

HP Forum Archive 08

Welcome!

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Repair of I/O ass'y on HP-41C

Message #1 Posted by [Dave Mabry](#) on 26 Aug 2002, 11:16 a.m.

I have been repairing the I/O assembly on many HP-41C calculators in recent times with pretty good success. This is the part that battery leakage attacks first and results in the battery contacts being "eaten" by acid. I wondered if there would be any demand for me to perform that service for others here. I am talking about the corrosion damage that seems to plague this series of calculators. It can be pretty severe and I have been able to repair them. I also wonder what would be a fair price to charge for this service. Can anyone here comment on this? Thanks in advance.

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RPN/Algebraic calculator for most PDAs

Message #1 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 26 Aug 2002, 9:50 a.m.

See www.infinitysw.com for information about powerOne, a nice RPN calculator which runs in Palm- and WindowsCE-based PDAs. While not cheap, it seems to be a good product. I haven't used it yet.

Quote from the manufacturers info:

"Customizable to fit your needs: You choose how powerOne Finance works.

Input Methods: Old HP users will like the RPN input. Scientific calculator users will like the Order of Operation input ($3+4*5 = 23$), and standard financial calculator users will appreciate the Chain input method ($3+4*5 = 35$)."

My remarks:

- a) powerOne is very configurable!!
- b) Are all RPN supporters (like me) "old"?
- c) Once more, RPN mode is the one which doesn't need any explanation!!

Re: RPN/Algebraic calculator for most PDAs

Message #2 Posted by [Ellis Easley](#) on 26 Aug 2002, 5:03 p.m.,
in response to message #1 by Andrés C. Rodríguez (Argentina)

b) for the sake of our vanity, I will assume the writer meant users of old HP calculators, before HP began supporting algebraic.

c) I am beginning to realize that it wasn't HP's RPN method that "AOS" was trying to improve on, but the number juggling you have to do with earlier TI calculators.

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HP41C

Message #1 Posted by [Roger Hubbert](#) on 26 Aug 2002, 9:49 a.m.

Can anyone tell me whether I can get my faithful HP41C serviced? The electronics are OK but it needs work done to the case internally. The small posts into which the screws holding the case together are embedded have cracked. This causes a bad connection between the main body and the LCD causing spurious readouts. My heart does not allow me to bin this lifetime aid! Thanks in advance for any advice! Roger Hubbert

Re: HP41C

Message #2 Posted by [Dave Mabry](#) on 26 Aug 2002, 10:45 a.m.,
in response to message #1 by Roger Hubbert

I have used Duco Cement, like the old airplane glue, with pretty good success on that plastic. It might depend on how many pieces your posts that the screws go into are broken into.

There are discussions here in the archives on procedures for performing this repair.

In general, the HP-41C series are pretty rugged and repairable. Good luck.

Re: HP41C

Message #3 Posted by [J Tiers](#) on 26 Aug 2002, 12:53 p.m.,
in response to message #1 by Roger Hubbert

When you glue them, wrap a piece of thin wire around the post. Thin so it won't get in the way. Get some glue over it. This will prevent future splitting.

There seems to be enough clearance on the ones at the display end. The others are a bit more problem if you have a CPU board there, as it is fairly tight fit on the board.

Re: HP41C

Message #4 Posted by [David Smith](#) on 26 Aug 2002, 6:01 p.m.,
in response to message #1 by Roger Hubbert

DO NOT use a glue to fix the posts. It WILL eventually fail again.

My recommendation is to use a plastic welding solvent sold at most hobby shops. It works by melting the plastic and letting it fuse back together, just like a metal weld. The ones I use contain the solvent methylene chloride (dichloro-methane).

Use a small brush to work the solvent into the cracked post (wet it pretty good) and then clamp it (or wrap with THIN wire, if you must). Let it set for at least 24 hours (dont believe the bottle instructions that say use sparingly and sets in 10 minutes).

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A revised family tree

Message #1 Posted by [jose goncalves](#) on 25 Aug 2002, 4:30 p.m.

I developed a familiy tree for the machines and I would like to share the idea with our friends in The Museum. The diagram was prepared based on the one available in Craig Finseth's site with added information taken from The Journal and other sources. There is a lot of personal opinion, like the idea that the whole thing started with the HP-35 model. You can see it at:

<http://www.hpmuseum.org/guest/goncalv/hptree.pdf>

As for the "instantaneous" development suggested by the vertical lines, they are mostly due to HP company information that some models were released in the first months of a certain year while some other models were available only later in the same year. They also represent models that belong in the same group of development, as far as the available information is concerned.

Anyway, I think the diagram shows very clearly the impetus that once drove HP company which is one of the reasons why we are so deeply involved with their products. Hence the big title I gave the diagram.

I'm trying to improve the vertical dimension as to make the diagram more complete and easy to understand.

Re: A revised family tree

Message #2 Posted by [Raymond Hellstern](#) on 26 Aug 2002, 4:29 a.m.,
in response to message #1 by jose goncalves

Nice work!

Hmm. Since you included the 9815, which is hardly a handheld device, wouldn't it be more complete to include the 9100 series, too?

And on the right end of the line, there are the 'FHB' models missing, since you included the 10BII;-)

But of course the title 'Real roaring 20's' says it all. From this aspect you're perfectly right.

Raymond

Re: A revised family tree

Message #3 Posted by [Victor](#) on 26 Aug 2002, 1:59 p.m.,
in response to message #1 by jose goncalves

I noticed there is a "32C" in the diagram. I don't think there ever was an HP-32C. Or is this an unreleased prototype?

Re: A revised family tree

Message #4 Posted by [Ellis Easley](#) on 26 Aug 2002, 5:16 p.m.,
in response to message #1 by jose goncalves

This is great! I have one question: how does the 16C contribute or lead to the 28C?

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TTF for the HP41, Voyager and 82143A

Message #1 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 25 Aug 2002, 4:23 p.m.

Hi;

I believe some of you (as I do) have been needing TTF files to give a better look to final documents. I posted a few weeks ago a message about an HP41's LCD TTF. Now I added two other TTF and "cleaned" the previous 41's TTF (I removed some trash). I also added an article, that can be seen [here](#). There are links to download the fonts from there.

Hope you can use them.

Best regards.

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Battery Charger for HP-41

Message #1 Posted by [Eric](#) on 24 Aug 2002, 6:50 a.m.

Is it possible to use 82059b as a charger for HP 41 (In the Museum it states that this is for HP-75/D!??)

Ref.: I asked the seller of this auction for the model number and 82059b was his reply!

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1375669596>

Or is this the only option: Charger 82059A/B (82066B 230VAC only)

If several models from other HP calculators is usable is there a list of all possible models for my HP-41 anywhere?

Thanks Eric

Re: Battery Charger for HP-41

Message #2 Posted by [David Smith](#) on 24 Aug 2002, 4:43 p.m.,
in response to message #1 by Eric

The 82059 series chargers are used with a lot of different HP calculators and peripherals. It works with the rechargeable NiCad battery pack for the HP41 (82120A).

Re: Battery Charger for HP-41

Message #3 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 25 Aug 2002, 8:52 a.m.,
in response to message #2 by David Smith

I use it to charge 82143A's batteries and, when my old 82120A was in one piece, I also used it.

Cheers.

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The exchange of the built-in NiCd battery of HP-34C.

Message #1 Posted by [Hiroshi Ito \(JAPAN\)](#) on 23 Aug 2002, 10:54 p.m.

I want to examine an exchange because the built-in NiCd battery of HP-34C deteriorates. Does HP-34C become stable when a NiCd battery is changed to the NiMH battery? Generally a NiMH battery outlasts a NiCd battery. But, a NiMH battery becomes useless if HP-34C doesn't become stable. Which of the NiCd battery and NiMH is it the choice whose it is better for HP-34C to choose?

Re: The exchange of the built-in NiCd battery of HP-34C.

Message #2 Posted by [David Smith](#) on 24 Aug 2002, 4:46 p.m.,
in response to message #1 by Hiroshi Ito (JAPAN)

I have used AA NiMH cells in all my rebuilt HP battery packs (classic, Woodstock, and Spice series) with great success. They take longer to fully charge (in direct proportion to their increased capacity over the regular NiCad batteries). 1800mAh NiMH cells take three times longer to charge than the 600mAh Nicads, but run the machine for three times longer.

Re: The exchange of the built-in NiCd battery of HP-34C.

Message #3 Posted by [Karl Schneider](#) on 26 Aug 2002, 4:37 a.m.,
in response to message #2 by David Smith

David --

What are you using as replacement 1.2V NiMH AA cells? I have both the "older" Spice pack (with silver metal holder and plastic spacer), and "newer" pack (2 cells in one assembly; cannot be taken apart). Both are dead.

I plan to build new packs using 1.2V NiCad AA "replace-a-cells" from Radio Shack. These are short, flat-ended, and have soldering tabs. RS does not sell similar 1.2V NiMH AA cells -- only the longer ones with posts on the + terminal, dimensionally identical to 1.5V alkaline AA cells, which break the delicate battery springs.

I agree with Mr. Rodriguez -- better to recharge these externally, even the NiCad -- and take

no risks.

Re: The exchange of the built-in NiCd battery of HP-34C.

Message #4 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 25 Aug 2002, 11:44 a.m.,
in response to message #1 by Hiroshi Ito (JAPAN)

Since the charging cycles of NiCd and NiMH are similar but not identical, it is advisable to charge the NiMH cells in an external, NiMH specific charger. In such manner, you also reduce some risks of overvoltage which can affect yor calculator in case of bad contacts, etc. And it also will be faster!

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Nothing much

Message #1 Posted by [Ken Weiss](#) on 23 Aug 2002, 8:34 p.m.

I just learned of this site and wanted to post an acknowledgment of how nice it is to see it. I still use my HP-25, it still works as well as ever. That RPN never caught on is always a mystery to me, but HP calculators have been the best of the best since the beginning -- which I remember first-hand.

RPN vs mixed mode

Message #2 Posted by [J Tiers](#) on 23 Aug 2002, 10:40 p.m.,

in response to message #1 by Ken Weiss

I can make RPN-phobic people mad by reminding them that the usual calculator is mixed mode, in that it is inconsistent.

You sometimes press the function before and sometimes after the number.

Sine, for instance, is pressed after the number, but addition must be selected before entering a number.

I point out that RPN calculators are at least consistent. Gets them every time :-)

Re: RPN vs mixed mode

Message #3 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 24 Aug 2002, 12:02 a.m.,

in response to message #2 by J Tiers

Hi;

I cannot agree more with you.

I teach HP12C Use & Program classes, and I remind the students that it exist algebraic NOTATION / EXPRESSION and math operations. When we want to take note of some math operations we use algebraic notation in the form of math expressions. If someone understands that notation, he will be able to reproduce the math operations.

RPN deals with math operations, not algebraic notation. After the HP28S we, HP users, made contact with a new way of using algebraic expressions: as objects in a RPN-fashion structure. We could enter as many algebraic as possible into stack levels, use them, combine them, and if we wanted to know what sort of expression would come from a particular RPN sequence, we could just fill the stack with variable names and use RPN operations. The resulting object would be an algebraic equivalent to the RPN sequence. Amazing!

I think that sometimes an Algebraic expression allows faster understanding than an RPN sequence (I usually take as much time as needed to depict RPN sequences in others programs, so I can understand what sort of procedure was used), but RPN sequences are intended to be math consistent, NOT algebraic consistent.

Anything (for sure) else to add here? Comments? Flames?

(Cheers)

Re: RPN vs mixed mode

*Message #4 Posted by [Pascal](#) on 25 Aug 2002, 6:09 p.m.,
in response to message #3 by Vieira, Luiz C. (Brazil)*

In my opinion, RPN is nothing more than an incredibly efficient method to enter an algebraic expression into a calculating device. For online manipulation of data structures such as Real & Complex numbers, matrices, or - in case of RPL - complete expressions displayed in algebraic notation, RPN is perfect. Over 10 years ago, I wrote a small application on the Atari TT which took an RPN input to build an algebraic expression for later use in other programming languages such as C, to provide a simpler and less error-prone way of writing expressions. And today, I'm still missing a similar tool to enter expressions in, let's say, Word or Excel. Take the 49G as an example: in relatively few keystrokes, you can easily build a large expression - and I'm not talking about this equation writer... but now I'm diverging...

Regarding the drawbacks of RPN/RPL: As mentioned in an earlier thread in this forum, RPN/RPL are candidates for 'throw-away programs'. Key it in, use it, and forget about it. Here I'm clearly in favour of a mixed mode calculator which has an 'algebraic', i.e. standard infix notation option for programming. The 32SII is pointing in the right direction: it allows the use of equations, which are more readable than an RPN keystroke sequence! Unfortunately, they're also slower in execution and larger in size, which is an issue when you've got merely 384 bytes available (hah, my 15C beats this!).

So, my 'dream calculator' would have RPN entry, RPN keystroke programming for the quick'n dirty tasks, and an algebraic programming model for the serious programs. All

in all, this sounds like a 42SII :-))

Pascal

Re: Nothing much

Message #5 Posted by [Steve Borowsky](#) on 24 Aug 2002, 7:49 p.m.,
in response to message #1 by Ken Weiss

Welcome, Ken. Maybe you could share a memory or two of the early days in the memory forum. As far as RPN not catching on, I can think of a few reasons off hand:

1. Price competition. Most algebraics were cheaper than HP's.
2. Since TI went with algebraic, when they sold calculator chips they were algebraic as well. The result was that RPN was 'swamped out' by all the algebraics hitting the market. The only other company i'm aware of that made RPN calculators was National Semiconductor but their implementation was not the same as HP's and had more limitations. I don't know if National put their RPN calculator chips on the open market but I don't think they could have competed with TI even if they did.
3. Reluctance of most people to scale the learning curve of RPN. Somewhat disappointing but not surprising when you add in points 1 and 2. When scrolling multi-segment or dot matrix LCDs allowed entire formulas to be input and edited at once that pretty much finished it in the public's mind, I think.

RPN chips...

Message #6 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 25 Aug 2002, 11:53 a.m.,
in response to message #5 by Steve Borowsky

In my opinion, RPN or algebraic is not a chips (microprocessor) issue. Most microprocessors have features like stack support and register load instructions which don't prevent RPN at all. In fact, while it can be a matter of discussion, RPN may result quite natural to implement on them. RPN or algebraic is a matter of software (or firmware, if you prefer). The calculator application of the HP LX 100/200, which runs in a 8086 architecture, is a nice example of dual mode operation.

Re: RPN chips...

Message #7 Posted by [Steve Borowsky](#) on 25 Aug 2002, 9:29 p.m.,
in response to message #6 by Andrés C. Rodríguez (Argentina)

<In my opinion, RPN or algebraic is not a chips (microprocessor) issue. Most microprocessors have features like stack support and register load instructions which don't prevent RPN at all. In fact, while it can be a matter of discussion, RPN may result quite natural to implement on them. RPN or algebraic is a matter of software (or firmware, if you prefer). The calculator application of the HP LX 100/200, which runs in a 8086 architecture, is a nice example of dual mode operation>

Yea but I was talking about the 'calculator-on-a-chip' devices that TI and others sold in the '70's. They had display driver, keyboard driver, calculator rom - all on one chip. All the manufacturer had to do was supply a keyboard, display and power supply.

Re: RPN chips...

Message #8 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 25 Aug 2002, 11:29 p.m.,
in response to message #7 by Steve Borowsky

The TI57 was exactly like this: one chip and... nothing but a 9V battery clip, keyboard and LED array (display). I had one in 1979... Wow!

Re: RPN chips...

Message #9 Posted by [Ellis Easley](#) on 26 Aug 2002, 12:49 a.m.,
in response to message #8 by Vieira, Luiz C. (Brazil)

I recently started collecting TI calculators and one of the first ones I got was a TI57 with a bad battery pack. The pack contains a convertor from 2.4V to 9V - but I didn't know what the output voltage was. I connected the calculator to a bench supply and slowly increased the voltage, occasionally switching the calculator off and on in case it needed a clean power supply edge to reset. I got up to about 16V with no results except random LED segments sometimes lighting, so I figured the calculator was dead. Later I got another TI with the same battery pack which was working. I discovered to my horror that TI used red for the negative supply wire and black for the positive! Around this same time TI had their 9900 microprocessor, in the documentation they numbered the address and data lines opposite from everybody else (0 was used for the most significant bit). But the story has a happy ending: after the abuse I gave it, the TI57 still works completely! I can only guess that between the protection diodes in the chip and the LEDs connected to so many pins possibly acting as shunts, the IC never saw an excess voltage.

Re: Nothing much

Message #10 Posted by [db\(martinez,california\)](#) on 25 Aug 2002, 8:16 p.m.,
in response to message #5 by Steve Borowsky

steve;

re: your paragraph #1 & #3 - sad but true. re: your paragraph #2, here is some info from our own dave, joerg woerner, ball & flamm and others.

there were a lot of rpn calcs out there back in the "golden age" of calculators. there were 7 or 8 makes made in the former ussr and most had lots of models, a couple in germany, one in japan, one in taiwan, of course sinclair in "jolly old" made two. ti even made an rpn translator rom for the 58/58c/59 series so people who were saddled with a ti could use 67/97 programs. someone from japan mentioned another translator rom for the pannasonic hhc here at the forum a few months ago. and yes nat.semi./novus did sell their chip for the mathematician at least once; "fate sa" of argentina made a pretty nice box, put it around the n.s. chip, and called it the microcifra cientifica. sadly-the trig accuracy still sucks. add this to about 6 or 7 other brands from the us of a. and you get over 50 models.

we are left with the conclusion that since aos entry requires no thinking, and people chose it even though there was an affordable rpn under every other rock; most people must not want to or be able to think.

- d

Re: Nothing much

Message #11 Posted by [Steve Borowsky](#) on 25 Aug 2002, 10:28 p.m.,
in response to message #10 by db(martinez,california)

<<there were a lot of rpn calcs out there back in the "golden age" of calculators. there were 7 or 8 makes made in the former ussr and most had lots of models,>>

That's nice to know but I don't think the Soviet calculators at that time could have influenced the European/Asian/US market one way or the other.

<a couple in germany, one in japan, one in taiwan, of course sinclair in "jolly old" made two.>

This is good to know, but i'd have to know more about the specific models to tell whether they would have been a good or a bad influence on the acceptance of RPN. The NS models for example were so crappy, comaparatively, that they may have had a

negative influence.

<<ti even made an rpn translator rom for the 58/58c/59 series so people who were saddled with a ti could use 67/97 programs. >>

Yes I know about that. Do I detect embers of the HP/TI wars still burning here?....

<<someone from japan mentioned another translator rom for the pannasonic hhc here at the forum a few months ago. and yes nat.semi./novus did sell their chip for the mathematician at least once; "fate sa" of argentina made a pretty nice box, put it around the n.s. chip, and called it the microcifra cientifica. sadly-the trig accuracy still sucks.>>

Neat. That's my point; did these cheapo models help or hurt?

<<add this to about 6 or 7 other brands from the us of a. and you get over 50 models.>>

Whoa. 6 or 7 other brands? We are talking about scientifics here, right? What are the names of these other brands? I know there were some 4 function units that used essentially RPN but I don't think we can count those since the market for 4 function calculators is too broad. I'm focusing on scientifics because there people had the opportunity and incentive to see the advantages of RPN in a significant way.

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HP41 Rechargeable Battery Pack Repair Solution

Message #1 Posted by [Eric](#) on 23 Aug 2002, 4:32 p.m.

I spent 15 minutes at Batteries Plus.

The total was \$12 (the 'N' cells alone cost an additional \$8) and the rechargeable battery pack works as good as new.

They used a 1/3AAA 500maH replacement

Sorry, but the \$60 for the guy in Florida to fix it doesn't cut it.

Re: HP41 Rechargeable Battery Pack Repair Solution

Message #2 Posted by [David Smith](#) on 24 Aug 2002, 4:49 p.m.,
in response to message #1 by Eric

500 maH in a 1/3 AAA... I don't think so. Perhaps 50maH.

There is a 150 maH NiMH cell (Sanyo) that is the same diameter as the original Nicads, but a little shorter. The string needs to be backed up with a piece of plywood, etc.

Re: HP41 Rechargeable Battery Pack Repair Solution

*Message #3 Posted by [Eric](#) on 24 Aug 2002, 10:16 p.m.,
in response to message #2 by David Smith*

"500 maH in a 1/3 AAA... I don't think so. Perhaps 50maH."

I'm not an expert, but that is what he told me. He specifically differentiated between 50maH and 500mah.

regards.

Re: HP41 Rechargeable Battery Pack Repair Solution

*Message #4 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 25 Aug 2002, 8:04 a.m.,
in response to message #2 by David Smith*

Hi;

I have a rechargeable batt pack for the HP41 that is disassembled and has no batteries. I though about many solutions, and all of them would result in cutting the original battery holder. I will not do that.

As you have found a Sanyo NiMh cell that fits in, would you place its specs here for us? If they are readable, of course. I'll try to find it here (but I am almost sure it will be about impossible...)

Thanks.

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Seeking Repair of HP 42S

Message #1 Posted by [Eduardo Garro](#) on 23 Aug 2002, 3:46 p.m.

I've had my HP 42S for several years and recently I dropped it and the 7 keys on the right of the panel don't work. Any recomendations of reliable individuals that can repair this calculator.

Thanx,

Eduardo

Re: Seeking Repair of HP 42S

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 23 Aug 2002, 7:34 p.m.,
in response to message #1 by Eduardo Garro

Hi;

do you have any skills in Electronics, also handcraft work? If so, chances are you can get it repaired by yourself.

Let us know.

Success.

Re: Seeking Repair of HP 42S

Message #3 Posted by [Eduardo Garro](#) on 24 Aug 2002, 7:32 a.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)

I am willing to try. Where do I start?

Thanx, Eduardo (Costa Rica)

Re: Seeking Repair of HP 42S

*Message #4 Posted by [David Smith](#) on 24 Aug 2002, 4:51 p.m.,
in response to message #3 by Eduardo Garro*

This is a fairly common failure mode. It seems to be caused by a bad connection between the keyboard and the CPU card. See Paul Broger's article in the Articles section on the goty details of how to open the machine... it was not designed to be opened.

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Color

Message #1 Posted by [Y K Wong \(Singapore\)](#) on 22 Aug 2002, 10:30 p.m.

I have two HP82161A Digital Cassette Drives, the color of my first drive serial no. 2230A18882 is very similar to the HP-41 calculator where HP called Ink Brown (I would say it is more of black to my eyes!), the second unit - serial no. 2338A02973 is I guess I would call greenish brown and it is of the same color of my HP82162A Thermal Printer (serial no. 2341S20166)!

I wonder did HP change the color of both the drive and printer from Ink Brown to lighter color. Incidentally, I noticed that both the drive and printer in the picture in HP Series 40 brochure (5953-5557) seems to be Ink Brown (see below)

<http://www.geocities.com/wongyapkong/series40.html>

Re: Color

Message #2 Posted by [Raymond Hellstern \(Germany\)](#) on 23 Aug 2002, 2:01 a.m.,
in response to message #1 by Y K Wong (Singapore)

Yes, they changed the the colors at some time. Compare to the LX palmtop series, where they changed from near black (95,100LX) to kinda blue (200LX, OmniGo)

The older versions of the printer (.43A) had the LED's looking out of the panel, where the newer versions of those IL devices hadd the LED's under the transparent plastic. I think it was cheaper to produce (one production step less)

Raymond

LEDs under panel

*Message #3 Posted by [Ellis Easley](#) on 23 Aug 2002, 4:55 a.m.,
in response to message #2 by Raymond Hellstern (Germany)*

The reason for putting the LEDs under a translucent panel might have been for electrostatic discharge protection. I worked on a project that failed ESD testing because we had an LED passing through a hole in a panel. We tried different gaskets without success. The solution was to glue the LED in the panel with RTV. Apparently, if there is any air gap from the outside, a discharge can find the LED leads and get onto the PCB. A better design would have been to use a plastic light pipe to carry the light to the outside, so the LED could have sat down on the PCB far enough from the hole that it would not cause a problem.

Re: LEDs under panel

*Message #4 Posted by [Raymond Hellstern](#) on 23 Aug 2002, 9:21 a.m.,
in response to message #3 by Ellis Easley*

Thanks for the info. This seems reasonable.

In the past I thought they put the LED's under the panel because it's easier to clean the panel from dirt.

Now I get an idea why so many products have a kind of light pipe, instead of the LEDs directly near the surface.

Regards,

Raymond

Re: LEDs under panel

*Message #5 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 23 Aug 2002, 7:39 p.m.,
in response to message #4 by Raymond Hellstern*

Just to add that my 82143A has the translucent pannel and it is not an IL printer. I remember seeing some old 82143A with the pop-out LED's, and I used to believe the translucent pannel was for dust protection. Knowing it is for ESD protection is something new. Fresh knowledge to be kept in mind.

Good reading!

Thanks.

Re: LEDs under panel

*Message #6 Posted by [Ellis Easley](#) on 24 Aug 2002, 9:31 p.m.,
in response to message #4 by Raymond Hellstern*

Another reason for a lightpipe is when the PCB isn't near enough to where you want the visible indication, as an alternative to adding a wire harness and a tiny PCB to hold the LED and fasteners to mount it where you want it. It also might help avoid a problem with radio frequency interference, since a wire harness would act as an antenna and even though it is carrying just a few milliamps DC for the LED, it might be necessary to add filtering components (at least to satisfy the compliance engineers!)

Re: LEDs under panel

*Message #7 Posted by [J Tiers](#) on 23 Aug 2002, 10:36 p.m.,
in response to message #3 by Ellis Easley*

I think in the old days ESD was much less of a deal..other than mil spec assembly.

The most usage of LED covers was as a red panel, which gave a better background than clear, and passed thru the red LED light. A dust-tight closure of course was also intended.....

Re: LEDs under panel

*Message #8 Posted by [Ellis Easley](#) on 24 Aug 2002, 9:47 p.m.,
in response to message #7 by J Tiers*

I think HP probably did take ESD into consideration primarily because the calculators are handheld devices and likely to be carried around and moved from place to place, while operating. I'm not talking about damage to components from ESD so much as disruption of operation. Also, while FCC Class B doesn't have ESD requirements, some European standards do. In the project I was working on, ESD testing was being done for European standards compliance, and the equipment (an IR communications interface) had data corruption when subjected to ESD.

Re: LEDs under panel

*Message #9 Posted by [J Tiers](#) on 26 Aug 2002, 9:03 a.m.,
in response to message #8 by Ellis Easley*

Yeah, likely so, since I have never had an ESD failure or odd operation on any HP or other calculator, for that matter.

However, don't forget that many of the same considerations that come up with a handheld anyway also help ESD immunity. For one, the tough case implies thickness, and hence spacings. Also, dust sealing implies a relatively closed case which tends to reduce potential paths. Finally, the usual type of clamshell case is generally accomplished with a tongue and groove closure, which lengthens the leakage or arc path.

We make all our equipment in export as well as domestic versions, and the basic design has to meet FCC/CE/C-tick, etc. I do EMC design evaluations and remediation as well as my regular design work. Part of that is ESD, although that tends to be inherent after the other items are satisfied. So I have some familiarity with the issues, and you are correct. I agree that if ANY company was interested in ESD back then, HP would have been it.

Now that they want to make nothing, I suspect they are less fussy.

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RPN as a language?

Message #1 Posted by [David H Thompson](#) on 22 Aug 2002, 6:14 p.m.

I was surprised to read Michael Meyer's statement that RPN is a language. Surely it's a notation. Even if we rise to the next level of HP complexity, RPL, that's still not a language.

Please correct me, but I thought that most people had now come to accept that computer "languages" are nothing of the sort: they are all just notations. I thought that Knuth and others had long since settled this matter.

Re: RPN as a language?

Message #2 Posted by [Michael Meyer](#) on 22 Aug 2002, 6:52 p.m.,
in response to message #1 by David H Thompson

David,

You are, of course, correct in the literal sense, and I appreciate your pointing this out. Technically, there is no official "language" of law, chemistry, etc. My point was that, in my opinion, the way we frame things can affect our abilities to solve problems. In this case, I believe RPN "teaches" the mind to work problems logically and better than AOS. With AOS, just entering the problem doesn't reinforce the mechanics of solving the problem. And that's only my opinion. I also believe that schooling, in general, teaches as much in the way of how to think as it does a mass of specific facts. For example (in my opinion), learning a foreign language does more for a person than just giving them another set of words to use. I believe that it can teach the person a process of learning that can extend to other areas of thought. I also believe it gives a structure-- both good and bad-- with which to enhance thinking, as most of our thinking is done in a "language" (certainly the verbal thoughts). I once heard a quote that makes sense to me, that, "we build our environment and it then builds us." I believe there is truth to this.

Anyway, the main point is that I believe the learning and use of RPN gives a person more than just a faster way to solve problems. So, this isn't a correction.... I believe you are correct. I was using "language" in a more general term for a process (or notation) that also influences the logic

and thinking of the individual. I apologize for my general and perhaps sloppy use of the term....

But I can't help but ask: how would you explain the term, "the language of love"? <grin>

Michael

Re: RPN as a language?

*Message #3 Posted by [Ellis Easley](#) on 23 Aug 2002, 6:39 a.m.,
in response to message #2 by Michael Meyer*

Michael wrote: "With AOS, just entering the problem doesn't reinforce the mechanics of solving the problem."

I agree, AOS with its emphasis on entering the equation the same way it is written seems to be organized around the idea of entering problems from a textbook. The machine, and whoever wrote the lesson, will solve the problem - the user is just there to press the keys. I guess once you get to the point that you can write your own textbook, you can solve your own problems!

I recently got a TI SR-50A with its manual. This calculator is the second version of TI's equivalent to the HP35. Near the end of the manual there is a four page appendix entitled "Register Level Processing". It explains that internally, the machine has three registers - X, Y and Z. Their use is pre-programmed in the following way: X and Z are used for "+" and "-", X and Y are used for "*" and "/" and exponentiation, and X alone is used for single argument functions. When you hit a function key, the contents of X either stays put, is moved to Y, or is moved to Z, depending on the function. This model has no parentheses and apparently they split (+,-) and (*,/) so they could do "sum of products" without manually saving the intermediate results. I wonder if TI provided this explanation just to parallel the one in an HP manual, where it is necessary to understand it to use the machine. But as an RPN user, it is frustrating to know that there is a three register structure in there that I can't use as a stack!

Re: RPN as a language?

*Message #4 Posted by [Chan Tran](#) on 23 Aug 2002, 10:01 a.m.,
in response to message #3 by Ellis Easley*

I will have to look at my TI SR50 again. I thought it has parentheses. Without the parentheses it would be a lot less than the 35 (assumed that the user prefers AOS)

Re: RPN as a language?

Message #5 Posted by [Ellis Easley](#) on 24 Aug 2002, 8:58 p.m.,
in response to message #4 by Chan Tran

I have the SR-50, SR-50A and SR-51A but I only have the manual for the -50A. None of them have parentheses. The SR-52 and -56 do have them.

The "sum of products" system must have been TI's first attempt to get around RPN. It reminds me of the "and-or-invert" arrangement used in programmable logic devices. Some of the examples in the book require re-arranging things. In fact, here's what the first page says:

"The SR-50A uses the algebraic entry method to simplify data entry into the calculator. For simple problems, the numbers and algebraic functions are entered into the calculator in the same sequence as they are stated algebraically."

Note the qualification - "for simple problems"

The SR-50 and -50A have the same key layout but the difference is more than just the style of the case. They have different PCBs. However, they both give the same result for the "calculator forensics (I think that's what he called it)" benchmark test posted here by Mike Sebastian (I think that was his name): (in degrees mode) 9, sin, cos, tan, atan, acos, asin. The result is ideally 9. I go a step or two further and subtract 9 from the result and multiply by 1,000,000. This lets me see the guard digits (if there are any) and also gives a sort of "parts per million" result.

BTW, the SR-50, -50A, and -51A have a very good score on this test, 4.661314 "ppm". Only some of the later HP's give a better result among my calculators - HP 71B, 48SX, 48GX, 32SII and 20S all give -1.35733. HP 67, 34C, 41C and 15C all give 417.403. HP35 (original ROM) gives 2983.113, HP45 gives 4076.644, HP25 gives 4076.649. TI SR-52 and -56 give nearly the same number as -50 except there appears to be one less guard digit. The main purpose of the test, according to the guy, is to identify calculators that may have the same firmware inside, but it also gives some indication of the precision an/or accuracy of a calculator.

Re: RPN as a language?

Message #6 Posted by [db\(martinez,california\)](#) on 24 Aug 2002, 11:54 p.m.,
in response to message #5 by Ellis Easley

the "winner?" and new champ for ellis's and mikes calculator forensics score is the novus mathematician with a result of 156238. that may sound bad but it's probably one whole order of magnetude better than you would get on a slide rule.

Re: RPN as a language?

Message #7 Posted by [Ellis Easley](#) on 26 Aug 2002, 12:31 a.m.,
in response to message #6 by db(martinez,california)

Some of my TI's are a little higher - SR-40/TI30 (same thing) give 177087.1, "Slimline" TI50 (an early LCD) gives 177087.09 - so choose the "Slimline"! Other TI numbers: TI55 7726.486, TI57 4746.3834, TI25X solar 52.205, TI34II 3.512065, TI66 (LCD version of 58/59, built by Toshiba) 2.294775, TI34 -1.36296 - exact same result as HP6S. This shows the value of this method for identifying calculators that are the same internally. That these models are the same was pointed out here, I think it was during a discussion about calculators used in algebra classes and how to interpret $\sqrt{-9}$ (or was it $-\sqrt{9}$?) When you have them side by side knowing they are the same functionally, it is striking how much better TI arranged the keys than whoever designed the HP6S - although the 6S is faster, very obvious on the trig functions (if that matters on a non-programmable). TI replaced the 34 and another model with the 34II, with two line display and menus - it takes multiple keystrokes to get to the trig functions on this one.

Re: RPN as a language?

Message #8 Posted by [Marc Brucker](#) on 23 Aug 2002, 2:37 p.m.,
in response to message #2 by Michael Meyer

I agree with Michael. I have been lurking here for some time, and I have learned that RPN is a useful tool for "getting my mind right", in addition to solving the problem at hand. I am but a novice to HP calcs and RPN, but I can already feel my Really Powerful Neurons doing much more work than with the algebraic system of entry logic. By the way, I found a calculator program (assembly, I think) online at a TI calc site that modifies my TI-86 to RPN. Does anyone have experience with these types of programs? I will post the link if anyone is interested. Thanks to all!

Re: RPN as a language?

Message #9 Posted by [db\(martinez,california\)](#) on 24 Aug 2002, 7:35 p.m.,
in response to message #8 by Marc Brucker

yes, please do post the link. someone else mentioned a program like this about a year ago. what a great (and subversive) idea.

Re: RPN as a language?

Message #10 Posted by [Marc Brucker](#) on 25 Aug 2002, 10:38 a.m.,
in response to message #9 by db(martinez,california)

Here goes the link to the subversive TI-86 RPN utility. I believe that when downloaded as a ZIP file and extracted, the source code for the program is displayed as another ZIP file to be extracted. Perhaps the program can be ported to other calcs. Go here:

<http://www.ticalc.org/archives/files/fileinfo/246/24677.html>

I have not put it on my calculator yet, but plan on doing so, soon.

Re: RPN as a language?

Message #11 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 24 Aug 2002, 8:45 p.m.,
in response to message #2 by Michael Meyer

Hi;

I wrote [this](#) and, even knowing that the subject in here is not the same, the contents are related with each other.

Just my US\$0.05...

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HP 48s

Message #1 Posted by [Scuba Diver](#) on 22 Aug 2002, 10:54 a.m.

Hello everyone!

In the thread regarding the closure of ACO it was mentioned that this group was responsible for re-designing some calcs (like the 12C and the 17BII) so that they could be manufactured in a more cost-effective manner.

Does anyone know; is the same true for the 48G/GX? Is a new machine equivalent to older ones, or are the 48 G/GX now manufactured in China?

The 12C may now be manufactured for less money, but they are also made with less quality.

Thanks in advance! Brendan

Re: HP 48s

Message #2 Posted by [Ellis Easley](#) on 22 Aug 2002, 1:43 p.m.,
in response to message #1 by Scuba Diver

I think there have been discussions here about the 48G's being built in China now, the topic was whether the 48G's are now available with the same black LCD as the 49G.

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Convert from 48 to 49g

Message #1 Posted by [Speck](#) on 22 Aug 2002, 12:44 a.m.

My hp 49g just puked on me. My 49g then tried recovering memory. Most of what it recovered was useless, but I did discover something interesting: when I originally tried opening a 48 grob on my 49g, it gave me an error. However, after it recovered memory, it apparently tried to take over the grob. When I tried viewing the grob after recovery, it opened. It looked weird, but it opened. I say it looked weird in that nearly every pixel on the screen was on, and the pixels making the outlines of the continents were off. I'm guessing that the grob somehow got inverted, but I might be mistaken. Anybody know anything about this? Is there an easier way to convert 48 grobs so they work right on a 49g?

Re: Convert from 48 to 49g

Message #2 Posted by [James M. Prange](#) on 23 Aug 2002, 4:50 a.m.,
in response to message #1 by Speck

Grobs from my 48 work fine on the 49G. I expect that something else else caused the problem, and perhaps changed the grob as well.

Re: Convert from 48 to 49g

Message #3 Posted by [Raymond Hellstern \(Germany\)](#) on 23 Aug 2002, 3:57 p.m.,
in response to message #1 by Speck

If the problem comes from the GROBs, simply transfer them to the PC in ASCII, then download them to the 49. Maybe you have to run OBJFIX on the result, I'm not sure. Please take a look at www.hpcalc.org on this issue. There should be tips and rules on how to transfer HP-48 software and data on the 49.

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The end of HP calculators

Message #1 Posted by [Vázquez](#) on 21 Aug 2002, 10:51 p.m.

<http://www.hpcalc.org/goodbyeaco.php>

I feel like I'm in a time warp

Message #2 Posted by [Jim L](#) on 21 Aug 2002, 11:49 p.m.,
in response to message #1 by Vázquez

First I read how HP may be coming back in calculators. Then this gets posted. But this page is a year old - from back before HP needed to come back.

Re: I feel like I'm in a time warp

Message #3 Posted by [J.Manrique](#) on 22 Aug 2002, 6:41 a.m.,
in response to message #2 by Jim L

Yes, it is old, but almost true.

ACO, the team that developed hp49, hp39 and hp40 has disappeared a long time ago..

HP is coming back in calculators business, but its way is not clear.

As far as it is know, HP doesn't have engineers working in HP calculators, just managers and business people, so maybe, and just maybe, next HP calcs are going to be produced by third-party companies and re-branded under HP logo.. Like hp6s or hp30s.. but I hope with better quality that these past experiences..

HP is planning to remake up every calc line (business, scientific and graphic).. but I don't expect any super-machine in graphic line.. but, it is HP, so, who knows?

We have to wait until September for real HP news..

Re: I feel like I'm in a time warp

*Message #4 Posted by [J Tiers](#) on 23 Aug 2002, 10:33 p.m.,
in response to message #3 by J.Manrique*

As far as I know, the "get it made for us" approach is HP's new "business model".

They have as much as said that they don't want to actually make anything anymore. In fact, as a user of electronic test equipment, I think the calculators were one of their best products. I could quibble about other stuff, I like Tek much better for 'scopes, Fluke better for meters, etc, etc.

But there isn't a better calculator to my way of thinking than the HP, and I have owned a few, including HP 21 and HP 41CV, Rockwell, TI, and a few other throwaway versions.

The 21 replaced a hand-held Rockwell with the old "green nixie" readout, if you want to date my involvement.....

The Rockwell was a special engineering school deal. The school did a volume purchase. It replaced the slide rule I had been using for previous schooling.

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HP 71B self test keys

Message #1 Posted by [Rick](#) on 21 Aug 2002, 10:10 p.m.

Hi,

Could someone tell me what the keys are to carry out the self test on the 71B please.

Thanks Rick

Re: HP 71B self test keys

Message #2 Posted by [Gordon Dyer](#) on 22 Aug 2002, 3:50 p.m.,
in response to message #1 by Rick

Hi Rick, there is no specific key sequence for self-test, but HP have a section in the User Manual which tell you what to do to test the HP-71B.

I have scanned it and OCR'd and will email it to you.

Regards,
Gordon

Re: HP 71B self test keys

Message #3 Posted by [J-F Garnier \(France\)](#) on 23 Aug 2002, 6:49 a.m.,
in response to message #2 by Gordon Dyer

There is a limited self test feature: press ON-/, 'INIT' message is displayed. Press 2 then ENDLINE and ROM checksums are tested. Be carefull with INIT sequence: 1 is for operation interruption, 2 for ROM test, and 3 for master reset (Memory lost)!

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New Line of HP calculators?

Message #1 Posted by [carl](#) on 21 Aug 2002, 5:19 p.m.

I went to my college bookstore to ask if they had the HP-49G available. The guy told me they sent them all back for credit because HP is going to come out with a new line of graphing calculators. Is this true? Because if it is, I might hold off on buying one.

Re: New Line of HP calculators?

Message #2 Posted by [Ron Ross](#) on 21 Aug 2002, 6:10 p.m.,
in response to message #1 by carl

It may be. But it is not likely. More likely is that Hp is just recalling Hp's in stock to replace in warranty repairs that seem to plague the 49g (most are minor warranty issues, but customers are used to a better 48 line). I suspect BS PR to hide the fact that Hp is really closing one of its best chapters and has a lousy ending in store for us. And that ending is, It is just going to quit the calc business aside from a few cheap knockoffs such as the Hp12c, Hp10Bii, the Hp30s and the perhaps the ultra cheap Hp6s line (which they may have already abandoned due to the Hp6s negative image).

I am speculating of course and do not know for sure.

So, my advice, buy a 49G while you can. It is a very impressive calculator. I like the 48G series hardware better, but the 49G has better software and the keyboard is okay once you get used to it.

Re: New Line of HP calculators?

Message #3 Posted by [Randy Sloyer \(US\)](#) on 21 Aug 2002, 7:57 p.m.,
in response to message #2 by Ron Ross

Very Interesting...

I was recently (3 weeks ago) talking with a first tier Hp distributor I have done business with in the past. I was trying to find a 32Sii or two left around. She laughed at the idea of anyone having any 32Sii's left. Hey - it never hurts to ask even if it is a long shot. But the point of the message is that she said that "Just wait for awhile. Hp has a new line of calculators coming soon". I asked when. The answer: In the forth quarter. I didn't press. I just figured it was Hp's way of keeping the distribution channel happy when Hp had nothing for them to sell. Never gave it a second thought, until now. I actually laughed to myself and said "Believe it when I see it".

Maybe? Is it possible? Since they have no in-house calc talent any more, have they outsourced a new calculator design like they finally did with PC's? If they did, will it be as big a disaster as the PC's? Anybody out there own any Hp Kayak's? Cursed from the day they came out of the box. My company's PC business went to Dell after Hp enjoying our PC business for 10 years without competition. Perhaps this is an opportunity to show us how the "New Hp" has re-invented itself from the old "New Hp"?

While Ron may be right on the mark about the 49's, anybody have other theories?

Doesn't mean I'm going to stop collecting older RPN machines, but I await further news with interest.

Re: New Line of HP calculators?

Message #4 Posted by [Iqbal](#) on 21 Aug 2002, 10:31 p.m.,
in response to message #3 by Randy Sloyer (US)

It's true or so I have been told by a friend who works at a Major Distributor. She said that a new line is coming out in a couple of months [that was a few weeks now], but she didn't have any more information. I hope HP surprises us and comes out with a HP42SII

Should we feel happy with this news?

*Message #5 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 21 Aug 2002, 11:29 p.m.,
in response to message #4 by Iqbal*

Hi, everybody;

I recently had my HP28S stolen, and I was fortunate enough buying another this very weekend. But that's not the point: I bought an HP28S so I could help others to use it. As I have many like this.

You know, I use the HP48, the HP42S (I call my 32K 42 as HP42S+) and the HP15C. The others are there for translating programs, testing routines, store programs being developed... mostly, to help other users. Some contributors in here may have noticed I do what I do because I like it.

But Hewlett-Packard does not think this way.

I learned here that HP would never, never get back to calculator business if it is not profitable. I read many things in here, I posted my own (almost inaccurate) opinions, but I'm certain about it: profitability.

I think we all should focus this way: why would HP get back to calculator business if it is not profitable? Or is there a profitable calculator slice in the market we are not seeing? (I swear I cannot even think of an HP6S' family coming along... I feel sick!).

I have expressed my feelings about RPN and mind development, and I believe I can think numbers the way I think because of RPN programming structure. I sometimes feel myself as doing arithmetic and thinking RPN fashion... (Doc. Mike, please, tell me it's O.K., will yah?)

I don't know, I believe a financial analysis must be taken into account here. I try not feeling happy with the news, because they are too good to be true.

Just my thoughts.

Re: Should we feel happy with this news?

*Message #6 Posted by [Speck](#) on 22 Aug 2002, 12:36 a.m.,
in response to message #5 by Vieira, Luiz C. (Brazil)*

Maybe Compaq was secretly working on a machine and didn't tell anybody about it, and now HP owns it. Saved a lot of development costs that way. Hee-hee!

I'm kidding, of course.

Does where the calc came from make a difference? I mean, if HP did get completely out of the calc business, but then released it all to Agilent in the process, would users here buy similar calcs from Agilent? (I have nothing to do with either HP or Agilent; I merely ask out of curiosity).

Hey, it might be worth considering in the future if HP does abandon us.

Re: Should we feel happy with this news?

*Message #7 Posted by [Michael Meyer](#) on 22 Aug 2002, 2:41 a.m.,
in response to message #5 by Vieira, Luiz C. (Brazil)*

Hi Luiz,

Not only is it "O.K.", I would argue that it's very important. Everything we learn in life is a language, and then that language gives us a vehicle and substrate for thought and understanding.

Learning medicine involves learning the language of medicine. Same with law, computers, chemistry, engineering, gardening--- you name it.

So, learning RPN DOES teach you to work through problems in a logical, superior way.

Humans store information quite efficiently, it seems. I have a patient who hallucinates music. Not that rare. But she reports hearing all the lyrics clearly and completely, to songs she cannot sing. I believe our minds store massive amounts of information. It's the retrieval and organization of those memories that seems to show the most limitations. Exercising that recall and organizing system is very important, and providing an efficient language can help.

Long live RPN!!

Michael

Re: New Line of HP calculators?

Message #8 Posted by [John K. \(US\)](#) on 22 Aug 2002, 2:40 a.m.,
in response to message #3 by Randy Sloyer (US)

I asked when. The answer: In the forth quarter.

Well, that's a silly time to release a new calculator. The best time would be towards the end of thrid quarter, to get in on the "back-to-school" rush. Of course, you'd have to announce the product in second quarter, to make sure that the retailers have enough lead-time to pre-order for August-September, but that doesn't necessarily require the announcement to be public. Fourth quarter is good for the holiday shopping season -- assuming that their marketing folks feel that a student is more likely to ask his folks for a brand new graphing calculator rather than, say, an X-Box...

Maybe Lee-Khuan Goh at the HPCC Meeting...

Message #9 Posted by [thibaut.be](#) on 22 Aug 2002, 2:55 a.m.,
in response to message #8 by John K. (US)

... will provide fresh news !

Re: New Line of HP calculators?

Message #10 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 22 Aug 2002, 6:35 a.m.,
in response to message #8 by John K. (US)

Hi;

if they already had that calcualtor in "blueprints", why not to redraw it (a Xpander derivated?) and launch it fast?

Just a thought.

Re: New Line of HP calculators?

*Message #11 Posted by [J.Manrique](#) on 22 Aug 2002, 6:44 a.m.,
in response to message #10 by Vieira, Luiz C. (Brazil)*

All ACO project are dead.. I think.

We have to wait until September to see "real" HP news..

Best regards,

J.Manrique

Calculators Users Group from Gijón

#1077 HPCC Member

Re: New Line of HP calculators?

*Message #12 Posted by [Scuba Diver](#) on 22 Aug 2002, 11:05 a.m.,
in response to message #11 by J.Manrique*

We can wait, but I think that what you see will be a "white label" calculator with HP branding.

I'm about to throw my 2 cents in here; I realize I'm a newbie, so it may be complete garbage, but hopefully it will get a discussion going.

In the past, HP made calculators of unbeatable quality. You could buy cheaper calculators, sure, but if you were an engineer out in the field, you couldn't have your calculator die on you. It was worth the extra money to get an HP. (All you have to do is take a look at TI; how many of their units are still functioning now???)

As time passed, things changed. Computers became smaller, more powerful and cheaper. Nowadays, people use computers for complex calculations; most calculator buyers are high school and college students. They shop on price.

HP has done what they can to keep up. They kept competitive on price by lowering quality and relocating manufacturing. The current HP customer doesn't buy their product because of its history of quality; they buy it because it does what they need it to do and Staples has it on sale.

We're a dying breed. We love HP because of what it WAS, not what it is. We use HPs because we love them. To us, using a classic HP is an "experience". Unfortunately, HP isn't Starbucks. They don't sell an experience, they sell a product.

Brendan

A little philosophy

*Message #13 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 22 Aug 2002, 1:01 p.m.,
in response to message #12 by Scuba Diver*

HP was what it was at a time when we were who we were...

Re: New Line of HP calculators?

*Message #14 Posted by [GE \(France\)](#) on 23 Aug 2002, 4:00 a.m.,
in response to message #12 by Scuba Diver*

Recently Lexibook (an everything-cheapo brand here in France) turned out some interesting machines. The first one was a rebrand of the HP6/6s called model 100/110. They just released a decent remake of the Casio 6300 (a graphical calc) badged as the "GC1000".

So it seems low-end brands are reusing old technology to address the cost-conscious part of the market (read : 99% of the market), on the lower range.

In the past companies less known for calculators designed nice models (example : Toshiba for TI). Also, see all the reasonable Palm clones issued by some asian companies. This is not ridiculous, so NIH (Not Invented Here) designs are fairly possible. I wouldn't be surprised if the new machines heavily borrowed from the original HP designs. However, this doesn't mean RPN as this is not the general direction of things nowadays.

Another remark : yes TI models were cheaper and thus theoretically less durable, but it depends on how you use them : if you care as you would for a \$500 model, they keep on working fine virtually forever. I have some (including a 2500 dated 1973), and they work like a charm. The

problem is that as you paid \$20 for it, you don't take care and it breaks...

So I think even if the next HP line is OEMed from some obscure remote company, it could be a nice surprise. IF there is one...

Re: New Line of HP calculators?

*Message #15 Posted by [Raymond Hellstern](#) on 23 Aug 2002, 9:40 a.m.,
in response to message #14 by GE (France)*

Hi,

>Recently Lexibook (an everything-cheapo brand here in >France) turned out some interesting machines. >The first one was a rebrand of the HP6/6s called model >100/110. They just released a decent remake of the Casio >6300 (a graphical calc) badged as the "GC1000". > I just wanted to note that at least the 6S solar is in fact a relabelled "Textet Albert", and not invented by HP, of course. So it seems obvious that the Lexibook machines are rebranded Textet calcs.

The 6S w/o solar is slightly modified, but from the same brand. One or two years ago some other people and I posted some details about the pcbs of the 6S and 30S here. Summary: Not a single HP part inside.

Regards,

Raymond

HP parts and HP-6S

*Message #16 Posted by [Gene](#) on 23 Aug 2002, 10:24 a.m.,
in response to message #15 by Raymond Hellstern*

"One or two years ago some other people and I posted some details about the pcbs of the 6S and 30S here. Summary: Not a single HP part inside."

Not even an OFF switch! (on the HP-6S) :-)

Gene

Re: New Line of HP calculators?

*Message #17 Posted by [Steve Borowsky](#) on 23 Aug 2002, 9:30 p.m.,
in response to message #14 by GE (France)*

"So I think even if the next HP line is OEMed from some obscure remote company, it could be a nice surprise. IF there is one..."

Let's hope it's not a re-badged Casio fx-7000G. Though I wouldn't mind a modernized 7500G...

Re: New Line of HP calculators?

*Message #18 Posted by [Chris Roccati](#) on 24 Aug 2002, 6:08 a.m.,
in response to message #14 by GE (France)*

> Another remark : yes TI models were cheaper and thus theoretically
> less durable, but it depends on how you use them : if you care as
you
> would for a \$500 model, they keep on working fine virtually
forever.

Not really, mu HP11C will soon reach the age of 18 years, I have it since the high school. It was handled in the roughest possible way: I used to carry it in my backpack, which was more than oftent trown and kicked around (in the extremely long travels from home to school and back). The poor thing has many scars to prove the battles he fought, but still works fine...

Re: New Line of HP calculators? / sacralige

*Message #19 Posted by [db\(martinez,california\)](#) on 24 Aug 2002,
8:52 p.m.,
in response to message #18 by Chris Roccati*

chris;

yes, i agree that hp calcs are usually much more robust than ti units. you practically have to stomp a voyager or pioneer to kill it but the opposite can be shown.

there were well built ti & other off-brand lines too. the ti 58/58c/59 was particularly well built with the only problem being

the battery clips, and they can be re-soldered right through the battery door; how many permanently fried hp 30 series from the same era have we all seen. older mexican rockwells seem to always work; there are a lot of dead hp 21's that were made in the same year. the 20, 30, and 60 series had problems with the charging systems/methods and companies like ti went the cheap but bomb proof way and put 9v batteries in their calcs. the series that included the first ti 30 and programmer almost always still work. novus mathematicians are also quite stout but with their bad trig accuracy you could wish they weren't, and they were rpn too.

i'm not bad mouthing hp in general. i use my 41 at least a dozen times a day and i have a growing (lowers his head, shuffles his feet, speaks sotovoice) collection of them. i do however respect good engineering and construction. some of those brand x's had the audible click and tactile feedback that hp has now stopped designing into their current tiny lineup and some like commodore and litronix tend to keep on working. no one can look at a navtronic and say "cheap".

so, while i agree with you i'll have to quote paul harvey and say: "now you know the rest of the story". and now that i am quoting old paplo i think it is time to sign off and probably to have a long talk with dr. meyer and/or my priest too.

- d

using the hp540 jornada

*Message #20 Posted by [earl wilson](#) on 25 Aug 2002, 6:09 p.m.,
in response to message #8 by John K. (US)*

seeking manual or other source of usage info on the 540 jornada

Re: New Line of HP calculators?

Message #21 Posted by [Frank Travis](#) on 22 Aug 2002, 3:41 p.m.,
in response to message #1 by carl

You might want to ask your college bookstore from what source did they get this information (i. e., a local HP distributor, a salesman, etc.) so a followup can confirm the validity of HP coming up with a new line of graphing calculators. My favorite HP calculators are the HP 48GX, HP 17B II (business), and HP 19BII (business). They have hard plastic keys and there is a smorgasbord of supplementary manuals and third party books on getting the most out of them. I have not found such a smorgasbord for other types of calculators. My wish is that if HP does come up with new calculators that they still retain the hard plastic keys and have backward compatibility with the three calculators I mentioned. I know that PDAs are doing more everyday, but to me there is still a place for traditional dedicated calculators.

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dead 41CV

Message #1 Posted by [J Tiers](#) on 21 Aug 2002, 1:25 p.m.

This machine has worked since 1978 or so, and has indeed been back to HP (who seem to have hams for hands).

Anyway, it was working as I was doing calculations, then quit in a few seconds between the time I set it down and picked it up again, possibly 4 sec or so. As I wasn't watching, I don't know what exactly it did.

No display or response.

It was then disassembled, the broken posts etc reinforced and glued, but still no response. Contact appears to be made to all the pieces.

It has the extra board with CPU etc, and does not appear to have any opens or etc on the display.

Any OTHER ideas? Symptoms (and life) are noticeably lacking!

No, batteries were NOT the problem

Message #2 Posted by [J Tiers](#) on 21 Aug 2002, 10:21 p.m.,
in response to message #1 by J Tiers

That caught me once many years ago.

And, yes I have already gone thru the archives

*Message #3 Posted by [J Tiers](#) on 22 Aug 2002, 8:36 a.m.,
in response to message #2 by J Tiers*

so I am not just popping up here to ask a dumb question with no research.

There used to be a bunch of folks commenting on fixing 41C units, they must have all left by now.....

Re: dead 41CV

*Message #4 Posted by [Dan M](#) on 22 Aug 2002, 9:04 a.m.,
in response to message #1 by J Tiers*

I have had terrible luck with the style of "zebra strips" that are long white rectangles with the conductor going up through the middle of them. The "zebra strips" are the things that connect the logic board with the keyboard. If the connection is no good, then the calculator won't work.

Do you have these kind of "zebra strips," or the other kind where the conductor wraps around the outside of a squishy tube? In either case, as I'm sure you know, you should "un-squish" the squishy part in the hopes to make better contact between the boards. I have not been able to get the white rectangle strips un-squished enough to work reliably once they stop working. Maybe others have had better luck.

This is one way (bad zebra strip connection) that a 41 calculator with all known good parts won't work at all.

Good luck, and sorry for the lack of technical terms.

Dan

Re: dead 41CV

*Message #5 Posted by [thibaut.be](#) on 22 Aug 2002, 9:41 a.m.,
in response to message #4 by Dan M*

Indeed, I've ressucited several 41 by just stretching the zebra strips...

It is a "fullnut", so I have all the

*Message #6 Posted by [JTiers](#) on 22 Aug 2002, 12:42 p.m.,
in response to message #4 by Dan M*

strips. I think Fullnut has the CPU board, right?

The strips seem to be making contact, and the failure mode was a quick total failure. No flakyness, no indication of problems, worked and suddenly stopped.

Is the info on the CD's useful? I looked at what is available, and didn't seem to find specific 41 info. Maybe I didn't realize what was meant.....

Re: It is a "fullnut", so I have all the

*Message #7 Posted by [Ellis Easley](#) on 22 Aug 2002, 1:39 p.m.,
in response to message #6 by JTiers*

There is a 41C service manual on the Museum CD-ROMs.

Yep, ordered it thanks NM

*Message #8 Posted by [J Tiers](#) on 23 Aug 2002, 8:44 a.m.,
in response to message #7 by Ellis Easley*

nm

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OT: Pocketronic manual

Message #1 Posted by [Stefan](#) on 21 Aug 2002, 9:20 a.m.

Hello, perhaps someone of you has this old calculator and can help me with a scan of the user manual. I discovered the tricky way of using RPN this calculator uses but I want to read how it was explained to the common user. I can offer a pdf of the patent which shows a circuit diagram but no real explanation.

Bye

Stefan

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Font File for HP-71B Required

Message #1 Posted by [Gordon Dyer](#) on 21 Aug 2002, 8:05 a.m.

Does anyone have a Windows font file which matched the HP-71 font?

Thanks in anticipation.

Re: Font File for HP-71B Required

Message #2 Posted by [Gordon Dyer](#) on 21 Aug 2002, 5:36 p.m.,
in response to message #1 by Gordon Dyer

Thanks for the font files Luiz.

I now have Windows fonts for HP-41C, HP-10C series and HP-71B thanks to Luiz C. Vieira (Brazil).

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HP-41 Font File for Windows required

Message #1 Posted by [Gordon Dyer](#) on 20 Aug 2002, 9:08 p.m.

Does anyone have a Windows HP-41 font file they can email to me?

This article has Mac files which need conversion...

139: HP-41 Fonts, Ernie Malaga - 27 Feb 2001, 6:09 p.m.

Thanks in anticipation.

Gordon

Re: HP-41 Font File for Windows required

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 20 Aug 2002, 10:13 p.m.,
in response to message #1 by Gordon Dyer

Hi;

I'm sending you (top the e-mail address you posted here) a copy of the font I created a few years ago and has been recently updated.

Please, feel free adding any suggestions.

Success.

Re: HP-41 Font File for Windows required

Message #3 Posted by [Gordon Dyer](#) on 21 Aug 2002, 8:03 a.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)

Thanks, I have received the font file and it works fine!

Regards, Gordon

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HP-71B Early Date Code

Message #1 Posted by [Gordon Dyer](#) on 20 Aug 2002, 7:04 p.m.

I have an HP-71B with date code 2401A00135. This is 1 week earlier than shown in the early date codes page. The VER\$ is HP71:1AAAA. It still works ok but is in tatty condition!

Re: HP-71B Early Date Code

Message #2 Posted by [Michael Meyer](#) on 20 Aug 2002, 8:38 p.m.,
in response to message #1 by Gordon Dyer

Wow.

Does anyone else have one with that ver\$? I thought BBBB was the first!!! Is this a prototype?

Michael

Re: HP-71B Early Date Code

Message #3 Posted by [Gordon Dyer](#) on 20 Aug 2002, 9:11 p.m.,
in response to message #2 by Michael Meyer

It is definitely not a prototype, or at least it looks like it was a full production unit, but now very battered and tatty. I can send photos if anyone is interested.

Gordon

Re: HP-71B Early Date Code

*Message #4 Posted by [Raymond Hellstern](#) on 21 Aug 2002, 3:32 a.m.,
in response to message #3 by Gordon Dyer*

Yes, I'd like to see some photos of it. Thanks in advance.

Raymond

Re: HP-71B Early Date Code

*Message #5 Posted by [Gordon Dyer](#) on 20 Aug 2002, 9:13 p.m.,
in response to message #2 by Michael Meyer*

Does anyone have information on bugs in VER\$ 1AAAA ?

Re: HP-71B Early Date Code

*Message #6 Posted by [tom](#) on 21 Aug 2002, 6:17 a.m.,
in response to message #2 by Michael Meyer*

It appears that version AAAA wasn't used for very long, as I have a 71b with a serial number of 2409Axxxxx. Made just 8 weeks later, with a ROM ver of 1BBBB.

Re: HP-71B Early Date Code

*Message #7 Posted by [Peter \(Germany\)](#) on 21 Aug 2002, 12:14 p.m.,
in response to message #6 by tom*

My earliest non-prototype has a serial of 2410A00149 with VER\$: 1BBBB. I have one (prototype) with serial 0000A00035, which shows for VER\$: TI%RM4-HP71:0AAAA, but because of the 0000 serial I do not know when it was made.

Re: HP-71B Early Date Code

*Message #8 Posted by [Gordon Dyer](#) on 21 Aug 2002, 1:21 p.m.,
in response to message #7 by Peter (Germany)*

Yours does seem to be a prototype and is earlier than mine.
Perhaps Dave Hicks will now update his earliest date code page?

Re: HP-71B Early Date Code

*Message #9 Posted by [Mike](#) on 24 Aug 2002, 12:00 a.m.,
in response to message #6 by tom*

I have a 2406 that has 1BBBB

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HP Forum Archive 08

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HP case yellowing. Shout it out.

Message #1 Posted by [Michael Meyer](#) on 20 Aug 2002, 2:44 p.m.

I've been restoring a couple of HP-97's. As I wrote earlier, I can see why people like restoring this machine. It completely strips down to the point that the keypad can be washed in soap and water, etc.

In order to try to reduce the extreme yellowing and darkening of the case. I placed the case in a solution of dish soap and bleach overnight in the sink-- not the keyboard, as I'm afraid it would dissolve the paint. (Cleans the sink, too!)

After a little scrubbing, the case does look much lighter and, of course, completely clean.

Do any of you engineers out there know if this will harm the plastic at all? I don't see any evidence of damage and am hopeful the solution is only cleaning the outer molecular layers and not reaching the bulk of the plastic. In other words, I don't think it's doing any harm.

Any comments would be helpful.

Thanks, Michael

Re: HP case yellowing. Shout it out.

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 20 Aug 2002, 2:53 p.m.,
in response to message #1 by Michael Meyer

Hi, Doc; how are you?

I am an engineer, but I know nothing bout industrial chemistry. I believe Chemical OR Industrial Engineers/Technicians will be of help.

I am ALWAYS afraid of using chemical products to clean plastic houses. Mostly if they need to be sank overnight. But you are talking about an (even) used HP97's back assy, I believe this if fine.

Cheers.

Re: HP case yellowing. Shout it out.

Message #3 Posted by [David Smith](#) on 20 Aug 2002, 3:31 p.m.,
in response to message #1 by Michael Meyer

It should be okay for a one off cleaning. I would expect any problems to show up immediately or shortly after drying. The problem that I would expect to occur would be a chalky appearance to the plastic, but if it came out OK it sounds like the plastic is not affected by chlorine. Perhaps a little Oxyclean would help also. I know it works wonders in some strange applications.

Re: HP case yellowing. Shout it out.

Message #4 Posted by [Erik Wahlin](#) on 20 Aug 2002, 3:49 p.m.,
in response to message #3 by David Smith

I have tried glass bead blasting in the past, and have had pretty good results. You need a real fine bead though or you will change the texture of the plastic.

Re: HP case yellowing. Shout it out.

Message #5 Posted by [Gordon Dyer](#) on 20 Aug 2002, 7:08 p.m.,
in response to message #1 by Michael Meyer

I have a yellowed Acorn Electron (UK) and will try your clean on it, so thanks for the tip!

Re: HP case yellowing. Shout it out.

Message #6 Posted by [Michael Meyer](#) on 20 Aug 2002, 8:42 p.m.,
in response to message #5 by Gordon Dyer

Actually, I just now pulled it out-- after 24 hours. Looks good. I have also had great luck with a very light coating of "Armor-All" on the plastics. Gives them a lasting lustre. I've also found this works great on areas near the "on" switches that show that whitish change to the plastic. Again, it's supposed to be good for plastics; preventing oxidation, etc. I've been using the light Armor-All coating for some time.... calcs I shined up 3 years ago still look great!

Michael

Re: HP case yellowing. Shout it out.

*Message #7 Posted by [Juan J](#) on 21 Aug 2002, 12:28 p.m.,
in response to message #6 by Michael Meyer*

Michael:

Many plastic housings get yellow because of dirt, smoke or direct sunlight exposure. Almost all plastics include additives for UV light protection, color and molding viscosity reduction, among other things.

Sunlight usually degrades the polymer's molecular bonds, and sometimes even the best UV absorbers cannot prevent degradation due to long-time exposure. However, it is easier to deal with dirt or smoke.

HP handhelds housings are made of acrylonitrile-butadiene-styrene (ABS,) a high strength copolymer with good resistance to chemicals. Since it is intended for heavy duty applications, ABS is carefully additivated to reinforce its mechanical properties in the long run, including direct sunlight exposure, heat, abrasion and impact resistance.

Therefore, a soak in oxyclean and soap will not harm any plastic housing. It will remove surface dirt and nothing else. And, as an extra feature, many cleaning solutions have substances known as optic blankers, which adhere to the surface being cleaned and do not absorb visible but UV light, making the surface look even cleaner.

HP might have made somewhat fragile circuit boards or wheels that become gummy in time, but the plastic it used for the housing was the best for the job. Shout the dirt out and make it look nice and clean.

Hope this helps.

Juan

Acorn Electron

*Message #8 Posted by [thibaut.be](#) on 21 Aug 2002, 12:35 p.m.,
in response to message #5 by Gordon Dyer*

Really ? My first computer was a BBC model B... what a hell of a machine !

Re: HP case yellowing. Shout it out.

Message #9 Posted by [thibaut.be](#) on 21 Aug 2002, 12:40 p.m.,
in response to message #1 by Michael Meyer

Not being an engineer at all I'm always scared of using cleaning products. I already had bad experiences of chlaky effects, so what I do and what is usually successful is a solution of water and... dishwashing soap... If you rub the calculator with it most of the dirt will disappear.

Re: HP case yellowing. Shout it out.

Message #10 Posted by [Michael Meyer](#) on 21 Aug 2002, 1:42 p.m.,
in response to message #9 by thibaut.be

Thank you all for the discussion!!

My bleached case, on drying and closer examination, is definitely lighter in some areas and looks much better than before, but it does have some uneven areas... it's darker, now, rather than lighter where there were stickers. Presumably, there was enough residue where the stickers were to block the cleaning effects. I would guess that if I hadn't just soaked it, but had scrubbed it several times, it might be more even, but this is just a guess.

I'm glad to hear about the durability of the ABS cases! Again, a reminder to all to be very careful with the keyboard, as even a soaking too long in soapy water can disturb the paint... especially on the woodstock series.

Michael

Re: HP case yellowing. Shout it out.

Message #11 Posted by [Mark Glusker](#) on 21 Aug 2002, 1:58 p.m.,
in response to message #1 by Michael Meyer

I am a product design engineer, so I have designed and tested quite a few plastic parts. I have always assumed that HP cases were an ABS/polycarbonate blend, but I don't really know for sure.

I don't think you will cause any damage with a water-soap solution and light scrubbing. I have used a child's toothbrush and Windex to scrub HP's, and have never had any trouble. I dip the toothbrush in a puddle of Windex rather than spraying the Windex on the (or into the) calculator.

In testing various products, we have found that certain oils can degrade the strength of plastics.

We use olive oil to simulate the effect of years of exposure to oils and grease from human skin contact. Also, sunscreen and some hand lotions have a very dramatic effect on plastics.

I would avoid Armor All on any parts that have stuck-on labels - Armor All has a lot of silicone in it which will migrate everywhere and completely ruin the adhesive bond.

About 20 years ago, I used an old HP workstation that had a painted plastic keyboard surround. Before too long, the paint peeled away where users rested their palms. Apparently, the paint had been tested with a variety of degradants, but not with human sweat and skin oils.

It's beautiful!

*Message #12 Posted by [Michael Meyer](#) on 21 Aug 2002, 10:45 p.m.,
in response to message #11 by Mark Glusker*

Well, it's done.

I don't know how to post a picture, but imagine this:

The 97 was awful. Dirty. Darkened. Sticking keys. Broken (gummy) card reader. Dead batteries.

After reassembling (second time, as the first time revealed a card reader still not in perfect adjustment...), it looks like a new machine. Some final scrubbing with cleaner removed the remaining sticker residue. The keyboard, after cleaning with soap and water (as the contacts aren't part of the assembly once apart) is perfect. Battery pack rebuilt with new NiCD's.

Now, picture an HP-97 that looks and works like new. Very cool.

Ah, I love this hobby! Thanks to all for your comments, and as always, support.

Michael

Re: It's beautiful!

*Message #13 Posted by [David Smith](#) on 21 Aug 2002, 10:49 p.m.,
in response to message #12 by Michael Meyer*

Best sticker residue/marker/paint remover I have found is white gas (cigarette lighter fluid). Does not harm cases but can leave water marks on the keyboard.

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HELP ON HP28S

Message #1 Posted by [Salome Steyn](#) on 20 Aug 2002, 7:12 a.m.

I have a real problem with my HP28S calculator or perhaps I am just stupid, but PLEASE I REALLY NEED YOUR HELP, because on this moment I think that this is not a nice calculator!!!!!!

I want to store definitions and so on, on my calculator with formulas and graphs, PLEASE HELP..... HOW DO I DO THAT!!!

I tried, and tried but most of the times it gives me a syntax error, why...

For instance :

Reverse Breakdown (RBV)

Also known as PIV

$$3(I1 + I2) + 2I1 = 30$$

CAN YOU PLEASE HELP ME, AS I REALLY WANT TO USE THIS CALCULATOR BUT CAN'T, I don't want the calculator to solve the equation it must just show me the whole description with the formula like that!!!

PLEASE HELP!

Re: HELP ON HP28S

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 20 Aug 2002, 12:36 p.m.,
in response to message #1 by Salome Steyn

Hi;

try this:

'3*(I1 + I2) + 2*I1 = 30'

You'll need explicitly to tell the calculator to multiply the numbers 3 and 2. Also, surround the equation (expression) with '. It must work.

Success.

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Self test for 41CX

Message #1 Posted by [John Breda](#) on 20 Aug 2002, 6:31 a.m.

Does anyone know what the self-test sequence is for the 41CX?

Re: Self test for 41CX

Message #2 Posted by [thibaut.be](#) on 20 Aug 2002, 8:05 a.m.,
in response to message #1 by John Breda

There is no self test sequence on 41C* models....

Re: Self test for 41CX

Message #3 Posted by [Raymond Hellstern \(Germany\)](#) on 20 Aug 2002, 9:32 a.m.,
in response to message #2 by thibaut.be

At least not built-in;-)

There exist some test modules resp. EPROM sets which allow for tests, but I don't think these will be easy to get hands on...

Raymond

Re: Self test for 41CX

Message #4 Posted by [Gordon Dyer](#) on 20 Aug 2002, 7:42 p.m.,
in response to message #1 by John Breda

Although there is no self-test, there are two useful things to try, here are the quotes from the 41CX manual:

Page 155:

To reset the computer (that is, to clear main and extended memory and set all flags to default status):

1. Turn the computer off.
2. Hold down <- key.
3. Press ON key.
4. Release <- key.

The display will show MEMORY LOST.

Page 385:

Verifying Proper Operation

If it appears that the computer will not turn on or otherwise is not operating properly, review the following steps.

1. Be sure that all the batteries are inserted with the correct polarity and that the battery contacts are not dirty.
2. If the computer does not respond to keystrokes, try to reset it as follows: press and hold the ON key and ENTER keys simultaneously, then release them. Turn the computer on, if necessary, and test for a response to keystrokes.
3. If there is no response, remove and reinsert the battery pack.

If the computer still does not turn on, install fresh batteries.

If this does not suffice, remove the battery pack and let the computer discharge overnight.

When you reinstall the batteries and turn the computer on, if the display shows MEMORY LOST, then the memory and the computer have been cleared and reset.

4. If the computer still does not respond to keystrokes, remove the battery pack and short the end battery terminals inside the HP-41 together. *Only momentary contact is required.* Replace the batteries. The contents of continuous memory will be lost, and you might need to press the ON key more than once to turn the computer back on.

5. If there is still no response, the computer required service.

I hope that this helps you!

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Aviation Pac and programming the 41CX

Message #1 Posted by [John Breda](#) on 20 Aug 2002, 6:24 a.m.

I posted a message yesterday but now was able to recall more about what I did 15 years ago. I used the aviation pac which works well. Additionally, I obtained some programs that were in the users library, one such program was number 1527C, HP 41C Flight Computer. It was designed to be used with the aviation pac defining user keys to start applications in the aviation pac and add additional calculations. The template I made was one shown in this program.

I tried to reload this program last night. I tried first via magnetic cards, and received card errors, and then tried from the bar code. Although the bar code seemed read in correctly, I was not able to run the program afterward. First, I should check that the calculator is working properly. I seem to remember that there is a self-test sequence for the 41CX but do not recall what it is. Secondly, could anyone give me a quick outline as to how to enter a program via optical wand so I might check what I am doing.

The program requires 318 registers, so I am setting the size to 001. The I am simply entering via the wand, pressing GOTO.. after each program section. The catalog seems to reference all that it should, but when I define the necessary user keys, they can not find the program when activated.

Your assistance is appreciated.

Re: Aviation Pac and programming the 41CX

Message #2 Posted by [Fred](#) on 20 Aug 2002, 10:42 a.m.,

in response to message #1 by John Breda

I have never used a wand but if you press GOTO .. after each section this may include an END instruction between the sections, so local labels may not be solved !!!!

An idea, like an other

Fred

Re: Aviation Pac and programming the 41CX

Message #3 Posted by [John K. \(US\)](#) on 20 Aug 2002, 9:44 p.m.,
in response to message #1 by John Breda

Hmm. Using 318 out 319 registers doesn't really leave much room for variables... ;^)

I seem to recall that some of the larger programs had (at least) two parts. The first would set up the system, then prompt for another card. The second card would load the main part of the program, overwriting the original. Some of the really big ones would ask for different cards based on which part of the application was being used. Is it possible that the Flight Computer software is set up that way?

Re: Aviation Pac and programming the 41CX

Message #4 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 20 Aug 2002, 10:32 p.m.,
in response to message #3 by John K. (US)

Hi;

I do not know the program you mention here, but there is an instruction in the wand's repertoire that acts like MRG (merge) in the card reader, and other that acts like RSUB (read subroutine). Fred is right about it, pressing GTO . . while loading programs with the use of a wand will add an END in the last program in memory. But if you don't do it, loading the next program will overwrite the last one in memory that has no END (permanent .END. does not count as part of the last program).

The instructions available in the wand for loading a program is WNDLNK, and to load a subroutine is WNDSUB, but I do not have the manual in hands and I have never used them. Should you read about them and try some program loading.

Hope you have success.

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Model 27

Message #1 Posted by [Chuck Lytle](#) on 19 Aug 2002, 3:22 p.m.

My Model 27 was bought new at the Portland State Univ. bookstore in Sept., 1976. I used it four five years of grad school, three years of univ. teaching, and a year in env. consulting before it stopped working. Symptom: neither new batteries nor the power pack would make it run. By the time I got around to contacting HP in Corvallis, OR, they had moved everything offshore. Can it be made functional? Who can or would do it? You wouldn't believe the stuff I did with it, from Newton's Approximation through Gaussian quadrature and boxcar averaging through figuring out how much car I could afford with a \$100/month payment.

Re: Model 27

Message #2 Posted by [thibaut.be](#) on 19 Aug 2002, 3:33 p.m.,
in response to message #1 by Chuck Lytle

Have you look up the contacts ? Beware, NEVER turn it on without batteries in it and without being sure they make a good contact. Most of the time if it remains "dead" it's a power supply problem, quite easy to solve. You might want to rebuild your pack, this is done quite easily in opening the pack in 2 pieces with a cutter and replacing the cells with 2 new AA NiCad cells that you will load at full charge before...

Otherwise there are many other articles in this forum that explain how to ressucite a woodstock calc.

Best wishes to success !!

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aviation pac for 41-CX

Message #1 Posted by [John Breda](#) on 19 Aug 2002, 1:52 p.m.

Can anyone help me out? I made a user template for the HP aviation pac 15 years ago. (I have a scan of it should you need to see it to answer my question). It defines user keys on the HP 41. I recently purchased the ROMm manual on CD from the HP museum but it does not give any information on the user defined keys and this template (which presumably the original mainual which was lost in a move referenced). I am able to run the programs per the CD manual, but do not recall how to make use the used defined keys from the template. Perhaps there is a set to generate the user definitions from the ROM application that I do not recall. Please e-mail to jbreda@massmed.org with any assistance. Thanks.

Re: aviation pac for 41-CX

Message #2 Posted by [Les Bell](#) on 20 Aug 2002, 12:27 a.m.,
in response to message #1 by John Breda

I'm not sure what you're getting at here, John. I still have the Aviation Pac, which I bought in the mid-eighties when I learned to fly. There was no template with the pac, as far as I know - I certainly don't have one now.

The pac doesn't make much use of user-defined keys, since it mostly prompts for input. The exception would be the first program, "Flight Management", which does speed/distance/time/fuel/fuel flow calculations. For that one, the A-E keys represent (and are labelled, when the program starts) D S T FF F respectively.

For the other programs, I guess you could use ASN to assign the starting labels to other keys for faster starting. Is that what you did, with the template to remind you?

Best,

--- Les Bell, CISSP [<http://www.lesbell.com.au>]

Re: aviation pac for 41-CX

*Message #3 Posted by [Dave](#) on 20 Aug 2002, 12:46 p.m.,
in response to message #2 by Les Bell*

I have the aviation pac and there IS a keyboard template for it. I'll try to find it and scan it. Can't remember anything more about it off the top of my head, but I'm sure there is a template. Stay tuned...

Re: aviation pac for 41-CX

*Message #4 Posted by [Les Bell \(Sydney\)](#) on 20 Aug 2002, 6:54 p.m.,
in response to message #3 by Dave*

I'll be interested to see if there is, Dave. I bought my aviation pac new, sealed, back in 1986 or so and don't recall ever having a template, nor can I find one among the templates I stored in the black plastic module wallets.

Maybe I was duded? What's the complaint address at hp.com? <grin>

Best,

--- Les Bell, CISSP [<http://www.lesbell.com.au>]

Re: aviation pac for 41-CX

*Message #5 Posted by [Dave](#) on 21 Aug 2002, 6:23 p.m.,
in response to message #4 by Les Bell (Sydney)*

Well, I once had a teacher who said "only fools are positive." I was "positive" that I had seen a template for the aviation pac. I just looked through all my HP 41 stuff and couldn't find one, so I will have to plea the fool.

Sorry to have been so sure. There appears not to be a template for the aviation pac.

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41c pictures

Message #1 Posted by [Lars](#) on 19 Aug 2002, 1:19 p.m.

I took apart a 41c recently for repairs and also took some pictures. Have a look at

www.mekanik.ikp.liu.se/staff/larjo/hp41.html

--Lars

Re: 41c pictures

Message #2 Posted by [Mike Sebastian \(Texas\)](#) on 20 Aug 2002, 7:39 p.m.,
in response to message #1 by Lars

Thank you for sharing the pictures.

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Congrats Dave! (Big HP Calc article in Oregonian newspaper)

Message #1 Posted by [Matt Kernal \(US\)](#) on 19 Aug 2002, 12:43 p.m.

Woohoo Dave! Imagine the BIG surprise I had this morning as I opened today's Oregonian (Portland, OR) newspaper and found a picture of our Dave Hicks sitting in front of an HP9100 along with another picture of an HP 25C and another of an early T.I.M. (Time Is Money) adding machine!

The article is titled "The Arithmetic of Love", and is the lead article on the cover of today's Living section. The story tells of Dave's early fascination with HP calculators (at age 13) and of his current collection of around 200-300 calculating devices.

Although the article can only touch the surface of various aspects of Dave's life and hobbies, it does mention calculator collectors (that would be "us") number in the thousands, and that Dave's website is one of Oregon's most visited. Wait-a-go Dave, the Oregonian, and to the rest of us for giving credence to this great hobby!

Matt (probably one of Dave's closest (HP collecting) neighbors (Beaverton, OR), with only 40-50 HP's :-)

Link to article...

Message #2 Posted by [Matt Kernal \(US\)](#) on 19 Aug 2002, 12:49 p.m.,
in response to message #1 by Matt Kernal (US)

GO TO: <http://www.oregonlive.com/oregonian/index.ssf> and navigate to the bottom-left corner of the page to access the article.

The article will probably only run today (Aug. 19, 2002)

Matt

Direct Link to article...

Message #3 Posted by [Greg Harris](#) on 20 Aug 2002, 8:43 p.m.,
in response to message #2 by Matt Kernal (US)

Try http://www.oregonlive.com/living/oregonian/index.ssf?/xml/story.ssf/html_standard.xml?/base/living/102958535534612.xml

as a direct link to the article

Greg

Re: Congrats Dave! (Big HP Calc article in Oregonian newspaper)

Message #4 Posted by [thibaut.be](#) on 19 Aug 2002, 1:36 p.m.,
in response to message #1 by Matt Kernal (US)

Congratulations Dave !

Thanks!

Message #5 Posted by [Dave Hicks](#) on 19 Aug 2002, 3:05 p.m.,
in response to message #1 by Matt Kernal (US)

I'm kind of surprised at the main photo that they used. I think that was right after I said "I feel like Burt Reynolds" ;-)

Re: Thanks!

Message #6 Posted by [Raymond Hellstern \(Germany\)](#) on 19 Aug 2002, 4:17 p.m.,
in response to message #5 by Dave Hicks

Hi Dave,

could you or someone else provide the photos? I could read the article online at

D:\RPL\NEWS\Calculator Hicks' collection includes 200-300 machines.htm , but I didn't see any related pictures.

Many thanks in advance.

Regards,

Raymond

Here's a BIG scan of the front page

Message #7 Posted by [Dave Hicks](#) on 19 Aug 2002, 5:31 p.m.,
in response to message #6 by Raymond Hellstern (Germany)

Steve Woodward said it was OK to post this.

LIVING

1. "XXX," \$23 million
2. "Signs," \$19.5 million
3. "Blue Crush," \$15.2 million
4. "Spy Kids 2: Island of Lost Dreams," \$11.6 million
5. "Austin Powers in Goldmember," \$8.7 million

- Estimated ticket sales for Friday through Sunday at North American theaters, according to Exhibitor Relations



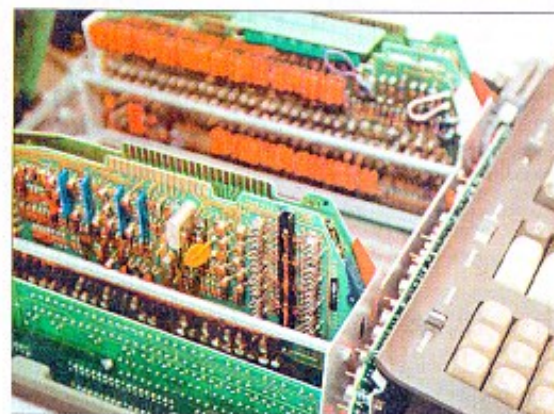
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2002

LIVING EDITOR: BRIDGET OTTO • 503-294-7612

The arithmetic of



The memory of the Hewlett-Packard 9100A, introduced in 1968, used thousands of diodes instead of chips and could display numbers up to 10⁹⁹. The list price was \$5,500.

*Computer engineer turned curator
Dave Hicks creates an online shrine
to his Hewlett-Packard calculators*

By **STEVE WOODWARD**
THE OREGONIAN

Like many 13-year-old boys, Dave Hicks fell head over heels in love for the first time.

Unlike most boys, however, the object of Hicks' affections could fit neatly into a pocket, do square roots and speak a language called Reverse Polish Notation. They met through an advertisement in Scientific American.

"It was a simple one-page, black-and-white ad for the most amazing product I had ever seen," Hicks would later write.

It was an ad for the HP-35, the first slide-rule pocket calculator ever made by Hewlett-Packard.

Sigh. True love.

Thirty years later, the former Intel computer engineer has transformed love at first sight into one of Oregon's biggest and most obscure tourist attractions: the Museum



DAVID G. HICKS

Age: 43

Marital status: Has traveled to China for potential matchmaking opportunity

First job at Intel: Real-time operating systems software engineer

The HP-35 handheld calculator advertising copy that changed his life: "When you first hear about it, it sounds like an electronic slide rule, the kind that's been available only in science fiction."

His first calculator: HP-25 scientific programmable handheld calculator, bought for \$250. (Hicks sold it in college to buy food.)

Why he still loves the

has transformed love at first sight into one of Oregon's biggest and most obscure tourist attractions, the Museum of HP Calculators.

Admission is free: Just point your Web browser to www.hpmuseum.com.

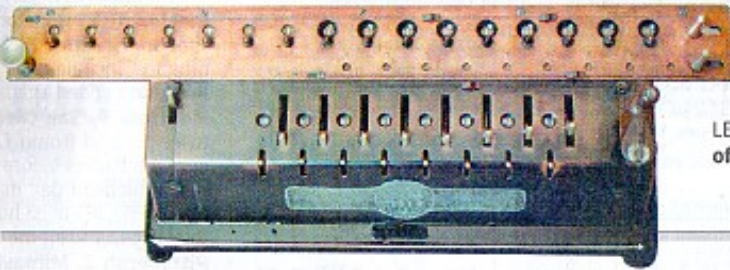
The museum's visitors, numbering a few thousand each day, are die-hard fans of Hewlett-Packard calculators, which were produced in Corvallis before manufacturing was moved to Indonesia and Australia.

"If I want to stroll down Memory Lane and see a calculator I owned when I was in grad school and working at a pizza joint nights, why, there it is," marvels Glen Kilpatrick, a Hewlett-Packard software engineer whose hob-

Please see **CALCULATOR**,
Page E3



This HP-25C continuous memory calculator is similar to Dave Hicks' first calculator, an HP-25 that he sold in college to buy food.



ABOVE: Dave Hicks shows off an HP-9100A, Hewlett-Packard's first calculator model. Introduced in 1968, the 9100A had a cathode-ray-tube display.
LEFT: This 1910 TIM (Time Is Money) calculator is one of Hicks' early mechanical calculating machines.



Photos by ROSS WILLIAM HAMILTON / THE OREGONIAN

(food.)
Why he still loves the HP-25: "I love the way it fits the hands."

Favorite books: David Brin's "The Uplift Saga" science fiction series

Favorite films: "Forbidden Planet," "Blade Runner"

What you can do with the JavaScript simulation of an HP-35 on Hicks' Web site: "You can pretend you're an HP firmware engineer."

His other passion: Collecting toys related to the "Doctor Who" science fiction TV series from the United Kingdom

Web sites:
www.hpmuseum.org
(Museum of HP Calculators); www.skaro.org
(Skaro Toy Museum)

- Steve Woodward

A BIG 'thank you' for the scan!

Message #8 Posted by [Raymond Hellstern \(Germany\)](#) on 19 Aug 2002, 5:52 p.m.,
in response to message #7 by Dave Hicks

Too bad the Oregonian didn't have this article in mid 1999, when I was there in Corvallis. I read that newspaper in my motel (because they put it on my room desk) This was an easy way to switch off from the tasks during the whole day;-)

Many thanks again,

Raymond

Re: Congrats Dave! (Big HP Calc article in Oregonian newspaper)

Message #9 Posted by [Karl Schneider](#) on 22 Aug 2002, 1:32 a.m.,
in response to message #1 by Matt Kernal (US)

I also opened my subscription copy of the Oregonian on Monday morning, and was pleasantly surprised to find the article. Several thousand hits a day on the site might not surprise me, what with its reference as a free source of info and pix for eBay auctions.

One of my co-workers, to whom I had mentioned my HP hobby, brought me the section from his paper, too. I suppose I could mail the extra copy of the article to the first one who asks...

Re: Congrats Dave! (Big HP Calc article in Oregonian newspaper)

Message #10 Posted by [Raymond Hellstern \(Germany\)](#) on 22 Aug 2002, 2:02 a.m.,
in response to message #9 by Karl Schneider

Hi Karl,

if you still have the copy, would you send it to me?

Thanks in advance.

Raymond

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Legal issues about expressing opinions in this forum

Message #1 Posted by [David Tan \(Singapore\)](#) on 19 Aug 2002, 3:47 a.m.

Hi all,

I have been reading this forum for long time. Of course, I am a fan of HP calculators. Recently, I find that some people are speculating on the activities of somebody or seller in ebay which are yet to be proved. They even explicitly pointed out particular links. Is this an act of defamation (or slander according to a poster here)? I am not sure whether they are liable to litigation for libel.

I envy the freedom of speech enjoyed by Americans. Does the "freedom of speech" become runaway without control? Do personal attacks or even defamation increase the joy of discussion? Personally, I am not interested in this kind of gossip. I prefer those discussions about technical issues.

I know that some websites require their members to register using non-free e-mail addresses before participating in discussions. Therefore, everybody is accountable for what he expresses in the forum.

Cheers,

David

Re: Legal issues about expressing opinions in this forum

Message #2 Posted by [James M. Prange](#) on 19 Aug 2002, 4:38 a.m.,
in response to message #1 by David Tan (Singapore)

I'm not a lawyer, but I believe that a statement would have to be false (or at least, not provably true) to be considered slander, defamation, or libel.

No, the Americans' freedom of speech doesn't include the freedom to make false statements about anyone. That's one of the reasons why such phrases as "in my opinion", "I heard", "the rumour is", "it is alleged", "the alleged [bad guy]", and "the suspect" are so common. Stating an opinion that damages someone's reputation as fact is risky. Even stating a fact that damages someone's reputation as fact is risky if you don't have the evidence to prove it.

Of course, even if the statement is provably true, there's still the risk of revenge.

Regards,
James

Re: Legal issues about expressing opinions in this forum

*Message #3 Posted by [Frank](#) on 19 Aug 2002, 2:32 p.m.,
in response to message #2 by James M. Prange*

Which is why perhaps that the average Lawyer in the US earns more per hour than the average graduate Engineer and is recognized by US society as having a more esteemed position, where in Japan, just the reverse is true, a manufacturing engineer is a position of very high esteem. Hey Todd? ;+} Is this factual or just a (US)urban legend? ---from an engineer

Re: Legal issues about expressing opinions in this forum

*Message #4 Posted by [Todd G.](#) on 19 Aug 2002, 5:54 p.m.,
in response to message #3 by Frank*

OK, Frank, I'll chime in.

Mr. Prange has it about right when he says the statement has to be true. In general, one cannot make false statements about people. However, the standards are different depending on whether the person is a public figure or a private person (standard is higher for a public figure, and lower for a private person). Expressing one's opinion is fine, but publishing falsehoods is generally not allowed (with some exceptions such as parodies).

IMHO, people should be careful to distinguish fact from opinion, especially when posting on the internet.

Todd

Re: Legal issues about expressing opinions in this forum

*Message #5 Posted by [Les Bell \(Sydney\)](#) on 20 Aug 2002, 9:52 p.m.,
in response to message #4 by Todd G.*

One should also bear in mind that in some (many?) jurisdictions, truth alone is not an adequate defence. The statement also has to be "of public interest" (notice, this is not the same thing as "of interest to the public").

Of course, once one gets into cross-jurisdictional issues on the Internet, everything becomes so difficult and expensive that legal remedies are unlikely to be pursued.

--- Les Bell, CISSP [<http://www.lesbell.com.au>]

Re: Legal issues about expressing opinions in this forum

*Message #6 Posted by [tom](#) on 20 Aug 2002, 6:27 a.m.,
in response to message #3 by Frank*

Hi Frank,

You may wish to take a look at this Gallup poll:

Who Americans trust

Most honest and ethical professions:

1. Nurses 2. Pharmacists 3. Veterinarians 4. Doctors 5. Teachers

Least honest and ethical professions:

1. Car salesmen 2. Advertising practitioners 3. Insurance salesmen 4. Newspaper reporters 5. Lawyers

SOURCE: GALLUP

Re: Legal issues about expressing opinions in this forum

Message #7 Posted by [Frank](#) on 22 Aug 2002, 9:13 p.m.,
in response to message #6 by tom

Interesting, and also I wonder if the poll will change this year or for the next couple of years to include some new titles/professions based upon the discovered financial issues exposed? There are some studies on Pharm folks which would indicate above average drug abuse, of course most often from stock. Always seem helpful, though we have heard in the news like any other profession of a few bad apples who were cutting dosage to patients, with some injured.

Legality, ebay, slander etc.

Message #8 Posted by [Dave Hicks](#) on 19 Aug 2002, 3:15 p.m.,
in response to message #1 by David Tan (Singapore)

I have been in email contact with the original poster and the seller who thought he had been slandered. In my opinion, the allegedly slanderous article was not even referring to him but to one of the bidders in his auction – someone whose unusual bidding style has been mentioned frequently on the forum lately. (I don't believe there was any slander against this person either unless "newbie" or "doesn't seem to understand proxy bidding" counts as slander.)

The poster of this article agrees with my interpretation but has also told me that it's OK to delete it or edit it for clarity and I'm waiting to hear which the seller prefers. (The original poster is not a native English speaker and his choice of words may not have been the best.) In particular he used the word "fake" (with the quotes around it) when strange, interesting, or unusual would have probably been more appropriate.

"I know that some websites require their members to register using non-free e-mail addresses before participating in discussions. Therefore, everybody is accountable for what he expresses in the forum."

That probably wouldn't have affected this discussion since everyone is using real email addresses in their posts. There is now a rule in the Terms of Use that you can't criticize real people without revealing your real identity. That rule wasn't broken here. I received an email response from the original poster within a few minutes of emailing him at his posted address.

The downside of making people register is that it stops many first-time posters. Frankly I get many emailed requests for help each day and I would like to encourage more rather than fewer people to use the forums since you people can produce better and faster answers anyway. (Unfortunately, I sometimes get months behind in my emails - in fact, many of the emails in my inbox right now are remaining "dusty" as I concentrate on the DVD.)

It does sometimes cross my mind to put some kind of limitation on ebay discussions. Ebay discussions have a **much** greater tendency to "go nasty" than any other topic. (Even when you don't see it, I get nasty emails.) I've recently come to believe that ebay's feedback system is very well designed. One 80 character comment (linked to a transaction) with an optional 80 character response, plus the ability to do "payback feedback" allows so little to be expressed that it protects ebay from defamation claims. ;-) That's a little sad, but I'm frequently left wondering why I should be put in the middle of someone's ebay complaint. At some point, I may stop them. How does everyone feel about that?

In the meantime, please continue using your own name when criticizing people and please choose your words carefully when talking about ebay.

Re: Legality, ebay, slander etc.

Message #9 Posted by [David Tan \(Singapore\)](#) on 21 Aug 2002, 4:22 a.m.,
in response to message #8 by Dave Hicks

Hi Dave,

I agree with you to some extent. To the best of my knowledge, criticisms about a party are used to point out a case that what he/she does does not reach an acceptable standard expected by the other people under a particular area of interest. Say for example, you said that the poster might not have chosen the best words. Normally, he will not be criticised for poor English because not everybody here is expected to have good English in order to post a message here. In fact, many of the audiences here are not native English speakers. If people had laughed at him, he would not have had post a message here. However, if he took an English examination, his standard of English would be criticised and assessed accordingly. If the same principle applies to the case of the 'rookie' bidder (forgive me for calling you this way! :P), he should have been treated more leniently.

Thank you very much for answering my questions from some of you here. Something suddenly strikes my mind. I am not sure whether such discussions have already undermined the interests of the buyer and the seller concerned. The 'rookie' buyer might not buy over eBay again. It is interesting to see whether eBay will take further (or legal) action against those people as it will strive to protect its own interest. Personally, I do not want anybody to be penalised in consequence. The HP forum used to be a peaceful place for people to express constructive opinions and will continue to be so.

Cheers,

David

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HP 33e and 33c battery packs

Message #1 Posted by [Kevin](#) on 18 Aug 2002, 5:06 p.m.

Does anyone know a source for battery packs for the 33e and 33c? I have several of them, with chargers, but no battery packs.

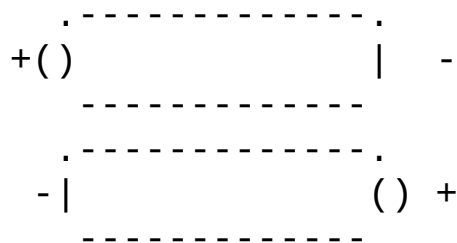
Thanks!

Re: HP 33e and 33c battery packs

Message #2 Posted by [Vassilis Prevelakis](#) on 19 Aug 2002, 6:25 a.m.,
in response to message #1 by Kevin

Series 30 battery packs are probably the easiest to construct. You take two AA rechargeable cells with flat tops (preferably with metal wire tabs if you can find them).

You then place them one next to the other and solder the positive end of one with the negative end of the other



You then use hot glue to join the batteries on the top side and only a third way on the bottom (to allow of the orientation tab on the bottom of the battery compartment).

Make doubly sure that the pack orientation is correct.

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32S2

Message #1 Posted by [Allen Russell](#) on 17 Aug 2002, 8:51 p.m.

Need to find a instructions book.

Re: 32S2

Message #2 Posted by [Kenji Nagahama \(Japan\)](#) on 18 Aug 2002, 7:53 p.m.,
in response to message #1 by Allen Russell

Visit <http://www.calcpro.com/>.

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HP-41 Navigation Pac?

Message #1 Posted by [Karl Schneider](#) on 17 Aug 2002, 5:11 p.m.

The Navigation Pac ROM for the HP-41 is apparently rare. The only offerings I've seen are an eBay auction a few months ago (dusty 41CX + wand + Nav Pac won for \$169 -- wish I'd bid more aggressively!); and one MoHPC member had one for sale in classifieds.

I'd like to write a program for the 42S with the following data interface:

Inputs: date, time, latitude, and longitude

Outputs: zenith angle, azimuth angle, rise time, set time for both sun and moon

I believe that the Nav Pac might offer some helpful code and ideas, but I don't know what it includes. My MoHPC CD-ROM set contains neither a scan of that particular Pac (one of the very few that are missing), nor a code listing of the ROM.

One user program for the 42S in the MoHPC library calculates phases-of-the-moon and lists an astronomical reference.

Could anyone provide a Table of Contents listing for the Navigation Pac ROM, or give any other helpful info? Many thanks in advance...

-- Karl

Re: HP-41 Navigation Pac?

Message #2 Posted by [Dave Hicks](#) on 17 Aug 2002, 5:33 p.m.,
in response to message #1 by Karl Schneider

Here's the table of Contents:

Great Circle Course and Distance
Great Circle Position
Rhumb-Line Course and Distance
Rhumb-Line Position
Great Circle Plotting and Voyage Planning
Dead Reckoning
Sight Reduction
Perpetual Almanac Stars, Sun Planets, Moon
Almanac Interpolator

Subroutines:

Sight Reduction Table
Calendar Functions
Greenwich Sidereal Time
Star Almanac
Fundamental Arguments
Astronomical Coordinate Conversions
Longitude to Latitude
Input/Output Routines

This manual will be on the next CD/DVD set which is what is currently consuming most of my time. I expect it to be ready quite soon.

Re: HP-41 Navigation Pac?

Message #3 Posted by [Karl Schneider](#) on 18 Aug 2002, 12:33 a.m.,
in response to message #2 by Dave Hicks

Thanks, Dave! (and Luiz Claudio by e-mail). This looks like a good module to get. The "Almanac Interpolator" might provide much of what I want, except the nice 42S menu interface.

BTW, I misremembered a fact in my original post: The phases-of-the-moon program was written for the HP-41, not the HP-42. That also seems to be covered in the Nav Pac.

Re: HP-41 Navigation Pac?

*Message #4 Posted by [Stephan \(CH\)](#) on 19 Aug 2002, 2:15 a.m.,
in response to message #3 by Karl Schneider*

Good Morning Karl As you mentioned it is very hard to get hold on a navigation pac. Approx. a month ago I was lucky to receive one. If it helps I could do a programlist printing for you. Let me know if you need copys of particular pages as well. Best regards Stephan

Re: HP-41 Navigation Pac?

*Message #5 Posted by [George](#) on 19 Aug 2002, 11:05 a.m.,
in response to message #2 by Dave Hicks*

Having the Navigation Pac manual on the next CD ROM set will be irresistable incentive for me to upgrade. I have had the ROM for some time but have been unable to find a manual (even a copy). Thank you for all your efforts, Dave.

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gene

Message #1 Posted by [Now a thief is using a pic of mine on ebay](#) on 17 Aug 2002, 4:49 p.m.

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1374247972>

The above is his listing for a TI 59 and printer. Note the paper does not go all the way across the print window. I took this picture last week on my kitchen table.

Here is my original auction listing. Note that the pictures are the same!

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1372694378>

Oh well! Gene

Re: gene

Message #2 Posted by [Raymond Hellstern \(Germany\)](#) on 17 Aug 2002, 10:00 p.m.,
in response to message #1 by [Now a thief is using a pic of mine on ebay](#)

Hi,

at least he sort of mentions that he 'borrowed' the picture;-)

Here in Germany I sometimes see pictures from the museum in eBay auctions, too. Some of the sellers add a link to here, others don't.

I asked some of the sellers if the photos showed their actual calcs. Only one of them answered my request, and stated that it was taken from here.

If I were the owner of those pictures, and didn't want them to be borrowed w/o permission or at least a suitable link, I'd place a huge watermark across the whole photo. Only those people who buy the museum CD would get pictures w/o the watermark. The small MoHPC logo on the edge of a picture isn't enough. As can be seen many times, it'll simply cut off... (OMHO)

Regards,

Raymond

Re: gene

*Message #3 Posted by [gene](#) on 18 Aug 2002, 7:12 a.m.,
in response to message #2 by Raymond Hellstern (Germany)*

yes, not quite the full "thief" as i thought at first. i emailed him and he quickly apologized and added the note.

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HP49g and Sun Clock

Message #1 Posted by [Speck](#) on 17 Aug 2002, 12:01 a.m.

Hi, everybody. I had seen sometime back that there was a sunclock program, which shows a world map and graphically displays which parts of the world are in daylight and which parts of the world are dark, for (I think) the 48 series calcs. Does anybody know what I'm referring to? I'm wondering if it works with the 49g, or if it's in assembly, and where it can be found. As I recall, it involved a library as well (please excuse my lack of HP jargon; I'm a long time TI user and my 49g is still new to me).

Re: HP49g and Sun Clock

Message #2 Posted by [James M. Prange](#) on 17 Aug 2002, 5:33 p.m.,
in response to message #1 by Speck

Yes, I remember the sunclock program. I don't know for certain that it works on the 49G, but if I recall correctly, it was written in UserRPL, in which case it should work on the 49G with little or no modification, and any needed changes would be easy to make.

Try a search at <http://www.hpcalc.org>

Regards,
James

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Sheesh. Leoglyph at it again!

Message #1 Posted by [W. Bruce Maguire II](#) on 16 Aug 2002, 4:15 p.m.

Check-out the bidding/pricing on this auction! (Previously, a mint-condition 28s could be had for \$50-\$100.)

<http://cgi6.ebay.com/aw-cgi/eBayISAPI.dll?ViewBids&item=1372645885>

Bruce.

Re: Sheesh. Leoglyph at it again!

Message #2 Posted by [thibaut.be](#) on 16 Aug 2002, 4:59 p.m.,
in response to message #1 by W. Bruce Maguire II

A few weeks ago I sold one complete with both manuals for \$60. The guy offered me only \$40 but finally agreed to generously pay \$60... Leoglyph, you're welcome on any of my sales !!!

Re: Sheesh. Leoglyph at it again!

Message #3 Posted by [David Tan \(Singapore\)](#) on 18 Aug 2002, 8:54 a.m.,
in response to message #2 by thibaut.be

thibaut.be,

Here is the info of Leoglyph who registered in ebay just more than a week ago. Are u referring to the wrong person?

Cheers,

David

=====

User ID History for leoglyph

User ID History Effective Date End Date

leoglyph Wednesday, Aug 07, 2002 Present

*** - Parts of prior User IDs that are email addresses are concealed to protect member privacy.

Re: Sheesh. Leoglyph at it again!

*Message #4 Posted by [Raymond Hellstern \(Germany\)](#) on 18 Aug 2002, 2:15 p.m.,
in response to message #3 by David Tan (Singapore)*

Hello,

I think he's talking of a different person who bought a 28 from him, and then invited 'leo' to buy other things from him, since 'leo' seems to have some, errr, difficulties with eBay;-)

Regards,

Raymond

Re: Sheesh. Leoglyph at it again!

*Message #5 Posted by [David Tan \(Singapore\)](#) on 18 Aug 2002, 8:54 a.m.,
in response to message #2 by thibaut.be*

thibaut.be,

Here is the info of Leoglyph who registered in ebay just more than a week ago. Are u referring to the wrong person?

Cheers,

David

=====

User ID History for leoglyph

User ID History Effective Date End Date

leoglyph Wednesday, Aug 07, 2002 Present

*** - Parts of prior User IDs that are email addresses are concealed to protect member privacy.

Re: Sheesh. Leoglyph at it again!

Message #6 Posted by [Raymond Hellstern \(Germany\)](#) on 18 Aug 2002, 2:15 p.m.,
in response to message #5 by David Tan (Singapore)

Hello,

I think he's talking of a different person who bought a 28 from him, and then invited 'leo' to buy other things from him, since 'leo' seems to have some, errr, difficulties with eBay;-)

Regards,

Raymond

Re: Sheesh. Leoglyph at it again!

Message #7 Posted by [callisto](#) on 16 Aug 2002, 10:06 p.m.,
in response to message #1 by W. Bruce Maguire II

and then here too! Way to go Leo!

<http://cgi6.ebay.com/aw-cgi/eBayISAPI.dll?ViewBids&item=1373195492>

Re: Sheesh. Leoglyph at it again!

Message #8 Posted by [thibaut.be](#) on 17 Aug 2002, 2:12 a.m.,
in response to message #7 by callisto

[Link to auction bidding history deleted at the request of the seller]

I really wonder if Leoglyph is a serious buyer or just someone having fun with the auctions... Let's follow-up the feedback of his 2 41cx purchase...

Leoglyph, I have couple of MIB 12c's for \$375 each if you want ...

28C/S prices and some philosophy

Message #9 Posted by [Karl Schneider](#) on 17 Aug 2002, 2:14 a.m.,
in response to message #1 by W. Bruce Maguire II

I won a mint-condition 28C with mint-condition manuals on eBay about a month ago for \$37 + shipping. Several weeks prior, I watched another 28C go for \$34. The only functional difference to my knowledge is 2kB RAM on the 28C vs. 32kB on the 28S. Doesn't really matter to me, because I'm not much of a fan of the RPL calc's (e.g. 28, 48) with their quirky stacks and syntax-intensive operations. However, I wanted an example of the model.

Judging from eBay prices for the 28 and 48 vs. those for the respectively less-capable, strictly-RPN 15C and 42S, I'm not alone. At the risk of starting a philosophical thread, I submit that a good handheld calculator must have three attributes:

1. Compact 2. Lightweight 3. Easy to use

The 15C and 42S succeed on all three points, while the 28C/S and 48S*/G* fail all three. Ergo, the respective prices and desirability.

RPL (now that I know what that means!)

Message #10 Posted by [Ellis Easley](#) on 17 Aug 2002, 5:18 p.m.,
in response to message #9 by Karl Schneider

I've had a 48SX since it was current and added 48GX and 49G when I found them discounted. I never got comfortable with them until recently. What actually got me started was when I found I could write my own graphing programs on the 38G, with its limited programming language. I decided to "port" them to the 49G, where I first had to sort out "RPN vs. Algebraic" and then come to terms with user RPL. Then I wanted to see what the relative speed of the 48GX and 48SX was and easily moved my programs from the 49G to them. I am now quite comfortable with user RPL and wrote a very slow terminal program on my 48SX!

Regarding the stack: I have found that it really works the same as the four level stack in that if you don't care about an item, you can just forget about it - except that the stack grows instead of discarding the item, so it is up to you to remove things. In programs, new items on the stack are generally consumed by the following instructions. Sometimes you want an item to stay on the stack and you can use DUP and ROT similar to the way you use <Enter> and <Roll(up,down)> on a four level stack machine. There are also ROLL and ROLLD which are generalized to do any number of levels. With the massive number of commands, there must be many cases where one command saves steps - I was very pleased when I found INCR!

I also have a 28S and I did power it up recently to try programming its LCD but I am paranoid about leaving batteries in it since it would be so hard to clean out. Also, even though I have used it very little, one of the plastic heat stakes on my battery door has broken off.

I give a lot of credit to the Forum for giving me ideas to try out on my calculators, that push-started me to do more with them.

Re: 28C/S prices and some philosophy

*Message #11 Posted by [James M. Prange](#) on 17 Aug 2002, 5:26 p.m.,
in response to message #9 by Karl Schneider*

The only functional difference to my knowledge is 2kB RAM on the 28C vs. 32kB on the 28S.

The additional RAM was certainly a major improvement, but the 28S has a new ROM which includes some other worthwhile improvements.

The directory structure, useful with so much more memory, is an obvious one. It also added LCD\->, \->LCD, the "hot-key" method of invoking PRLCD, indexed variables,....

Regards,
James

Re: Sheesh. Leoglyph at it again!

*Message #12 Posted by [Randy Sloyer](#) on 17 Aug 2002, 9:48 a.m.,
in response to message #1 by W. Bruce Maguire II*

Looks like this guy was trained in the same school of bidding as Leoglyph:

<http://cgi6.aol.ebay.com/aw-cgi/eBayISAPI.dll?ViewBids&item=1372647574>

Must be the full moon coming on... Things seem really weird on eBay lately. Is just me being paranoid or does this look like shill bidding to anyone? Or just newbies at play?

Re: Sheesh. Leoglyph at it again!

Message #13 Posted by [Raymond Hellstern \(Germany\)](#) on 17 Aug 2002, 1:12 p.m.,
in response to message #12 by Randy Sloyer

I think they're just newbies, as you can see from their feedback, and, in the case of 'leo', the craziness of bidding about \$200 for an HP-28S.

Usual prices for these machines are between \$30 and \$70, with manuals of course.

The most interesting items on that particular auction wasn't the calc itself, nor the leather pouches. Instead, the book from Wlodek 'Customize..', and the pocket guide were the things to hunt for.

Like 'buy the bulk, throw away the calc';-)

Raymond

BTW: I have a near mint 28S for sale, maybe with manual, maybe even with HP leather pouch. What about \$200 + shipping?

Re: Sheesh. Leoglyph at it again!

Message #14 Posted by [Tom \(UK\)](#) on 21 Aug 2002, 12:41 p.m.,
in response to message #13 by Raymond Hellstern (Germany)

The first time I bid on ebay I used the same method of bidding up in small increments. I think I did this because I was fooled into thinking it was like a normal bidding process and I needed to know the limit of the highest bid.

In a 'normal' bidding room there are usually only 1 or 2 bidders you are up against, in ebay there could be thousands. Also in a normal bid you keep going, there is no time limit. Both these ebay differences change the way an experienced ebayer bids.

I realise now that it's best to bid late when the final value is better known (and you help keep down the final price).

Unfortunately the false bidding theory looks very similar to a typical newbie tactic. As ebay makes it easy for a potential false bidder to look like a newbie it can look bad.

Just my 2 pennies worth - hope I've not offended anyone or got the wrong end of the stick...

Re: Sheesh. Leoglyph at it again!

*Message #15 Posted by [David Smith](#) on 17 Aug 2002, 4:52 p.m.,
in response to message #12 by Randy Sloyer*

Yes, but at least the max bid was fairly reasonable...

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Another 19BII Question

Message #1 Posted by [Scuba Diver](#) on 16 Aug 2002, 10:33 a.m.

Hi everyone!

I'm Brendan...you'll remember me from such famous messages as "Brand new 19BII; they don't make 'em like they used to!" and "Mint HP41CXs on ebay".

My 19BII predicament reared its ugly head again today on my way to work when I noticed a new 19BII for sale in a shop window. I knew that the unit had been sitting around for a while because it was in an actual box (as opposed to those nasty plastic contraptions that the new calcs are delivered in...I always seem to cut myself when I open those!)

Anyway, I took a look at the unit, and it's old (built in late '96), but perfect (the keyboard feels the way an HP keyboard should feel!) The store told me that it is new; the manual is still sealed, etc. I'm sure they're right, since the calc doesn't look like it's ever been touched (although you never know with those electronics stores!)

Here's the interesting thing. I looked at the serial number; it was stamped "Made in Indonesia" yet the serial number read 3642BXXXX. Isn't B for Brazil?

What should I make of this? A 6-year old calc which was made in Brazil yet marked made in Indonesia? We have a mystery on our hands; where's Columbo when you need him? Heck, I'll even take Angela Lansbury at this point!

Also, this unit comes with the old-style battery cover (located on the side of the unit). Are they really as unreliable as everyone makes them out to be?

Re: Another 19BII Question

Message #2 Posted by [W. Bruce Maguire II](#) on 16 Aug 2002, 4:18 p.m.,
in response to message #1 by Scuba Diver

Brendan wrote:

Also, this unit comes with the old-style battery cover (located on the side of the unit). Are they really as unreliable as everyone makes them out to be?

Not for me!

I used my 28s for many years in college, and I never had any problem with the battery door. But then again, I didn't go throwing it against brick walls either... ;-)

Bruce.

Re: Another 19BII Question

Message #3 Posted by [Ron Ross](#) on 16 Aug 2002, 5:01 p.m.,
in response to message #2 by W. Bruce Maguire II

I think a lot of people ruined their doors by changing their batteries in haste. No one wants to lose all that programming. But if your careful and take your time to change out batteries, the door is probably ok. However, you will lose programs if you take to long.

Re: Another 19BII Question

Message #4 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 16 Aug 2002, 5:34 p.m.,
in response to message #3 by Ron Ross

Hi;

I have recently add a new HP19BII to the other calcs, and I also noticed that the manual was printed in Brazil, while calculator was Indonesian. The manual was an 1994 edition, and came with the Edisa label (Edisa was the name adopted by the HP representation in Brazil at that time), although calculator's serial #n reads ID11200080 (late 2000).

It seems to me that, not specifically in your case, some older models still under production (maybe in stock for a long time) are receiving some sort of makeup to look as new.

About being made in Brazil, we had some HP calcs being produced (electronics

imported) in here for some time, and they were somewhat reliable. I believe HP used to take care of this at that time, even for products assembled elsewhere but USA.

Just to add some info...

Cheers.

Re: Another 19BII Question

*Message #5 Posted by [Scuba Diver](#) on 18 Aug 2002, 3:00 p.m.,
in response to message #4 by Vieira, Luiz C. (Brazil)*

Luiz wrote:

"About being made in Brazil, we had some HP calcs being produced (electronics imported) in here for some time, and they were somewhat reliable. I believe HP used to take care of this at that time, even for products assembled elsewhere but USA."

That would explain it. They imported the body from Indonesia and assembled it in Brazil. The machine is great! The keys are firm and responsive...very well made unit!

I have also noticed that the colour scheme on the new machine differs from that on the older one (no, I did not misspell colour...that's how us Canadians spell it). The newer machine has a black case and the keys are black as well; contrast that with the older 19BII which has the characteristic brown case and grey keys.

Now that I have a "new" older 19BII, I'm going to be selling my brand-spanking new one. Do you think that this tag line will bring the bidders in?

"Barely used 19BII in mint condition...keyboard lacks the usual HP feel and provides the user with the sensation of sticking their fingers into overcooked oatmeal."

I think I missed my calling...I should be in marketing.

B.

Re: Another 19BII Question

Message #6 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 19 Aug 2002, 12:30 a.m.,
in response to message #5 by Scuba Diver

Overcooked oatmeal??? I would never think about oatmeal, even if it is overcooked, when pressing keys... (that's funny! We need this sort of lines in here, so we feel human beings surround us. No pun intended here, Scuba; I like reading good stuff like this, too)

Well, people "taste" what they want to, right?

About the colo(u)r scheme (how is it color spelled in French?): I never had an HP19BII before, but my old HP28S (recently stolen) had that brown color. Now that you mentioned, I can see the contrast of the yellow (light orange) and black.

And if there is something I really appreciate in the new clamshell is the battery compartment. I never liked the fact that the HP28S' door should also be active (electrical contact), and the new design seems to be more efficient. At least for me; if the batteries' compartment door is broken OR lost, the calculator will operate, no troubles at all. In the former design, that would be a headache.

Cheers.

Re: Another 19BII Question

Message #7 Posted by [thibaut.be](#) on 19 Aug 2002, 4:36 a.m.,
in response to message #6 by Vieira, Luiz C. (Brazil)

Colo(u)r is spelled "couleur" in French...

Re: Another 19BII Question

Message #8 Posted by [Scuba Diver](#) on 19 Aug 2002, 12:40 p.m.,
in response to message #7 by thibaut.be

In Canada, we use British English. If you go into a bookstore and purchase a dictionary, you'll get one in British English. Some specialty stores do carry a few American English dictionaries (if you need one). We are taught British English in school, so most people use that when writing (eg. queue, neighbour, colour and odour). There are some examples of American English here, however; newspapers use some American English (eg. if they publish a story written by an American newspaper) and some American companies forget the linguistic

differences and publish their Canadian marketing information in American English.

Conversational American English is very similar to conversational Canadian English. There are a few differences, and I have noted the major ones below:

1) Canadians often add "eh" to their sentences. One purpose that "eh" serves is to convert a statement into a question. For example, "Joe's going to the theatre" is a statement, but "Joe's going to the theatre, eh?" would require the listener to either confirm or deny this fact. 2) Canadians refer to the last letter of the alphabet as "zed" not "zee". 3) I have never met a Canadian who referred to a group of people as "y'all". Well, actually I do know one, but her father was a draft dodger; once Carter pardoned them, they moved back, so I guess she doesn't count.

That's about it. Who would have thought that a visit to the HP forum would provide you with a lesson in linguistics?

B.

Re: Another 19BII Question - still???

*Message #9 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 19 Aug 2002, 2:49 p.m.,
in response to message #8 by Scuba Diver*

Hi;

I must confess I love this subject: communication in other languages.

I feel myself as a fortunate person because I was born in Brazil (I'm proud of it for many other reasons than this one). If I was born in any other country where Portuguese is not spoken, I'd never learn it. I swear. It's hard to understand, hard to use, hard to read and write... but as I already know it, the challenge of studying other languages becomes acceptable.

Back to business, I saw an old HP19BII today with the batteries door broken. The owner was angry a lot, because when he stores the calculator for some days, it sometimes wakes up with the memory lost (bad contact). I shown her the new model, and she is getting a new one in a hurry. I asked about the broken-door one, and she told

me she will keep it for personal reasons (sob!). I still believe the best thing HP did was redrawing the clamshell's batteries compartment.

Re: Another 19BII Question - still???

*Message #10 Posted by [Scuba Diver](#) on 19 Aug 2002, 4:12 p.m.,
in response to message #9 by Vieira, Luiz C. (Brazil)*

Luiz, there is quite a large Portuguese population in my city (from the Azores mostly) and most agree that the Brazilian accent is very beautiful...they prefer it to the continental accent (Lisboa/Lisbon).

A few postings ago someone mentioned that the battery door is fine as long as you take your time changing the batteries. I thought I would test this, so I swapped the batteries in my 2 19BII's. I probably spent about 2 minutes doing it, and the memory was intact in both units. In retrospect it probably wasn't the greatest design, but I'll just take care when changing batteries and it should be fine.

Gee, get your friend to send me an email...maybe I can offload my "oatmealy" 19BII!!! :)

B.

Re: Another 19BII Question

*Message #11 Posted by [Gordon Dyer](#) on 20 Aug 2002, 8:28 p.m.,
in response to message #8 by Scuba Diver*

None of you speak properly over that side of the Atlantic! Over here overcooked oatmeal is Scotts Porridge. Some of you did make very good calculators... Gordon (1/4 Scottish)

Re: Another 19BII Question

*Message #12 Posted by [Scuba Diver](#) on 21 Aug 2002, 7:48 a.m.,
in response to message #11 by Gordon Dyer*

Us Cannucks call it porridge as well, but I didn't think the readers south of the 48th parallel would know what that is!

Of course, the Scots provided us with quite a few things...golf and Robbie Burns just to name two. I'm a bit dubious about the food, however. Haggis and tablet???

:)

Brendan

porridge

*Message #13 Posted by [Ellis Easley](#) on 21 Aug 2002, 10:55 a.m.,
in response to message #12 by Scuba Diver*

I've made porridge by following the instructions on a can of oats from Scotland. The oats are cut but not rolled, and take about 20-30 minutes to cook. Very tasty! Here in the US, most oats are rolled (smashed flat), take from 0 to 3 minutes to cook, and the result is called "oatmeal". Is "porridge" typically made from the more whole grain, or is it just another name for oatmeal?

Re: Another 19BII Question

*Message #14 Posted by [Scuba Diver](#) on 19 Aug 2002, 12:44 p.m.,
in response to message #6 by Vieira, Luiz C. (Brazil)*

Liuz, I agree. We're all human beings who share a common interest. We should inject humour into conversations whenever possible (oops, should I have spelled that humor?? Hehehe)

For most of us, this is a hobby. Hobbies are meant to be fun. As long as we treat everyone with respect, we're not doing any harm to anyone.

B.

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Blanknut question

Message #1 Posted by [Erik Wahlin](#) on 16 Aug 2002, 1:29 a.m.

I recently purchased a HP-41C Blanknut Option 001. I was wondering if anyone knows why the plastic cover is put over the user and program keys. What was HP's intention? Is there any way to enter program mode without using the prgm switch? Is the plastic cover removeable? This particular machine has the following features of a blanknut 1. It is a HP-41CV 2. It has the plastic cover over the program and user switch 3. It does not have a front label (Hewlett Packard ...) 4. It has a serial # on the back 5. It does not have a back label, but has MADE IN SINGAPORE stamped in silver

Re: Blanknut question

Message #2 Posted by [Chris Catotti \(Florida\)](#) on 16 Aug 2002, 6:40 a.m.,
in response to message #1 by Erik Wahlin

To program without using the PRGM toggle switch, you can set system flag 52. With a PPC Module us IF (Invert Flag)

5 2 XEQ I F

That should put you in the PRGM mode. If you executed IF from ROM, then you will be in PRGM mode in the ROM. Do a CATalog 1 to catalog through user programs in RAM. Stop where you want, and have fun programming.

Re: Blanknut question

Message #3 Posted by [Chan Tran](#) on 16 Aug 2002, 10:01 a.m.,
in response to message #2 by Chris Catotti (Florida)

The plastic cover can be removed easily. I removed them on my blank nuts. I think the purpose of the plastic cover is to prevent users from modifying the program or turn off the user mode.

User Mode

*Message #4 Posted by [Gene](#) on 16 Aug 2002, 1:56 p.m.,
in response to message #3 by Chan Tran*

Which of course, one can do by clearing flag 27.

I suppose that's one of those technical things that HP figures users will never care about these days (and back then).

Re: Blanknut question

*Message #5 Posted by [David Smith](#) on 16 Aug 2002, 2:11 p.m.,
in response to message #1 by Erik Wahlin*

None of my blanknuts had a switch cover. It was either an option (but none of my HP literature mentions it) or an aftermarket thing.

Re: Blanknut question

*Message #6 Posted by [tom](#) on 16 Aug 2002, 2:50 p.m.,
in response to message #5 by David Smith*

Seven of my eight blanknuts have the switch cover. One, a 41CXHNBN, is NIB, and the cover came in a little plastic baggie inside the HP issue box.

Re: Blanknut question

*Message #7 Posted by [Erik Wahlin](#) on 16 Aug 2002, 2:56 p.m.,
in response to message #6 by tom*

Tom was there any paperwork describing the the purpose/function of the blanknut option in the NIB calc? Maybe it describes the purpose of the bar.

Re: Blanknut question

Message #8 Posted by [David Ramsey](#) on 19 Aug 2002, 10:45 p.m.,
in response to message #6 by tom

OK, tom, I have to ask...

I consider myself a collector. I have the 41C, CV, and CX, and recently bought an early 41 with the "high top" keys and gold ball bearing in the charger port. And finally, after some years, I found a blanknut. So now I have 5 HP-41s, with two versions of the 41C.

I suppose if I were really obsessed I might try to find halfnut versions of all of them.

But anyway...why in the world do you have EIGHT blanknuts?

you know what they say about blanknuts -

Message #9 Posted by [Ellis Easley](#) on 20 Aug 2002, 4:24 a.m.,
in response to message #8 by David Ramsey

once you start, you can't stop! (possible explanation)

Re: Blanknut question

Message #10 Posted by [Raymond Hellstern \(Germany\)](#) on 20 Aug 2002, 9:49 a.m.,
in response to message #8 by David Ramsey

I think it was a clearing stock, so he got them cheap.

A few years ago I had the chance to get 6 (six) IL tape drives, and 4 (four) IL printers, six card readers, etc, from a company, amongst many other HP items, for a symbolic price;-) The units were all near mint. I sold most of them for a few bucks more, keeping one unit of each.

The prices weren't as crazy as today.

BTW: The HP-41 Option 001 was described in some flyers from HP, and yes, all photos showed the 001 *with* the bar across the PRGM & USER switches. So it may have been another option to get the 001 *without* the bar.

Raymond

Re: Blanknut question

*Message #11 Posted by [tom](#) on 20 Aug 2002, 12:35 p.m.,
in response to message #8 by David Ramsey*

Well. You have to have the 41C halfnut and fullnut blanknuts. and the 41CV halfnut and fullnut blanknuts. and then there's the 41CX halfnut and fullnut blanknuts. and you need a couple of halfnut and fullnut blanknuts to trade, of course!

plastic bar on blanknut, possible explanation?

*Message #12 Posted by [Erik Wahlin](#) on 16 Aug 2002, 2:51 p.m.,
in response to message #5 by David Smith*

It seems to be that a very possible explanation concerning the black bar is that it came with the option 001's but not originally affixed to the calculator. After you entered your custom program, you would not want it messed with so you would put on one of the plastic bars. That would explain why some blanknuts have the bars and some don't. The bar looks to be an HP product. The finish of the plastic is the same as the body of the 41C. There is even a small rectangular area on the bar that might have been intended for some kind of sticker you would put on to identify the function of the machine. If you had blanknuts performing different tasks at a company, you would want to identify them.

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ebay

Message #1 Posted by [callisto](#) on 15 Aug 2002, 11:54 a.m.

The HP museum site mentions shill bidding and other dubious techniques on Ebay for hp calculators. Does anyone have any stories to share?

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Who is going to the HPCC 20th annual meeting ?

Message #1 Posted by [thibaut.be](#) on 15 Aug 2002, 11:34 a.m.

... on sept 21 in London ?

Re: Who is going to the HPCC 20th annual meeting ?

Message #2 Posted by [Tony Duell \(UK\)](#) on 15 Aug 2002, 2:05 p.m.,
in response to message #1 by thibaut.be

I will be there. Actually, as I am planning on giving a talk on the 9100, I virtually _have_ to be there :-). Incidentally, It's a 2 day event, 21st _and_ 22nd of September. Most (all?) of the formal talks/presentations are on the 21st, with the 22nd being used for more informal demonstrations, discussions, etc. Or at least that seems to be what's happening at the moment. It might well change if we (HPCC) get offered more talks.

Re: Who is going to the HPCC 20th annual meeting ?

Message #3 Posted by [Chris Randle \(UK\)](#) on 15 Aug 2002, 4:00 p.m.,
in response to message #1 by thibaut.be

Me & my 3 year old daughter. Really looking forward to it.

Re: Who is going to the HPCC 20th annual meeting ?

Message #4 Posted by [James M. Prange](#) on 17 Aug 2002, 5:38 p.m.,
in response to message #1 by thibaut.be

I'll be there, probably for a few days before and a couple of days after as well.

Regards,
James

Re: Who is going to the HPCC 20th annual meeting ?

Message #5 Posted by [James M. Prange](#) on 17 Aug 2002, 10:45 p.m.,
in response to message #4 by James M. Prange

PS:

Just in case there's anyone here who doesn't know about it, visit <http://www.hpcc.org/> or <http://holyjoe.org/hhc2002/>.

Regards,
James

Re: Who is going to the HPCC 20th annual meeting ?

Message #6 Posted by [Katie](#) on 18 Aug 2002, 1:18 a.m.,
in response to message #4 by James M. Prange

I'm sorry that I'm going to miss this conference; I'd love to hear Tony's talk on the 9100A, especially. But I'm *very* curious as to why HP is sending a representative from it's Personal Systems Group and asking participants to fill out a questionnaire about their calculator usage in advance. Hasn't HP decided to drop its calculator business?

Re: Who is going to the HPCC 20th annual meeting ?

Message #7 Posted by [Tony Duell \(UK\)](#) on 18 Aug 2002, 2:13 p.m.,
in response to message #6 by Katie

One minor correction. I am talking (primarily) about the 9100B, not the 9100A. The main reason for this is that I have a 9100B (Which, as you might have guessed I've pulled into rather small pieces :-)) but I've not been lucky enough to find a 9100A yet. Of course much of the talk will apply to both machines, but don't assume everything I say will apply to the -A.

Re: Who is going to the HPCC 20th annual meeting ?

Message #8 Posted by [Ellis Easley](#) on 18 Aug 2002, 5:12 p.m.,
in response to message #6 by Katie

The HP questionnaire asks if you would like to be involved in focus group research for future calculator models. Maybe they have been getting their focus group participants from shopping malls!

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HP-41 Card Reader Parts Available

Message #1 Posted by [Wayne Brown](#) on 15 Aug 2002, 7:52 a.m.

Some time ago one of the clips on the side of my card reader -- the ones that hold the reader on the calculator -- broke. I saw a message here in which Luiz Cláudio Vieira mentioned having a non-functional reader available, so I asked him if I could obtain the part I needed from it. He very graciously sent not just the part, but the whole reader, free of charge. Now that my reader is fixed, I'm making the same offer to someone else. If anyone needs parts to repair a card reader, I'll be happy to send you the reader Luiz gave me. You can use whatever parts you need and then pass it along to someone else. Luiz told me it's his wish to "let it make more people happy."

The reader seems to have a problem in the electronics; it gives a CARD ERR message as soon as the calculator is turned on. However, even if the electronics are bad it can still provide replacements for the mechanical parts. So if anyone wants it, give me your address and I'll send it to you.

Thanks again, Luiz Cláudio, for your kindness and generosity!

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Are 17B/19B calculators being discontinued?

Message #1 Posted by [mimi](#) on 14 Aug 2002, 12:31 p.m.

I heard that HP is discontinuing the 17B and 19B financial calculators. I heard that HP is no longer investing in calculators, but that it will continue to produce the 12C. Can anyone offer any insight on this? Thanks! --Mimi

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HP 29-C

Message #1 Posted by [Hennie Pool](#) on 14 Aug 2002, 8:02 a.m.

I have a 29c since 1983, but cannot find a replacement battery pack.

Can I use other re-chargeable batteries instead if I opened the old chassis? What type and specs?

Please can any one help?

Thanks

HJP

Re: HP 29-C

Message #2 Posted by [thibaut.be](#) on 14 Aug 2002, 9:11 a.m.,
in response to message #1 by Hennie Pool

Hello,

Standard AA pacs will run perfectly and far better than the original pacs !

Thibaut

Re: HP 29-C

Message #3 Posted by [David Smith](#) on 14 Aug 2002, 5:02 p.m.,
in response to message #1 by Hennie Pool

You can replace the cells in the pack with AA Nicad or NiMH cells. The NiMH cells have a much larger capacity, are more environmentally friendly, and don't have the "memory effect" problems of NiCad cells. They take more time to charge than the older Nicads (directly proportional to their greater capacity). The old Nicads were around 600 maH. NiMH cells can be found from 1200-1800 maH.

One thing to consider is that the HP29C is the most fragile calculator HP ever built in terms of what can happen if it is connected to the AC charger with a bad battery pack (or no battery pack) installed. If at all possible, charge the batteries in an external charger or a different Woodstock series machine.

Re: HP 29-C

Message #4 Posted by [andy](#) on 14 Aug 2002, 5:38 p.m.,
in response to message #1 by Hennie Pool

I use standard AA's in mine. You can modify the original battery pack's plastic housing by cutting away the plastic piece which runs in between the batteries.

Re: HP 29-C

Message #5 Posted by [David Ramsey](#) on 15 Aug 2002, 9:01 p.m.,
in response to message #4 by andy

Modifying the original battery pack by cutting away the center bar so you can easily use standard AAs is a hell of a suggestion! I tried it immediately and powered up my 21, 25, 25C, 27, and 29C for the first time in years! Thanks!

Re: HP 29-C

Message #6 Posted by [David Smith](#) on 16 Aug 2002, 2:14 p.m.,
in response to message #5 by David Ramsey

I don't like doing the packs that way since they are no longer original looking (I have a few that were already done, and it is handy). I prefer to slice through the seam between the top and bottom halves of the pack and rebuild it with fresh rechargeables.

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Brand new 19BII; they don't make 'em like they used to!

Message #1 Posted by [Scuba Diver](#) on 14 Aug 2002, 1:37 a.m.

I'm about to start Business school and I thought I would treat myself to a 19BII before they are discontinued (I am already the proud owner of a 17BII but I have always wanted a clamshell).

I'm not a collector, but I am a huge fan of HP calculators. One of the reasons I love my 17 is its comfortable keyboard. I don't have to look at the display to see if a keypress is registered; I can feel it.

The 19BII that I purchased is brand new, having been manufactured in Indonesia in early 2002. When I used the calculator for the first time, I was quite disappointed. There were no manufacturing flaws, however the keys felt extremely soft and mushy. In addition, the rubber feet on the bottom are so thin, the plastic case taps against the desk every time I press a key (which resulted in quite a few stares when I was studying in the library for the GMAT!)

Can these differences be explained away because the 17 and 19 are two different series (clamshell vs. pioneer) or is this "cheap" feel the result of years of cost-cutting in the manufacturing process? I wanted to find an older 19 so that I could compare the two, however I don't know anyone with one.

That's why I'm here. I am hoping that there is someone out there who can shed some light on this for me. Maybe someone has had the opportunity to use an older and a newer 19BII and they could comment on any differences. Or, maybe there are other 19BII or 28S users out there who are experiencing the same issues.

I also have another question that I would like to get answered: Do any differences exist between HP units manufactured in the US and units of the same model manufactured overseas (Singapore and Indonesia)?

Any responses are greatly appreciated. I would really like to take a 19BII with me to school, but I want one that I'm comfortable using. If the older models were manufactured to a higher standard, I'll return this one and find an older one on eBay.

Thanks for taking the time to read my diatribe!

Re: Brand new 19BII; they don't make 'em like they used to!

Message #2 Posted by [Stephan](#) on 14 Aug 2002, 6:01 a.m.,
in response to message #1 by Scuba Diver

Dear Sir/Madam,

Your impression is absolutely correct. As you are, I am disappointed about the "quality" of recently manufactured units. I asked a friend in Singaore to buy a 12C and expected a calculator as solid as my 15C, which was manufactured end of the eighties. After he bought it he called me and described the look and feel. What will I get? A cheap plastic calculator for a lot of money. I feel cheated, but will not sell this unit for the price I paid, because it is not worth it and I do not intend to cheat others. Probably I will give it away at a discount and explain its deficiency to the buyer.

I just compared my 19BII (SG 1994) to the 28S (USA 1990). Both are heavy duty quality, the 19BII is in even better shape, because it hasn't been used much by the man I got it from.

You assumed a reason for decreasing quality might be cost-cutting in manufacturing. At this point I disagree. The reason is quality-cutting only. Many companies changed their attitude towards customers, there is little pride left in the products sold. So did HP in many fields, e.g. entry level laser printers, calcs, ...

A manufacturer can only choose one of two possible ways to stay in a market. You either go for cost leadership or offer something special. If you sold something special before, selling scrap at high prices may work for a while, but inevitably customer loyalty will fade.

Cost cutting can mean to maintain or even improve quality and bring costs down at the same time. But you need to be creative and put your best engineers on the job. What I guess happend at HP is that the bean counters took over and made decisions short-sightedly. But so far I havent heard of any case, that money was earned by counting beans multiple times or counting them faaster.

I hope I didn't get too far off topic. To answer your question in a sentence: I have a 19BII made in Singapore in 1994 and I am fully satisfied.

Best regards,

Stephan

Re: Brand new 19Bii; they don't make 'em like they used to!

Message #3 Posted by [Masao Kinoshita](#) on 14 Aug 2002, 12:35 p.m.,
in response to message #1 by Scuba Diver

I bought a new HP 17Bii recently (s/n: ID14601173, i.e., 46th week of 2001) and was actually surprised at first how firm the key presses are. (Broken in, they feel quite good.) This is compared to my HP 48GX (ID80407876) which is soft but not mushy, but with key-bounce. (I read somewhere that the HP 48GX actually has a time delay built into the keyboard so that it will not register the bounce; my HP 48SX never had this problem.) My 15 year old HP 27S (2749A01572) is quite soft, but feels good; the softness is probably due to its old age. My 10 year old HP 32Sii (3218S17651) is somewhere between my 27S and 17Bii. Now that I think about it, my 17Bii's keyboard feel may be close to what I remember my old HP 67 (1610A00979) keyboard feeling like, regarding the firmness of key presses.

The gist of all this is that I'm quite surprised that a new HP 19Bii's keys would be "extremely soft and mushy."

Re: Brand new 19Bii; they don't make 'em like they used to!

Message #4 Posted by [Kenji Nagahama \(Japan\)](#) on 14 Aug 2002, 10:20 p.m.,
in response to message #3 by Masao Kinoshita

My 17Bii made in Indonesia is more recently produced (ID10902033, i.e., 9th week of 2002) bought from Japanese dealer. The key touch is not soft and completely same feeling compare with my Indonesian 32Sii (ID14800488, i.e. 48th week of 2000) bought a half year ago from US dealer (the price was still reasonable at that time).

Both units is likely to use the same parts for keys and difference between them is only the finish of the surfaces (17Bii is slightly more smooth and brighter).

I do not know what is the difference between 17Bii and 19Bii, though.....

Re: Brand new 19BII; they don't make 'em like they used to!

Message #5 Posted by [Chris Randle \(UK\)](#) on 15 Aug 2002, 4:16 p.m.,
in response to message #1 by Scuba Diver

I have a averagely used 1988 USA 28S and an unused 1998 Indonesian 19BII.

In my opinion, there's little if anything wrong with the newer machine. The keys have the same feel as the USA machine, albeit slightly firmer as you might expect with 10 years less use.

The USA m/c has a "creak" in the hinge which is absent in the Indonesian m/c.

The USA m/c has injection moulded keys whereas the Indonesian's are painted.

I'm quite happy with the quality of the newer machine, although I prefer the kudos of a calc made in the country of its birth.

Re: Brand new 19BII; they don't make 'em like they used to!

Message #6 Posted by [Scuba Diver](#) on 15 Aug 2002, 5:49 p.m.,
in response to message #5 by Chris Randle (UK)

Thanks to everyone who replied to my original posting!

Although I'm not completely convinced that my new 19BII is as well-made as older units, I have decided that I'll use this one at biz school. That way, I can use it without worrying about dropping it, etc. If, after two years of heavy use, it looks like it was run over by a truck, I won't get upset!

I will give credit where credit is due. My 2002 19BII has a re-designed battery cover; not only was the cover redesigned but it was relocated to the back of the unit (from the side). I think that this was a smart move and should alleviate the problem of the battery case popping off.

This whole experience has reminded me why I love HP calculators so much, so I've decided that it's time to start picking up a few other models; not to lock up and save, but to use and enjoy. My first target is a 12C (don't worry, we won't get into a discussion of the quality of the Chinese units!) then a 71B or 75 and a 41. Who knows where this will end!!!!

The long and the short of it is...you haven't seen the last of me! Thanks again! Brendan

Re: Brand new 19BII; they don't make 'em like they used to!

Message #7 Posted by [Michael Meyer](#) on 15 Aug 2002, 8:48 p.m.,
in response to message #6 by Scuba Diver

"Who knows where this will end!!!"

I'm not positive... but I have an idea where it will end...

It won't! I'm afraid you may have been bitten by the HP collecting bug. I've been ill with it for over three years, now.

You DO have my sympathy. It seems that few people who aren't ill with this same condition have any understanding of the symptoms.

Some of the symptoms I've observed include:

Desire to handle and learn to use more and more of the models, both modern and "classic".

Sudden and progressive desire to have at least one, if not more, of the calculators you could only dream about having when you were younger (if you're of Mid-Life-Crisis age), or a progressive desire to collect the antiques of yesteryear (if you're still young).

Development of a "spiritual" admiration of the more amazing models, which for me, is each one in succession...but more so with very special models (HP-35, HP-67, HP-19C, HP-25, etc.)

Symptoms of addiction can develop, including intense highs upon experiencing a new calculator... and withdrawal if you haven't had a chance to partake recently.

Slow but insidious draining of your bank account as each machine is a "HAVE TO" have... especially at "that price"... After awhile, when you have the machines you desire the most, you find yourself saying, "I might as well fill in the holes with the other models to make my collection more complete..." (I've heard that some very afflicted individuals even start over once they've assembled a complete set!!)

And if you do your own repair and restoration, the disappearance of many hours on the clock without explanation. "Wow. How did it get to be 3 a.m.?!"

There are many other symptoms. Many of these symptoms have specific numbers attached to their descriptions, such as: "65" and "15C" and even "42S".

Though I haven't yet found a cure, I am working on a treatment. I'll let you know about it, but first I have to go clean up and learn to use the HP-21 I finally added to my collection today. (Can you believe I've never had one before!) It's going to be beautiful once the feet are cleaned, the contacts polished, and the batteries rebuilt.

Oh, what was I saying?

The good new is: you're not alone.

Michael

Re: Brand new 19BII; they don't make 'em like they used to!

*Message #8 Posted by [Juan J](#) on 15 Aug 2002, 10:32 p.m.,
in response to message #7 by Michael Meyer*

Thanks to Doctor Michael for his kind words and accurate diagnostic. I do have all the symptoms.

We all have been bit by the collecting bug. And despite the fact that you can do things a thousand times faster on a PC, there is always this fascination about crunching numbers with our beloved HPs. My hat goes off to those who designed such amazing machines.

Brendan: collecting is just great. Every addition has a unique beautifulness of its own, and the more you find about it, the more you like it. It goes on and on... And there is a wonderful community of users out there who will enjoy sharing details and information with you. Perhaps this is one of the few forums where you can speak your mind without being afraid of the comments you will receive. There are ugly exchanges sometimes, but it is the exception rather than the rule.

Doctor Michael: I have a couple questions about your diagnosis. Could you please drop me a note to my e-mail?

Re: Brand new 19BII; they don't make 'em like they used to!

*Message #9 Posted by [Juergen Rodenkirchen \(GER\)](#) on 16 Aug 2002, 3:25 a.m.,
in response to message #7 by Michael Meyer*

I really enjoyed to read your diagnosis, Michael, and I've to admit that I've been bitten by the bug too :-). But please, just to complete your "diagnosis", don't forget the accessories that are worth collectable to some of us (just think of the huge HP-41 accessory list). Last but not least, if you're still a user (to which extent ever), you may find it most interesting to read all the books written by dedicated, greatly gifted fellow enthusiasts like Dr. W. C. Wickes, Wlodek Mier-Jedrzejowicz, James Donnelly, Joseph Horn ... my apologies to everyone whom I forgot in the short list in the hurry!

Re: Brand new 19BII; they don't make 'em like they used to!

*Message #10 Posted by [Michael Meyer](#) on 16 Aug 2002, 12:38 p.m.,
in response to message #9 by Juergen Rodenkirchen (GER)*

Thanks, Juergen!

I have had those symptoms also, but didn't realize what they were <grin>.

BTW: The HP-21 I got yesterday is pristine: the only corrosion was on the positive terminal. The rest of the circuit was perfect. There was a defect in the LED module, but I had a couple of extras with my less fortunate HP-25 parts. Even the red lens was without a scratch... lucky for a calc sold without a case!

Yes.... I've even been reading the manuals from the museum CD set one by one. I think I might have a fever, too.

Michael

Re: Brand new 19BII; they don't make 'em like they used to!

*Message #11 Posted by [Scuba Diver](#) on 16 Aug 2002, 12:46 p.m.,
in response to message #10 by Michael Meyer*

Don't say that...I just ordered the CD set yesterday! I can't wait for it to arrive!

Re: Brand new 19BII; they don't make 'em like they used to!

*Message #12 Posted by [Scuba Diver](#) on 16 Aug 2002, 2:53 p.m.,
in response to message #7 by Michael Meyer*

Although I'm in the early stages, I can tell that it's going to be a chronic illness.

I'm glad to know that there are support groups that can help me to deal with the situation.

Since I now own 3 HPs I guess I'm officially a collector; I have decided that I want to start by focusing on the financial calculators (since that's my profession) and the handheld BASIC computers (75/71).

I'm also looking forward to the banter on this forum. Everyone appears to be quite friendly, and although you may not always agree on a particular topic, you're bound by one common thread...a love of the classic (and not-yet-classic) HPs.

In closing, I have one final comment to make which should sum up my future of HP collecting. As Kramer (of Seinfeld fame) often said, "Giddy up!"

Brendan

Re: Brand new 19BII; they don't make 'em like they used to!

*Message #13 Posted by [Michael Meyer](#) on 16 Aug 2002, 8:49 p.m.,
in response to message #12 by Scuba Diver*

Brendan,

I'm so glad you're joining the ranks. The HP-71B was my most important computer for years before my first XT. After 10 years in a box, and after buying an extra on e-Bay (my first purchase) and visiting the Smithsonian, I retrieved it. My first thought was, "How did I ever know how to use this?" But after a couple of days, it "all came back to me." Let me know if you can't find any on e-Bay for a low price. I want to hold onto my cleanest ones for now, but I'm sure I can come up with a working but well-used one I could part with cheap, especially to a "worthy cause." I'd also recommend reading Joseph Horn's "HP-71 Basic Made Easy". I haven't been able to get ahold of him (the links to his 71B web page have been dead for a good year or more). I could send you a scan of his book just to read. Hopefully he wouldn't mind.... (it's been out of print for over 15 years....)

Michael

Re: Brand new 19BII; they don't make 'em like they used to!

Message #14 Posted by [Juergen Rodenkirchen](#) on 17 Aug 2002, 3:40 p.m.,
in response to message #13 by Michael Meyer

Michael, I've tried to get a copy of Joseph Horn's "HP-71 Basic Made Easy" but could not (yet) find one. So, I know it's an impertinent question, but I'd really like to ask if you would mind to send me a scan of this book too? Of course, I'd be happy to compensate you for your efforts in an appropriate way. Oh, if you like to answer, feel free to contact me via e-mail (I don't like to use the Forum for advertisement-like threads, you know).

Regards, Juergen

Re: Brand new 19BII; they don't make 'em like they used to!

Message #15 Posted by [Michael Meyer](#) on 17 Aug 2002, 10:30 p.m.,
in response to message #14 by Juergen Rodenkirchen

Does anyone know if Joe Horn is still around?

Michael

Re: Brand new 19BII; they don't make 'em like they used to!

Message #16 Posted by [James M. Prange](#) on 17 Aug 2002, 10:37 p.m.,
in response to message #15 by Michael Meyer

He certainly is. Try <http://holyjoe.org> for now, but he expects to get <http://holyjoe.net> back soon.

Regards,
James

Re: Brand new 19BII; they don't make 'em like they used to!

*Message #17 Posted by [Michael Meyer](#) on 17 Aug 2002, 10:46 p.m.,
in response to message #16 by James M. Prange*

Thank You, James.

I have asked Joe's permission to share, and I am awaiting his response. Joe has always been very kind to me in the past.

Michael

Re: Brand new 19BII; they don't make 'em like they used to!

*Message #18 Posted by [Scuba Diver](#) on 18 Aug 2002, 2:04 p.m.,
in response to message #17 by Michael Meyer*

Hi Michael!

I tried sending you an email at the address listed, but it was returned.

Is there an email address where I can reach you?

Brendan

Re: Brand new 19BII; they don't make 'em like they used to!

*Message #19 Posted by [Michael Meyer](#) on 18 Aug 2002, 2:48 p.m.,
in response to message #18 by Scuba Diver*

Brendan,

mlmeyer@pol.net really should work... try again. I can be found sometimes at mlmeyer@cox.net, but I don't check that very often.... it's my home mail rather than work.

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good as GOLD circuits and classic HP's

Message #1 Posted by [Michael Meyer](#) on 13 Aug 2002, 8:55 p.m.

Hi. I was surprised at the dip in HP-45 prices and unexpectedly won an auction for a second one. Upon opening to repair a cracked switch, I observed what I'd only seen in HP-35s: really beautiful gold circuits. Even my office staff, who don't understand my hobby, pretended to be impressed.

My first HP-45 was built in the 50th week of 1973, though the circuit board is dated 1976. Either a swap or a repair, I figure. The new one was built in the 33rd week of 1973, and the circuits are all gold. Really pretty gold.

I've not seen it mentioned elsewhere in the forum or museum or in books, but I found it interesting. Was this when HP ceased using gold-plated circuits and went to copper-dipped-in-solder circuits? To me, it was a very important change in design. I once received, for free, a non-working HP-35. Upon sanding off the corrosion, which was extensive, there was enough gold circuitry remaining that the calculator easily came back to life. Amazing.

Anyone know anything more about the history of the use of gold plating or circuits in the early HP calcs?

Michael

PCB, gold plating facts

Message #2 Posted by [Ellis Easley](#) on 14 Aug 2002, 4:35 a.m.,
in response to message #1 by Michael Meyer

In the mid-1980's I had occasion to have some printed circuit boards made and I learned that the options available for gold plating on card edge connector fingers were 30 microinches, 15 microinches or "gold flash" which I think must be a contact plating, rather than electroplating. Also, gold isn't plated directly on copper, there is a layer of nickel plating in between.

One other thing - tin plating on connector surfaces (such as lower cost card edge connector fingers) is much harder than gold, and since tin develops an oxide coating like most metals

(other than gold), to make a reliable connection it is necessary for the spring force pushing the two contact surfaces together to be quite high, so the oxide coating is scraped off during mating and a "gas tight", metal to metal connection can be made. Therefore, one of the worst things you can do with connectors is to mate a tin plated contact with a gold plated one - with the high spring force and greater hardness of the tin plated contact, the gold is scraped off the gold plated contact. Mating tin plated contacts together makes reliable connections, only the allowable number of mating cycles is much less than with gold plated contacts.

All PCB traces are copper, with or without other plating. The original way to make the traces was to start with a board covered with the full thickness of copper and print the desired pattern, in a positive image, with a coating resistant to the chemicals used to etch away the unwanted copper. The wider the traces, the longer you could leave the board in the etchant to make sure any stubborn bits of copper were dissolved, since there was some etching of the edges of the traces (between the resist and the substrate). As traces became narrower, the board had to be removed from the etchant as soon as possible, so copper shorts between traces became more of a problem. One solution was the "additive" process: starting with a board covered with a very thin layer of copper, the pattern was printed in a negative image and then additional copper was plated onto the board, making the exposed trace patterns thicker. Then the resist was removed and the board was etched until the original, unplated, thin copper between the traces was dissolved.

Many PCBs have their traces covered with solder to make it easier to solder components to their pads, but this step can cause shorts between traces. Also, solder shorts can be caused when the components are soldered to the board. "Solder mask" is the (usually green) paint which is applied to the majority of the surface of the board (except for the component pads) to prevent solder shorts between traces when the components are soldered in place, but it can lead to another problem: a board with solder plated on all the traces and then covered with solder mask can end up with solder shorts UNDER the solder mask, where they are harder to deal with. One solution to this problem is "SMOBC" - solder mask over bare copper. Sometimes with this kind of board the bare copper traces look black under the green solder mask (I imagine this is because the copper reflects mostly red light).

Some lighter colored solder masks with shiny copper or solder plated traces underneath make it look like the traces are gold plated when they aren't.

Re: PCB, gold plating facts

Message #3 Posted by [Michael Meyer](#) on 14 Aug 2002, 3:01 p.m.,
in response to message #2 by Ellis Easley

Thanks, Ellis.

So, does that mean that these early circuits aren't gold plated?

Michael

Re: PCB, gold plating facts

Message #4 Posted by [Ellis Easley](#) on 14 Aug 2002, 4:45 p.m.,
in response to message #3 by Michael Meyer

No, HP did heavily gold plate the traces of PCBs in a lot of equipment. Much of their old test equipment which I have is built this way. Lots of old electronic equipment has been thrown into acid baths (presumably the famous "aqua regia" - a mixture of nitric and hydrochloric acids, I think - which is able to dissolve gold) to recover the gold! When there is no solder mask, gold plating is unmistakable, and a lot of HP's pre-IC PCBs were hand soldered. Solder mask is primarily used to allow "wave soldering" with close traces, which would otherwise be hopelessly shorted together - back then, hand soldering was considered the most reliable method since every joint was inspected by human eyes in the process of soldering it. I don't know why HP went to the expense of gold plating all traces, but three possible reasons are (1)they wanted the protection from adverse environments that gold plating provides - they used to run a print ad featuring a piece of test equipment that was recovered after spending some years in a lake, which worked within calibration specs after just drying it out! and (2)they determined that the extra gold more than paid for itself by contributing to the high price people would pay for HP equipment! and (3)I believe the price of gold used to be kept artificially low in the US for monetary reasons - wasn't the price \$32 per ounce for many years and weren't Americans not allowed to own bullion?

Since gold became very expensive, the trend in all interconnect systems (including PCBs) is "selective gold" which means using the minimum amount of gold plating, only where contact between parts takes place. An excellent example is connectors for ribbon cable (as distinct from "ribbon connectors" which is the official term for what are often called "Centronics" type connectors, so named because the actual mating contact is cut from a ribbon of metal). Connectors for ribbon cables actually have two connection points per pin: the point where the connector mates with another connector (for example a .025" square pin or a PCB finger or a "D" connector pin) AND the point where the connector pierces the insulation of the individual ribbon cable wires ("insulation

displacement") and provides a narrow channel into which the stranded conductor is forced, forming a "gastight" electrical connection. In the early days, the entire piece of metal forming an individual contact of such a connector would be plated with gold. Now, only the portion that actually touches the mating connector surface is gold plated - the mating surface is often a curved section of spring metal and only a small area on either side of the actual point of contact will be plated. The rest of the contact - including the insulation displacement end - will be tin plated. This is actually an improvement, since the wires in the ribbon cable are also tin plated.

On my HP25's, the logic PBC's have solder plated traces (wave soldered, with solder mask only on the solder side) and the gold plated contacts soldered in place that connect to the keyboard and display. The keyboard PCB's are completely gold plated although the only critical points that benefit from gold plating are the key switch contacts, the slide switch contacts, and the holes ("vias") that mate with the pins in the logic PCB. (On the display PCB, HP appears to be mating the gold plated pins with silver plated vias.) My HP97 is basically built the same way. I've seen pictures here of HP97 logic boards that have solder mask on the component side and appear to have gold plated traces. While I can't say for sure from a picture, this looks to me like the kind of light colored solder mask that makes shiny traces look like they are gold plated.

Re: PCB, gold plating facts

*Message #5 Posted by [Meyer Michael](#) on 15 Aug 2002, 12:38 a.m.,
in response to message #4 by Ellis Easley*

Thanks. It's been years, but I used to make my own circuit boards. I'd always admired the HP-25's gold connectors. One note I've discovered about these circuits: We all admired the HP circuits which were covered with shiny solder compared to the "cheap" TI copper traces. Nearly 30 years later, many of the HP circuits are hopelessly corroded from outgassing, where many of the plain copper boards held up better!!

So, my original observation stands: my HP-45 is one of the prettiest darn circuitry I've ever seen. Gotta cover your eyes due to the glare of gold. <grin>

Michael

Re: PCB, gold plating facts

Message #6 Posted by [Ellis Easley](#) on 18 Aug 2002, 10:19 p.m.,
in response to message #5 by Meyer Michael

I opened up my HP45 and found that the logic board is completely gold plated and has solder mask on the solder side. It makes sense that they would wave solder a board with so many component pins. I guess HP's rule was that if any gold plating was needed on a PCB, they plated all the traces. This would save steps, since if they had only plated the vias that mate with the pins from the keyboard (which IMHO is the only place they needed gold plating), it would have been necessary to mask off the areas not to be plated, then remove the mask afterward.

When only the PCB card edge connectors are to be gold plated, as is frequently the case with PC option boards, the PCB fabricator builds the board with additional traces (outside the final outline of the PCB) connecting the card edge connector fingers together, to use as a common terminal for electroplating. Then after the plating is done, the extra material is trimmed off. Also, some tiny PCBs like handheld games, the little music boxes that come in greetings cards, etc. are made with the different networks shorted together with additional traces that are then drilled out. I assume this is done to facilitate plating the traces. I wonder what method HP used to make contact with all the traces on PCBs in order to gold plate them? One possibility that occurs to me is a variation on the "additive process", since the whole board is covered with thin copper and the desired traces are built-up by electroplating copper, additional electroplating could apply the nickel and gold layers before the resist is removed and the thin copper is etched away.

Re: good as GOLD circuits and classic HP's

Message #7 Posted by [Tom \(UK\)](#) on 15 Aug 2002, 3:36 a.m.,
in response to message #1 by Michael Meyer

I have an early HP41C (made in 1979), the PCB can be seen when the battery tray is removed. The tracks on the PCB are a very shiny gold colour, there does not seem to be any coating on the PCB - are these tracks gold plated? If so when did HP stop plating the tracks with expensive gold?

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HP41CV Repair

Message #1 Posted by [Tom Walker](#) on 13 Aug 2002, 3:52 p.m.

Finally got brave enough to remove the rubber feet and carefully remove the screws. Theory is that key contacts may need cleaning. I have separated the two halves, and in doing so a strip of plastic the width of the case, but only about 1/8inch wide, dropped out. I can't figure out where it goes!

Also, I'm not sure how to remove the circuit board to clean key contacts, or if that is even necessary. Symptoms were random oddities--sometimes wouldn't turn on, sometimes wouldn't turn off, other times screwy displays.

Re: HP41CV Repair

Message #2 Posted by [David Smith](#) on 13 Aug 2002, 4:52 p.m.,
in response to message #1 by Tom Walker

The little right angle strip of plastic is a dust shield that fits above the LCD display module. It just lies between the top of the module and the case.

The keyboard cannot be removed. It is basically melted into place by those zillions of little heat stakes.

To clean the keys you need to make a tiny wire brush out of three small wire bush bristles chucked into a pin vise or Xactio knife holder. Twist the bristles together and trim the end square with a pair of cutters.

Notice that beneath each key disk is a tiny plated through hole. Place a drop of 91% isopropyl alcohol on the hole of the offending key, dip the brush in some more alcohool and gently "scritch" around in the hole. While holding down the key scritch some more. Be careful not to break a bristle off in the hole. Repeat as needed.

Re: HP41CV Repair

*Message #3 Posted by [Tom Walker](#) on 13 Aug 2002, 5:40 p.m.,
in response to message #2 by David Smith*

David, thanx much for the info. I will work on that. Did the symptoms I described give you any other ideas?? Tom

Re: HP41CV Repair

*Message #4 Posted by [Ed Martin](#) on 13 Aug 2002, 8:30 p.m.,
in response to message #3 by Tom Walker*

Tom,

I had a similar experience with my 41, and it appears the major problem is with the flexible gold connector connecting the CPU board to the main (keyboard) circuit board. Make sure there is enough pressure on this connector, or all kinds of screwy stuff can happen.

The other flexible interconnect (the one to the batteries & external ports) can also be problematic. Bad connections here can cause one or more ports to stop working.

While you have it open, check all the screw posts for cracking, and also check the back cover to ensure there are no cracks where the screws go - this can also lead to insufficient pressure on the contacts.

Despite all I said about sufficient pressure, don't overtighten the screws, as that can lead to cracked posts.

Use 91% isopropyl alcohol or a contact cleaner pen to clean the contacts while you are in there.

One last pointer - if you get some crazy results after you put everything back together, try shorting the battery contacts or leaving the batteries out for several hours, as stray charges can cause problems.

Good Luck.

Ed

Re: HP41CV Repair

*Message #5 Posted by [Tom Walker](#) on 14 Aug 2002, 10:27 a.m.,
in response to message #4 by Ed Martin*

ED, DAVID, I really appreciate the guidance. As I look at the open case what I presume is the circuit board (since it has a couple of capacitors thereon) slides over the two bottom screw posts. Is there any wiring beneath this or can it be removed by carefully sliding it off the posts? It seems to have a slight rocking motion. Now, for the larger board which seems to be the backside of the key contacts, it is mounted on all four posts and has numerous wires going to the display module at the top. Can this also be removed (partially--I don't want to get into soldering!) by sliding off the four posts and tilting upward??? Maybe that is not necessary if the problem is on the underside of the circuit board. Tom

Re: HP41CV Repair

*Message #6 Posted by [Erik Wahlin](#) on 14 Aug 2002, 3:33 p.m.,
in response to message #5 by Tom Walker*

The contacts (zebra connector strips) for the cpu board to keyboard pcb is under the cpu board. The contacts are of two type. The first is extremely fine wire wound around a soft spongy material. The other type is a connector with fine wires impregnated into a silicon strip. In any case, connections to the cpu board and keyboard pcb are made through these two soft flexible connectors. Be very careful when removing the board from the soft zebra connectors because in the case of connector with fine wire wrapped around the spongy material, you can break the wires if they are stuck to either the keyboard or cpu board. Look for corrosion or dirt on the cpu board or keyboard contacts where the zebra strips make contact.

Re: HP41CV Repair

*Message #7 Posted by [Tom Walker](#) on 14 Aug 2002, 4:59 p.m.,
in response to message #6 by Erik Wahlin*

Erik, in a previous msg. David M. had suggested to make sure there was sufficient pressure on the cpu board to make good contact with the main board. Any ideas (from anyone) on a means of increasing pressure on that board. I am thinking more and more that's where the problem lies. Tom

Re: HP41CV Repair

*Message #8 Posted by [Ed Martin](#) on 14 Aug 2002, 8:01 p.m.,
in response to message #7 by Tom Walker*

Tom,

To answer your first question - yes, the CPU board is the small board that slides over the two posts. You can safely remove this. Make sure all of the contacts are clean. I wouldn't do too much to increase pressure other than ensure the screws are tight. I suppose you could place very thin nylon spacers over the screw posts to increase the compression if nothing else works.

The main circuit board is heat staked on, and is not removable (my mere mortals with my skill level, at least).

- Ed

Re: HP41CV Repair

*Message #9 Posted by [Tom Walker](#) on 15 Aug 2002, 4:19 p.m.,
in response to message #8 by Ed Martin*

ED, I believe you "cracked the code"! I placed a short strip of rubber, about 2mm thick, along the bottom of the circuit board. With the case closed it exerts enough pressure on the circuit board and the connector beneath to solve the problem! I am delighted.

I have three "old" HP's that I bought when they were new, in the 70's and early 80's. An HP65, 41CV, and 41CX. I've had to build up a battery pack for the 65, and the CV you know about. The CX has never had a problem (yet!)

Needless to say I appreciate the help that you and the other experts provide on this forum.

Re: HP41CV Repair

*Message #10 Posted by [Ed Martin](#) on 15 Aug 2002, 9:46 p.m.,
in response to message #9 by Tom Walker*

Tom,

I'm glad I was able to help. I'm not sure I would call myself an expert, certainly not compared to some of the talents in this forum. Nevertheless, I am flattered and happy that I could be of some assistance.

- Ed

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HP41CV Keys Beep

Message #1 Posted by [Jon Bakker](#) on 12 Aug 2002, 2:47 p.m.

My HP41CV beeps with every key stroke. Does anyone know what I can do to stop this annoying beep?

Re: HP41CV Keys Beep

Message #2 Posted by [Philip Reagan](#) on 12 Aug 2002, 3:11 p.m.,
in response to message #1 by Jon Bakker

Yes. Either press the BEEP key (which is a shifted function on the keyboard) or do XEQ [ALPHA]TONE[ALPHA]9.

This problem can occur due to a bug in most systems. If you have the TIME module it probably beeps every second as well.

Re: HP41CV Keys Beep

Message #3 Posted by [Jon Bakker](#) on 12 Aug 2002, 4:42 p.m.,
in response to message #2 by Philip Reagan

Thanks. It worked exactly as you said.

Now why didn't the manual tell me this??

Re: HP41CV Keys Beep

Message #4 Posted by [Philip Reagan](#) on 12 Aug 2002, 6:17 p.m.,
in response to message #3 by Jon Bakker

Well, because HP didn't intend for that to happen. It's a bug. The bug is documented in a book called "Extending your HP41" and probably other places.

Re: HP41CV Keys Beep

*Message #5 Posted by [Raymond Hellstern](#) on 13 Aug 2002, 2:51 a.m.,
in response to message #4 by Philip Reagan*

I think it happens when there's some 'dirt' left in the tone register.

Raymond

Many times, this happens when changing batteries

*Message #6 Posted by [Gene](#) on 13 Aug 2002, 7:51 a.m.,
in response to message #5 by Raymond Hellstern*

If you take the battery pack out or let it slowly slip out and then put it back, this can sometimes happen too.

Turning on HP41CV Keys to Beep

*Message #7 Posted by [Matt Kernal \(US\)](#) on 13 Aug 2002, 11:16 a.m.,
in response to message #4 by Philip Reagan*

I don't have my copy handy, but what was/is the three-button key-press that turns on the keys to beep?

Thanks, Matt

Re: Turning on HP41CV Keys to Beep

*Message #8 Posted by [Philip Reagan](#) on 13 Aug 2002, 12:29 p.m.,
in response to message #7 by Matt Kernal (US)*

I've gotten it to occur on my CX which implements the Reset option (ENTER+ON). If you execute BEEP and then press ENTER+ON trying to time that reset during a BEEP, the "problem" will occur. It may take several times to get it to happen. Be sure to press the ENTER key first and then ON or the unit will turn off. Try to time the pressing of the ON key with the occurrence of a BEEP.

Re: Turning on HP41CV Keys to Beep

*Message #9 Posted by [Matt Kernal \(US\)](#) on 15 Aug 2002, 11:22 a.m.,
in response to message #8 by Philip Reagan*

Thanks for your detailed description... I remembered the timing of pressing the keys was important. In 1987, we used to play this beeping trick on unsuspecting co-workers before they arrived at work. There was also the small program to turn the 41 off as soon as it was turned on. Fun memories.

Thanks again, Matt

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HP41.CV Repair

Message #1 Posted by [Tom Walker](#) on 12 Aug 2002, 12:09 p.m.

Sometime ago I recall some messages suggesting repairs that could be done (key contact cleaning, etc) to get my 41CV working properly. It produces some random nonsense, but sometimes will work O.K. Indications to me are that some key contacts may need cleaning. I don't really know how to open the case to look into this. Suggestions?

Re: HP41.CV Repair

Message #2 Posted by [Ellis Easley](#) on 12 Aug 2002, 3:07 p.m.,
in response to message #1 by Tom Walker

There are lots of discussions about cleaning the 41C's. The Forum contains the most recent threads and the [Archives] have the earlier ones. The highest numbered Archive is like a "sweep account" for the Forum, as new messages are posted, older ones are "swept" into the highest numbered Archive. In either the Forum or the Archives, use [Search / Personalize Display] to search for specific discussions.

Re: HP41.CV Repair

Message #3 Posted by [Stephan \(CH\)](#) on 13 Aug 2002, 1:27 a.m.,
in response to message #1 by Tom Walker

Morning Tom It just happened to me as well, that my display told me only garbage. The reason for this was that the lower screws which hold the two calculator case parts together were loose. The result was that the zebra-connector didn't do a firm connection anymore. When I pressed the lower part of the calculator to the table it worked fine. Without pressure I got only a symmetric pattern of hieroglyphs in the display. Just try to tighten the lower two screws under the rubber feet. (But do not overstress the screws!) Good luck, hope I could help.

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HP 42S

Message #1 Posted by [Richard Garner](#) on 12 Aug 2002, 11:47 a.m.

I see there are 2 must have at any cost beginners that are driving the price of the 42S's up again.

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1372018037>

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1372311341>

Re: HP 42S

Message #2 Posted by [W. Bruce Maguire II](#) on 12 Aug 2002, 10:04 p.m.,
in response to message #1 by Richard Garner

That's *funny*!

That kind of "*I'll just keep adding one dollar to my bid until I top his*" mentality is hilarious!

I wonder when (if ever?) it occurs to these people that their bidding pattern is completely transparent, and that we can all tell (usually with surprising accuracy) where their newest "high-bidder" bid lies? Oh well, just another person who doesn't get the idea of proxy bidding...

Bruce.

Re: HP 42S

*Message #3 Posted by [John Aasen](#) on 18 Aug 2002, 7:27 a.m.,
in response to message #2 by W. Bruce Maguire II*

What is HP's replacement for the 42S? (with every single function of a 42S and a size <= to the size of a 42S.)

If there isn't one, why doesn't HP design one or just crank up production of the old design again so we can buy these without the Ebay crazyness. If HP did a new similiar design, the only feature I'd like to see changed is screen size increased to about double vertically.

Has anyone contacted HP about this?

Re: HP 42S

*Message #4 Posted by [thibaut.be](#) on 18 Aug 2002, 8:09 a.m.,
in response to message #3 by John Aasen*

Well, sure there's nothing as good as the 42S...

However how much 42S would HP sell should they start up the production line again... 50 ? 200 ? 1000 ? seems that this community only want to purchase one, and a unit figure with less than 6 digits is not interesting for HP....

Re: HP 42S

*Message #5 Posted by [Raymond Hellstern \(Germany\)](#) on 18 Aug 2002, 2:40 p.m.,
in response to message #4 by thibaut.be*

Hi,

I think many would buy at least two units, if the price is suitable;-)

Raymond

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RPL help. . .

Message #1 Posted by [Tal](#) on 11 Aug 2002, 4:04 a.m.

Hi, All!

I have a repeatable file result that stored in "xxx" variable.

Does anyone could help to check if this file is exist and if so the result file name will be changed and will be stored as "xxx1" and so on.

Best regards, Tal

Re: RPL help. . .

Message #2 Posted by [James M. Prange](#) on 11 Aug 2002, 5:15 p.m.,
in response to message #1 by Tal

To check whether the variable exists, use RCL within an IFERR structure, like this:

```
\<<
  'XXX'
  IFERR
    RCL
  THEN
    (whatever action to take if the variable doesn't exist goes here)
  ELSE
    DROP (whatever action to take if the variable does exist goes here)
  END
\>>
```

You may want to refine the THEN clause by nesting a conditional (IF... or CASE...) structure in there with ERRN to check that the error was really #204h, "Undefined Name".

But note that this checks whether the variable exists anywhere on the current path. To restrict the search to the current directory, maybe:

```
\<<
```

```
VAR$ 'XXX'  
IF  
  POS  
THEN  
  (whatever action to take if the variable does exist goes here)  
ELSE  
  (whatever action to take if the variable doesn't exist goes here)  
END  
\>>
```

But note that VAR\$ is slow when the current directory is large.

What you want to do resembles what happens when the calculator receives a file with the same name as an existing variable in the same directory and flag -36 is clear, so there may well be a SysRPL entry that would help you.

Regards,
James

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HP48 RPL HELP. . .

Message #1 Posted by [Tal](#) on 11 Aug 2002, 1:29 a.m.

Hi, All!

I have a program that gives at the end a "GROB".

This "GROB" displayed on the screen and saved in "XXX" variable(for other time display).

I used a temporary ("TEMP") variable.

I am wondering if it is must using this temperary variable: . . . @ here is the GROB 'TEMP' STO \<<
TEMP \->LCD 3 FREEZE \>> 'XXX' STO XXX \>>

Best regards, Tal

Re: HP48 RPL HELP. . .

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 11 Aug 2002, 11:38 a.m.,
in response to message #1 by Tal

Hello, Tal

Let me see if I get it: your program lists like this (as is in your post):

```
GROB 'TEMP' STO
<< TEMP
->LCD
3 FREEZE
>>
'XXX' STO
XXX
>>
```

The last >> seems to have no counterpart. Is there something else in your program?

When the calculator finds GROB in a program, it places GROB in stack level-1. GROB is a special name, and sometimes I feel confused about how to use it. What did you expect being stored at 'XXX' at the end of the procedure?

If you want to send me the program listing, be my guest.

Best regards.

Re: HP48 RPL HELP. . .

*Message #3 Posted by [James M. Prange](#) on 11 Aug 2002, 2:55 p.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)*

Hi Vieira,

"GROB" is RPL jargon for "GGraphics Object". Presumably, an earlier part of the same program left the GROB in level 1.

Tal,

Just let the program that makes the GROB end with the GROB on level 1. Now start writing the 'XXX' program in the command line, but instead of using the variable TEMP as the first object, press LeftShift EDIT, then the \|^STK menu key to get into the "interactive stack", and with the arrow on level 1, press ECHO to get a copy of the GROB itself into your command line, and then press CANCEL (or ATTN on the 48S series) to get out of the interactive stack.

My explanation sounds a bit complicated, but once you learn the technique, it's really very easy.

Regards,
James

Re: HP48 RPL HELP. . .

Message #4 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 11 Aug 2002, 7:14 p.m.,
in response to message #3 by James M. Prange

Hi, James. Thanks for the information.

You are right: I confused GROB for PICT. The sort of maneuver with PICT is what I mentioned as confusing; PICT is a name, an object and you can deal with the name as you deal with the object; if you recall its contents to the stack, it becomes a *Graphic Ill X ccc*; if you type in PICT and press [ENTER], you place PICT in the stack, no ' surrounding it; if you have a graphics object in level 1, you can type in PICT and press [STO]. Sometimes I feel confused about what I am dealing with...

I thought that the listing posted by Tal was incomplete. I thought a program was created within the main program, so the first << and something else was missed. After your analysis, I realized I was trying to see more than it was really shown. Checking for XXX existence is the best solution.

What I did not understand is the fact that the default condition is overwriting existing variables. One question: the 'XXX1' solution would be 'XXX.1' solution for transferred files (flag -36 controls overwriting, as mentioned), but... is there a SysRPL entry that allows the generation of a new file name, like 'XXX.1', when the duplicated file comes from a program command? I did not get into SysRPL so far (I do not have a complete documentation; any suggestion?), but knowing about it would be great!

Best regards.

Re: HP48 RPL HELP. . .

Message #5 Posted by [James M. Prange](#) on 11 Aug 2002, 11:03 p.m.,
in response to message #4 by Vieira, Luiz C. (Brazil)

Hi Luiz,

First, my apologies for my gaffe of using your surname in my previous post.

You are right: I confused GROB for PICT. The sort of maneuver with PICT is what I mentioned as confusing; PICT is a name, an object and you can deal with the name as you deal with the object; if you recall its contents to the stack, it becomes a Graphic Ill X ccc; if you type in PICT and press [ENTER], you place PICT in the stack, no ' surrounding it; if you have a graphics object in level 1, you can type in

PICT and press [STO]. Sometimes I feel confused about what I am dealing with...

I think that the word GROB is, properly speaking, an object delimiter. If you do LCD \->, then you'll see something like Graphic 131 x 64 on level 1. If you EDIT this object, then your command line will start with GROB (the beginning delimiter for the object), then 131 64 (the dimensions of the object), and finally what looks like a very long string of hexadecimal (even if the calc isn't in HEX mode) digits. No trailing base indicator is needed because it's always displayed in hex format, and no ending delimiter is needed because the length can be computed from the dimensions.

Ah, yes. PICT is indeed a very strange word. In his "HP 48 Insights" books, Bill Wickes refers to it as a "pseudo-name". It's actually a built-in command (but with very strange syntax for an RPL command), rather like the "symbolic constants" \pi, e, i, MAXR, and MINR are actually built-in functions rather than reserved variables, regardless of what you've read about them.

Quoting from "Insights":

"PICT is actually a command (type 19), but you can use it in two ways:"

"1. As a graphics object. PICT can be used as an argument for commands that work with graphics objects: SIZE, SUB, GOR, GXOR, and REPL. For the last three commands, PICT may only be used as the first (level 3) argument. With that argument, the three commands return no result to the stack--the result becomes the new picture screen. Furthermore, there are operations on the PICT grob that are not provided for other grobs: line, box, and arc drawing, and the ability to control and test individual pixels in the grob."

"2. As a "variable." Using PICT like a quoted name allows you to treat the picture screen like a variable containing a grob representing the current picture. Specifically, *grob* PICT STO stores *grob* into the picture screen, replacing the current contents; PICT RCL returns the current contents of the picture screen to the stack as a graphics object, and PICT PURGE deletes the picture screen and recovers the associated memory. Note: you should not use ' ' quotes around PICT."

I thought that the listing posted by Tal was incomplete. I thought a program was created within the main program, so the first << and something else was missed. After your analysis, I realized I was trying to see more than it was really shown. Checking for XXX existence is the best solution.

I think that it was indeed incomplete, and he was indeed making the 'XXX' variable within a larger program, with the beginning "to be understood".

What I did not understand is the fact that the default condition is overwriting existing variables.

A "design choice" I suppose. It seems "natural" to me, but I'm accustomed to this behaviour all the way back to the 28S.

The SysRPL entry CREATE is sometimes a useful variation. It's much like STO, except that even if a variable with the same name already exists in the current directory, a new variable will be made. Since it's at the beginning of the directory, it will be found quite quickly (as long as you don't change directories). This has some of the advantages of local variables, and can be used where a local variable won't work. But (like a local name) you won't be able to use any other variable with that name in the same directory as long as the new one exists, so you'll probably want to be sure to PURGE the new one when you're finished with it.

I stumbled across a use of CREATE by the plotter by repeatedly pressing ON-C to break out of some very slow plots, and finding two variables named 'X' at the beginning of the current directory. Apparently, by warmstarting, I didn't give the plotter time to "clean up" after itself. A bit disconcerting, to say the least, but basically harmless.

One question: the 'XXX1' solution would be 'XXX.1' solution for transferred files (flag -36 controls overwriting, as mentioned), but... is there a SysRPL entry that allows the generation of a new file name, like 'XXX.1', when the duplicated file comes from a program command?

An excellent question; I wish I knew! It seems to me that since this works with Kermit transfers, there ought to be a SysRPL entry for it, but perhaps it's an "unsupported" entry. It would be very useful indeed to have a variation of STO that "renames" if the name matches an already existing variable.

I did not get into SysRPL so far

I'm barely "into" it myself. UserRPL usually suffices for my purposes: "ad hoc" programs used only by myself and not used all that many times, so it's not really worth the time to "optimize" them, let alone use SysRPL to write them and have a greater risk of a "Try To Recover Memory?" when I need to get some "real work" done ASAP. But knowing a bit about the "internals" does, I believe, help me to use UserRPL better, and occasionally I do use a SYSEVAL in my programs. But as a hobby, it's fun to optimize a program for size, speed, or memory use. Maybe one of these days.

(I do not have a complete documentation; any suggestion?), but knowing about it would be great!

I'm not sure that anyone, maybe not even HP, has "complete documentation". For a start, I'd suggest <http://membres.lycos.fr/ekalin/>, maybe <http://www.engr.uvic.ca/~aschoorl/>, or <http://www.math.fu-berlin.de/~raut/>, and of course, <http://www.hpcalc.org/>. I consider RPLMAN.DOC from the old HP Tools on Goodies Disk 4 (see <http://www.hpcalc.org/details.php?id=235>) to be THE basic reference for SysRPL, but I've read that it's available in other (PDF or PostScript?) formats elsewhere on hpcalc.org.

Note that the SysRPL entries (especially the "unsupported" ones) for the various models differ; be sure that you're using the correct entry table for your calculator.

I wouldn't recommend that anyone jump right into trying to learn SysRPL without first learning UserRPL, at least enough to feel reasonably comfortable and confident programming in UserRPL.

Regards,
James

Re: HP48 RPL HELP. . .

*Message #6 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 12 Aug 2002, 12:39 a.m.,
in response to message #5 by James M. Prange*

Hello, James;

first of all, I was not even known it is a gaffe when one uses the surname to refer to someone else's name. In Brazil we normally use both in the same way; sometimes, the surname comes after a Mr. (or Ms.), but it is not unpolite omitting the Mr. I feel glad for your apologies, and I would accept them as well, but... we're home, my friend (may I?). I was not aware of it.

Well, what to say! Thank you very much for the explanation. The HP48 is really a box of surprises. I have both HP48 Insights, and it is a very good, easy reading (thanks to Bill Wickes), but I did not find the time reading them till the last page. And they are not the kind of books to read in a flash: they MUST be taken word by word, slowly, digesting... We're lucky they were very, very well written.

I bought my HP28S when I was in still an engineer student. It took me so many days reading (and understanding) its manuals that I thought nothing else would

be hidden inside it. I was known about Synthetic Programming on the HP41 (Wickes strikes again...) and I could read it only after buying the HP28S. Some years later, I could get my HP48SX and then I thought a lot more would be hidden in there.

I have some stuff about SysRPL, but it demands time, time, and more time to devote and experiment. I'm about to find some for now, but I believe most of the hidden secrets are already known by many users. I think I can take a ride and save time to be spent in development. Do you agree?

I am a lot curious about many HP48 related things. I'll search for info following the addresses you posted here.

Again, my pleasure reading your post.

Thank you a lot!

Re: HP48 RPL HELP. . .

*Message #7 Posted by [James M. Prange](#) on 12 Aug 2002, 4:06 a.m.,
in response to message #6 by Vieira, Luiz C. (Brazil)*

Hi Luiz,

Customs vary with time, place, and circumstance. When I was a child, adults (at least in this neighborhood) were addressed (by both children and other adults) as Mr., Mrs., or Miss plus their surname, with the exception of family and those who were childhood companions (even then, on "business" matters, the formal Mr., Mrs., or Miss and surname was used). These days, Mr., Mrs., Miss, or Ms. and surname would seem too formal for most situations; we use the informal first name in most cases. In some cases the surname alone may be used in an informal manner, particularly when that distinguishes which person is meant when the first name could refer to more than one person, but more often it would be considered somewhat rude.

And yes, I would be honoured to be considered your friend.

Bill Wickes's books are indeed very well written, I'm glad that you have them. Perhaps others will also benefit from the excerpts that I quoted. Except for things that are obviously new with the 49G and SysRPL matters, or when I know exactly where else to find the answer, the "Insights" books are still the first place that I look when I have a question about these calculators. But even in the "Insights" books, I occasionally find an error; if you really want

to know for sure, there's nothing quite as good as experimenting.

These calculators still have some surprises, at least for me. I don't think that the documentation was ever really complete, and the quality and completeness of the documentation seems to go down with each new model. It's as if they expect that the only ones who might read the "Guides" (Whatever happened to "Manuals"?) are those who are already familiar with the previous model and those who don't care to make the effort to learn "in-depth" how the calculators work.

But there is indeed a wealth of information available; it's mostly a matter of finding it and finding the time to study it, and it's worthwhile looking into what others have already discovered, but do have a bit of skepticism about anything that you read.

By the way, let's not overlook the Museum CDs as a source of information on RPL.

As for learning SysRPL, it's something that I keep promising myself I'll do someday. But experiment with it only when you have your calculator backed up and a "Memory Clear" won't be too terribly inconvenient. Mistakes that you'd discover by an error when working with UserRPL may well be discovered by a TTRM when using SysRPL.

Note that backing up to a port is a lot faster than backing up to a PC, and, especially if you write-protect the card (on a 48 series) or use the flash memory (on a 49G), it's almost completely secure. But for "worst-case" scenarios, I still recommend having a reasonably recent back-up on another device, whether you're experimenting with the "internal" languages or not.

Regards,
James

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CNN Headline News...Pocket Calculator story

Message #1 Posted by [Gene](#) on 10 Aug 2002, 4:50 p.m.

8/10/02 about 3:45 pm central time. CNN Headline News is running a story about pocket calculators.

Website mentioned:

www.pocketcalculatorshow.com

Re: CNN Headline News...Pocket Calculator story

Message #2 Posted by [Ellis Easley](#) on 12 Aug 2002, 3:29 p.m.,
in response to message #1 by Gene

I've seen the website mentioned in some Ebay auctions of calculators. They said the auctions were raising money to pay for the website.

Re: CNN Headline News...Pocket Calculator story

Message #3 Posted by [Ed](#) on 13 Aug 2002, 4:27 p.m.,
in response to message #2 by Ellis Easley

These guys actually have a weekly radio show on shortwave station WBCQ (7415kHz) on Saturday evening 10PM EDT. They're into electronics from the '70s and '80s and frequently discuss calculators, along with early PCs (Apple, Altair, etc.), etc.

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HP Calculators in the U.K.

Message #1 Posted by [Andrew](#) on 10 Aug 2002, 11:07 a.m.

With my renewed interest in HP calculators I spent some of today looking for a supplier of these units in the United Kingdom. Despite a lot of searching I cant find anyone in the UK who sells the current range of HP calculators. I looked at amazon.com but they wont ship HP calcs outside the USA. Does anyone know of a supplier in the UK who still sells HP calculators? Have HP stopped selling these items in the UK completely?

Andy

Re: HP Calculators in the U.K.

Message #2 Posted by [Nenad Vulic \(Croatia\)](#) on 10 Aug 2002, 1:03 p.m.,
in response to message #1 by Andrew

If you are located in London you may visit a small shop in the city of London (near the underground station Bank) which offers HP calculators. Their Internet site is:

www.wfsleath.demon.co.uk

Whwn I was there (nine months ago) they had all the current models available.

Hope that this helps.

Re: HP Calculators in the U.K.

Message #3 Posted by [Renato](#) on 10 Aug 2002, 6:37 p.m.,
in response to message #1 by Andrew

Did you look at www.ebay.co.uk ? There were some 41cx NIB for sale.

Re: HP Calculators in the U.K.

Message #4 Posted by [Davemc](#) on 10 Aug 2002, 8:17 p.m.,
in response to message #1 by Andrew

Check the 'Suppliers' page here: <http://www.hpcc.org/>

Re: HP Calculators in the U.K.

Message #5 Posted by [Kelvin](#) on 11 Aug 2002, 10:12 a.m.,
in response to message #1 by Andrew

I got my HP32Sii from WFSleath, as mentioned in one of the above posts.

In addition, in Tottenham Court Road in central London there are a number of hifi/computer/electronics shops that still sell things like HP12C, HP17s etc.

If like me, you are interested in older second-hand HP calcs like the HP67, then in the UK it appears to be impossible. I've attended many car boot sales, and only ever saw one: an HP12C which I got for 50p!

Re: HP Calculators in the U.K.

Message #6 Posted by [Edwin Russell](#) on 12 Aug 2002, 7:58 a.m.,
in response to message #1 by Andrew

I bought my 32SII from <http://www.rms-marketing.ltd.uk/> last November but this now shows as 'out of stock'.

However the rest of the range appears to be available.

Edwin.

Re: HP HP Calculators shipped to U.K. from U.S.

Message #7 Posted by [Frank Travis](#) on 12 Aug 2002, 2:59 p.m.,
in response to message #1 by Andrew

A good place that sells just about all of the current HP calculator models (i.e., HP 48GX, HP 10B, HP 10BII, HP 12C, HP 17BII, HP 19BII, 20S, etc.) as well as accessories, is Calcpro website www.calcpro.com. They are in Corvallis, OR, USA; but will ship to overseas locations in Europe, Australia/Oceania, etc. I have bought from them many times and have had good dealings with its manager, Paul Nelson. Good luck!

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HP-35

Message #1 Posted by [Peter Kruse](#) on 10 Aug 2002, 2:56 a.m.

I'm not a calculator buff, but am investigating what I have here. It's an HP-35 my father bought in 1976. I have the box it came in and the manual. How do I know if it's a "red dot".

Re: HP-35

Message #2 Posted by [thibaut.be](#) on 10 Aug 2002, 4:40 a.m.,
in response to message #1 by Peter Kruse

you can check if there is a small red dot on the right side of the power switch.

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A data base about the version of the ROM.

Message #1 Posted by [Hiroshi Ito \(JAPAN\)](#) on 10 Aug 2002, 1:25 a.m.

I am interested in whether the version of how many kinds of ROMs was manufactured about the various HP calculators. The confirmation of the version of the ROM is troublesome because it isn't distinguished from the appearance. There is a problem in the reliability of the source of information as well. Confused condition is going on because it was discussed from the viewpoint of fragment and it didn't come. Information about the version of the ROM is little, and moreover it is scattered. All catch a favor if there is a data base put in order in every model. Is there a plan to make a list in MoHPC? The number of versions of the ROM. How to confirm a version A functional difference. Are there people who are good, an idea?

Re: A data base about the version of the ROM.

Message #2 Posted by [Sling Blade](#) on 12 Aug 2002, 3:35 p.m.,
in response to message #1 by Hiroshi Ito (JAPAN)

I like the way you talk!

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The version of the ROM of HP-42S.

Message #1 Posted by [Hiroshhi Ito \(JAPAN\)](#) on 10 Aug 2002, 1:01 a.m.

How many kinds of versions of the ROM of HP-42S are there? How to know the version of the ROM of HP-42S which one owns is? Why were the contents of the ROM of HP-42S changed halfway?

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HP-21 museum pic on ebay?

Message #1 Posted by [Gene](#) on 9 Aug 2002, 10:15 p.m.

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1371860990>

Looks like it to me...especially since he says he has no battery pack yet the display in the picture is lit.

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HP-27: Why would this trace be cut?

Message #1 Posted by [Mike](#) on 9 Aug 2002, 3:31 p.m.

I got my HP-27. It did not have any of the problems that the seller said it had. Must have been related to the tiny bit of corrosion on the tip of the battery contacts.

I cleaned that off and it worked. All except the decimal points, which were always on. So, I opened it up to see what the problem might be. After I put it back together it worked 100%. Lucky!

However, while it was open, I noticed something odd. There was a trace that was cut. Was this just a factory modification (change)? Are all 27s like this? Could this be something that a previous owner did? Why?

Everything seems to work 100%. It even charges properly. The trace comes from the AC Adapter pin.

Here is the photo of the cut trace: (picture unavailable)

Re: HP-27: Why would this trace be cut?

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 9 Aug 2002, 5:42 p.m.,
in response to message #1 by Mike

Hi;

this "all decimal points on" situation means running in low battery. As you disassembled and reassembled it and it turned into normal operation, chances are you had just a bad contact in one of the power lines (or connections on it).

By looking at the photo, it seems the cut was drill made (by hand?). I do not have any HP27 in hands, and I had an HP22 (no longer with me). In my HP25 I see the resemblance, except for an electrolytic capacitor that is soldered right bellow the 3.6K resistor (orange, blue, red). On it, the copper trace is not interrupted, and it works fine.

I know it does not help much, but I noticed there is no capacitor in your board. Should you

verify if there is any sign if some component was removed? In your photo, right bellow the resistor (a bit to left), there is what seems to be a desoldered component pad. Is it corect?

Success.

I know what the decimal points mean...

*Message #3 Posted by [Mike](#) on 9 Aug 2002, 10:39 p.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)*

That was not the point of the post. I just mentioned that as background for opening the calc. (not that we need any reason (picture unavailable))

No components removed, as far as I can tell. Seems to work find though

Re: HP-27: Why would this trace be cut?

*Message #4 Posted by [Katie](#) on 10 Aug 2002, 12:54 a.m.,
in response to message #1 by Mike*

All the 27's that I've seen are like that. I think it was either a manufacturing mistake that was corrected during assembly, or it was an intentional reuse of an existing circuit board -- like from a 25. The 27 is subtly different from the 25 as far as circuit board traces are concerned. These difference were needed to deal with the different voltages for PMOS vs NMOS.

The circular trace cut is made by using a hand trace cutting tool. It used to be a very common tool for working on circuit boards, they sold them in several sizes for different width traces. It's sort of like a counter-sink drill bit.

Re: HP-27: Why would this trace be cut?

*Message #5 Posted by [Dave](#) on 10 Aug 2002, 3:48 p.m.,
in response to message #4 by Katie*

The chips and circuits in my 27 bear no resemblance to the picture shown...

Are you sure you have a 27?

*Message #6 Posted by [Mike](#) on 13 Aug 2002, 1:23 p.m.,
in response to message #5 by Dave*

Not sure what to make of this. I have checked all the functions and they all work.

Re: HP-27: Why would this trace be cut?

*Message #7 Posted by [David Smith](#) on 13 Aug 2002, 4:57 p.m.,
in response to message #5 by Dave*

I seem to remember seeing three different HP27 logic board layouts.

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HP-65 Help!

Message #1 Posted by [Luis](#) on 9 Aug 2002, 2:06 p.m.

As it's my first time in working with a HP-65, I replaced the gummy wheel, and because I don't have any manual, I would like to know if the Card Reader is working properly. Does anybody knows a simple way to test it (read and record)? Which are the instructions should I give to the calculator to make those tests? Thanks all! Luis

Re: HP-65 Help!

Message #2 Posted by [Dave](#) on 9 Aug 2002, 2:14 p.m.,
in response to message #1 by Luis

Well, to write a program, key it in and leave the switch in PGM mode. Run a card through and it should pass through smoothly and the display should be steady. If an error occurs the display will flash or pulse.

To read a card leave the switch in RUN mode and enter the card into the machine. If successful the card will run smoothly and the display will be steady. A flashing display indicates a read error.

Sometimes a repaired calc may only be able to read cards written on the machine and not others. You can try a preprogrammed card from HP if you have one. This problem arises if the OD of your wheel is not the same as original (or some other cause for speed variations).

Good Luck and let me know if you need different info, others on this board I am sure will help you also.

Dave

Some HP-65 programs can be found here

*Message #3 Posted by [Gene](#) on 9 Aug 2002, 3:01 p.m.,
in response to message #2 by Dave*

<http://www.rskey.org/gene/hpgene/>

Down the page a bit are some links to several HP-65 programs, including games such as Lunar Lander, Craps, Bagels, even Ping Pong (one of my favorites).

Give them a look. They can be tough to key in since the HP-65 does not show line numbers. Be especially careful about double key bounces/presses.

Enjoy! Gene

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Anniversary edition calculators

Message #1 Posted by [Andrew](#) on 9 Aug 2002, 10:23 a.m.

Hi

I used to work for HP, back in around 1989 they issued a couple of 50th Anniversary special edition calculators which were available apparently only to HP staff and HP special customers. The HP 32S and 14B Anniversary versions are mentioned on this site, but are the anniversary edition of these calculators of any particular interest to collectors? I only ask because I recently found both of these items which I bought when I worked for HP. Andy

Re: Anniversary edition calculators

Message #2 Posted by [S. Martin](#) on 9 Aug 2002, 12:22 p.m.,
in response to message #1 by Andrew

As with any HP calculator for which limited numbers were made, they are of special interest to collectors. In the near future it may well be that all hp calculators will be of interest to collectors once HP stops selling them for good.

Steve

Re: Anniversary edition calculators

*Message #3 Posted by [Andrew](#) on 9 Aug 2002, 1:34 p.m.,
in response to message #2 by S. Martin*

Thanks for your response, also thanks to all the people who e mailed me personally! This must be a very active site judging by the number of responses I get(only found it very recently).

In response to everyone who asked me if I want to sell these items...I dont know, as I have no idea what they are worth. Have any of these ever been sold on EBAY or elsewhere and if so what sort of price do they attract? Mine are absolutely mint and unused and in their original anniversary boxes and with all manuals, internal packing, adverts, brochures, slip case etc. They were opened once but only to remove the batteries (which I still have and still fire up the calculators!).

On a seperate note I remember when all the staff at my HP office were offered the chance to buy HP-01's at the end of their life. Special price was \$150 each I think and you could order 1 gold and 1 silver at this price (to clear the old stock). I couldnt afford the price at the time (1979 or 1980??) so didnt bother, now THAT was a mistake I now regret!

Andy

Re: Anniversary edition calculators

*Message #4 Posted by [David Smith](#) on 9 Aug 2002, 4:32 p.m.,
in response to message #3 by Andrew*

They show up fairly regularly on Ebay (mayby one a month). For some strange reason, they don't usually fetch a whole lot above normal machines (mayby 30-50% at best). I actually bought my 32S and 14B for a tad less than what regular machines were going for at the time (but well within normal Ebay price variations).

Re: Anniversary edition calculators

*Message #5 Posted by [Katie](#) on 10 Aug 2002, 1:04 a.m.,
in response to message #4 by David Smith*

They do seem to be pretty easy to find. I can't belive that they were only available to HP employees, they must have gotten out to the general public somehow. What seems much, much harder to find is the 100th aniversary edition of the 28S. I'm still looking for one....

Re: Anniversary edition calculators

Message #6 Posted by [Todd G.](#) on 10 Aug 2002, 6:59 a.m.,
in response to message #5 by Katie

Katie, you mean the 100th anniversary of the American Mathematical Association, and not the 100th anniversary of the 28S, right? ;-)

Re: Anniversary edition calculators

Message #7 Posted by [Steve Borowsky](#) on 10 Aug 2002, 10:32 a.m.,
in response to message #5 by Katie

I had an anniversary edition 28S. I believe it was commemorating the 100th anniversary of the AMS and was sold at the 1988 meeting of the NCTM (National Council of Teachers of Mathematics). It was used in fact to introduce the 28S to the teaching community and if I understand correctly only 1500 were made, based on comments made by Bill Wickes at a user group meeting. I do somewhat regret selling it, since owning something with a known limited production run can be somehow flattering, but i've always felt I collect HP calculators for the technology and the cultural context and I didn't want to be distracted from that. BTW Katie, if you want to buy one, contact Tom Drewski ;-)

Re: Anniversary edition calculators

Message #8 Posted by [David Smith](#) on 11 Aug 2002, 11:00 a.m.,
in response to message #5 by Katie

The anniversary modeuls were also sold to HP stockholders.

Re: Anniversary edition calculators

Message #9 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 9 Aug 2002, 5:24 p.m.,
in response to message #3 by Andrew

Hi;

I know ome people in here will not like it, but others will agree with me, so... Why not?

I have these itens with me (no particular aniversary model):

1 HP25 with everything but the carton case; 1 HP31 with manual, soft case and charger (batteries are not the original pack) 1 (recently given to me by a friend) HP55 with soft

case, manual, charger and dead batt pack

I thought about trading them for other items, newer, that would be somewhat more useful. After deliberating with myself for a while, I decided I should keep them and, if I get rid of them, that should be for a very, very good reason. I do not consider money will pay for their services, just a good reason (say, one of our dear contributors in here need one of these pieces for some particular reason; I implicitly trust in all of them).

Please, guys, we are a community. We should help each other in any situation. If a newcomer asks for some item's value, we should consider that any of us was, at one point, a newcomer. Let's face it: whom of us would get rid of a celebrating model? I wouldn't. I always say I cannot think of a calculator inside a glass box to be seen. If so, only its external case is enough; it can be surely not working. If they are working, let's use them. Even if it is to confirm they are working, and programming. I am studying the HP55, how to build a program on it. I am almost sure I'll never develop a program to run on it, but I would like doing this.

So, I'd say: KEEP THEM! I would.

Just my quarter.

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HP-42X: HP-42S MicroCode Emulator for HP-48GX (Preliminary Info)

Message #1 Posted by [HrastProgrammer](#) on 9 Aug 2002, 8:28 a.m.

After many months of research and development I have a fully functional and working beta version of HP-42S Micro Code Emulator. Currently it is running on HP-48GX with two 128K memory cards but it will be ported to HP-49G in the future.

On my homepage (<http://hrastprogrammer.tripod.com>) there are few pictures captured from the emulator running on Emu48 under Windows.

The emulator is based on the original HP-42S ROM (revision C) so it behaves **exactly** like the real calculator. The screen looks the same and the HP-48 keyboard is accomodated to look like the HP-42S keyboard. It is very easy and joy to use the emulator on HP-48. Showing function name after pressing a key is suported. NULL is suported as well. Available memory is increased to 96K (MEM show '97089 Bytes' after 'Memory Clear'). It is now the largest memory capacity in any of the available HP-41 based calculator/emulator. Even the HP-41X maintains less memory with it's 4096 registers and 8×4096 HEPAX RAM words = approx. 61440 bytes in total. Theoretically, the maximum memory limit which can be supported is 224K (by destroying the whole 128K of calculator memory) !!! Both the main HP-42S ROM and the additional emulator ROM occupies 64K each with the plenty of room left in the second ROM for extensions which can be implemented in the future.

Things which must be implemented are annunciator, tone and printer support. In the current state the emulator isn't suitable for the public distribution so there is a lot of work left in this area. And, of course, a lot of testing, testing and testing ...

I am now going on a 10-day vacation to Dubrovnik. In the meantime I would like to know what do you all think about this project ...

Best regards.

Re: HP-42X: HP-42S MicroCode Emulator for HP-48GX (Preliminary Info)

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 9 Aug 2002, 9:53 a.m.,
in response to message #1 by HrastProgrammer

W O W !

Re: HP-42X: HP-42S MicroCode Emulator for HP-48GX (Preliminary Info)

Message #3 Posted by [Pascal](#) on 9 Aug 2002, 12:45 p.m.,
in response to message #1 by HrastProgrammer

This is absolutely great! And it may be a reason for me to buy a 48 as long as they're available...

Pascal (42S user as well)

Re: HP-42X: HP-42S MicroCode Emulator for HP-48GX (Preliminary Info)

Message #4 Posted by [Hiroshi Ito \(JAPAN\)](#) on 10 Aug 2002, 4:59 a.m.,
in response to message #1 by HrastProgrammer

Saving to the flash memory of the RPN program and loading function.

I want HP-41X to increase saving of the RPN program and a loading function. The peripheral device of HP-IL is necessary to save a program with HP-41C. The peripheral device of HP-IL is big and inconvenient for carrying. HP-42S can't save a program, either. HP-48GX and HP-49G can add a flash memory. Moreover, it can obtain a cheap flash memory manufactured by the third party even now. (ex. KLOTZ electronic 128KB =25EURO, 1MB =40EURO, 2MB =70EURO and 4MB =250EURO) http://uuhome.de/oklotz/index_e.html It is very convenient if a RPN program can be saved after No.2 of the port of the flash memory. As for the format of the file, I want it to prepare for two of the binary form and the text form. A binary form is necessary to download the RPN program debugged with HP-41X into HP-41C. A text form is necessary to edit the RPN program of HP-41X on the text editor.

Re: HP-42X: HP-42S MicroCode Emulator for HP-48GX (Preliminary Info)

*Message #5 Posted by [James M. Prange](#) on 11 Aug 2002, 4:24 p.m.,
in response to message #4 by Hiroshi Ito (JAPAN)*

Actually, the plug-in cards for the 48SX and 48GX are battery-backed SRAM. In many ways this is more convenient than flash memory, but the card requires its own battery to retain memory at all times except when it's in the calculator and the calculator is turned on.

The 49G doesn't have the option of plug-in memory cards of any kind, but has built-in flash memory. The flash memory has the advantage of being non-volatile; you don't need any battery at all for it to retain memory. It has the disadvantages that it takes more power and time to write to, and the calculator can't actually "erase" just one object from flash memory, it has to clear an entire bank at one time. What the system does when you "purge" an object from flash is add a marker to it to tell the system to ignore it. Eventually, I'm sure, it's necessary to copy any valid objects from the bank and clear the entire bank so that it can be used for new objects. I don't know the details of how that works. And of course, on the 49G you can't remove a memory card for storage off-calculator. If you want to back up something off-calculator, you have to transfer it to a different device (a PC, for example).

But on a 48 series, there's the problem of the card battery going dead, so it's a good idea to use the PC for backups anyway.

Regards,
James

Re: HP-42X: HP-42S MicroCode Emulator for HP-48GX (Preliminary Info)

*Message #6 Posted by [HrastProgrammer](#) on 19 Aug 2002, 3:57 a.m.,
in response to message #4 by Hiroshi Ito (JAPAN)*

If I have understood your message correctly, you want to load programs to (and save programs from) the HP-41X. Although I haven't found it useful for me, maybe I will include the possibility to load RAW files into the emulator. You can convert various other formats to RAW by programs like HP41UC.EXE (User-Code File Converter/Compiler/De-compiler by Leo Duran).

Re: HP-42X: HP-42S MicroCode Emulator for HP-48GX (Preliminary Info)

Message #7 Posted by [Hiroshi Ito \(JAPAN\)](#) on 10 Aug 2002, 5:14 a.m.,
in response to message #1 by HrastProgrammer

I hear that HP-41X supports an infrared rays printer, and I am very much expecting it. I want HP-41X to increase a log file formation function, too, in addition to this. Data to transmit to the infrared rays printer are accumulated in the flash memory. It can be reconfirmed on the liquid crystal screen of HP-48GX if a result of a calculation can be left by the file.

Re: HP-42X: HP-42S MicroCode Emulator for HP-48GX (Preliminary Info)

Message #8 Posted by [HrastProgrammer](#) on 19 Aug 2002, 3:58 a.m.,
in response to message #7 by Hiroshi Ito (JAPAN)

Yes, HP-41X printer output can be sent to the HP-48/49 display as well as to the HP-82240 IR printer. This is described on my homepage.

I don't understand the rest of your message. What is the 'log file formation function'? What do you mean by 'Data to transmit to the infrared rays printer are accumulated in the flash memory'? What 'can be reconfirmed on the liquid crystal screen of HP-48GX if a result of a calculation can be left by the file'?

Re: HP-42X: HP-42S MicroCode Emulator for HP-48GX (Preliminary Info)

Message #9 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 10 Aug 2002, 5:48 p.m.,
in response to message #1 by HrastProgrammer

Would you please try to make it fit in a 48G+ (128 K RAM, no RAM slots)? It would be wonderful!!

Re: HP-42X: HP-42S MicroCode Emulator for HP-48GX (Preliminary Info)

Message #10 Posted by [HrastProgrammer](#) on 19 Aug 2002, 4:00 a.m.,
in response to message #9 by Andrés C. Rodríguez (Argentina)

There is no way to fit the HP-42X into 128K of RAM (HP-48G+ or HP-48GX without memory cards). It requires 64K (HP-42 ROM) + 64K (Emulator ROM) + 32K (Emulator RAM) + 96K (HP-42 RAM) = 256K.

I heard that some guys from Germany are working on a HP-42 emulator which will be integrated into HP-48/49 POL system. Maybe it will fit into HP-48G+.

Minimum memory requirements...

Message #11 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 25 Aug 2002, 12:12 p.m.,
in response to message #10 by HrastProgrammer

Understood. So 256K is an absolute minimum. As I don't have a clear understanding about the "ports" issues, I would like to know if your emulator would work in a "expanded" 48G+, upgraded to 256K by means of internal chip soldering, so to speak. Thank you, I think your simulators are great, at least from what I saw in your web page.

PS: Would it work in a WindowsCE PC PDA with Emu48?

Re: Minimum memory requirements...

Message #12 Posted by [HrastProgrammer](#) on 26 Aug 2002, 2:21 a.m.,
in response to message #11 by Andrés C. Rodríguez (Argentina)

As soon as you see Ports :1: and :2: (at least) in the PORTS menu it can be installed. It means that you must have the HP-48G+ upgraded to at least $128+256=384$ K. It would be possible to run the emulator with just a 256K (only port :1: is present) but in this case the 128K of the main RAM has to be used and will be destroyed. I don't think that would be a clever idea :-(

I will try to see if an lite version of the emulator can be developed which could be used with just port 1 ...

And yes, it works fine under Emu48.

Re: Minimum memory requirements...

Message #13 Posted by [Christoph Giesselink](#) on 26 Aug 2002, 11:46 a.m.,
in response to message #12 by HrastProgrammer

Just an addition to the Emu48 topic. At the moment the Emu48 Win32 version is at v1.30, v1.31 is coming soon. There are only minor improvements of the emulator in the last time, so v1.31 fixes an adress wrapping bug at the following code sequence:

```
D0=(5)  #FFFFFF
A=DAT0 A
```

and fixes bugs in the keyboard handler, when timer2 is off. Truely I don't know any programs that use these features/modes, but I think that especially emulators, running on a calculator, are programmed very close to the calculator hardware.

So these sorts of programs might have problems running on an emulator.

When we are now looking on the latest Emu48 version for WinCE, the latest revision is v1.23. May bugfixes have been done since then. Another point is that nobody guarantees the Win32 and the WinCE version 1.23 are functional equal. I don't know how the author of the WinCE version synchronizes his sources to the Win32 version, but that must be hard work. So telling that it's running on Emu48 Win32 version don't mean automatically that it's also running on the latest WinCE version or vice versa. Nearly all programs will do, but not all.

Re: HP-42X: HP-42S MicroCode Emulator for HP-48GX (Preliminary Info)

Message #14 Posted by [db\(martinez,california\)](#) on 11 Aug 2002, 5:01 p.m.,
in response to message #1 by HrastProgrammer

this sounds like a great idea, i'll probably buy a copy when it's done. even though i have never run your program yet i have one suggestion. when everything else is finished and debugged you might think of writing an option that gives the softkey labels AND both lines of display, or even three lines of display. i used the d'zign surveying software in my first 42 and it was perfect except that i often wanted to see northing, easting, and elevation or azimuth, horizontal distance, & elevation difference or station, offset, & cut/fill all at one time. the screen is there taking up space - you might as well use it.

Re: HP-42X: HP-42S MicroCode Emulator for HP-48GX (Preliminary Info)

Message #15 Posted by [Hiroschi Ito \(JAPAN\)](#) on 12 Aug 2002, 9:00 a.m.,
in response to message #1 by HrastProgrammer

Three lines left over are used for debugging.

HP-42S can be indicated only two lines. HP-48GX can be indicated five lines. What will I only have to use three lines left over for? I propose using it for the debugging information.

5:The line number that it is carried out at present, and a command are indicated. 4:An optional register, a flag, a stack Z, a stack T and LASTX are indicated. 3:A command input area for debugging. (Query?) 2:The stack Y of HP-42S. 1:The stack X of HP-42S.

Indication example. 5:10 STO+ 02 4:R02=1.2345 3:Query? 2:2.0000 1:1.0000

A stack isn't destroyed even if a command for debugging is inputted. Not only value is referred to for the command for debugging but also it can be set up.

Command example. 3:Query?TRACE On 3:Query?TRACE off 3:Query?SHOW R02 3:Query?

Hiroshi's Idea sounds good!

*Message #16 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 12 Aug 2002, 11:49 a.m.,
in response to message #15 by Hiroshi Ito (JAPAN)*

Hi;

I think Hiroshi's idea - using "unused" levels 3, 4 and 5 (meaning status area) to show on-line hidden information - would help a lot debugging programs for the HP42.

If it is easy to implement, these features would allow even actual 42's users to develop and debug programs. Even if they are not exactly what Hiroshi proposed, using them this way would be better than, say, showing Z- and T-registers' contents. At least I believe so, because we do not have this T- and Z-registers view in the actual HP42. I know we do not have the information requested, but this is somewhat new fashion: a query, an optional register and running program line.

Well, I do not know how does Hrast see these requests. He has already done so much... (hey, Hrast, will you transform all of your development in a BOOK so we all can buy it and understand the process? Will you open the Pandora's Box while we observe you? I know you will sell the emulator, but a book is also a source of good money...)

Best regards.

Re: Hiroshi's Idea sounds good!

*Message #17 Posted by [HrastProgrammer](#) on 19 Aug 2002, 4:02 a.m.,
in response to message #16 by Vieira, Luiz C. (Brazil)*

Well, I am perfectly satisfied with the way HP-42S display is organized and don't see any need for the additional display information (something must be kept in the programmer's head, too). Usually, I use unused display lines for the printer output (as I have done with HP-41X). Maybe I will do the same with HP-42X, I don't know.

I heard that some guys from Germany are working on a HP-42 emulator which will be integrated into HP-48/49 POL system. Maybe it will have the possibility to show additional stack levels. HP-42X doesn't integrate - it is a standalone program which takes the total control of the calculator (including the interrupt system and everything else). When you start the HP-42X (as well as HP-41X) the HP-48/49 operating system is disabled. That's the way I like it ...

As for the book - I don't plan to release the internals of the emulators. This is something I want to keep just for me. I am professional programmer and I own a little software bussiness so this is my source of the money. Emulators are my hobby. I have released HP-41E as a freeware somewhere in the 1999. but then I decided to sale the HP-41X (and HP-42X, HP-71X, ...) because I was frustrated by the people who are ready to pay 200\$+ or 300\$+ for the used calculators and are expecting to get the emulator for free. I have even seen the guy who's asking 350\$ for the second hand HP-42S on eBay !!! If you had the buy everything what is built-in (and come with) the HP-41X then you had to have more than 1000\$ in your pocket ... and you won't come even close to the all features of HP-41X (huge memory capacity, 16-characters LCD, increased speed, 8-ports, printer emulation, flexibility, etc, etc.) because the real calculators don't have them.

You are 100% correct

*Message #18 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 19 Aug 2002, 10:29 a.m.,
in response to message #17 by HrastProgrammer*

Hi;

I did not see this way. You are right. 100%.

About the book, I thought about it with the readers' view in mind, not the writers'. I thought about making some money NOT EXACTLY by depicting the HP42SX emulator, but showing some basic guidelines on how to create emulators in the HP48/HP49. I do not have any idea if there is a way to do it differently, I just thought about it.

My development area is basically HW. I am still collecting data about available microcontrollers, and I intend building a hardware emulator for the HP calculator's platform. I need some more info about the Saturn internal structure (special registers, F.P. instructions, and the like); is there some other source of info beyond the ones normally mentioned in here?

Congratulations, Hrast; this is the kind of professionalism I admire and encourage.

Best regards.

Re: HP-42X: HP-42S MicroCode Emulator for HP-48GX (Preliminary Info)

Message #19 Posted by [warren](#) on 12 Aug 2002, 12:57 p.m.,

in response to message #1 by HrastProgrammer

A 42S emulator for the 48GX is something that I have hoped you would develop. Others have made many suggestions of features to include. It would be great to display the x and y registers with a soft menu up, or to perhaps display x, y, z and t (with or without the softmenu), but just having an emulator that exactly duplicates the 42S will be good enough. The only thing I would ask is that if possible, it should be able to run on a 48GX with no memory cards (which would also make it able to run on a 48G+ as was requested above). However, if this is not possible, that will just give me an excuse to buy a RAM card. I assume a 1 or 2 meg card (as available at very reasonable prices from Klotz Electronic) would do, correct?

On a related note, is anyone familiar with making/using keyboard overlays for the 48 series? The keyboard has the slots in it which I have always assumed were there to accept overlays, but I do not recall ever seeing any overlays. Since the 42S has only one shift key, it has only two functions per key. Therefore, it seems like an overlay that had the two functions printed above each 48 key (except the numeric, math functions, back-arrow and ENTER keys that match on the two machines) could be produced that would make it very easy to use the 42X emulator on the 48G.

Re: HP-42X: HP-42S MicroCode Emulator for HP-48GX (Preliminary Info)

Message #20 Posted by [James M. Prange](#) on 12 Aug 2002, 3:03 p.m.,

in response to message #19 by warren

HP did market keyboard overlays for the 48SX at one time. The package came with three opaque light grey (or maybe beige describes them better), three (nearly) transparent, and one transparent with the Left/Right shifted Alpha keyboard characters printed in orange/blue on the bottom surface. All have a matte finish on the top surface. The transparent ones are about .010" thick and the opaque ones about .011" thick, and each has six tabs extending out about .06" (maybe 1/16"?) to fit in the slots at the sides of the keyboard. The slots on the calculators can take a thicker material, up to maybe .035", or I suppose that you could store a couple of overlays under the one currently in use (assuming that you're using opaque overlays). Offhand, I don't know the part number, or whether HP ever marketed a set for the 48G series. I'm almost certain that some "third-party" applications came with custom printed overlays.

I expect that the HP overlays would be very hard to find now, and I doubt that it would be profitable for anyone to tool up to mass-produce them. It does occur to me that it might be possible to make them with a CNC cutting laser, similar to that used for some prototyping systems, or perhaps with a CNC mechanical cutter, or maybe just score the material deeply enough so that it could be finished by hand. I suppose that someone with a lot of patience

and a steady hand could make a usable overlay himself.

Regards,
James

Re: HP-42X: HP-42S MicroCode Emulator for HP-48GX (Preliminary Info)

*Message #21 Posted by [Raymond Hellstern](#) on 13 Aug 2002, 3:04 a.m.,
in response to message #20 by James M. Prange*

Hi,

the HP part number is 82220A Overlay Kit for the HP-48 SX.

The IMHO nicest of these overlays is the transparent one with special alpha chars.

A drawback is that your keyboard legends become somewhat cluttered because of those many symbols around the keys;-)

That reminds me of the 20S or worse, the 32SII...

But the best overlay, all in all, is that from the HP-41CV Emulator Card;-)

Regards,

Raymond

Re: HP-42X: HP-42S MicroCode Emulator for HP-48GX (Preliminary Info)

*Message #22 Posted by [HrastProgrammer](#) on 19 Aug 2002, 4:03 a.m.,
in response to message #19 by warren*

Some other keys like STO, Shift, Up, Down are matching and others are very easy to remember: RCL (EVAL), XEQ ('), R/S (SPC). Keys A..F are used as a menu keys and NXT can be used as a Down key, too. Of course, overlay would be very useful for shifted keys.

Re: HP-42X: HP-42S MicroCode Emulator for HP-48GX (Preliminary Info)

*Message #23 Posted by [warren](#) on 19 Aug 2002, 1:09 p.m.,
in response to message #22 by HrastProgrammer*

Welcome back from your vacation! Hopefully you had a good time and are now refreshed and ready to put the finishing touches on the 42X emulator.

I gather from your response regarding key assignments that you have re-mapped some of the 42S keys to different keys on the 48GX, i.e. to different physical row and column locations on the keyboard. That probably makes sense for keys that have the exact same primary key label but are in different locations, like STO, SIN, COS, TAN, +/-, EEX (just E on the 42S, but the same as EEX). However, this brings up a bit of a philosophical question: would it be easier for an experienced 42S user to have the functions in the same locations on the keyboard, or re-mapped to keys with the same/similar labels and/or easily remembered names? May I suggest or request that you give 42X users the option to either go with the key function re-mapping that you were already planning, or having the 42S functions mapped to the same row/column locations on the 48GX keyboard? (Of course it makes perfect sense to have keys A Through F be the menu keys in either case.) The 42X is to me the "Holy Grail" that I have been searching for. As soon as you make it available, I plan to get it and start using it. In the meantime, I'll start pursuing fabrication of an overlay. In case anybody was wondering, the part number for the SX overlay given in a previous post is no longer available from HP. I think having an HP manufactured overlay to use as a starting point would greatly simplify the fabrication process. Does anybody have any suggestions for where to get one? I don't think I have ever seen one come up on eBay.

Re: HP-42X: HP-42S MicroCode Emulator for HP-48GX (Preliminary Info)

*Message #24 Posted by [HrastProgrammer](#) on 19 Aug 2002, 2:59 p.m.,
in response to message #23 by warren*

You're right about the keyboard mapping: with the overlay it would be better to have keys on their physical locations. I will take this into consideration ...

Best regards.

Re: HP-42X: HP-42S MicroCode Emulator for HP-48GX (Preliminary Info)

Message #25 Posted by [Raymond Hellstern \(Germany\)](#) on 19 Aug 2002, 3:13 p.m.,
in response to message #23 by warren

Hi,

I was the one who mentioned the 82220A, and yes, I got the set through eBay for a few bucks;-)

But I have to admit that they don't seem to be very common.

Raymond

See ya later emulator;-)

Re: HP-42X: HP-42S MicroCode Emulator for HP-48GX (Preliminary Info)

Message #26 Posted by [Christoph Giesselink](#) on 19 Aug 2002, 3:05 p.m.,
in response to message #19 by warren

I saw here many requests for a HP42S emulator running on a HP48 or HP49. But for what?

IMHO the HP48 is a great machine, mostly everything (except executing HP42S code) I could do with a HP42S I also could do with a HP48, mostly even better. I personally have a HP42S and the best thing on this machine is it has a very small size for the amount of functions and is mostly a little bit faster than the HP48 at normal calculation.

But the main topic for me is the calculator size and weight. A HP48 is IMHO too big and too "heavy" to carry it in a jacket pocket, so this could be no reason for the HP42S emulation.

One point could be the software compatibility with HP42 (for HP41 exist emulators) programs. But which important programs exist only for the HP42S and not for the HP48? There was a reason for a HP41 emulator in the early 90'ties, because the wasn't many applications and more important no specific software for the HP48, but today?

So is there really a need for a HP42S emulator on a HP48/49 or is it just "nice to have". But who is willing to spend a lot of bucks for a "nice to have product"? Perhaps the same people who spend over US \$200 for a real HP42S?

And finally, what a shame, I have a HP42S and don't use it. In office or at home I use my

HP48 (SX) or more times Emu48 on the PC. And in my jacket pocket I have a HP32SII (the cheapest RPN calculator today) for the easy calculations at the places where I don't have a HP48 handy. :) The only reason, why I bought the HP42S was, I needed a legal way to get a ROM image, a HP42S faceplate, and a real machine to discover some secrets of the Lewis chip and some other internals (display, keyboard, MMU, ...). And that only just for fun.

Re: HP-42X: HP-42S MicroCode Emulator for HP-48GX (Preliminary Info)

*Message #27 Posted by [HrastProgrammer](#) on 20 Aug 2002, 12:46 a.m.,
in response to message #26 by Christoph Giesselink*

You are perfectly right - we really don't need an HP-42S emulator on HP-48/49.

Thanks for explaining me such a obvious fact. Maybe I have been stuck in the past because I use HP-41X every day and I will use HP-42X on my HP-48GX. IMHO the HP-48GX (with memory cards, of course) is the best calculator ever produced by HP. It is soooo good that it is able to emulate other calculators in the HP family. What is wrong with this?

Maybe the reason for writing the emulator is just to show that it could be done. Before I have started working on a HP-41E in 1998. people said that it would be impossible, that HP-48 isn't powerful enough, that emulator will be very slow, etc, etc. But I have done it and (at the end) it was much faster and more powerful than a real HP-41.

I have (almost) done an HP-42S emulator, too. It will be very useful for me (as well as other emulators I am planning to write) and if it will be useful for someone else that's even better ...

Re: HP-42X: HP-42S MicroCode Emulator for HP-48GX (Preliminary Info)

*Message #28 Posted by [Christoph Giesselink](#) on 20 Aug 2002, 2:03 p.m.,
in response to message #27 by HrastProgrammer*

TNX for your comments. It's like why to climb on a mountain -- because it's there.

BTW, really good work, I personally would have no idea how to capture the I/O access to the hardware without having methods like page access faults.

Re: HP-42X: HP-42S MicroCode Emulator for HP-48GX (Preliminary Info)

Message #29 Posted by [HrastProgrammer](#) on 21 Aug 2002, 12:45 a.m.,
in response to message #28 by Christoph Giesselink

I enjoy climbing on the mountain, too ;-)

Best regards.

Re: HP-42X: HP-42S MicroCode Emulator for HP-48GX (Preliminary Info)

Message #30 Posted by [Wayne Brown](#) on 20 Aug 2002, 8:25 a.m.,
in response to message #26 by Christoph Giesselink

Well, some of us don't especially like the 48 programming language, and much prefer the keystroke programming of the 41/42 models...

Personally, I prefer an actual, physical 41CX to anything else, but the 42X running on a 48GX looks very tempting.

Re: HP-42X: HP-42S MicroCode Emulator for HP-48GX (Preliminary Info)

Message #31 Posted by [Christoph Giesselink](#) on 20 Aug 2002, 2:07 p.m.,
in response to message #30 by Wayne Brown

The key stroke programming is a good objection. I never thought that somebody would like the key stroke programming more than the RPL one. My first HP calculator was an HP15C (with key stroke programming) and I really don't liked it (perhaps also because of the very very slooow program running speed). One year later I bought a HP28S and IMHO this was a big step forward -> structured programming on a calc and much faster than the HP15C. So after over 14 year of RPL programming, mostly on a HP48SX, key stroke programming is complete out of my mind.

Re: HP-42X: HP-42S MicroCode Emulator for HP-48GX (Preliminary Info)

*Message #32 Posted by [HrastProgrammer](#) on 21 Aug 2002, 12:25 a.m.,
in response to message #31 by Christoph Giesselink*

I don't like keystroke programming more than RPL (or System RPL, or ML) but in many cases it is just simpler to write a keystroke oriented programs. That's why it is nice to have an HP-41/42 emulator by hand on the HP-48/49 :-)

Best regards.

Re: HP-42X: HP-42S MicroCode Emulator for HP-48GX (Preliminary Info)

*Message #33 Posted by [warren](#) on 20 Aug 2002, 1:22 p.m.,
in response to message #26 by Christoph Giesselink*

I don't think we need a discussion of the merits of the 42S vs. 48G, etc. To each his own! If you prefer the 48 Christoph, more power to you. Hrast, the first line of your response to Christoph scared me a little ("You are perfectly right - we really don't need an HP-42S emulator on HP-48/49"). I thought maybe you had decided to abandon the 42X project. However, the last line provided comfort that you do plan to continue. Rest assured that you are correct, it will be useful for someone else, actually many others I suspect.

I had one question which I poorly stated in my original post in this thread. That is, does the 42X require a 128k Ram card in each slot to work for some reason, or will a single 1 Meg, 2 Meg or 4 Meg card suffice?

Re: HP-42X: HP-42S MicroCode Emulator for HP-48GX (Preliminary Info)

*Message #34 Posted by [HrastProgrammer](#) on 21 Aug 2002, 12:39 a.m.,
in response to message #33 by warren*

There is no reason to abandon the HP-42X :-) My first line was just a little sarcastic. I don't like comments like 'X is better than Y' or 'we don't need Y because we have X' etc.

Regarding the memory cards - there must be a 128K card in slot 1 but you can have anything >=128K in slot 2 ... On the HP-49G the whole Port1 will be used.

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HP41 card reader wire colors ?

Message #1 Posted by [Georg Holderied](#) on 9 Aug 2002, 4:07 a.m.

When I did the goo<->o-ring swap in my HP41 card reader, two of the coloured wires that connect the card reader with the pcb came off.

I had thought they were soldered there, but they seem to be just plugged in. Can anyone give me the correct sequence ?

(top down: red, yellow, blue, orange, black ?)

BTW does anyone have a large quantity of correctly sized o-rings and can send me some ?

George

Re: HP41 card reader wire colors ?

Message #2 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 9 Aug 2002, 7:44 a.m.,
in response to message #1 by Georg Holderied

At least in my reader, the sequence is the same you posted, I remember it formed the R Y B O K "word". After fiddling with the contacts, I decided to solder them lightly to keep them in place.

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HP41 powers off

Message #1 Posted by [Gary Cox](#) on 8 Aug 2002, 11:28 p.m.

Need help. I have a halfnut HP41CV that has started turning off at random much earlier than the normal battery saver. It even turns off at random when keys are being pressed. Memory is preserved up to the last keystroke. Is the battery saving function located totally in the CPU or is there some external component that could have gone bad? Any help will be greatly appreciated. Gary

Re: HP41 powers off

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 9 Aug 2002, 12:54 a.m.,
in response to message #1 by Gary Cox

Hi;

if it goes off while you're typing stuff in, chances are you have an easy-to-beat bad contact in the BATT/IO assy, either between batteries or mainboard. If you have to remove batteries and put them back on, or (don't blame me! Sometimes it is needed...) to squeeze or twist the calculator a bit so it turns on, then you are almost there: just open it and clean it.

If you are not confident about it, wait for some other posts that will guide you to other ways. Read [this thread also](#), because it deals with related stuff.

Success!

Re: HP41 powers off

Message #3 Posted by [Rob Stone](#) on 9 Aug 2002, 6:21 a.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)

Thanks for the info, but unit only powers down (or as it states in the manual "times out") while it is idle.

Re: HP41 powers off

Message #4 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 9 Aug 2002, 7:50 a.m.,
in response to message #1 by Gary Cox

Check your batteries and contacts, it looks like a "low battery power" situation. Had your BAT indicator ever turned on?

I experienced a similar problem (without BAT showing), it had to do with marginal (somehow old but not discharged)batteries and bad contacts...

For tests, you should also remove any peripherals and modules, just to check if there is some influence; and also reset your machine (forcing a MEMORY LOST situation), to be sure there are no other factors influencing your tests.

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HP-41 card reader

Message #1 Posted by [Jeff Glass](#) on 8 Aug 2002, 9:02 p.m.

Hello all:

Thank you for the tips regarding the repair of my card reader! I was partially successful. I bought a second reader that has gummy-itis. I put the head-motor assembly that I recently rebuilt from my first reader onto the second card reader. I now have a card reader that reads and writes without errors!

So, this means that the "electronics" on my original reader are obviously bad. I read in the archives about the tantlum capacitors that go bad. Maybe I'm just a chicken, but I cannot seem to figure out how to separate the "L" shaped circuit board so I can get to the tantlums to replace them. Any ideas?

Anyone have a set of "electronics" that they would want to sell or trade for mine?

Thanks again for all the help,

Jeff Glass

Re: HP-41 card reader

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 8 Aug 2002, 10:32 p.m.,
in response to message #1 by Jeff Glass

Hi;

I have two different readers, and in both of them, the "L" assy is just connected with each other: pulling them appart (in both of mine) will separate them. As you have knowledge, verify if they have not been soldered with each other; if so, try unsoldering them.

In both of mine, contacts between both PCB's are golden plated, well-aligned, firmly "locked" with metal clipers. As everything HP used to build at that time, a piece of art.

Hope it helps.

Re: HP-41 card reader

Message #3 Posted by [Andreas Müller](#) on 9 Aug 2002, 3:21 a.m.,
in response to message #1 by Jeff Glass

Hi Jeff, did you remove the cover above the card readers connector, or is exactly that your problem. If so, the cover has two littel noses to the connector body. You have to lift this cover a bit with a little screwdriver or the like coming from the open mouth of the connector(be very careful). TThen you can slide the cover from the base. Now you have the complete PCBs accessible to get them out of the case. Hope that helps. Regards, Andreas

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HP-41CV power supply

Message #1 Posted by [Rob Stone](#) on 8 Aug 2002, 4:43 p.m.

I have recently acquired a hp-41cv and while its in use it constantly turns off while idle for about 15 seconds. Is this normal or is it a problem? Thanks for the info.

HP-41CV power supply is innocent

Message #2 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 8 Aug 2002, 6:51 p.m.,
in response to message #1 by Rob Stone

Eventually, the display, not the power supply, is the main suspect... The display is the only active part of an idling HP41C/CV.

If I recall correctly, a PowerOff signal is generated by the display after the idle timeout. Perhaps Tony Duell or others may confirm.

Re: HP-41CV power supply is innocent

Message #3 Posted by [Ed Martin](#) on 8 Aug 2002, 7:11 p.m.,
in response to message #2 by Andrés C. Rodríguez (Argentina)

I have exactly the same problem on my CX, and I have investigated the problem. I thought it was such an odd problem that it must only have been me.

Andres is correct. The 41 actually has three power modes - Run, Standby, and Sleep. The 41 actually stays in Run mode for a very short period of time (to conserve battery power).

The power moding is controlled by two signals. PWO (controlled by the processor) is only high when the 41 is in Run mode. When the processor sets PWO low, it also instructs the display to take over power moding. The display keeps showing whatever is in its data storage registers while its internal clock counts down. When the countdown is complete (which is SUPPOSED to take 10 minutes), the display sets DPWO low, which puts the 41 into Sleep mode.

Despite understanding all of this, I failed in fixing my 41. At first, I thought I might have some bad connections, as I also suffered from poor display quality on the LCD (which I could fix by pressing above the display). I subsequently rebuilt the machine (checked for bad solder joints, cleaned contacts & fixed the screw posts and a cracked back cover). My LCD now works great - good as new - but the machine still turns itself off after 15 seconds.

About the only workaround I have found is to assign the ON function to a USER key - I have found Shift-ENTER to be handy. Then, after turning on the 41, I hit USER ... Shift-ENTER ... USER. I just have to remember to turn it off.

BTW, the 41 will stay on as long as a program is running.

If someone else has a solution to this problem, I would love to know. I've thought about getting a good display driver from a dead 41, but I'm not sure I want to take that risk.

- Ed

Re: HP-41CV power supply is innocent

*Message #4 Posted by [Steve \(Australia\)](#) on 8 Aug 2002, 8:25 p.m.,
in response to message #3 by Ed Martin*

How did you check the display contacts?

I had a problem with these contacts on an early HP41 that could only be seen under magnification.

It would be interesting to know *how* the display calculates the 10 minutes (is it affected by clock speed for instance).

Re: HP-41CV power supply is innocent

*Message #5 Posted by [David Smith](#) on 9 Aug 2002, 4:45 p.m.,
in response to message #4 by Steve (Australia)*

I have seen LOTS of HP41 machines with bad display contacts. They are particularly prone to come undone from the LCD module side, although they also pop loose from the keyboard. When I suspect an LCD problem (or have a dead machine that a replacement CPU will not fix) I go down the line of contacts and lever them gently with a dental probe and see which ones pop loose. If one does, usually more than one will. Be very careful soldering to the LCD module board.

Anothe problem that seems to occur quite a bit is solder flux or invisible grunge on

the CPU card, LCD module circuit board, or keyboard (in that order of probability). This is a primary cause of screens that go blank when a key is not pressed. Clean with 91% isopropyl alcohol. Don't let the alcohol drip down on the LCD window. It can cause clouding. If that happens either live with it or remove the LCD module and re-polish it.

Re: HP-41CV power supply is innocent

Message #6 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 8 Aug 2002, 10:45 p.m.,
in response to message #3 by Ed Martin

Hi;

I have three 41's, two of them being halfnut and one (the grandma) being fullnut.

Does the problem you are dealing with appear in both models?

When you removed the LCD, you remove it from the keyboard's PCB or you took all of the assy together?

I'm somewhat curious about it. If the display generate this signal, does it have a separate line for it? If so, can the connection be simply removed? This way, the ON function would be no longer needed, as the LCD's circuitry will not send Power-Down signal (unless it is multiplexed in one of the lines in the display; I do not have the schematics in hand, now).

I'd like to know how to find more info about this particular problem, so I could be of more help. If any of you feel O.K. doing this, send me a detailed e-mail; I have one fullnut spread around my tech stuff and I'll try verifying as far as possible.

Cheers.

Re: HP-41CV power supply is innocent

Message #7 Posted by [Rob Stone](#) on 9 Aug 2002, 6:33 a.m.,
in response to message #3 by Ed Martin

Ed tried your workaround was unsuccessful can you describe the keystroke order again I'm not sure if I'm performing it properly. Thanks

Three comments

Message #8 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 9 Aug 2002, 7:41 a.m.,
in response to message #3 by Ed Martin

Three comments:

a) To Ed: The CX may be somehow different because of TIME functions; I don't have any experience with the CX. Your description of PWO and DPWO is accurate and helped to clarify the issue!

b) To Rob: The ON function prevents the machine from turning off because of inactivity timeout, the standard manner to invoke it is [XEQ] [ALPHA] "ON" [ALPHA].

As this may be cumbersome for everyday use, Ed's solution uses a redefined or "assigned" key. To this end, you need first (only once) to press [shift][ASN][ALPHA] "ON" [ALPHA] and then your choice of key; as per Ed's suggestion you might press [shift][ENTER].

Then, every time you turn your calculator on, you just press [USER][shift][ENTER] to call the ON function, and then [USER] again to exit the USER mode. Just check this doesn't conflict with other key assignments you may wish to use.

c) To Luiz: As far as I can remember, DPWO is a physical signal, so there should be a physical trace which can be opened in the PCB. It may be needed to solder a pull-up or pull-down resistor (I suggest something around 200 Kohm) to ensure that the now opened trace has the proper level on the CPU side...

I ADVISE ANYONE NOT PROFICIENT WITH THIS KIND OF HARDWARE MODIFICATION JUST TO STAY WITH THE SOFTWARE "PATCH", SO TO AVOID RISKING A VALUABLE CALCULATOR. But if you know what you are doing and accept the risk, the thrill of a successful hardwired modification is a nice sensation!

Re: Three comments

Message #9 Posted by [Ed Martin](#) on 9 Aug 2002, 5:47 p.m.,
in response to message #8 by Andrés C. Rodríguez (Argentina)

Rob,

The posting by Andres describes the software workaround I intended to give. Andres just did a much better job in describing it than I did.

If you execute the "ON" function, it sets flag 44 (Continuous ON) so that the machine will not turn itself off. I assume that this causes it to stay in RUN mode and therefore have a higher battery drain, but I'm not sure.

Note that you can't set flag 44 directly via the keyboard or under the control of a normal (non-synthetic) program, as it is in the protected area.

Assigning "ON" to a USER key is only a shortcut to save time on startup.

- Ed

A little clarification about power modes

Message #10 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 10 Aug 2002, 6:12 p.m.,
in response to message #9 by Ed Martin

The HP 41C/CV has 3 power modes:

1-RUN: While executing a program or a function (for instance, for less than a second when you press [SIN], or all the time needed to finish a program since you pressed [R/S]). In this mode, the calculator draws the most power (peripheral operation like Wand or Card reading may take even more power). It is supposed that the calculator spends not a large percentage of time in RUN mode.

2-STANDBY or IDLE: The calculator is doing "nothing", except detecting eventual keyboard activity. The display keeps showing the last contents it had. This mode uses little power, and is key to the long battery duration, since the calculator seems to be active when it is really doing very little.

As the CPU is not running while IDLE, the display, which is the only component "working" in that moment, is the only place in which a timer could be counting.

After 10 minutes in such mode, the display intends to shut off the calculator by means of the DPWO signal (Display PoWer Off).

Any RUN mode activity (i.e.: keypresses) resets the timer.

If the calculator has Flag 44 on (continuous mode on), it will ignore the display timeout, but in normal cases it will shut off.

So, after executing ON, the calculator may remain for a long time in IDLE mode, even without any RUN mode event.

[[Note: I am not sure if ON prevents the timer to generate the DPWO signal; or if flag 44 causes the CPU software to ignore DPWO, which seems more probable. A nice challenge for hardware experimenters...]]

3-SLEEP. In SLEEP mode the calculator appears to be off, it is just feeding a little current from the batteries to the RAM chips in order to keep their contents. Apart from detecting activity on the ON key, nothing is being done, and the power consumption is very low.

[[A sleeping calculator may be turned on by some peripheral activity like Wand or Card reading, or by the Time module]]

Re: HP-41CV power supply is innocent

*Message #11 Posted by [Tony Duell \(UK\)](#) on 10 Aug 2002, 6:44 p.m.,
in response to message #2 by Andrés C. Rodríguez (Argentina)*

One thing I've just thought of. On the fullnut machines (separate CPU/logic board), there's a capacitor on the CPU board that's connected (via the CPU board -> keyboard connector) to the display hybrid. This capacitor is used as part of the timer circuit for the auto-power-off function. IIRC, there were 2 versions of the display driver hybrid, which used different value capacitors. So there are 2 things to think about. Firstly, do clean and re-clean the contacts. An open-circuit here could cause some interesting problems. Secondly, has this machine ever been repaired? Has the CPU board or display driver hybrid ever been replaced? If so, is it possible that the capacitor is the wrong value. This does not apply to halfnut machines as far as I know. I can't find an equivalent capacitor on that machine.

Re: HP-41CV power supply is innocent

Message #12 Posted by [Ed Martin](#) on 11 Aug 2002, 4:09 p.m.,
in response to message #11 by Tony Duell (UK)

Ahh, the capacitor connection is intriguing. By any chance, do you know what kind of capacitor it is, and if there is any way it may experience current leakage? If the capacitor is leaky, that could explain the premature timeout.

What bothers me about this problem is that the calculator * does * wait a while before turning itself off, but it is so far shorter than 10 minutes. I cannot imagine a scenario where a logic problem or broken connection would lead to this condition, but a shift in an analog component hmmmm.

- Ed

Re: HP-41CV power supply is innocent

Message #13 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 12 Aug 2002, 12:54 a.m.,
in response to message #12 by Ed Martin

Hi, Ed;

I am not sure about it, but I read a post about batteries leakage being cleaned; I cannot ensure it was related to this specific subject, but one thing occurred to me when reading your post: you are right. If the display is the one who controls DPOW (is it correct?) signal, it counts (down?) from a reference. The only way to accelerate it, if not by changing the starting countdown value (HW fixed?) is by increasing count speed. And that can be accomplished only by increasing clock reference.

Wow! Where are those Technical Data, Maintenance Guides and the like about the HP41? They must have something about it...

Re: HP-41CV power supply is innocent

Message #14 Posted by [David Smith](#) on 12 Aug 2002, 12:54 p.m.,
in response to message #13 by Vieira, Luiz C. (Brazil)

The HP41 service manual is on the HPMUSEUM CDROM set.

Re: HP-41CV power supply is innocent

Message #15 Posted by [Tony Duell \(UK\)](#) on 12 Aug 2002, 6:51 p.m.,
in response to message #13 by Vieira, Luiz C. (Brazil)

As far as I know (see my other post) the display driver hybrid does control DPWO (at least in fullnut machines). And when the CPU is idle, the display runs off its own internal oscillator, controlled by the capacitor I mentioned. So either the display driver hybrid has failed (I guess it's possible for some of the logic to fail so that it no longer counts correctly) or the oscillator is running far too fast. I have no idea how fast this thing will run with no capacitor connected, but maybe an open-circuit connection in the logic-keyboard connector will cause this. Or maybe the capacitor is faulty.

Re: HP-41CV power supply is innocent

Message #16 Posted by [Tony Duell \(UK\)](#) on 12 Aug 2002, 6:38 p.m.,
in response to message #12 by Ed Martin

The capacitor you want is on the logic (CPU) board. It moves around a bit (there are at least 6 versions of the HP41 logic board, of which 3 were used in 41CV machines). But it's generally close to the left end (looking at the component side of the PCB with the front edge towards you) of the CPU chip -- the largest chip on the board. It is connected between the front left pad that connects to the keyboard PCB and logic ground. Originally (Version F display hybrid, with a plastic cap over the chips) it was a 0.01uF capacitor. With the more common revision G display hybrid (epoxy blobs over the chips) it's 470pF. The front left pad of the keyboard - logic connector is connected to the 4th pin from the left (looking at the back of the keyboard PCB) of the display hybrid pins. It would appear that the display time-out is handled by the display driver hybrid -- when the PWO signal goes low (i.e. the CPU is sleeping) then the display runs off its own internal oscillator (rather than from the CPU bus signals). Then after 10 minutes (or so), the display times out, turns itself off, and brings the DPWO signal low as well (which is an input to the CPU). As far as I know, this only applies to the older fullnut models. The halfnut machines don't seem to have an equivalent capacitor, so I guess they work somewhat differently.

Re: HP-41CV power supply is innocent

*Message #17 Posted by [Ed Martin](#) on 25 Aug 2002, 12:40 p.m.,
in response to message #16 by Tony Duell (UK)*

Tony,

I finally got around to replacing the suspect capacitor. It was exactly where you said it was, just to the left of the CPU (a 470pF cap, since I have the revision G hybrid with the epoxy blobs).

I had high hopes, since the epoxy coating on the old capacitor was cracked. Unfortunately, my 41 still does the same thing - turns itself off after ~14 seconds. This is identical to the failure mode reported by the person who originally posted this problem.

Any other ideas? Is it possible that I have a bad timer circuit in the display itself?

BTW, my calc is a fullnut 41CX made in 1984 week 21.

Any ideas you have would be greatly appreciated.

- Ed

Re: HP-41CV power supply is innocent

*Message #18 Posted by [Tony Duell \(UK\)](#) on 25 Aug 2002, 3:42 p.m.,
in response to message #17 by Ed Martin*

YEs, it is possible that there's a fault in the DDH (Display Driver Hybrid). The good news, though, is that this part is the same on all Fullnut 41s (C, CV, CX) -- well, apart from there being the 2 revisions that I mentioned in a previous message. So you don't have to hunt around for a CX to get the part. Somebody must have a beat-up CV (by far the most common HP41 over here anyway) that you could get cheaply. However, before doing that, do check the contacts between the DDH and the capacitor (it goes via one pin on the zebrastrip connector between the keyboard and logic board, for example. You might be lucky!

Re: HP-41CV power supply is innocent

*Message #19 Posted by [Ed Martin](#) on 25 Aug 2002, 3:50 p.m.,
in response to message #18 by Tony Duell (UK)*

Tony,

Thanks! I've checked out the zebra connector, and everything appears to be OK there. It looks like the problem lies in the DDH, so I'll scrounge for a dead fullnut 41 to see if I can fix it that way.

- Ed

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Re: HP's that lasted >10 years

Message #1 Posted by [Ellis Easley](#) on 8 Aug 2002, 3:52 p.m.

I imagine one reason for the rapid introduction of new models in the early years was technological advancement - availability of better chips plus the evolution of HP's understanding of what user's expectations were. These were pretty well defined when LCD's became available and then came the 41C. I wonder how much impact LCD displays had on the acceptability of calculators (I mean how much did sales go up in response) since all the problems of rechargeable batteries went away. Higher sales (as long as they were profitable!) would have encouraged HP to keep a model in production longer - and to enhance it (CV, CX).

A recipe for the HP-41C birth

Message #2 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 8 Aug 2002, 6:48 p.m.,
in response to message #1 by Ellis Easley

Many wonders...

LCD + CMOS = Continuous Memory + No rechargeable batteries

LCD = ALPHA at acceptable cost and power budgets

CMOS + Moore's Law = Non Volatile, enough capacity RAM for nicer and longer programs

HISTORY (1972-1978?) + COMMITMENT to be excellent = Understanding of user needs and preferences + good implementations + creativity + human factors (Keyboard feel, "USER", and even "NULL" are examples)

LAB INSTRUMENTATION BACKGROUND + HP-IB (aka IEEE 488) = Peripherals and HP-IL insight

OPTOELECTRONICS BACKGROUND + SEMICONDUCTOR BACKGROUND = Optical Wand + ROM as software distribution media + custom chips with serial buses...

QUALITY CULTURE + MEDICINE/INSTRUMENTATION BACKGROUND = Excellent documentation and service

ENGINEERING BACKGROUND = Few politics and speculation

But also a tender critique...

EXCESS OF INVENTIVENESS = Newer but poor interboard connectors, flexible printed circuit bus (corrossion sensitivity), lack of standards support such as RS232, weak plastics for screw posts...

Re: HP's that lasted >10 years

*Message #3 Posted by [Steve Borowsky](#) on 12 Aug 2002, 2:19 a.m.,
in response to message #1 by Ellis Easley*

Once programmability was well-established there was a built-in mechanism to limit new models. At that point only radical advances in technology made a completely new model necessary, such as the move from 67->41->71->48.

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HP-42S debugger

Message #1 Posted by [jose goncalves](#) on 7 Aug 2002, 8:33 p.m.

Where can I find good information about the HP-42S debugger, its operation and purpose ? All I can find are some sparse references.

Re: HP-42S debugger

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 7 Aug 2002, 8:40 p.m.,
in response to message #1 by jose goncalves

José;

have a look [here](#); all of the debugger "keys" are listed (after the middle of the page).

Hope you find what you need.

Inté! (see yah)

Re: HP-42S debugger

Message #3 Posted by [jose goncalves](#) on 8 Aug 2002, 8:27 a.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)

Ok, let's read it.

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About HP-28S, a difference in black model and yellow model.

Message #1 Posted by [Hiroshi Ito \(JAPAN\)](#) on 7 Aug 2002, 11:27 a.m.

There is a kind that the kind that a shift key is yellow, and a shift key are black in HP-28S. Is there a difference between even the part except for the color of the shift key and both? How many kinds of HP-28S's are there?

Re: About HP-28S, a difference in black model and yellow model.

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 7 Aug 2002, 12:56 p.m.,
in response to message #1 by Hiroshi Ito (JAPAN)

Hi;

I was not known about any HP28S with a blk shift key. That's new! Collectors piece?

Are the shifted labels (printed in the keyboard) in black too?

About the "regular" color: is it yellow or red (more to "wine", I'd say)? If I am not wrong, the 18C/19B/19BII are the ones with a yellow shift key. Is it correct?

Cheers.

Re: About HP-28S, a difference in black model and yellow model.

Message #3 Posted by [Juergen Rodenkirchen \(GER\)](#) on 7 Aug 2002, 3:13 p.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)

I always thought that "red" is the only existing color scheme for the 28S shift-key; At least, I've never seen a yellow-shift key machine, not to mention a black-keyed one. Is there anything more to tell that discriminates the ordinary -- well, if an HP-calc can be "ordinary" at all ;-)-- "red-key-" from the "yellow-key machine"?

Re: About HP-28S, a difference in black model and yellow model.

Message #4 Posted by [wlodekjmj](#) on 7 Aug 2002, 9:20 p.m.,
in response to message #1 by Hiroshi Ito (JAPAN)

The HP-28S (and 28C) shift key is a rather dark purple. I'd guess that the person who asked the question saw a picture in which this key looks so dark as to seem black - or saw an HP-28S under poor lighting and thought the key was black.

The financial models of the same size and shape all have a yellow shift key. Most likely the person who asked did not realize that the model with a yellow key was not an HP-28S.

Or was this an HP-28S with an incorrect key in it - such errors do sometimes turn up on models where individual keys are used, and not a single molded unit comprising all the keys.

Wlodek Mier-Jedrzejowicz

About HP-28S - Some ALIEN models

Message #5 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 7 Aug 2002, 10:16 p.m.,
in response to message #4 by wlodekjmj

Hi;

it was 1985, I was about to become an Engineer, and I saw what I called an interesting trick: an HP11C with the HP15C's logo. If, at that time, I wondered how valuable collectro piece it was, I'd buy a new 11C and trade it. Now, I have no idea it it still exists or not.

If I understand it well, the shift key of any clamshell fits in any other. Based on my own experience, this is interesting to see. IF HEAT STAKES ARE UNTOUCHED, say, no one opened the machine and changed keys with a purpose, this is something to be collected.

Cheers.

Re: About HP-28S, a difference in black model and yellow model.

Message #6 Posted by [Hiroshi Ito \(JAPAN\)](#) on 8 Aug 2002, 3:35 a.m.,
in response to message #1 by Hiroshi Ito (JAPAN)

I made a mistake in the mention. The color of the shift key wasn't yellow, and it was dark red. I saw HP-28S of the red shift key and a black shift key HP-28S. HP-28S of the red shift key is sometimes seen even now. But, my friend had HP-28S of the black shift key. The key touch of the black shift key seemed to be unchanged with the red shift key, too. I saw the secondhand model of black shift key sold in Japanese Akihabara once in another day. It may be the model which is characteristic of Japan.

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Email exchanged with Seller.

Message #1 Posted by [Mike Tjebben](#) on 7 Aug 2002, 10:27 a.m.

I sent an email to the seller to ask if he had any other items of interest, besides those listed in the "seller's other auctions."

He sighed that he had no more "red dots" and had "had quite a day" after finding out what HP collectors will usually pay for one!

He seemed to be a very nice guy!

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HP-42S

Message #1 Posted by [Jeff Glass](#) on 7 Aug 2002, 9:24 a.m.

Hello:

Are ther any devices out there that use the IR port on the 42S to download programs from the 42 to an IBM PC?

Jeff

Re: HP-42S

Message #2 Posted by [warren](#) on 7 Aug 2002, 12:45 p.m.,
in response to message #1 by Jeff Glass

The INPRT program (available here:<http://www.hpcalc.org/details.php?id=2296>) appears to let you transfer to an HP48G/+/X, which can then transfer to a PC. A method to dump the 42S ROM image to a 48 using this program is described here:

<http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/articles.cgi?read=266>

So if you have a 48, this might work.

Re: HP-42S

Message #3 Posted by [Randy Sloyer](#) on 7 Aug 2002, 5:30 p.m.,
in response to message #2 by warren

While the article mentioned is a starting point, it really doesn't provide much detail, especially if you are not a 48 expert (like me). It's easy once you are set up. You will need:

1. A 48 of any flavor, any S or G model.
2. The INPRT program
3. The HPGCOMM program to transfer the INPRT program to the 48 and the 42S programs back to the PC
4. A PC to 48 serial cable
5. A utility program to translate the 42S program to the PC character set

I wrote the #5 a while ago as a dos command line program. I could dig it out and email to you if you wanted to tackle this project. I found it easy once I got past the unknowns on the 48 side. It was a handy way to archive my programs.

Re: HP-42S

Message #4 Posted by [John K. \(US\)](#) on 7 Aug 2002, 9:06 p.m.,
in response to message #3 by Randy Sloyer

> I wrote the #5 a while ago as a dos command line program.

If you still have the source code, I'd be willing to look at doing a *nix port of it. Please e-mail me if you're interested/willing in letting me attempt the project.

Re: HP-42S

Message #5 Posted by [Randy Sloyer](#) on 8 Aug 2002, 5:38 p.m.,
in response to message #4 by John K. (US)

Sorry, I should not have called it a "dos" program as it is a rather specific windows cmd line program - I used a commercial awk program called "TAWK" which is compiled and has non-standard awk extensions. It was rather trivial in content - it only translated character positions. But - I also used Unicode Open Fonts to get all symbols used by the 42s. I doubt that it would work under anything than WinXp or perhaps 2000. The compiled exe is 100k+ due to the run-time baggage.

What would you do in *nix to to get a matching font? I was thinking of making a windows bit-mapped font to match the 42S but never got around to it. This would at least save the unicode dependencies.

Re: HP-42S

Message #6 Posted by [John K. \(US\)](#) on 9 Aug 2002, 2:17 a.m.,
in response to message #5 by Randy Sloyer

> What would you do in *nix to to get a matching font?

Well, without seeing the code, I'll have to guess at a lot of it, but...

It might be possible to come up with a version using standard awk/gawk syntax that will be functionally identical. If not, then it might still be possible to use something else (say, Perl) to perform the manipulations.

The Unicode problem is a little more difficult for me to WAG. I'm not entirely sure what the state of Unicode support is under Linux, but most of the commercial versions of Unix have at least rudimentary support, though I'd have to look at the individual tools to see if they'll do what's needed.

The situation is quite a bit simpler on Mac OS X, since the sytem uses Unicode pretty much for everything, and it comes with decent support in the command line tools -- including both Tcl and Perl.

In fact, if the port is successful, it would be almost trivial to make a bi-directional translation tool. Not that it would be of much utility, given the 42's lack of input options, but the geekion flux density of such a thing would be significant. Who knows? If someone ever comes up with an robotic key-stroke entry robot for the 42S, the tool could probably be modified to generate instructions for the robot. :^)

HP-42S input

Message #7 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 9 Aug 2002, 8:09 a.m.,
in response to message #6 by John K. (US)

About a year ago Tony Duell, Paul Brogger and I (and others) discussed an electronic interface which could be used to input information to an HP42S. Tony actually build a working prototype, based on CMOS Switches (CD4052) emulating keypresses, and driven by optocoupled signals from a PC paralell port. Look at the archived posts here at the MoHPC forums.

Re: HP-42S

*Message #8 Posted by [Randy Sloyer](#) on 9 Aug 2002, 10:47 a.m.,
in response to message #6 by John K. (US)*

If you skip the unicode handling aspect of the program, it comes down to two lines of awk code to translate a 42S program to printable text.

```
BEGIN { RS = "\04" }
```

```
NR > 3 { print $0 }
```

For the non-awk'ers out there, the first line sets line terminator to the 42S convention of char(4) and the second line prints every line of text after skipping the first 3 lines which are baggage that comes in from the 48 port. As I said, quick and dirty.

You can extend this to translate to whatever character set you desired by using awk's associative arrays to hold the character mapping.

Re: HP-42S

*Message #9 Posted by [John K. \(US\)](#) on 9 Aug 2002, 9:56 p.m.,
in response to message #8 by Randy Sloyer*

Randy,

Could you do me a favor and e-mail me a copy of a sample dump from a 48? (In fact, it might be a good idea for us to continue this conversation out of band.) It would also help if you could include the associated output from your program, as well as the character mappings you're using. Of course, a copy of the tawk program would also be useful, if for no other reason than to look at your methodology. Thanks!

On the face of it, it doesn't look like it'll will be too difficult to hack something together in standard awk to do the job.

Re: HP-42S

Message #10 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 7 Aug 2002, 5:50 p.m.,
in response to message #1 by Jeff Glass

Look for old postings in the Archives Forum. or articles by Steve (Australia) in which he describes how to decode the datastream from the HP42 by means of the PC soundcard audio input. Is very enlightening and good reading. Articles and Archived Forum can be accessed frmo the MoHPC Forum menu.

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Re: HP's that lasted >10 years

Message #1 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 7 Aug 2002, 8:01 a.m.

Well, I have an HP42 and am a great supporter of that model, as many previous postings show. And I am one of the many people who "prayed" to HP to produce a 42 (or 43) model again, since it has an excellent balance of features, size, etc. What I mean is that the SLOPE of the evolution curve decreased sharply after the HP41 introduction. Previous models lasted in the top for months, a year at most; the 41 kept a leader position for almost a decade.

Perhaps my English wording made it unclear, I apologize.

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HP-95LX startup files

Message #1 Posted by [Johnny Bjoern Rasmussen](#) on 7 Aug 2002, 7:20 a.m.

Hi there

Where do I place the CONFIG.SYS and the AUTOEXEC.BAT in my HP-95LX to make it work?

Does anybody have a spare manual?

Thanks! Johnny

Re: HP-95LX startup files

Message #2 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 7 Aug 2002, 7:54 a.m.,
in response to message #1 by Johnny Bjoern Rasmussen

While I have not experience with the 95LX, I have had a 100LX and 200LX, I assume all them are similar since all use a ROM version of MS-DOS 5.0 and Lotus applications.

In the 100LX-200LX, you should put your CONFIG.SYS and AUTOEXEC.BAT in the C:\ (RAM drive) root directory (as in a standard PC). There are system files in the D:\ drive, which is a ROM image used to boot when the system is hard-reset, but usually it boots from C:\ . There was a menu of boot options, which you normally don't use.

While I have no manuals in hand, I may try to find out more details for you if you need such information. Please just ask. (I regret I cannot guarantee a fast answer...)

Good luck!

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Omnigo manuals and strategy games

Message #1 Posted by [Alberto Giha](#) on 6 Aug 2002, 4:03 p.m.

Any body knows where can i found or download the manuals and the strategy games for the HP Omnigo 100?

Thanks

Re: Omnigo manuals and strategy games

Message #2 Posted by [jose gonalves](#) on 6 Aug 2002, 9:43 p.m.,
in response to message #1 by Alberto Giha

Uau ! I'm looking for those manuals also. The Machine looks fine, I heard it has a quite powerful solver, but I can't figure out how to access it.

Let's see...

Re: Omnigo manuals and strategy games

Message #3 Posted by [Glen Kilpatrick](#) on 8 Aug 2002, 4:41 p.m.,
in response to message #2 by jose gonalves

I had an OG 100 for a time, and liked it considerably. HOWEVER, it was 'way too hard to read except in direct sunlight (and I gave it away to a friend with younger eyes). There's a context-sensitive help function that tells you quite a bit, and experimentation will provide the rest.

I don't have any manuals; what I do have, however.... When I first got the beast, I downloaded everything I could find (based upon the idea that what you see on the Internet today, might not be around tomorrow). So if you might have an ftp site for it (email me the details privately), I could share my 43,611,884_bytes of unsorted, unverified, unsupported, applications and ebooks (I was fascinate by the ebooks, but you need GeoWorks Bindery to roll-your-own, and that hasn't been available anywhere for years), maybe as a very big ZIP file, but whatever. And because it's mostly uncategorized, I'm sure there are significant

duplications here and there....

Alternately, you can cruise through Google & friends, and find it yourself.

And lastly, there's a Yahoo group devoted to GeoWorks, moderated by Byron Collins (bcollins@clarksville.com). It seemed moderately active, but the OG 100 was mostly a "sideline"....

gk :)

Re: Omnigo manuals and strategy games

*Message #4 Posted by [Alberto](#) on 13 Aug 2002, 11:14 a.m.,
in response to message #3 by Glen Kilpatrick*

I will be greate. Thanks.

I open a demo account in www.filesanywhere.com. You can put the zip file in the account, it have 50 Mb free.

The username is : alberto1965 The password is : beto65

i hope you have the time to upload the file.

Thanks

Alberto

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fix card reader

Message #1 Posted by [Jeff Glass](#) on 6 Aug 2002, 3:18 p.m.

Hello: I have a card reader for the HP-41 that has the age old symptom of depositing sticky crud on program cards that I try to read. I then took it apart and cleaned it up and replaced the gummy glob with O-rings. Now, the cards run through there just fine. The first two cards I ran through, it read the programs into memory and they ran fine. Now the problem is, whatever card I run through, I get a checksum error. This reader seems to be writing to the cards because they can be read on a good reader. I know the cards I have are good because they read fine on a known-good reader.

I'm a pretty good bench tech and I fix things for a living. I've never fixed a card reader before, and I need some help and advice. If you know of someone that could fix this thing, please let me know that, too.

I'm new to this forum so I do not know for sure how to receive responses to this message. Please email me directly.

Thank you very much,

Jeff Glass, BSEE xmitters@aol.com

Re: fix card reader

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 6 Aug 2002, 11:59 p.m.,
in response to message #1 by Jeff Glass

Hello, Jeff.

I believe you'll find your answers [here](#), and you can also try [this one](#).

Success! Let us know about your card reader.

Re: fix card reader

Message #3 Posted by [David Smith](#) on 7 Aug 2002, 12:32 a.m.,
in response to message #1 by Jeff Glass

A card reader that writes but will not read is almost always caused by a defective tantalum bypass capacitor on the sense amp chip. There are two in the head coil circuit... no problem there. The one on the power supply to the chip develops a high ESR and voila... no el reado. It is almost always a small blue dipped tantalum with around a 4.7uF value (not particularly critical).

Re: fix card reader

Message #4 Posted by [Andreas Müller \(GER\)](#) on 7 Aug 2002, 4:57 p.m.,
in response to message #1 by Jeff Glass

And in addition to Vieira's advice look here <http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/forum.cgi?read=20310> Did you use demagnetized screwdrivers? Did you demagnetize all the screws? This solved most of my problems with card readers. Regards, Andreas

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HP 11c for sale

Message #1 Posted by [Bob W](#) on 6 Aug 2002, 1:42 p.m.

I have one HP11c for sale in good to great condition. It has the original manual and cover. I'm looking for \$150.00 US. If you are interested please reply to this message.

Re: HP 11c for sale

Message #2 Posted by [Ellis Easley](#) on 6 Aug 2002, 2:03 p.m.,
in response to message #1 by Bob W

"Please continue to use the classified ads section for "for sale" and "wanted" ads. "

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Mint HP41CX's on ebay

Message #1 Posted by [Tom \(UK\)](#) on 6 Aug 2002, 12:59 p.m.

There is a whole load of mint(ish) boxed HP41CX's being sold on www.ebay.co.uk (search for hp* calc*) with a 'but it now' for 50 pounds (approx \$75). The photo for all of them is the same, the manuals look sealed.

If you look at 'completed items' one person is buying most of them.

Is this a big find by someone and they are being sold off at a low price???

Re: Mint HP41CX's on ebay

Message #2 Posted by [Ty Rogers](#) on 6 Aug 2002, 3:45 p.m.,
in response to message #1 by Tom (UK)

<http://cgi.ebay.co.uk/ws/eBayISAPI.dll?ViewItem&item=2044334933>

Re: Mint HP41CX's on ebay

Message #3 Posted by [gifron](#) on 7 Aug 2002, 1:10 p.m.,
in response to message #1 by Tom (UK)

Looks like a good opportunity to "enhance your collection" in you are in the UK. He only ships to the UK.

Re: Mint HP41CX's on ebay

Message #4 Posted by [thibaut.be](#) on 12 Aug 2002, 5:45 a.m.,
in response to message #1 by Tom (UK)

[Link to auction bidding history deleted at the request of the seller]

Re: Mint HP41CX's on ebay

Message #5 Posted by [Dave Mabry](#) on 12 Aug 2002, 9:53 a.m.,
in response to message #4 by thibaut.be

Interesting indeed! That Leoglyph has been busy. Take a look here too... <http://cgi6.ebay.com/aw-cgi/eBayISAPI.dll?ViewBids&item=1370347704>

The fact that he "won" the HP-41CX will make it interesting to see what feedback, if any, gets applied. As far as I can tell these two auctions were from different sellers.

Too bad e-pay won't do anything about shill bidding. They always say there isn't enough evidence.

Re: Mint HP41CX's on ebay

Message #6 Posted by [David Smith](#) on 12 Aug 2002, 12:58 p.m.,
in response to message #5 by Dave Mabry

It can be hard to tell from the photos, but that HP-15C does not look very mint to me. Also check out the manual and case in the photos.

Re: Mint HP41CX's on ebay

Message #7 Posted by [Dave Mabry](#) on 12 Aug 2002, 2:43 p.m.,
in response to message #6 by David Smith

Out of curiosity I emailed the seller in this auction: <http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1370152495> The price seemed too high to be real. The seller told me that Leoglyph paid with Bidpay right away, so he seems to be for real. I wonder if he'd like to buy some of my collection... hmmmmmm Never mind. I'll keep them.

Re: Mint HP41CX's on ebay

Message #8 Posted by [Ellis Easley](#) on 12 Aug 2002, 4:04 p.m.,
in response to message #5 by Dave Mabry

I think the repeated bidding only indicates inexperience or a misunderstanding/distrust of the Ebay "proxy bidding" system. I predict in a short time "Leoglyph" will join the ranks of the snipers!

Re: Mint HP41CX's on ebay

*Message #9 Posted by [Scuba Diver](#) on 15 Aug 2002, 6:06 p.m.,
in response to message #8 by Ellis Easley*

Well, it looks like the curator can now update the price range chart for the 41CX...it looks like we've hit a new high!

Re: Mint HP41CX's on ebay

*Message #10 Posted by [sinibomb](#) on 18 Aug 2002, 11:26 a.m.,
in response to message #4 by thibaut.be*

'Now look here how "fake" biddings have appeared on this item...'

Baseless accusations of fraud like this can easily be interpreted as slander... I am reporting this to the forum manager for action as they see fit.

It's hardly any sellers fault if someone doesn't understand the proxy bidding system, or wants something so desperately they are prepared to pay over the odds for it.

Engage brain before typing next time...

Who needs shill bidding?

*Message #11 Posted by [Gladiator \(Bidder?\)](#) on 18 Aug 2002, 11:22 p.m.,
in response to message #10 by sinibomb*

Hey.

I can't count how many auctions I've lost by a buck to a fellow collector from<grin>. He ought to have enough, now, for several dozen museums.

I should get some kind of kick-backs for being the second highest bidder so often... <grin>.

Slander, itself, is a strong word. I hope that this forum can be "free" enough to allow voicing of concerns such as keeping alert to the POSSIBILITY of misconduct. I think it protects everyone, including sellers. The bidder in this auction even admitted he was new at this.... and it turned out to be legit bidding.

Please, folks. Let's never let this forum stoop to the level of others. I don't want to see

any more "fighting" words.

Peace, Love, and HP.

Re: Mint HP41CX's on ebay

*Message #12 Posted by [Gordon Dyer](#) on 20 Aug 2002, 9:36 p.m.,
in response to message #1 by Tom (UK)*

I bought one of the mint 41CXs in the UK for £50, it does look unused with shrink wrapped manuals, just a slightly damaged box. Date code 2819S20688. Its my first HP-41 and I'm having fun trying it. I did wonder (for about 10 seconds) if I should keep it all shrink wrapped and re-sell it , but I am a user not a dealer.

Re: Mint HP41CX's on ebay

*Message #13 Posted by [David Smith](#) on 21 Aug 2002, 5:15 p.m.,
in response to message #12 by Gordon Dyer*

You might do good to put it away for the grandkids and go buy a nice used one on Ebay, etc.

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RedDot HP-35 for \$69

Message #1 Posted by [Mike](#) on 6 Aug 2002, 10:13 a.m.

Did you see that Red Dot go for \$69?

AND, it was in excellent condition. Almost no missing silver trim.

Re: RedDot HP-35 for \$69

Message #2 Posted by [Fred](#) on 6 Aug 2002, 11:33 a.m.,
in response to message #1 by Mike

Where ??????????????????????????????

Re: RedDot HP-35 for \$69

Message #3 Posted by [Y K Wong](#) on 6 Aug 2002, 8:45 p.m.,
in response to message #2 by Fred

Lucky Tom :-)

But shouldn't this be the real value of an old calc consider it pure functionality?

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1371555849>

Re: RedDot HP-35 for \$69

Message #4 Posted by [Tom \(UK\)](#) on 7 Aug 2002, 7:06 a.m.,
in response to message #3 by Y K Wong

Perhaps I'm being picky but the display looks like:

6.888888889-10?

Again the low quality picture does not help, and the user states that it works fine.

Re: RedDot HP-35 for \$69

Message #5 Posted by [David Smith](#) on 7 Aug 2002, 12:34 a.m.,
in response to message #1 by Mike

It may be a red dot or a photo artifact. The dot appears to be too low and ill defined for a real red dot, but with the quality (or lack thereof) of the photos one cannot tell.

I noticed that too...

Message #6 Posted by [Mike](#) on 7 Aug 2002, 12:40 a.m.,
in response to message #5 by David Smith

But if the hole is really too low, you would not see an entire dot. It has to be right above the dot, doesn't it? The switch lever is not very wide (at least on the non red dots).

Red dot switch andf early HP-35's

Message #7 Posted by [Erik Wahlin](#) on 7 Aug 2002, 11:55 a.m.,
in response to message #1 by Mike

I once worked on a very early HP-35 that was not a red dot machine. The on/off switch had a red dot on it! Obviously, HP had a few switches with red dots left after doing an engineering change that removed the see through hole. Another interesting fact was the cpu board had sockets instead of the through holes on later HP-35's. There were some other differences such as the rear label. One way to check the validity of the machine would be to see if the cpu board has the sockets.

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Menu's on HP42s

Message #1 Posted by [Steffen Bräuner](#) on 6 Aug 2002, 5:25 a.m.

Hi

I am new to this forum. I made a handfull of survey field programs for the 42s. In some of the programs I am using menus with more than 6 choices. How do you set the arrows that show the user that more menu-choices are available from within a program ?

Steffen

Re: Menu's on HP42s

Message #2 Posted by [John K. \(US\)](#) on 6 Aug 2002, 8:19 a.m.,
in response to message #1 by Steffen Bräuner

IIRC, button numbers "7" and "8" are the up and down arrows, respectively, (numbers 1-6 are the menu keys and 9 is the [EXIT] button) and are handled just like the programmable menu buttons, except that you don't specify the labels. If either of those are selected, you simply branch to a new set of menu declarations. Off hand, I don't remember if the "up & down" arrow segment of the LCD is set as a result of this, but there may be a flag which will turn it on. I don't have my manual handy, but I'll take a look at it later and post that info if nobody beats me to it.

Re: Menu's on HP42s

Message #3 Posted by [Randy Sloyer \(US\)](#) on 6 Aug 2002, 7:48 p.m.,
in response to message #2 by John K. (US)

The "multirow menu" annunciator should appear automatically when you have more than 6 programmable menu choices.

I can find no flag to set or test the state of this annunciator.

Re: Menu's on HP42s

Message #4 Posted by [John K. \(US\)](#) on 6 Aug 2002, 10:40 p.m.,
in response to message #3 by Randy Sloyer (US)

<nod> Yeah, that's what I found, too. It's been a while since I did any serious programming on my 42, and I'd forgotten whether or not I had to set it manually. In any event, the up arrow is menu key 7 and the down is 8.

Re: Menu's on HP42s

Message #5 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 7 Aug 2002, 1:07 a.m.,
in response to message #3 by Randy Sloyer (US)

Hello;

I agree with you both, Randy and John, but there are two specific situations: a menu with variables created internally by, say, SOLVER (in this case, [UP] and {DOWN] arrows are automatically active), and a menu created by KEYG or KEYX, that demands the key number; in this case, activating [UP] and [DOWN] arrow will need **KEY 7 GO somewhere** or **KEY 8 XEQ something**. There will be only six options at a time. There is a very good example of this feature at the HP42S User's Manual, Part 10 - Programming Techniques, The programmable Menu (my manual is in Portuguese, and this subject is found at page 145; I believe in the original English manual it will be closed to it).

Hope this helps.

Re: Menu's on HP42s

Message #6 Posted by [John K. \(US\)](#) on 7 Aug 2002, 3:43 a.m.,
in response to message #5 by Vieira, Luiz C. (Brazil)

> I agree with you both, Randy and John, but there are two specific situations[..]

True, but I assumed -- perhaps incorrectly -- that he was not talking about the automatic menus (or local variable mode, for that matter). I guess the real question is, assuming the program is using the programmable menu (e.g. KEYG/KEYX sequences), does the annunciator come on automatically if the KEY 7 and/or KEY 8 instructions are executed? I honestly can't remember, and I haven't had a chance to check. As Randy Sloyer indicated, there doesn't seem to be a way to set it manually, though there seem to be flags for almost all of the other annunciator segments -- go figure. :^/

Re: Menu's on HP42s

Message #7 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 7 Aug 2002, 7:08 a.m.,
in response to message #6 by John K. (US)

Hi;

For testing purposes, I typed a small program in and it did no set up/down arrows on, meaning no up/down option indication for user KEYG/KEYX in the display. You know, I never thought about this. In fact, KEYG/KEYX will only redefine the first row keys, one at a time. If we try to "roll-down" or "roll-up", "7" or "8" will appear, meaning down-arrow or up-arrow will be redefined.

That's completely normal to expect that, in this particular situation, the annunciator would turn on, as it happens with other menus, CUSTON and LOCAL LABEL included.

Now I get your point. But it seems to me this is an internal set; maybe J.F. Garnier, Hrast and others will find some shortcut for this annunciator.

Thanks teasing my mind.

Re: Menu's on HP42s

Message #8 Posted by [Hiroshi Ito](#) on 6 Aug 2002, 12:05 p.m.,
in response to message #1 by Steffen Bräuner

Thank you for responding to me. I have 82160A HP-IL printer. But I have neither a bar cord leader for HP-41C nor a bar cord leader for HP-71B. Where can I find a change program? Or, where can I find a bar cord printing program? I am the best if there is a HP-71B BASIC program to collect a text file in the binary file and to change. If such a program is here, I can do most work on HP-71B. I tried another method. I am not found though I looked for the emulator which had a change function. If a binary file can be formed, it lets 41CV read it via 9114B.

Re: Menu's on HP42s

Message #9 Posted by [Steffen](#) on 7 Aug 2002, 2:25 a.m.,
in response to message #1 by Steffen Bräuner

Thanks for your reply

It seems you've got the same experiences as I do. When you use one of the set menu's (Solver for example) the multirow menu annunciater is set, but when You program one your yourself they are not. I have been looking for a flag to set but can't find any in the manual ? Maybe it is impossible ?

Steffen

Re: Menu's on HP42s

Message #10 Posted by [John K. \(US\)](#) on 7 Aug 2002, 3:52 a.m.,
in response to message #9 by Steffen

Well, assuming they don't come on automatically, then it doesn't look like there is, no. At least, not according to the documentation I have. It might be interesting to play around with flags 31-33 though, just in case they "hid" it in plain sight. I believe they are in the unprotected range, so it should be possible to set and clear them directly.

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How to change a program list in text form into executive form of HP-41CV

Message #1 Posted by [Hiroshi Ito](#) on 5 Aug 2002, 3:55 a.m.

I finally want to carry out a program list in text form that debugging was finished on HP-71B with HP-41CV. I have a "HP-41 Translator for HP -71" module. This module can be changed into individual form that a HP-41 emulator on HP-71B can understand a program list in text form. But, as for this module, the executive form of HP-41CV can't be formed. I want to use the program which finished debugging on HP-71B on HP-41CV. If it is necessary, I am added to HP-71B for this plan, and "HP-9114B Disc Drive" and a personal computer can be prepared. Don't you know the good method of anyone?

Re: How to change a program list in text form into executive form of HP-41CV

Message #2 Posted by [Vassilis Prevelakis](#) on 5 Aug 2002, 8:49 p.m.,

in response to message #1 by Hiroshi Ito

If you have the program in text form (ASCII), then you can use one of the many programs that print barcodes on inkjet and laser printers. You then read the barcode using the Wand.

If you do not have a wand, or you want to use the 9114 floppy, no matter what, then you need to convert the text listing into a binary HP-41 program. You can do this with little effort by modifying the barcode printing program to store the bit patterns in a file rather than printing the barcode. Note that you only save the bits that correspond to the program instructions, not the barcode headers and checksums.

Come to think of it, maybe one of the HP-41 emulators can be used to convert text files to binary HP-41 program files.

**vp

What if...

Message #3 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 5 Aug 2002, 11:01 p.m.,

in response to message #2 by Vassilis Prevelakis

Hi;

as I do not have any means to exchange data from my 41's to the external world (*I only have the input wand and the printer, so I can scan printed listings, use an OCR, correct it, generate the barcode and wait till the sunlight illuminate the cave so I can start it over after dawn... primitive, but it is the only way I have. I can also type in the programs, but having a hardcopy (82143A) helps much*), I want to know if a stream with all valid code, say, straight equivalent bytes, can be loaded in the HP41 and be "understood" as a program. I mean, if I have all bytes that form a program in the HP41 memory, would the calculator accept them as a program? There are some instructions in the HPIL repertoire that allow data transfer; would a simple header be enough? If this is true, then the transfer process AND file changing would be easy: a bit of Synth Code understanding and the transfer way and the job is done.

I would like having a look at the actual contents of a program-type file so I could see how is it coded.

Just to see, because I have no means to use it. (I dream of an 82160A HPIL).

Cheers.

Re: What if...

Message #4 Posted by [Dan M \(Vermont, USA\)](#) on 6 Aug 2002, 8:43 a.m.,
in response to message #3 by Vieira, Luiz C. (Brazil)

Leo Duran has written an excellent piece of software that will easily transfer all kinds of HP-41 (and some HP-71) program formats from one into another. This includes many different and useful formats. You must have a method to get the files to/from your calculator, though.

<http://www.hpmuseum.org/software/41uc.htm>

Luiz: Please email me privately for some additional information.

Re: What if...

Message #5 Posted by [Hiroshi Ito \(JAPAN\)](#) on 7 Aug 2002, 5:39 a.m.,
in response to message #4 by Dan M (Vermont, USA)

Thank you for responding for me. It is decided that I try the program of Leo Duran. If it is possible, I want to finish all work on HP-71B. Does the change program described by HP-BASIC exist? Then, can you download a binary file from HP-71B into HP-41C directly?

How to create 41 barcode from program listing in text form

Message #6 Posted by [Chan Tran \(USA\)](#) on 16 Aug 2002, 10:08 a.m.,
in response to message #5 by Hiroshi Ito (JAPAN)

Vassilis, I wonder what kind of program that allows me to print barcode from an HP41 text listing? I can get the listed program into a PC text file by printing via the IR module to a 48 then transfer to the PC. I might have to do some editing but for the most part I can get the program listing OK. Thanks. Chan

Re: How to create 41 barcode from program listing in text form

Message #7 Posted by [Vassilis Prevelakis](#) on 16 Aug 2002, 6:52 p.m.,
in response to message #6 by Chan Tran (USA)

Didn't you read Dan M's message earlier on? He said:

```
> Leo Duran has written an excellent piece of software that will easily
> transfer all kinds of HP-41 (and some HP-71) program formats from one
> into another. This includes many different and useful formats. You must
> have a method to get the files to/from your calculator, though.
>
> http://www.hpmuseum.org/software/41uc.htm
```

**vp

Re: How to create 41 barcode from program listing in text form

Message #8 Posted by [Dan M](#) on 16 Aug 2002, 8:58 p.m.,
in response to message #6 by Chan Tran (USA)

Look in the "articles" forum at this site.

<http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/articles.cgi>

Towards the bottom (old articles) I have #42 and #24.

#42:

<http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/articles.cgi?read=42>

is a way to use MS Excel and TrueType fonts to make 41 BarCode. It's kind of cumbersome, and it even takes me a while to figure it out every time I go back to it, but it works.

Leo Duran has done a far better job of implementing these ideas than I can. Read about his program at

<http://www.hpmuseum.org/software/41uc.htm>

I think that his BarCode output is for a PostScript Printer, and since I generally don't have PostScript Printers I haven't really tried it. If it's anything like the rest of his program, making barcode with it will be easy, quick, and bug-free.

Tony Duell has written what appear to be very excellent utility tools for 41 programs, "but" they are for Linux. I don't run Linux :-(so I have not had the opportunity to try his programs. Tony's extensive list of utilities includes methods to produce 41 bar code.

http://www.hpcc.org/hpil/lif_utils.html

Good Luck. If you try my MS-Excel-based implementation and have trouble figuring it out, feel free to send me an email and I can possibly explain how it works.

Re: How to create 41 barcode from program listing in text form

Message #9 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 17 Aug 2002, 11:16 a.m.,
in response to message #8 by Dan M

Hi;

I tried the programs (uc41) and there is an option to generate a file that is printable (if I am not wrong, it is a .prn extension file). I got success printing these files directly through an HP1100 laser, when the computer was in plain DOS (I did not set the printer to print in a DOS shell when installing it). The final printing is a lot good.

If more info is required, I just have to find my notes somewhere in here...

Success.

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HP32Sii color scheme

Message #1 Posted by [Juergen Rodenkirchen \(GER\)](#) on 5 Aug 2002, 2:16 a.m.

I've another question regarding the HP32sii: I know that the older version machines had orange/blue shift keys, whereas more recent models have got green/purple(lilac?) ones. Thus, I was surprised to learn from HP database that after the orang/blue versions, blue/white color schemes were apparently introduced. So, is this just a "typo" or do these blue/white machines really exist (I've never seen one)? Besides, if they do exist, does anyone know on their rarity in comparison with the original orange/blue machines? Thanks for your time!

Juergen

Re: HP32Sii color scheme

Message #2 Posted by [jose goncalves](#) on 6 Aug 2002, 9:49 p.m.,
in response to message #1 by Juergen Rodenkirchen (GER)

Ok. The name of the "new" scheme might be blueish green / whithish lilac or something like it.

Re: HP32Sii color scheme

Message #3 Posted by [Juergen Rodenkirchen \(GER\)](#) on 7 Aug 2002, 5:07 a.m.,
in response to message #2 by jose goncalves

Oh, OK, I see! So, I didn't miss anything ;-) and there's actually no 3rd color scheme of the HP32Sii. Thanks for the information!

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Cheapest HP-32SII sold on ebay today in a long time

Message #1 Posted by [Gene](#) on 4 Aug 2002, 9:48 p.m.

Had a buy it now of \$25.

Oh well. A competitor beat me to it. :-(

Gene

Re: Cheapest HP-32SII sold on ebay today in a long time

Message #2 Posted by [tom](#) on 5 Aug 2002, 7:30 a.m.,

in response to message #1 by Gene

Yes, there are a few good deals left if you are willing to hunt them down, and have a little luck. Also on Ebay, in the past 45 days, were other 32SII calcs acquired for: \$30 (mint), \$50 (mint), \$49 (NIP) and \$49.50 (NIP). And still I see people paying over \$175 for one. Amazing.

Re: Cheapest HP-32SII sold on ebay today in a long time

Message #3 Posted by [John Smith](#) on 5 Aug 2002, 9:42 a.m.,

in response to message #2 by tom

Not to mention a New-In-Box HP32S (not SII) for just \$50.00 a couple of months or so ago.

By the way, am I the only one who feels the HP32S to be actually better than the 'improved' 32SII ? I'm talking about physical characteristics (ruggedness, materials, colours, display) as well as technical ones (much more elegant layout, less bugs, much less keyboard cluttering, etc).

Re: 32s vs. 32sII

Message #4 Posted by [Paul Brogger](#) on 5 Aug 2002, 10:29 a.m.,
in response to message #3 by John Smith

I agree on your preference for the 32s over the sII -- mainly because of keyboard clutter. And the few features added to the sII are ones I rarely use. I'm not a "real" collector, and my sII's are relegated to toolbox and glove compartment. My 32s is on my desk at work, and gets used most often.

With regard to occasionally high eBay prices, maybe someone convinced NASA that 32sII's are essential to keep the Shuttle fleet operational. ;->

Re: 32s vs. 32sII

Message #5 Posted by [Trisnadi Sutrisno](#) on 5 Aug 2002, 10:52 a.m.,
in response to message #4 by Paul Brogger

I've just been using the 32S for a month for replacement of my 32Sii, I agree that the 32S is simpler in the keyboard layout, although it has nested menus. What I like most is 32S has only one shift key, it is simpler to my mind. For me, the 32S is just perfect. For some techie people probably the 32Sii is more interesting.

Trisnadi

Re: HP-32SII vs 32S

Message #6 Posted by [Edwin Russell](#) on 6 Aug 2002, 7:34 a.m.,
in response to message #3 by John Smith

Hi John,

I use a new 32SII daily. I thought that the only bugs had been ironed out long ago (see <http://www.finseth.com/~fin/hpdata/hp32sii.html>). You say it is more buggy than a 32S - what bugs are you referring to? Is there a published list?

Edwin.

Re: HP-32SII vs 32S

*Message #7 Posted by [John Smith](#) on 6 Aug 2002, 9:48 a.m.,
in response to message #6 by Edwin Russell*

> You say it is more buggy than a 32S - what bugs are you > referring to? Is there a published list?

No, I was referring to the well-known 'fractions' bugs mentioned in finseth, which I understand were removed long time ago.

Anyway, bugs or no bugs, I still think the 32S to be the better machine, IMHO of course.

32S - Why only 3 years

*Message #8 Posted by [Trisnadi](#) on 6 Aug 2002, 8:47 p.m.,
in response to message #7 by John Smith*

Anyone knows why the 32s was replaced by 32sii in only 3 years after introduction?

Re: 32S - Why only 3 years

*Message #9 Posted by [Tom \(UK\)](#) on 7 Aug 2002, 1:06 p.m.,
in response to message #8 by Trisnadi*

From the graphical time line I put up some time ago it looks like there may have been a gap in the work load for the engineers just after the HP48S(X), HP17Bii and HP19Bii were launched in 1990. The HP32Sii came out in 1991. Perhaps they spent their time 'improving' the HP32S using some of the styling from the 48 series?

I'd guess soon after the HP32Sii was launched some of the calculator staff were re-allocated to other parts of HP, leaving behind a core staff to look after the HP48 series.

Just a guess by putting 2 and 2 together and getting 5... ;-)

Re: 32S - Why only 3 years

Message #10 Posted by [Paul Brogger](#) on 7 Aug 2002, 3:07 p.m.,
in response to message #9 by Tom (UK)

Tom wrote *Just a guess by putting 2 and 2 together and getting 5...*

Did you use a TI for that calculation? My HP's all show **4!** ;->

Re: Cheapest HP-32SII sold on ebay today in a long time

Message #11 Posted by [Juergen Rodenkirchen \(GER\)](#) on 5 Aug 2002, 10:13 a.m.,
in response to message #2 by tom

Well, not quite amazing. In Germany it was possible to get the HP32Sii from regular retailers for a price of about 75 Euros (= approx. 75 US\$) until only a few days ago; but note that we are talking about new versions with new color scheme (green/purple)! I however felt that older version machines (orange/blue color scheme) sold for a lot more as they probably are much more rare. So, I think your comparison is not quite fair as it's too simple: There might be 32sii's worth 175 \$ but others which are not ... at least in the eyes of dedicated collectors :-)

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bicycle distance meter

Message #1 Posted by [Tal](#) on 4 Aug 2002, 4:08 a.m.

Hi, HP48 users!

I would be very thankful if someone could help me to count the RS232 logic transition.

The goal of the program is to be a bicycle distance meter.

Each time that I stop it, it put the number of pulses on the stack.

I received this program to receive one bit:

```
GOSBVL =DisableIntr GOSBVL =DispOff D0=(5) =IOC * Address of serial IO control register. LC
(1) 8 DAT0=C 1 * Turn serial circuitry on. D0=(5) =RCS * Address of receive control/status
register. C=DAT0 1 * Read RCS register. Bit 3 reflects the state * of the RX pin. ( 1 means the pin is
at a * zero or negative voltage. 0 means it is at a * positive voltage. ) D0=(5) =IOC C=0 A DAT0=C
1 * Turn off serial circuitry. GOSBVL =DispOn GOSBVL =AllowIntr
```

I hope it is not too difficult a task and likewise a challenge.

Best regards, Tal email: td@chem.ch.huji.ac.il

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hp 12c

Message #1 Posted by [terry oboyle](#) on 4 Aug 2002, 2:02 a.m.

my beloved hp 12c (purchased in 1981) had a cup of coffee today. it still turns on and off, but just has symbols as though you are doing the "on-/" self check.

any ideas how i can get it up and running again?

Re: hp 12c

Message #2 Posted by [David Ramsey](#) on 4 Aug 2002, 12:38 p.m.,
in response to message #1 by terry oboyle

Your best bet is to simply replace it while 12c calculators are still readily available. Better yet, buy two.

Re: hp 12c

Message #3 Posted by [Randy Sloyer](#) on 4 Aug 2002, 6:21 p.m.,
in response to message #2 by David Ramsey

Yes, buy two while you still can. But might I suggest trying to find older stock units. If you go to your local Staples or OfficeMax, you'll end up with newer units made in China and you will *see and feel* the difference. The newer units do not have the quality of the original 12C's. Try before you buy, if you can.

Re: hp 12c

Message #4 Posted by [Scuba Diver](#) on 14 Aug 2002, 2:01 a.m.,
in response to message #3 by Randy Sloyer

Randy, do you have any idea when 12C production moved to China? You mentioned in your note that most large retailers are probably selling the Chinese units, but if the production shift occurred recently, then it may be possible that some smaller retailers would still have non-Chinese units in stock.

I would love to get a new 12C, but not if the quality isn't there.

Thanks!

Re: hp 12c

Message #5 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 20 Aug 2002, 10:48 p.m.,
in response to message #4 by Scuba Diver

Hi, Scuba;

identifying the new ones is that easy: they use one single 3V button cell instead the 3 x 1,5V LR44-type of the old (good) ones. Just look in the back of the calculator and you'll see the new compartment door (why do Chinese HP workers like to change battery compartment doors? Is it a legacy?). About serial numbers, the Chinese will read CNxxxxxxxxx.

Cheers.

Re: hp 12c

Message #6 Posted by [Renato \(Brazil\)](#) on 4 Aug 2002, 8:34 p.m.,
in response to message #1 by terry oboyle

I see you are Kiwi. *Very* nice people and place. On the other hand this puts ebay out of reach. I suggest placing ad for help on the classifieds area - ask for Kiwi help. If you were in Brazil, I am certain you would find some very kind and helpful people to take care of your beloved 12c. Knowing Kiwis, I bet you will find good local help. Good luck, Renato

Re: hp 12c

Message #7 Posted by [David Smith](#) on 5 Aug 2002, 10:23 a.m.,
in response to message #1 by terry oboyle

If all else fails try giving it three baths in an ultrasonic cleaner with fresh distilled water each time. Shake out as much water as you can, then dry in in an oven on low (< 150F) for several days.

Re: hp 12c

Message #8 Posted by [Gordon Dyer](#) on 20 Aug 2002, 9:42 p.m.,
in response to message #1 by terry oboyle

Try a good wash with ethannol, it gets into places other cleaners can't, and evaporates away nicely. I did this with a HP-71 card reader which was completely bunged up with grimy dirt and wouldnt work; after a few good washes with ethanol it works fine and I didn't have to disassemble it!

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Does anyone remember.....

Message #1 Posted by [Michael Meyer](#) on 4 Aug 2002, 12:40 a.m.

Hi.

Does anyone remember if someone once posted a source of replacement L.E.D. modules for the 35 series calculator? I seem to remember seeing here once that you could actually buy replacements from some electronics source. Or maybe I need some Thorazine...

Thanks

Re: Does anyone remember.....

Message #2 Posted by [David Smith](#) on 4 Aug 2002, 5:09 p.m.,
in response to message #1 by Michael Meyer

Take two thorazine and call me in the morning. Somebody had some for sale at one time, but they went fast. Only replacements seem to be from another machine.

There are two types of modules. Those with silver leads and those with gold. Don't mix them because the digits are slightly different sizes. The modules are also graded in intensity by a letter... typically "I" - "L". Try to keep within a letter or two of the original.

Re: Does anyone remember.....

*Message #3 Posted by [Michael Meyer](#) on 5 Aug 2002, 10:39 p.m.,
in response to message #2 by David Smith*

Thanks.

That explains why the ones I cannibalized from a 35 are dimmer in the 55 I placed them in. Still, I had to restore the 55. Someday I'll find a non-functional 35 series that I can restore my previous 35. Or something.

Michael

Re: Does anyone remember.....

*Message #4 Posted by [David Smith](#) on 6 Aug 2002, 11:06 a.m.,
in response to message #3 by Michael Meyer*

The purists out there replace all three LED modules at a time from a single machine. But since I only try to scrap out machines that have problems that can never be fixed, I tend to use LEDs from machines that already had a dead segment in one module. Beggars can't be choosers. Just match the color of the LED lead frames and try to get the display intensity selection letter close. I can't tell the difference in a single letter step. Two letters off and most other people can't tell. Three gets noticeable.

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HP32SII Rom Versions

Message #1 Posted by [Juergen Rodenkirchen \(GER\)](#) on 3 Aug 2002, 3:01 p.m.

Hi all!

I'm currently occupied with an HP32SII and I wondered if there are any different ROM versions of the machine and if there's any (software-) way to get the information directly from the calc (is there any keystroke sequence revealing this information, that is). In particular, if any ROM modifications have been done at all, does anyone know about significant differences between the versions? Besides, are there any known version related bugs?

Thanks a lot for your time and input!

Re: HP32SII Rom Versions

Message #2 Posted by [J-F Garnier \(France\)](#) on 4 Aug 2002, 5:54 a.m.,
in response to message #1 by Juergen Rodenkirchen (GER)

Have a look at <http://www.finseth.com/~fin/hpdata/hp32sii.html>

I don't know how to find the ROM version. During self tests (ON-E), a message is briefly displayed: 32SII-OK. On my HP32SII, the annunciator 1 is also displayed with this message. It could mean version 1. Does somebody have an other annunciator set at this stage?

And if someone know how to get the ROM out of the HP32SII, please let me know. A HP32SII emulator would be nice ...

J-F

Re: HP32SII Rom Versions

Message #3 Posted by [Juergen Rodenkirchen \(GER\)](#) on 4 Aug 2002, 4:50 p.m.,
in response to message #2 by J-F Garnier (France)

Hi J-F,

indeed a few interesting bug reports in the database; thanks for the hint! B.t.w., my calc also shows the 1 annunciator together with the "32SII-OK" after the self-test. It's a pretty new machine although I can't interpret the new series no. scheme: I'm sorry, Wlodek! I know you once told me how to read it but alas I did forget about it and can't find your mail either :-
(

Re: HP32SII Rom Versions

Message #4 Posted by [jose goncalves](#) on 4 Aug 2002, 5:29 p.m.,
in response to message #3 by Juergen Rodenkirchen (GER)

Talking about a new scheme for serial numbers, I still cannot interpret the numbers of my HP17BII, 32SII and 19BII. All of them will start with 1D, but will have no letters where they were supposed to be, indicating the country of origin. BTW, they are manufactured in Indonesia.

Any clue ?

Re: HP32SII Rom Versions

Message #5 Posted by [Ed Martin](#) on 4 Aug 2002, 8:20 p.m.,
in response to message #4 by jose goncalves

(remove "spamno" from email address for direct email)

The serial numbers on newer models made in Indonesia differ from the original scheme (counting years from 1960).

The new serial number format for Indonesian calculators is:

IDywwsssss

.... where "ID" stands for Indonesia y is a single digit indicating the year (e.g., "8" is 1998, "1" is 2001) ww is the week of the year sssss is the 5 digit serial number for that week

- Ed

P.S. Could it be that in adopting the new serial number format, HP assumed there would never be a need to discriminate between 1998 and 2008? Should we view this as an ominous sign?

Re: HP32SII Rom Versions

*Message #6 Posted by [James M. Prange](#) on 5 Aug 2002, 2:59 a.m.,
in response to message #5 by Ed Martin*

Maybe, but maybe they just didn't expect to ever have another model that stayed in production and was made in the same country for ten years.

I suspect that the "1D" that Jose mentioned was really "ID" for Indonesia. I've read that the newer 49Gs have a serial starting with CN for China. I expect that they're using the ISO country codes as listed [here](#) for the new style serial numbers.

Regards,
James

Re: HP32SII Rom Versions

*Message #7 Posted by [Ellis Easley](#) on 5 Aug 2002, 11:29 a.m.,
in response to message #5 by Ed Martin*

I've noticed for a long time that Asian manufacturers use one digit for the year while US makers use two digits in the datecode on electronic parts. Even the Asian divisions of some US companies use one digit - you can tell whether TI parts were packaged in US or Asia this way. I figure, as James says, most things don't stay in production for ten years. Also, you can tell from packaging materials and other clues what decade a thing was made. And the purpose of the datecode from the manufacturer's point of view, tracking quality and warranty issues, is pretty much over with in a short time.

How many HP calculator models stayed in production for more than 5 years anyway?

Re: HP32SII Rom Versions

*Message #8 Posted by [jose goncalves](#) on 5 Aug 2002, 5:20 p.m.,
in response to message #7 by Ellis Easley*

The HP-12C, HP-42S and HP-20S were manufactured for more than 5 years, as an example. Anyway, maybe HP doesn't intend to repeat the feat in the future...

Re: HP32SII Rom Versions

*Message #9 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 5 Aug 2002, 7:41 p.m.,
in response to message #8 by jose goncalves*

Hi;

forgot the HP41.

Re: HP's that lasted >5 years

*Message #10 Posted by [TOM \(UK\)](#) on 6 Aug 2002, 12:33 p.m.,
in response to message #7 by Ellis Easley*

HP calculator's sold over more than 5 calendar years (from Dave's museum figures):

HP41C

HP41CV

HP41CX

HP42S

HP67

HP48G(X)

HP38G

HP11C

HP12C

HP15C

HP16C

HP80

HP37E

HP32E

HP20S

HP32Sii

HP10B

HP17Bii

HP19Bii

HP97

Sorry if I've missed any off or included any that should not be there.

Re: HP's that lasted >5 years

*Message #11 Posted by [Ellis Easley](#) on 6 Aug 2002, 1:31 p.m.,
in response to message #10 by TOM (UK)*

I guess I should have asked, "How many HP calculator models were in production for TEN years?", since the matter under discussion was whether one digit is enough to convey the year in a datecode.

Re: HP's that lasted >10 years

*Message #12 Posted by [Tom \(UK\)](#) on 6 Aug 2002, 1:51 p.m.,
in response to message #11 by Ellis Easley*

OK that list is a bit shorter:

HP10B

HP12C

HP17Bii

HP19Bii

HP20S

HP32Sii (just)

HP41CV (just)

And who knows, perhaps the HP48GX?

However I do get your point, most manufacturers just put a serial number on the part with no year indicator. Did HP just make a rod for it's own back?

Note that the more recent calcs have been in production for a long time not only because they are mostly good but also HP did not invest in calcs for almost the whole of the 1990's. It's a testament to the original design that the same model sold over ten years.

Re: HP's that lasted >10 years

Message #13 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 6 Aug 2002, 6:18 p.m.,
in response to message #12 by Tom (UK)

In my humble opinion, there is a large difference between pre and post HP41 times. In a plot of usability versus time, I think we can clearly observe a period in time (1972-1979) in which every six months new features appeared (HP 35-45-65, TI 50-56-52, HP 25-25C, HP67, TI 58-59). From the HP41 introduction on, changes were MUCH slower, since most "dreamed" features were already available in the HP41 (with symbolic math and graphics remaining the major elusive dreams for ten more years). So it is a matter of evolution; and something like the law of diminishing returns, which commands these processes. After achieving a good usability level, the focus shifted to friendliness, lower price, smaller size (Voyagers: 10C-11C-15C-16C series), and then lower manufacturing-service costs (Pioneers). The high end turned powerful but more difficult to use for regular tasks (48...), which is a doubtful progress for these devices.

Again, my hat off to the HP41 !!

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Replacement battery pack for HP45

Message #1 Posted by [Richard Hook](#) on 3 Aug 2002, 1:28 p.m.

Greetings: Bob Marinelli reported that the Panasonic battery packs HHR-P505 are good replacements for the original battery pack. However, the original battery pack consisted of NiCd cells while the Panasonic pack consists of NiMH cells. Will the original HP charger for the HP 45 be compatible with the NiMH cells or must another charger be used? If the latter is the case, what charger is recommended. Are the Panasonic cells soldered together or do they snap in their battery case?

Thank you for your input

Re: Replacement battery pack for HP45

Message #2 Posted by [Dave Shaffer](#) on 3 Aug 2002, 7:33 p.m.,
in response to message #1 by Richard Hook

I did the HHR-P505 replacement for an even older HP35, and the original charger seems to have no problem putting electrons into the NiMH cells.

The Panasonic cells are prejoined, but you have to bring out their wires to a couple of home-made contacts that take the place of the original battery pack contacts. Make sure you get the polarity correct.

The entire assembly benefits from some strategically placed thin pieces of styrofoam to keep the batteries snug in their new home.

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HP-41C with weak display

Message #1 Posted by [Jose Goncalves](#) on 3 Aug 2002, 12:01 p.m.

I've been working on an HP-41C that shows a very dim display. In fact, it's only possible to read the display if you look at it with the machine tilted (lower part much higher then the upper part). I've noticed that batteries are gone after some two or three weeks of use, what doesn't seem to be fair.

I've been checkig for bad contacts and the like, but couldn't find anything relevant. Can someone tell me what to try next ?

Thank you

Re: HP-41C with weak display

Message #2 Posted by [David Smith](#) on 3 Aug 2002, 12:50 p.m.,
in response to message #1 by Jose Goncalves

Try cleaning the circuit boards with 91% isopropyl alcohol. I have seen this happen when old solder or some other gunk gets on the boards. Clean the CPU, keyboard, and back of the LCD. Another symptom that shows up is a display that only shows up while a key is pressed down.

Be careful not to get the alcohol on or under the LCD window. It can cause it to appear fogged. On full nut machines you can remove the LCD module and repolish the window (but this is a fairly tricky thing to do).

Another cause may by the temperature compensation circuitry in the LCD drive system.

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Any suggestions for reviving an HP-41CV ?

Message #1 Posted by [jose goncalves](#) on 3 Aug 2002, 11:55 a.m.

I'm trying to revive an HP-41CV but all I can get is a MEMORY LOST message, that sometimes changes in to a long series of that symbols that is a mix of a hang man and a @ sign. These @ sign will pulse, may be once per second.

I know it is alive. The only thing is that it's not answering to my calls.

I've been checkig internal contacts, tried to reset it doing all known tricks (at least those mentioned in the archives), including connecting and diconnecting the batteries and discharging the capacitor by puting the batteries contacts in short. Then I disassembled again the machine and visually checked for cold solderings and orher bad contacts. Now I need some more suggestions from you.

Thank you.

Re: Any suggestions for reviving an HP-41CV ?

Message #2 Posted by [David Smith](#) on 3 Aug 2002, 12:52 p.m.,
in response to message #1 by jose goncalves

See the post above about bad LCD displays in the HP41. The same thing about cleaning the circuit boards applies here. Often times what ever is the source of the problem is not visible to the naked eye.

Unfortunately your problem can also be caused by a bad ROM or CPU chip.

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Leaving batteries in

Message #1 Posted by [David Ramsey](#) on 2 Aug 2002, 5:45 p.m.

I used to delight in showing people my collection, turning each calculator on in sequence to show that they all worked.

Of course, I now keep the batteries out of all my calculators with rechargeable batteries.

What's the consensus on calculators that use the button batteries? I know the "N" cells used in some calcs can leak; have anyone ever seen damage from leaking button cells?

On another subject: what's a good source of calculator display stands?

Re: Leaving batteries in

Message #2 Posted by [David Smith](#) on 2 Aug 2002, 5:48 p.m.,
in response to message #1 by David Ramsey

ALL batteries have seals that can leak. Exceptions are hermetic batteries for implants and really expensive equipment (think hundreds of bucks each). Consumer alkalines and nicads are just about guaranteed to spew at some really inappropriate time in the future.

HP42S - won't work after empty batteries replaced

Message #3 Posted by [Sandor Spruit](#) on 5 Aug 2002, 7:06 a.m.,
in response to message #2 by David Smith

I own a HP42S that I got as a present when I got my BSc. in electrical engineering, years ago. I've been moving towards software engineering ever since, so the calculator has been laying around for quite a while.

Problem: the device won't work after I've replaced its empty batteries, even though there's no sign of any damage or leaks. Does this mean it has broken down, or could it be I've used the wrong batteries (I've noticed there are lots of different types) ?

Re: HP42S - won't work after empty batteries replaced

Message #4 Posted by [David Smith](#) on 5 Aug 2002, 10:26 a.m.,
in response to message #3 by Sandor Spruit

The HP manual suggests shorting the ends of the battery contacts with a piece of wire or paper clip for a couple of seconds WHILE THE BATTERIES ARE INSTALLED IN THE CALCULATOR. Strange, but it does work.

Re: HP42S - won't work after empty batteries replaced

Message #5 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 5 Aug 2002, 11:46 a.m.,
in response to message #4 by David Smith

Hi;

should I suggest a brief short circuit? A single touch (less than a second) would be enough. I have experienced a total loss of memory (more than 3/4 of available 7200K in programs... Sob!) when replacing batteries. There is a way you place them (edgess first, middle last) that may shorten two of them in a flash, and the calcaultor circuitry is fed with only 1.5 Volts. So, Memory Clear becomes today's special. (S.....). After testing masny forms, the one with less failures (for me) is placing the two batteries that go with minus pole (-) first, and place the last one as the being the positive pole (+). The risk is having the circuitry fed with 3.0 Volts, and I did not have troubles since than.

Hope it helps.

Re: HP42S - won't work after empty batteries replaced

Message #6 Posted by [Sandor Spruit](#) on 8 Aug 2002, 6:05 a.m.,
in response to message #5 by Vieira, Luiz C. (Brazil)

Well, very strange suggestions indeed :) It's sure worth a try to fiddle with the batteries before giving up on the calculator entirely. Thanks for the suggestions, I'll definately report back what happened

Sandor

Re: HP42S - won't work after empty batteries replaced

Message #7 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 8 Aug 2002, 8:16 a.m.,
in response to message #6 by Sandor Spruit

Hi;

when I first read them, I also thought they were strange (must confess I still do), but there is some sort of reason on this procedure. (Voyagers' Manuals suggest this brief short-circuit as a "last chance")

By keeping batteries in their compartment and connected to the calculator circuitry, you avoid increasing the voltage in their terminal; if there is a chance that electrostatic charges are the problem, MOS internal circuitry could be easily damaged IF batteries are removed (they ensure low voltage at the mains source poles). Also, the brief short circuit will discharge the first electrolytic (or tantalum) capacitor, that keeps the main voltage for a few minutes when changing batteries; this is more than a reset: it's an HW reset, and might clear all user (RAM) memory contents. If the calculator will not switch ON for SW, HW or ESD causes, this procedure is enough for all of them.

If the calculator still does not respond, I would also suggest that, AFTER briefly short circuiting the terminals with the batteries on, remove them and let it rest for, say, one day long. Then you replace the batteries for NEW, unsuspecting ones and try again.

I sincerely hope you have success.

Best regards.

Calculator Display Stands

Message #8 Posted by [Victor](#) on 2 Aug 2002, 7:38 p.m.,
in response to message #1 by David Ramsey

I use those clear plastic picture frames that are roughly in an L shape. This gives me a wedge shape that I can set my calculator on top of. The frames cost about 99 cents each.

Re: Calculator Display Stands

Message #9 Posted by [David Ramsey](#) on 2 Aug 2002, 8:29 p.m.,
in response to message #8 by Victor

I think I've seen the frames you're talking about, but the ones I'm thinking of hold the calculator at a very shallow angle-- I need something more upright.

Re: Calculator Display Stands

Message #10 Posted by [Ellis Easley](#) on 3 Aug 2002, 9:46 p.m.,
in response to message #9 by David Ramsey

I got a calculator stand from calcpro.com recently. It is made for Pioneers but they advertise it for "graphing calculators" and the 48G and 49G sit on it well. It is a simple piece of molded plastic with a hinge and an adjustable support. The highest angle, which I find best for use, is about 25 degrees. It is their item number PA30001 and sells for \$7.95

Re: Calculator Display Stands

Message #11 Posted by [David Ramsey](#) on 3 Aug 2002, 10:13 p.m.,
in response to message #10 by Ellis Easley

Thanks, you'd think I'd have tried CalcPro since I just ordered an HP-40 from them!

Re: Calculator Display Stands

Message #12 Posted by [Ellis Easley](#) on 5 Aug 2002, 11:50 a.m.,
in response to message #11 by David Ramsey

I measured the highest angle of the calculator stand more carefully and it is closer to 30 degrees. [$\text{atan}(2.75/4.875) = 29.4$ degrees] I thought calcpro.com had a section for calculator accessories and that was where I found the stand in the first place, but now I don't find such a section, but using their search for "stand" found it (although the search strangely returned a list of calculators and other things as well!)

Re: Leaving batteries in

Message #13 Posted by [Glynn](#) on 3 Aug 2002, 2:19 a.m.,
in response to message #1 by David Ramsey

David Smith's response is correct: just about ANY cell CAN leak, and probably will, given time. Careful manufacture can minimize the tendency, of course. But consumer cells just aren't so high-tech as to be totally leak-proof.

A separate but equally important issue is not leaking, per se, but Venting. Rechargeables in particular can do that, and that leads to battery compartment problems as well.

In FACT, if you look at a NiCd or NiMH rechargeable cell. (say a AA size) you will sometimes see the HOLES, usually at the positive terminal cap. All cylindrical rechargeables have holes; some are visible and some are just hidden by the label area. These are to vent off a gas buildup in the electrolyte that occurs while charging, and especially if overcharging. As a battery "ages", its electrolyte is more likely to dry out and this outgassing increases. So terminal corrosion in the form of "hazing" is very common, and gold plating is recommended in applications where outgassing is possible.

Since gold is expensive, most manufacturers use a "corrosion-resistant" bright-metal alloy instead. It looks a lot like gold, but can still haze up pretty badly. When "hazed", they are not as good at conducting, and so you want to keep them shiny. Polish these contacts with #2 plastic polish and a small felt wheel or vigorous q-tip.

In a LEAK situation, real corrosion of the metal results, even on gold, and you will lose metal... so it is important to clean up a leak immediately and thoroughly. Towel and q-tip and cotton-ball clean every bit of electrolyte; follow up with isopropyl alcohol wipes. When your battery compartment is clean and dry, any corroded spots on the metal contacts or springs need to be scrubbed (an old dry toothbrush works well).

Inspect the metal; green or blackened areas need to be worked on further. Very very fine (000?) steel-wool of the sort used by furniture refinishers can clean contacts very well, BUT in doing so realize that the sheddings of this stuff are a danger to circuitry, so shield your calculator well prior to working on it this way.

Do button-cells leak? Sometimes, yes. More likely, you've seen a button cell swell (take on a convexity). If they do so, replace them IMMEDIATELY *no matter if they still work*.

Zinc-air cells leak notoriously. They need those holes to activate; but those holes are an achilles heel. I do not recommend zinc-air cells in any calculator application anyway; but they've found their way into pagers and the like and are the de facto standard in hearing-aids. If you use zinc-

air in a calc, take them out if you won't be using the calculator for more than a week.

Much speculation about making "pseudo" batteries run by AC to power your displayed calcs...
hmm, simpler to me is to SEPARATE battery from calc with a length of WIRE. Attach wires to contacts on calc, attach to a battery pack of proper voltage SOMEWHERE ELSE, and you'll never, never have calc damage. Even AC adapters and charging circuits will be properly fooled if you do this right.

Re: Leaving batteries in

*Message #14 Posted by [David Ramsey](#) on 3 Aug 2002, 11:43 a.m.,
in response to message #13 by Glynn*

Glynn,

Thanks for that long, informative message on battery stuff!

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HP 49G FUNCTION LIST

Message #1 Posted by [mike](#) on 2 Aug 2002, 3:19 p.m.

Hi dear friends. I have been looking on Internet the full list of the all 2300 function included in the HP 49G calculator. Would you send me it please?

And another question: I need to know if the 450 functions of the HP19Bii business calculator are included in the HP49G.

Tnak you dear friends and good bye.

Mike. :-)

Re: HP 49G FUNCTION LIST

Message #2 Posted by [Raymond Hellstern \(Germany\)](#) on 2 Aug 2002, 4:25 p.m.,
in response to message #1 by mike

Hi,

for a list of all functions/features of th 49G please take a look at www.hpcalc.org

For the HP-19BII functions: I doubt that all functions of the 19BII are included in the 49G.
Why should they?

The 19B series are business calculators, whereas the 49G is a scientific calc.

Please don't mix calc power with functions count. The number of functions isn't necessarily equal to the power level of a machine.

The 4x series has much more functions than the 19B series, but out of the box, the 19B(II) can be much more powerful for financial calculations.

Of course you can expand the 4x series with financial software. On the other hand, you can turn

a 17BII into something like a scientific calc by programming SIN,COS, etc. (This is described somewhere here on this site)

Raymond

Re: HP 49G FUNCTION LIST

*Message #3 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 2 Aug 2002, 7:34 p.m.,
in response to message #2 by Raymond Hellstern (Germany)*

Hi;

A few financial features were available at the 48G O.S. and the 49G maintain these features. If you type TVM [ENTER], you have access to Time-Value-of-Money, as it is available in the HP19BII, both Algebraic and RPN modes. Also, AMORT is available.

No Cash Flow as standard feature, but you can develop your own programs... Why not?

Try HP48 User's Guide (not the Advnced), pages 18-13 to 18-20. Or the poor two-pages TVM mentioning at the HP49G Users Guide (6-11 and 6-12).

Best regards.

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Civil Engineering Plug in card for HP48

Message #1 Posted by [Eric](#) on 2 Aug 2002, 2:16 p.m.

Anyone have information an where I can buy the Civil Engineering Plug in Card or Pro Civil Engineering card for the HP48 Series.

Thank you

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Danger! Hoax 419

Message #1 Posted by [Mike \(Stgt\)](#) on 2 Aug 2002, 6:18 a.m.

I recently posted an append that I received spam where my eMail address was taken from this list. It was a "Nigeria 419 hoax". If others received something similar (from 'Obot Williams' for example) be warned! It is a Advance Fee Fraud. For more information see <http://home.rica.net/alphae/419coal/>

Ciao.....Mike

Re: Danger! Hoax 419

Message #2 Posted by [Steve \(Australia\)](#) on 2 Aug 2002, 9:02 a.m.,
in response to message #1 by Mike (Stgt)

On the other hand, it can be very interesting to reply to their email, lead them on for as long as possible.

At least while you have their attention, it's less time that they could be drawing in suckers.

And while you're at it, perform all of your calculations using your trusty HP calculator. Tell them about it. Drive them crazy :-)

Re: Danger! Hoax 419

Message #3 Posted by [Ellis Easley](#) on 3 Aug 2002, 4:27 a.m.,
in response to message #1 by Mike (Stgt)

Are you talking about what I think you are talking about? An email from a person saying he (or she) is a relative of, or an official of, an African government, has access to millions of dollars that are sitting somewhere unnoticed, and just needs a bank account number to transfer the money to? In return for providing which, you will receive 20 - 30% of the money?

I've received a bunch of what I described, never the same twice. I always print them out because they are so entertaining.

Who would ever respond to such a thing? Maybe someone who felt they had little in their bank account to lose, and lost what little they had? I guess if you can do that to enough people it might be lucrative.

Re: Danger! Hoax 419

Message #4 Posted by [Wayne Brown](#) on 3 Aug 2002, 7:14 a.m.,
in response to message #3 by Ellis Easley

This actually is a very serious problem-- so serious that the US Secret Service has set up a special project to fight it. The project is called "Nigerian Advance Fee Fraud - Operation 4-1-9" and you can visit http://www.secretservice.gov/financial_crimes.shtml#Nigerian for a description of it. They have also set up a web page at <http://www.secretservice.gov/alert419.shtml> that gives details of the way the scam operates. Here are a few quotes from it:

"Unfortunately, there is a perception that no one is prone to enter into such an obviously suspicious relationship. However, a large number of victims are enticed into believing they have been singled out from the masses to share in multi-million dollar windfall profits for doing absolutely nothing. It is also a misconception that the victim's bank account is requested so the culprit can plunder it -- this is not the primary reason for the account request -- merely a signal they have hooked another victim."

"The goal of the criminal is to delude the target into thinking that he is being drawn into a very lucrative, albeit questionable, arrangement. The intended victim must be reassured and confident of the potential success of the deal. He will become the primary supporter of the scheme and willingly contribute a large amount of money when the deal is threatened. The term "when" is used because the con-within-the-con is the scheme will be threatened in order to persuade the victim to provide a large sum of money to save the venture."

"Victims are almost always requested to travel to Nigeria or a border country to complete a

transaction. Individuals are often told that a visa will not be necessary to enter the country. The Nigerian con artists may then bribe airport officials to pass the victims through Immigration and Customs. Because it is a serious offense in Nigeria to enter without a valid visa, the victim's illegal entry may be used by the fraudsters as leverage to coerce the victims into releasing funds. Violence and threats of physical harm may be employed to further pressure victims. In June of 1995, an American was murdered in Lagos, Nigeria, while pursuing a 4-1-9 scam, and numerous other foreign nationals have been reported as missing."

"Indications are that Advance Fee Fraud grosses hundreds of millions of dollars annually and the losses are continuing to escalate. In all likelihood, there are victims who do not report their losses to authorities due to either fear or embarrassment."

It's better not to get involved with these people in any way. I always forward any of those emails I receive to 419.fcd@uss.treas.gov which is an address that has been set up to report this scam.

Re: Danger! Hoax 419

*Message #5 Posted by [Theo Kastrissios](#) on 3 Aug 2002, 9:01 a.m.,
in response to message #3 by Ellis Easley*

I kept getting the same emails just after I started posting questions here. After a couple of weeks the 'Nigerian Scam' stopped but as soon as it did I started getting exactly the same from another source. This is the email address of the second wave of these scams - Anne_Bangura@libero.it - if you know the email addresses of these scams then you can set it up your email program to delete them from the server once they are sent.

Re: Danger! Hoax 419

*Message #6 Posted by [Ellis Easley](#) on 3 Aug 2002, 9:27 p.m.,
in response to message #5 by Theo Kastrissios*

I looked at the website above and I see that it is a very serious matter. I still have all the emails on my inbox and I am going to send them as requested.

Re: Danger! Hoax 419

Message #7 Posted by [Mike \(Stgt\)](#) on 5 Aug 2002, 6:17 a.m.,
in response to message #3 by Ellis Easley

No, I will never ever response to spam. But there are enough that should be warned.

You know, the sum of intelligence on earth is constant and population is growing ;-)

Ciao.....Mike

Re: Danger! Hoax 419

Message #8 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 5 Aug 2002, 11:49 a.m.,
in response to message #7 by Mike (Stgt)

Should I believe that? Oh My, oh My... if you are right, there are people also able to increase their brain activity linearly (or exponentialy) while others have their activity kept the same and others will, definitely, have a reduction.

Something to think about...

Re: Danger! Hoax 419

Message #9 Posted by [Mike](#) on 4 Aug 2002, 12:02 p.m.,
in response to message #1 by Mike (Stgt)

Anyone that falls for this Nigerian SCAM deserves what they get. They have FRAUD, SCAM written all over the emails. They even tell you it is illegal upfront.

So, if you think you will get rich, you are either brain dead or deserve what you get, in my opinion.

These are designed to work only on the dishonest ones in society. This scam has been around for 100 years in other forms.

Re: Danger! Hoax 419

Message #10 Posted by [James M. Prange](#) on 5 Aug 2002, 4:24 a.m.,
in response to message #9 by Mike

I agree that one would have to be very foolish to fall for such an obvious scam, but even foolish people don't "deserve" to be treated so badly. And for someone who's living from paycheck to paycheck and wondering how he's ever going get out of debt and doesn't think through the probable consequences, it must seem awfully tempting, if only it were believable. Illegal, yes, but how many are bothered by their conscience if they find a way to avoid paying a government some tax?

Yes, these are variations on a very old scam, but we've heard often enough that "There's a sucker born every day."

I've gotten a variety of these e-mails (It seems to me that the last one claimed to be from South Africa) regarding various sorts of unclaimed cash or securities. Typically, the owner is deceased and no surviving heirs can be found, and the money will go into the government treasury unless some relative comes forward to claim the valuables, so who'll be harmed, other than a government that won't get a "windfall profit" from the death of a rich person? Sometimes I read them for the entertainment value before filtering out the sender (though I doubt that that does any good) and trashing the e-mail. It does seem like a good idea to forward them to Uncle Sam before tossing them; though I have my doubts as to how much they'll be able to accomplish against the senders.

Regards,
James

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HP 9100B

Message #1 Posted by [Mark Peters](#) on 1 Aug 2002, 9:38 p.m.

We have a HP 9100B here at my work in the School of Surveying at the University of Otago, Dunedin, New Zealand. We are looking at disposing of it as we have not used it in a very long time, would it be best to list it on something like ebay? We came very close to throwing it away with the rubbish but realised it could be a rather rare example just in time.

Any suggestions welcomed.

Regards, Mark Peters

Re: HP 9100B

Message #2 Posted by [David Smith](#) on 1 Aug 2002, 9:50 p.m.,
in response to message #1 by Mark Peters

Throw it away... use my trashcan. One in good shape should fetch a couple thousand dollars, give or take.

Re: HP 9100B

Message #3 Posted by [Ellis Easley](#) on 1 Aug 2002, 9:52 p.m.,
in response to message #1 by Mark Peters

Be prepared for a lot of responses!

Although I get the sense that the 9100A has a much greater value to collectors since it is the first HP calculator. Look here for come analysis of HP calculator prices on Ebay. The chart doesn't make any distinction between 9100A and B:

<http://www.hpmuseum.org/collect.htm#diff>

Re: HP 9100B

Message #4 Posted by [John K. \(US\)](#) on 2 Aug 2002, 12:21 a.m.,
in response to message #1 by Mark Peters

Funny you should mention that -- I just started a disposal service for old HP 9100s. ;^)

Actually, as David Smith said, they do fetch a rather good price on eBay, but I'm sure that you'd be able to find plenty of takers here who would be willing to give it a nice home. Any idea how much you'd want for it?

Re: HP 9100B - Shipping from NZ

Message #5 Posted by [Dan M](#) on 2 Aug 2002, 8:48 a.m.,
in response to message #1 by Mark Peters

Just one precaution, if you do end up shipping your 9100B from New Zealand: Please pack it very carefully!

There has been more than one report of 9100's arriving with broken CRTs from shipping. The CRTs were a custom part, and I think are irreplaceable except from another HP 9100.

So, pack it carefully with ample and suitable cushioning.

Also, give a search around for any extra documentation, peripherals, or cords. They are sometimes harder to find than the calculator, and it would be an equal shame to toss them into the rubbish.

Re: HP 9100B - Shipping from NZ

Message #6 Posted by [David Smith](#) on 2 Aug 2002, 9:56 a.m.,
in response to message #5 by Dan M

I would HIGHLY recommend double boxing it with good padding between the boxes. Actually the machines are pretty bulletproof (many stores of the falling off tables and being washed down the side of mountains, etc) and about the only real damage that can occur is that broken CRT... but you know how creative the Parcel Smashers can be.

Also the 9100B appears to be around 4 times rarer than the 9100A, but most collectors don't seem to really care. They both seem to fetch the same amounts.

Re: HP 9100B - Shipping from NZ

Message #7 Posted by [Tony Duell \(UK\)](#) on 2 Aug 2002, 6:39 p.m.,
in response to message #6 by David Smith

I would guess the ferrite cores (both in the core-on-a-rope microcode ROM and in the read/write core memory) are brittle (ferrite cores normally are), but I've seen one get broken. I guess they're just properly supported. The light bulbs (to illuminate the register display labels, and for the error indicator) are also fragile, but they're easy to replace. The rest of the machine (apart from the CRT) is very solid. The CRT is delicate. Not only can the envelope fracture, but also the electron gun is assembled using brittle glaass support rods (inside the CRT envelope). I am told that if these fracture, you can get inter-electrode shorts in the CRT which will damage componets on the deflection boards and on the gating board (and if you're unlucky, on the flip-flop board as well). Therefore, before powering up an unknown 9100 (particularly one that's been shipped), I'd want to remove the CRT (it's not hard to do), then take off the mu-metal can, and look at the electron gun just to make sure that nothing is broken or shorted. Incidentally, I've managed to find 2 off 9100Bs and not a single 9100A so far, so for me the 9100B is much the more common machine.

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international standards markings

Message #1 Posted by [Ellis Easley](#) on 1 Aug 2002, 7:56 p.m.

There was a thread a while back about the markings found on the back of HP calculators. I mentioned the crowd of symbols that were found on items that met all the different European standards (one of the things the European Economic Community is trying to address). I happened on a website (www.electricord.com) that shows a number of the symbols of the different standards organizations. Look at the bottom of their homepage:

<http://www.electricord.com/>

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HP41 AC adapter & battery charger

Message #1 Posted by [John Breda](#) on 1 Aug 2002, 2:23 p.m.

Does anyone have a battery charger for N cells for the HP 41CX. Also, looking for an AC adapter for the 41CX. Please e-mail to:

jbreda@massmed.org. Thanks.

Re: HP41 AC adapter & battery charger

Message #2 Posted by [David Smith](#) on 1 Aug 2002, 5:27 p.m.,
in response to message #1 by John Breda

It uses the 82059 A/B/C/D chargers. They appear with great regularity on Ebay. Average going rate \$20 +/- \$5.

Re: HP41 AC adapter & battery charger

Message #3 Posted by [Ellis Easley](#) on 1 Aug 2002, 7:33 p.m.,
in response to message #2 by David Smith

It sounds like he's looking for two different things - something to charge N cells and, I guess, the 41C rechargeable pack. That uses a 82059 but it doesn't sell for \$20! Didn't an auction for a rechargeable pack generate a thread here of the "Do you beleieve what I saw on Ebay ..." variety?

Re: HP41 AC adapter & battery charger

Message #4 Posted by [Vassilis Prevelakis](#) on 2 Aug 2002, 2:53 a.m.,
in response to message #1 by John Breda

Hi John

You do not say where on earth you live, so I'll assume you live in the US. The easiest way to buy a charger for N cells is to go to Radio Shack. You need to buy a standard NiCd and NiMH charger (probably desktop) and a set of 4 converters to make the N-cells fit in the charger.

If the RS people have no clue how to order these adaptors, ask them to check the back of any rechargeable N-cell pack sold by RS, it contains the magic product number. Best to wait till you get the adaptors before you buy the charger as they do not fit in all the chargers (esp. the small ones).

One final note, the RS code will order you a PACK OF FOUR ADAPTERS, so order only one - Yes I ended up buying 16 adapters :-(

On your second question (about running the HP-41 off a mains adapter), there is no sensible answer. HP used to produce a rechargeable battery pack for the 41, but it's a complete cludge as it uses minute cells which are difficult to find, tend to leak and need recharging very often. They allow the HP-41 to be operated using the same charger as the other HP-41 peripherals (e.g. the 82143 printer), but, like I said, they are expensive and too much of a bother. It's cheaper to buy another set of 4 rechargeable N-cells and simply swap them round.

**vp

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HP41 Software Library

Message #1 Posted by [John Breda](#) on 1 Aug 2002, 1:59 p.m.

Does anyone know if the HP41 software library is still in around? Originally it was run by HP, then by Solve and Integrate in Corvallis, OR.

Re: HP41 Software Library

Message #2 Posted by [Chris Catotti \(Florida\)](#) on 1 Aug 2002, 2:11 p.m.,
in response to message #1 by John Breda

It was thrown in a dumpster(s). No one could be found that want to keep a large room of filing cabinets.

I would like to start collecting all programs, clean them up, and eventually redistribute a on CD-ROM or DVD.

Any interest?

I have a few programs now, and catalogs of the US and European Libraries.

Re: HP41 Software Library

Message #3 Posted by [John Breda](#) on 1 Aug 2002, 2:25 p.m.,
in response to message #2 by Chris Catotti (Florida)

I have the old software catalog from the 1980's and a few software items.

Re: HP41 Software Library

Message #4 Posted by [Wlodek Mier-Jedrzejowicz](#) on 1 Aug 2002, 7:17 p.m.,
in response to message #3 by John Breda

The European HP-41 program library was separate from the US library. The most popular US programs were included, but most programs in it were ones written by members of the User Program Library Europe (UPL). Programs were cataloged by language, and then subcataloged by subject. When HP decided to close down these program libraries, they offered the European libraries to European clubs in each language. The English-language section was given to the British club, HPCC. A selection of programs was stored for use by members, and the complete original set is still in a member's attic. The problem is finding someone who would transfer it all (several thousand programs) to a modern medium - we at HPCC (<http://www.hpcc.org>) are not willing to risk shipping it, so the work would have to be done in or near London, England. Any offers?

Re: HP41 Software Library

Message #5 Posted by [Ellis Easley](#) on 1 Aug 2002, 7:37 p.m.,
in response to message #4 by Wlodek Mier-Jedrzejowicz

Sounds like a fantastic way to spend an extended vacation! I wish I could - unfortunately I've used up all my extended vacation time! If I win the lottery I'll be in touch.

Re: HP41 Software Library

Message #6 Posted by [Steve \(Australia\)](#) on 2 Aug 2002, 9:09 a.m.,
in response to message #4 by Wlodek Mier-Jedrzejowicz

What format is it in?

I wrote a program to convert scanned barcode to printed HP41 instructions some time ago (not that I'd be able to find it :-)

I realise I'm not too close to london, but perhaps you could slip some of it to Ian Thorpe on his way back.

Re: HP41 Software Library

*Message #7 Posted by [Tony Duell \(UK\)](#) on 2 Aug 2002, 3:18 p.m.,
in response to message #4 by Wlodek Mier-Jedrzejowicz*

Wlodek, I volunteered to look at the remains of the UPLE over a year ago. I can transfer any (still-readable) 41 media (cards or bacodes would be the most likely) to disk. I might even be convinced to type in some of the more useful programs from their listings, as I did with some of the HP67 solution books. However, at the time you said it would not be easy for me to get the library boxes (or whatever). Has this changed? If so, I will have a go at it. (And yes, I do live in London).

Re: HP41 Software Library

*Message #8 Posted by [wlodekmj](#) on 3 Aug 2002, 6:28 p.m.,
in response to message #7 by Tony Duell (UK)*

Hi to everyone who expressed interest in the English language section of UPLE, still in London.

The library is _mostly_ just as photocopied sheets of paper, or the submitted originals, including copies of program listings. It might be possible to simply scan everything, a sheet at a time, to a CD-ROM. Or even to microfilm - who still uses that very useful medium? ;-) But that is not of direct use to people who want to read programs directly into an HP-41 or an emulator.

Only some of the programs were put onto barcode by UPLE. An even smaller number were put to program cards. And the HPCC Committee decided at one stage that the cards were more valuable than the programs on them, so many programs that _were_ on cards, no longer are, as the cards were given to members for re-use :- (Some programs still _are_ on cards, though.

Tony - the boxes are easier to get at now than before, if you are interested. I'll contact you directly :-)

Dave, I'll contact you directly too.

Anyone else _in_ London or interested in helping? Come in September, and come to the HPCC Conference at the same time? ;-) See <http://www.hpcc.org>

Thanks,

Wlodek

Re: HP41 Software Library

*Message #9 Posted by [Tony Duell \(UK\)](#) on 3 Aug 2002, 7:28 p.m.,
in response to message #8 by wlodekml*

As you know, I have no scanner, so I can't help with that part of it. But I will (as I said to Wlodek privately) read in any barcodes and/or magnetic cards, and get them onto PC disks. Then somebody else can put those onto CD-ROM or whatever. As regards printed listings, I really don't want to type them _all_ in, particularly not for areas I am not interested in. But I am prepared to do _some_ of them. Wlodek, let's discuss this by private e-mail. If you can dig out the boxes (one at a time?) then I will look through it and at least see what's there. Incidentally, I have a few (about 10, I think) UPLE programs on magnetic cards that I've been given. Those will obviously end up on disk.

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Batteries

Message #1 Posted by [Tony](#) on 1 Aug 2002, 11:33 a.m.

Hi all! It is good practice to remove batteries from calculators when they're not used for longer periods of time in order to avoid corrosion of the contacts. But: Do all batteries exhibit this corrosion problem? Or is it only rechargeable NiCds? What about the small button-sized cells in the Voyagers/ Pioneers? Because of this battery issue I'd like to operate calculators only with the power supply - but some models (ie. 21, 31E, 65) have problems running from the power supply alone. Can this be fixed? Ie. by using special power supplies that give off DC instead of AC (for 21, 31E) or more current (for the 65 magnetic card reader). Thanks for help, Tony

Re: Batteries

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 1 Aug 2002, 12:13 p.m.,
in response to message #1 by Tony

Hi;

I experienced corrosion in many HP41's BATT/IO assy and their batteries were neither NiCad, nor other rechargeable.

You are right about button-sized cells, they are much more stable. Some Silver-Oxide are better. But regular alkalines deserve more care and attention.

I use my calculators, and from time to time, I check batteries compartment (at least once a month; better if it is twice a month)

Hope this info helps you.

Best regards.

Re: Batteries

Message #3 Posted by [Ellis Easley](#) on 1 Aug 2002, 1:32 p.m.,
in response to message #1 by Tony

I haven't seen button cells leak much in things that I have owned (i.e. things that I was the original owner) but as others have reported, they do leak. In my own experience, my 15C that I bought at a sidewalk sale worked but went through batteries in about a week, it actually drew more current off than on. This turned out to be due to battery leakage. After disassembling the machine and cleaning the corrosion, it has worked for several years on one set of batteries. But here's the thing: the Voyagers and Pioneers aren't made to be taken apart, so if their batteries leak, you have a lot more work to do to clean it up.

It would be interesting to know whether alkaline or silver oxide button cells have more of a tendency to leak.

Also, I've had alkaline N cells and AAA cells leak in a 41C and a 71B.

On the power adapter question, I haven't done what I am about to describe, but I have thought about building a module to fit in the battery compartment that contains a zener diode or a properly biased IC shunt regulator so I can safely operate a Woodstock or Spice model from the standard AC adapter for extended periods without worrying about overcharging the batteries - no batteries present, just using semiconductors to replace the voltage regulation function of the NiCads. I haven't measured the actual current requirement of the calculators - if they need more than the limited charging current, my idea won't work. A large capacitor along with the shunt regulator might provide enough peak current to make it work reliably, although a large capacitive load might make an IC regulator unstable.

The thing about the 65 and 67 (as I understand it) is that the card reader circuitry is connected directly to the battery because of its greater current requirement. The Classic charger has two outputs, a voltage regulated one for the calculator circuitry so you can use the calculator while the battery charges, and a current regulated one to charge the battery. Normally, the metal spring in the charger receptacle connects the battery to the calculator circuitry, then when you plug in the charger, that connection is opened. The non-card reader Classics are OK to operate from the charger without the battery in place since the battery is out of the circuit. But the current regulated output has a high output voltage when the battery isn't there (same problem as Woodstock and Spice) which can damage the IC in the card reader. However, although I don't know how much current the card reader motor needs (with no load my 67 motor only drew 13 mA!), since the problem is essentially the same as the Woodstock and Spice, a shunt regulator in place of the battery might work there too.

On the subject of building a new DC power supply to safely operate a Woodstock or Spice with no batteries, you might have a problem because of the current limiting resistor in the calculator.

It is in series with the rest of the calculator so it will drop a voltage proportional to the instantaneous current. To the extent that the current drain changes from moment to moment (typically a lot in the case of digital circuits - for instance, changing from a few to a lot of LEDs on), this voltage drop of the resistor would show up as noise on the DC supply of the calculator chips, some of which would normally be filtered out by the batteries (and some of which will be filtered out by the capacitors on the circuit board). If there is too much noise, the result might be erratic operation.

The biggest problem with building a new DC adapter is the plug that fits in the calculator. Unless you have some absolutely un-repairable AC adapters to cannibalize!

Re: Batteries

*Message #4 Posted by [Tony](#) on 2 Aug 2002, 5:29 a.m.,
in response to message #3 by Ellis Easley*

Thank you Ellis and Luiz!

>>The biggest problem with building a new DC adapter is the plug that fits in the calculator. Unless you have some absolutely un-repairable AC adapters to cannibalize!

Well, not really: I would take a working HP AC adaptor, cut the cable and insert some off-the-shelf connector. That way I can either use the HP supply or my "special" one.

Tony

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problem of nnm

Message #1 Posted by [Jobs Chen](#) on 1 Aug 2002, 8:02 a.m.

I download an network node manager 6.31 for solaris 8 evaluatoion software to study, but I installed it on solaris 9(Sunos Solaris1 5.9 Beta_Refresh), and the memory is only 256M. After installed, it can't start SNMP MIB-2 subagent sucessfully and the exit code is 139, and this make netmon can't start successfully. I don't know which cause this problem. Can anybody help me? Thanks.

Re: problem of nnm

Message #2 Posted by [Fred](#) on 1 Aug 2002, 10:01 a.m.,
in response to message #1 by Jobs Chen

What calculator does this fit?

Solution

Message #3 Posted by [Gene](#) on 1 Aug 2002, 11:57 a.m.,
in response to message #1 by Jobs Chen

Find an atomic vector plotter.

Hook it up to the logic circuits of a Bambowinni Sub-Meson brain.

Immerse it all into a strong brownian motion producer (a nice cup of really hot tea will suffice).

Enter parameters.

Read some Vagon poetry while you wait.

Re: problem of nnm

Message #4 Posted by [Ellis Easley](#) on 1 Aug 2002, 1:36 p.m.,
in response to message #1 by Jobs Chen

Could it be that Carly has told HP Tech Support to send people here to get back at us for the bad press she has received here?

Re: problem of nnm

Message #5 Posted by [John K. \(US\)](#) on 1 Aug 2002, 8:36 p.m.,
in response to message #1 by Jobs Chen

It sounds like you should probably look into finding a support site for OpenView/SNMP. This site, in case you were confused by Fred and Gene's droll wit :^), is pretty much devoted to older HP calculators, not their line of network monitoring software.

Unless, of course, you manage to figure out a way to port net-snmp to MetaKernel. I'm sure many of us would be interesting in that... ;^)

What? Don't like Douglas Adams? :-)

Message #6 Posted by [Gene](#) on 1 Aug 2002, 11:07 p.m.,
in response to message #5 by John K. (US)

Funniest man who lived in the last 50 years, IMO. I still break out laughing when I hear the audio versions of any of his books.

Terrible loss, dying at such an early age. :-(

Gene

Re: What? Don't like Douglas Adams? :-)

Message #7 Posted by [John K. \(US\)](#) on 2 Aug 2002, 12:12 a.m.,
in response to message #6 by Gene

> *Funniest man who lived in the last 50 years, IMO. I still break out laughing when I hear the audio versions of any of his books.*

I'm not sure if he's the *funniest*, but he certainly makes my short list. I heard a rumor that the original BBC Radio version of *Hitchhiker's Guide to the Galaxy* is available on CD, but I'm still trying to locate a copy. The only thing I've been able to turn up is the audio books. :^/

> *Terrible loss, dying at such an early age. :-(*

Indeed. I keep hoping that he's simply spending a few years dead for tax purposes...

I understand that he's got a new book coming out. *The Salmon of Doubt: Hitchhiking the Galaxy One Last Time* is supposed to have been reconstructed from manuscript fragments and notes discovered on his various computers after his death.

Douglas Adams? :-) Good news!

Message #8 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 2 Aug 2002, 2:25 a.m.,
in response to message #7 by John K. (US)

Hey;

pretty good news. Is there a way to know some more about it?

Brazilian versions of his books are hilarious, too.

Cheers.

Re: Douglas Adams? :-) Good news!

Message #9 Posted by [John K. \(US\)](#) on 2 Aug 2002, 3:18 a.m.,
in response to message #8 by Vieira, Luiz C. (Brazil)

The US edition details are:

The Salmon of Doubt: Hitchhiking the Galaxy One Last Time
Douglas Adams, Christopher Cerf (Editor)
Hardcover; 288 pages
Harmony Books; ISBN: 1400045088
May, 2002

It is available through Amazon.com (serch "Books" for Douglas Adams), but I'm not sure if they ship to your neighborhood. :^)

Re: What? Don't like Douglas Adams? :-)

Message #10 Posted by [Randy Smith](#) on 3 Aug 2002, 10:15 a.m.,
in response to message #6 by Gene

42!

Re: What? Don't like Douglas Adams? :-)

Message #11 Posted by [David Smith](#) on 3 Aug 2002, 12:56 p.m.,
in response to message #10 by Randy Smith

No... 42S

Re: What? Don't like Douglas Adams? :-)

Message #12 Posted by [Randy Smith](#) on 5 Aug 2002, 12:01 p.m.,
in response to message #11 by David Smith

Isn't it interesting that the ultimate answer is 42, both in the book and, it seems,
which calc everyone would like to see reintroduced?

Re: What? Don't like Douglas Adams? :-)

Message #13 Posted by [Ellis Easley](#) on 5 Aug 2002, 12:29 p.m.,
in response to message #12 by Randy Smith

Si! See: <http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/archv007.cgi?read=13984>

Re: What? Don't like Douglas Adams? :-)

Message #14 Posted by [glynn](#) on 5 Aug 2002, 10:11 p.m.,
in response to message #12 by Randy Smith

If they ever DO reintroduce the 42, maybe (in remembrance) they should
give it a slipcase that says "Don't Panic!".

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USA vs Singapore

Message #1 Posted by [Mark Palmer](#) on 1 Aug 2002, 1:51 a.m.

I have been in love with and using HP calculators since 1978, when I picked up my dad's HP25. I used and still own my original 11c from high school and college. I am now trying to collect one HP unit from each series, but as I am doing so one thing has happened that is stumping me. Seems as all the ones I used way back (dad's 25 and 32e, my own 11c, and a few others) were all USA built units. Now that I am collecting, it seems every unit I win on e-Bay or acquire from other sources are Singapore built. Is this just coincidence, or are the Singapore units more plentiful or worth less on the collector market? I have put two old mint 1977 25's I own, one USA, one Singapore, under the eye and can find absolutely NO differences. So why did HP manufacture the same thing (through many of the series, even the oldies) in the USA and Singapore to sell in the USA? Were they smart to go for the cheaper labor even back in the early to mid 70's, or did they figure making them in Singapore too would make them easier to ship to other world markets? Any insight would be appreciated.

Re: USA vs Singapore

Message #2 Posted by [Raymond Hellstern](#) on 1 Aug 2002, 3:12 a.m.,
in response to message #1 by Mark Palmer

It was just cheaper. From the quality view the calcs don't seem to be much different.

I have many models where one's built in the U.S., the other in Singapore.

Raymond

Re: USA vs Singapore

Message #3 Posted by [Mark Palmer](#) on 1 Aug 2002, 11:38 p.m.,
in response to message #2 by Raymond Hellstern

Thanks for the insights- looking at some of my calcs, the USA ones do have earlier SN's. Again maybe just coincidence, but it seems like the faces on the classic/woodstock models made in Singapore scuff easier than the USA units. I have also noticed USA built voyagers tend to have more dust inside the LCD than Singapore voyagers...must have cleaner assy. plants in Singapore :)

Re: USA vs Singapore

Message #4 Posted by [David Smith](#) on 1 Aug 2002, 9:38 a.m.,
in response to message #1 by Mark Palmer

By looking at the serial numbers of various units it seems that HP usually started making them in the US then as they got familiar with each model moved production to the US. Earlier serial numbers in each series are always US, later ones are Singapore and very occasionally Brazil.

Re: USA vs Singapore

Message #5 Posted by [Ellis Easley](#) on 1 Aug 2002, 1:54 p.m.,
in response to message #1 by Mark Palmer

I don't think cost is the only factor in the case of Singapore. It may be something that comes with outlawing chewing gum, but Singapore is known for high quality manufacturing. Hard drives have been built there for a long time.

A semiconductor rep once told me about a facility in Indonesia or Maylasia where something happened - an employee had an epileptic seizure or something - and the crew wouldn't come back until a religious official blessed the building.

(This isn't intended to poke fun at people's beliefs, but every place has its own customs.)

I heard recently that with the great volume of manufacturing that is done primarily for the Christmas season, non-Christians in the Asian countries where so much of the manufacturing is done have started celebrating Christmas (or at least the gift giving part of it!) to take advantage of the good prices.

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Sick. You thought 32SII were expensive on EBay...

Message #1 Posted by [Tony David Potter](#) on 1 Aug 2002, 12:11 a.m.

Save \$18.17 -- over 2% -- by going here.

<http://www.savingsdream.com/cgi-win/dream55.exe/~p008007020645>

I think I'll take my chances on EBay.

-Tony David.

Re: Sick. You thought 32SII were expensive on EBay...

Message #2 Posted by [thibaut.be](#) on 1 Aug 2002, 4:10 a.m.,
in response to message #1 by Tony David Potter

And if you ask "all calculators of this vendor", have a look at the prices ! what's that for a site? I thought at 1st sight that it was a Canadian site...

Re: Sick. You thought 32SII were expensive on EBay...

Message #3 Posted by [John K. \(US\)](#) on 1 Aug 2002, 5:02 a.m.,
in response to message #1 by Tony David Potter

So, I entered a ship-to state and zip code, just for the fun of it. On top of the oh-so-low price of \$681.33 (US) for just one of these gold-plated beauties, they tack on \$8.81 in "Freight" charges, plus an additional \$10.00 for "Handling". That makes the grand total for this baby US\$700.14.

It's probably for the best that they don't seem to have any in stock...

Re: Typo? You thought 32SII were expensive on EBay...

Message #4 Posted by [Tom \(UK\)](#) on 1 Aug 2002, 7:47 a.m.,
in response to message #1 by Tony David Potter

OK so the other calculator prices are not low but the HP32SII seems to be the only one that is WAY out.

Is the decimal point in the wrong place? i.e. should the price be \$69.99?

If you go here...

Message #5 Posted by [Gene](#) on 1 Aug 2002, 7:56 a.m.,
in response to message #1 by Tony David Potter

<http://www.savingsdream.com/PC0000000000387.html>

You'll find the HP-32SII listed for 69.99 about halfway down the page.

Don't bother clicking on it...I already did. :-)

Item not in stock.

Perhaps the other page is a typo, but they do have rather high prices on other calculators.

Gene

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Help! hp-97 Card Reader

Message #1 Posted by [hunter gowen](#) on 31 July 2002, 11:35 p.m.

I have a HP-97 that works fine except for the card reader. It may or may not read the magnetic card when put in. The card also will come out gummy sometimes. Does anyone if this can be repaired? If so, how can I do it or where can I send it?

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Is this the HP of old? (I don't think so)

Message #1 Posted by [Steve \(Australia\)](#) on 31 July 2002, 6:19 a.m.

Imagine what would hapen if we discovered synthetic programming today!

<http://news.com.com/2100-1023-947325.html>

Re: Is this the HP of old? (I don't think so)

Message #2 Posted by [W. Bruce Maguire II](#) on 31 July 2002, 1:25 p.m.,
in response to message #1 by Steve (Australia)

One word: **PATHETIC!**

Bruce.

(additional URL) Re: Is this the HP of old? (I don't think so)

Message #3 Posted by [Christof \(Davis, CA\)](#) on 1 Aug 2002, 1:52 a.m.,
in response to message #2 by W. Bruce Maguire II

<http://www.politechbot.com/docs/hp.dmca.threat.073002.html>

I just popped into the forum to post this url. the letter itself.

I am, honestly, speechless. I'm seriously considering boycotting anything post Carly. (not fair to tar my 28s or 42s , or even my 320lx notetaking machine with that brush)

HP started out as a hacker* company- that was the point and the drive of the era. People pushed limits, discovered flaws, made bugfixes, and used HP kit to do everything from build a bridge, to design a logic board, to (potentially) navigate spacecraft!

Now? money. I hear accusations of science destroying our sense of wonder, but is it *science*, or the corporate ownership of it?

-Christof

(* not that this needs to be explained here, but hacker doesn't mean media driven security cracker. MIT has some great hack pages, if you care to see)

Re: Is this the HP of old? (I don't think so)

Message #4 Posted by [Tom \(UK\)](#) on 1 Aug 2002, 7:59 a.m.,
in response to message #1 by Steve (Australia)

In doing this HP appear to be trying (not very well) to protect their name and market position / profits. They do not seem too interested in protecting their customers by fixing the bug in the HP software (the artical does say HP were warned some time ago by the same group).

Oh well another Carly triumph...

Do I take it that using a similar argument HP could produce totaly inadequate software, full of bugs and loop-holes and then sue anyone who pointed this out? A clear case of emperor's clothes^.

^ Childrens story about an emperor who asked for some new clothes to be made. The tailors made the clothes out of nothing, the royal court and adults were too afraid to point this out to the stupid ruler. It was only when he paraded down the street naked that a child shouted out he had no clothes on at all - everybody then fell about laughing at the stupid ruler.

Re: Is this the HP of old? (maybe so)

Message #5 Posted by [Steve \(Australia\)](#) on 5 Aug 2002, 2:33 a.m.,
in response to message #1 by Steve (Australia)

It seems that someone has had a word in someone's ear

<http://www.theregister.co.uk/content/55/26508.html>

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Help on 17BII's undocumented Let & Get

Message #1 Posted by [jianghao](#) on 31 July 2002, 4:49 a.m.

Can anybody give some detailed descriptions and samples on these two function? Your help are very appreciated.

Re: Help on 17BII's undocumented Let & Get

Message #2 Posted by [Ellis Easley](#) on 31 July 2002, 12:33 p.m.,
in response to message #1 by jianghao

This Museum article by Bruce Maguire uses the commands on a 17BII:

<http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/articles.cgi?read=222>

If you have the Museum CD's, refer to the "HP27S/19B Technical Applications".

Re: Help on 17BII's undocumented Let & Get

Message #3 Posted by [W. Bruce Maguire II](#) on 31 July 2002, 2:09 p.m.,
in response to message #1 by jianghao

jianghao:

Are you able to purchase the "Museum of HP Calculators CD Set"? Click here:

<http://www.hpmuseum.org/cd/cddesc.htm>

If you are not able for some reason or other, you might want to contact the owner of this great site, David G Hicks, at:

dgh@hpmuseum.org

and see if you can work out a deal to get the "HP27S/19B Technical Applications" PDF that

Ellis mentioned in the prior message. If at all possible, though, please order the full CD set---it is very well worth it!

Bruce.

Re: Help on 17BII's undocumented Let & Get

*Message #4 Posted by [jianghao](#) on 31 July 2002, 11:26 p.m.,
in response to message #3 by W. Bruce Maguire II*

Ellis and Bruce, thanks for your information. Actually I'm considering to purchase the CD set, just a little worry about the custom issue(I'm from China). Anyway, I'll check with David G Hicks.

BTW, I just bought 17BII and 32SII at the beginning of this year from Singapore when I'm on vacation, and sooner found both of them are discontinued. What a luck :-)

Re: Help on 17BII's undocumented Let & Get

*Message #5 Posted by [Ellis Easley](#) on 1 Aug 2002, 3:57 p.m.,
in response to message #4 by jianghao*

Look here for some pictures of Dave's travels in China:

<http://www.hpmuseum.org/bio.htm>

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Dead HP 28C

Message #1 Posted by [Marcus](#) on 30 July 2002, 10:45 p.m.

My HP 28C is completely dead. Are there any known faults that might be repairable? How do you open the case (either side!)?

Re: Dead HP 28C

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 31 July 2002, 12:34 a.m.,
in response to message #1 by Marcus

Hi;

under the plastic label, right over the display (you must carefully remove it, try no bending it so much or you'll leave watermarks), you'll find heat-molded stakes. Cut them off (in a way you can rebuild them) and the top cover will be off.

I have a document somewhere in here that describes a way to open the 28 with more details. If you want to have a look at the stakes for now, do it. I have removed the label of two others, and I had to open one of them. One tip: right below the plastic label, you'll have access to the (+) and (-) battery poles; after testing them directly, you'll be able to decide if you need to open it or not (one of the two I was about to open was safely revived by just cleaning the batteries contact springs).

Success.

Re: Dead HP 28C

Message #3 Posted by [Marcus](#) on 1 Aug 2002, 9:14 p.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)

Thank you very much. I'd never have guessed that one!

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Wrong 41's TTF file - please, read.

Message #1 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 30 July 2002, 5:47 p.m.

Hello;

I must thank Mr. Chris Catotti for his concerns about the HP41 Character Set TTF file. He, and also Mr. Jose Goncalves and Mr. Thibaut, as others, have tested the font. But my attention was called from one of the guys who tested the font (please, I thought about not to identify you, as I did not ask if I could) because of one character, wrongly missed in the 41's TTF: Character # 223. This character has a reference to myself.

A few years ago I could see some TTF with one of its characters (closed to the highest positions) mentioning the name of the font's creator, and I thought that as a protection measure.

I just tried to see how would it look having a character built that way. And I forgot to remove it from the font(those who use Corel DRAW! to create TTF files know how boring it is sometimes to check, correct or change fonts).

ASAP, promise, I'll ask Dave again (yes, this is the second font I submit; this one is the result of an improvement) to substitute the previous font for the new one, no wrong characters (I'll double check). Also, the hangman characters are in wrong places. Their original codes are out of the TTF's character code range.

Some duplicate characters will be removed, and I'll find a better place for the flying goose...

Please, forgive-me. I was so glad using this font that I missed the chance to remove the bugs.

Thank you all for your patience and support. And keep suggesting, showing wrong spots, and the like. That's the best way to offer a better solution.

Best regards.

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XPander on eBay

Message #1 Posted by [David Ramsey](#) on 30 July 2002, 1:54 p.m.

I see someone's just posted an Xpander on eBay. With two recent sales of "red dot" HP-35s at more than \$750 (both, along with many other auctions, won by some sniper named "texaspyro" who's really starting to piss me off), I wonder what this little beauty will go for?

A year or so back I posted a standing offer of \$1K for an Xpander in the buy/sell area here. Somehow I think the eBay Xpander will go for more than that.

Re: XPander on eBay

Message #2 Posted by [Y. Samuel Arai](#) on 30 July 2002, 2:26 p.m.,
in response to message #1 by David Ramsey

There's a guy in Australia selling them new in the box for about \$500.

The last XPander I saw on EBay fetched around \$500 or so, but was not new in the box.

Sam

Re: XPander on eBay

Message #3 Posted by [David Ramsey](#) on 30 July 2002, 5:56 p.m.,
in response to message #2 by Y. Samuel Arai

Umm...do you have any information on that guy in Australia?

Re: XPander on eBay

Message #4 Posted by [Scott Pritchard](#) on 31 July 2002, 11:07 a.m.,
in response to message #3 by David Ramsey

I HAVE ONE IN A BOX NEW. If your interested. Scotty.

Re: I have to say this (yet) one more time

Message #5 Posted by [Mike](#) on 30 July 2002, 3:03 p.m.,
in response to message #1 by David Ramsey

If you **only** bid what you are willing to pay, **it makes no difference**, if you are sniped or if someone just outbid you earlier. If you are outbid, you are outbid. Timing does not matter. If you could have gone higher, **you should have gone higher**.

Why is it that people that low-bid items get so whiney when they are outbid?

Re: I have to say this (yet) one more time

Message #6 Posted by [David Ramsey](#) on 30 July 2002, 5:56 p.m.,
in response to message #5 by Mike

"Why is it that people that low-bid items get so whiney when they are outbid?"

He's not pissing me off because of his sniping per se (although I consider it rude and it ensures that you can't reconsider your maximum bid in light of new information), but rather than he's obviously a speculator buying up a lot of stuff to resell, presumably for a profit, later.

For example, I was outbid by him on an 82143A printer...and he also won the other auction for that model printer. So he's got two of these printers and two very expensive red dot calculators. A look at his past auction wins makes it obvious that he's a speculator with very deep pockets.

This is legal and arguably ethical-- I'm free to use the same robot bidding programs he's using and try to snipe my way in.

But it's still RUDE. IMO. And I reserve the right to be annoyed by it.

Re: I have to say this (yet) one more time

Message #7 Posted by [Mike](#) on 30 July 2002, 11:14 p.m.,
in response to message #6 by David Ramsey

You say: "he's obviously a speculator buying up a lot of stuff to resell, presumably for a profit, later"

He has been buying items for years. Have you ever seen him sell anything. He pays top dollar for a lot of items. I suspect he is more of a collector than you think.

The 2nd point is **so what?** Do you bid on things with the hopes that you will lose money? Even if you don't plan on selling it, you hope that you don't lose any money.

You say: For example, I was outbid by him on an 82143A printer...and he also won the other auction for that model printer. So he's got two of these printers.

Two? :-) He probably had 20. I have seen him buy lots of 15 calculators. He has bought at least three 9100s that I've seen. **What's the big deal?**

But if you go back to what I said, "If you bid your maximum, you cannot lose, simply by timing", you **however will lose** because your bid is low.

Why? Or better yet, what is the strategy in bidding low at something just a bit lower than you are willing to pay. It makes no sense. I understand making a token bid to track an item but making a legitimate bid that is below what you are willing to pay, makes no sense at all.

Bidding late, does one thing, it keeps the price on auctions low. I 100% guarantee you that if he bid early, he would still have bid more than you, unless you bid more than the item was worth. See... that is what raises the price.

The bottom line, and I repeat, is that if you bid early and don't bid what you are willing to pay, **then you won't win**. Someone will always bid more, on items that are collectible or below market value.

Another opinion: [Re: I have to say this (yet) one more time]

Message #8 Posted by [Raymond Hellstern \(Germany\)](#) on 1 Aug 2002, 2:35 p.m.,
in response to message #7 by Mike

>You say:"he's obviously a speculator buying up a lot of >stuff to resell, presumably
for a profit, later" > >He has been buying items for years. Have you ever seen him
>sell anything. He pays top dollar for a lot of items. I >suspect he is more of a
collector than you think. > >You say: For example, I was outbid by him on an
82143A >printer...and he also won the other auction for that model >printer. So he's
got two of these printers. > >Two? :-) He probably had 20. I have seen him buy lots
of >15 calculators. He has bought at least three 9100s that >I've seen. What's the big
deal? > So I suppose he wants to build his house out of printers and calcs instead of
bricks.

It's hard to believe that he doesn't buy big packages of the same model w/o wanting
to refinance the ones he keeps by selling the others.

And buying big packs reduces the cost of the individual item in many cases, so the
word 'top dollar' becomes relative here.

Sniping is legitim, of course. But sometimes it just kills the fun participating at an
auction for many other people. And IMHO it doesn't show too much style;-)

Two weeks ago I was bidding on an USB keyboard, of which the seller had about
ten to sell. A minute before closing they all were between \$5 and \$7.50 . I had only
one bid on one of the keyboards with \$11 as my maximum, but I watched the others.
TWO seconds before bid closing, 'my' kbd was at \$8, some idiot sniped me, and
forced me to bid one another one of those keyboards. I got this other kbd for \$8,
which was nearly the lowest final price of all those kbds, and I couldn't resist and
ROTFL, because that sniper had to pay the highest price of all, about \$12...

Ok, that's not much money overall, but in this case he was the loser. I made similar
experiences when bidding on HP items.

>Bidding late, does one thing, it keeps the price on >auctions low. I 100% guarantee
you that if he bid early, >he would still have bid more than you, unless you bid more
>than the item was worth. See... that is what raises the >price. > That's one option.

I think you know the other option, too: Buying big amounts of units for relatively
low prices per unit, then selling them (resp. auctioning them) individually, which
usually leads to higher prices, because people think they bid on rare items.

Nearly everyone here knows that there are very few items which are really rare, most of the HP calcs and accesories were made in big quantities. Even prototypes and pre-series calcs were made several to hundreds per model.

Regards,

Raymond

Re: Another opinion: [Re: I have to say this (yet) one more time]

*Message #9 Posted by [db\(martinez,california\)](#) on 3 Aug 2002, 8:51 p.m.,
in response to message #8 by Raymond Hellstern (Germany)*

raymond; i had one of those low dollar ebay wierdnesses happen to me a couple of weeks ago. i'm not even mad; the guy did himself. i had bid \$20 on an odd old calculator and the bids only went up to \$9 but that was still below the reserve. i have been working a week and a half per week and did not watch it too close. he did not contact me but imediatly relisted it and someone who had not bid before did a buy it now for \$10.75; fine - thats the rules. it is all unimportant, but nice to know that do to a combination of lazyness and greed the seller got a hair over half what i was willing to pay.

Re: I have to say this (yet) one more time

*Message #10 Posted by [David Ramsey](#) on 3 Aug 2002, 1:28 a.m.,
in response to message #7 by Mike*

Mike, I see a couple of possible contradictions here:

You say: "He has been buying items for years. Have you ever seen him sell anything. He pays top dollar for a lot of items. I suspect he is more of a collector than you think."

Perhaps. But then:

"Two? :-) He probably had 20 (82143A printers). I have seen him buy lots of 15 calculators. He has bought at least three 9100s that I've seen."

Does even the most rabid collector need 20 printers or even 3 9100s? Can you look at these quantities and really think he's not reselling? There's nothing wrong with that, but trying to make him out as merely an overzealous collector is silly.

I'd also take exception to one more statement you made:

"Bidding late, does one thing, it keeps the price on auctions low. I 100% guarantee you that if he bid early, he would still have bid more than you, unless you bid more than the item was worth. See... that is what raises the price."

How come if he outbids me, I'm underestimating the value of the item, but if I outbid him, I'm paying more than the item was worth?

Re: I have to say this (yet) one more time

Message #11 Posted by [Luis Sisamon](#) on 31 July 2002, 12:00 p.m.,
in response to message #6 by David Ramsey

You can always feel annoyed by whatever you want, that is your right and I have nothing to say about that.

Regarding timing, the other poster (Mike) is right. In auction you should value before you start bidding, and go for it. You also mention that you upgrade your bid when you get new information, this is perfectly fine and logical as long as you do not call the other perso's bid "new information". The fact that somebody is willing to pay 1\$ more than you does not imply that you should be willing to pay \$1 more than him/her. This leads very quickly to winner's curse.

Again, you can dislike late bidding, but there is nothing wrong with it (but the fact that sometimes you could miss the deadline 8-).

Cheers

Luis

Re: XPander on eBay

Message #12 Posted by [who cares](#) on 30 July 2002, 5:36 p.m.,
in response to message #1 by David Ramsey

I'm about to believe the Xpander's best use is to rise its own price on e-bay

Re: XPander on eBay

Message #13 Posted by [Raymond Hellstern \(Germany\)](#) on 31 July 2002, 7:21 p.m.,
in response to message #12 by who cares

That's perfectly right. You can't use the machine for anything but for a collection of 'prototypes'. Same with the x25...

Raymond

BTW: Anyone wants to buy an x25 complete package?

BTW2: Sorry, gone for \$900...

BTW3: The above 'BTW's' weren't meant seriously, of couse. I wouldn't sell my x25;-)

Re: XPander on eBay

Message #14 Posted by [David Smith](#) on 30 July 2002, 5:53 p.m.,
in response to message #1 by David Ramsey

Previous eXpanders on Ebay have sold for \$450 +/- \$50.

HP Calculators profitability

Message #15 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 30 July 2002, 6:37 p.m.,
in response to message #1 by David Ramsey

Hi;

where else (or for who else) would Hewlett-Packard calculators (and extensions) be wanted so much, so their prices would go so high up in the sky?

WE ARE SOMEWHAT RESPONSIBLES FOR THIS HIGH PRICES (and someone else also wrote some words closed to these here, at this very forum). We called attention of those who have never used an HP calculator, but sniff in here a bunch of users that know how to do it the best way. Take kids their candies off and they cry. I cry, too. I hate knowing old HP calculators cost that much, because I want to use them and I can't. I do not want to close them in a glass box to be seen by people. I remember someone mentioned here (too) that sometimes ago, the HP71B (and BII) was so cheap that people were almost throwing them away! Now we cannot find them for less than a couple of hundreds. Amazing.

Forgive-me, guys, but I cannot agree with that. I feel myself responsible, too. Just because I like

to use them, I like to think of HP calculators as more than electronic apparatus; they are amazing signs of human brain activity, as the result of this activity.

(I about not to post this, but what the h...! I've seen and read so many things in here without complaining...)

Sorry.

Re: HP Calculators profitability

*Message #16 Posted by [W. Bruce Maguire II](#) on 31 July 2002, 1:59 p.m.,
in response to message #15 by Vieira, Luiz C. (Brazil)*

Luiz wrote:

Sorry.

Luiz:

Don't apologize for stating your opinion! In my (not-always-so-humble-) opinion, as long as you are civil (and *you* have *always* been more than that), you need not apologize for stating your opinion.

I may---or may not---agree with you. And I'm **not** sorry about it.

; -)

Bruce.

Re: XPander on eBay

*Message #17 Posted by [David Smith](#) on 31 July 2002, 7:21 p.m.,
in response to message #1 by David Ramsey*

BTW, your bids on the 82143A printers were not even the second highest bids. Two other people thought more highly of them than you. Also the printers included some highly desirable extras (such as a HP82120A rechargeable battery pack for the HP41). Your bids were not anywhere close to where they should have been to have half a chance of getting them.

Re: XPander on eBay

*Message #18 Posted by [David Ramsey](#) on 1 Aug 2002, 1:42 a.m.,
in response to message #17 by David Smith*

Shrug, you're right-- other people did think more highly of them than I did. But recall that I wasn't complaining about the prices they went for; just the bidding technique used, whose only purpose is to make sure that other people don't have the chance to reconsider and bid against you.

And was \$35 (my bid) really "not anywhere close" to what it should have been for an item that went for \$41? Heck, I'd say I was in the ballpark...

Re: XPander on eBay

*Message #19 Posted by [David Smith](#) on 1 Aug 2002, 10:12 a.m.,
in response to message #18 by David Ramsey*

Yes, for a normal condition, plain 82143A in a box \$35-\$40 would be a reasonable bid (but probably still on the low side). A lot of times unboxed units go for that. Since these were at least advertised as being really nice (yeah, right) and had those tasty little extras thrown in, a much higher bid would be appropriate if one wanted a significant chance of getting them. They wound up going for a lot less than they should have (although the shipping seemed rather high, and would not be significantly reduced for the pair).

As far as sniping goes, it increases your chance of winning an auction by a factor of 750-800%!!! This is based upon actual measured outcomes of a lot of auctions. This would not be so if people weren't so timid about bidding. They should just decide what an item is worth to them and bid that amount. That is what I do whether I snipe or not. A BIG advantage of a last second bid is to keep your options open in case a different or better item comes up. Retracting a bid is VERY poor form.

BTW, are you the David Ramsey who worked for Apple in Dallas in the days of the Apple II and III? I seem to remember he had a cat with a similar name.

Re: XPander on eBay

*Message #20 Posted by [David Ramsey](#) on 1 Aug 2002, 12:53 p.m.,
in response to message #19 by David Smith*

"A BIG advantage of a last second bid is to keep your options open in case a different or better item comes up. Retracting a bid is VERY poor form."

Good point.

"BTW, are you the David Ramsey who worked for Apple in Dallas in the days of the Apple II and III? I seem to remember he had a cat with a similar name"

Probably. I was in Dallas from 1979-1983, and although I didn't work at Apple, I was involved in the local Apple clubs ("Apple Corps", as I recall)

Re: XPander on eBay

*Message #21 Posted by [Wlodek Mier-Jedrzejowicz](#) on 1 Aug 2002, 7:33 p.m.,
in response to message #20 by David Ramsey*

Several people on this thread have said it makes sense to bid your top price early on. One disadvantage of this has not been mentioned - some bidders are well known and others will bid on the same item just because "s/he knows what they are doing, so it must be worth trying to outbid her/him".

I have also come across the opposite - people who email me to say "I see you are bidding on X, and I know you will use it for your book/articles/etc, so I did not bid against you". That's very kind, but someone else might outbid me (or whoever) anyway. So bid away, and if you want to help Dave Hicks, me, or anyone else who shares information, offer them that information after you have won :-)

Re: XPander on eBay

Message #22 Posted by [James M. Prange](#) on 1 Aug 2002, 11:52 p.m.,
in response to message #20 by David Ramsey

Personally, I make it a habit to wait until the last day to place a bid, although I definitely don't practice the "last-minute" sniping. First, as David mentioned, that keeps my options open in case a similar but maybe better item comes up, second, I don't want to have to keep track of a lot of items that I'm currently bidding on, and third, I don't want to add to the "bandwagon effect" early in an auction.

I agree that sniping is effective given eBay's rules, but I still consider it rude.

I prefer to just place one bid on an item, whatever I'm really ready and willing to pay. "Dutch" auctions, though, are a little trickier.

Regards,
James

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HP-12C Manual

Message #1 Posted by [Tony](#) on 30 July 2002, 1:11 p.m.

Hi there! Got a HP-12C without manual - where can I get one? Couldn't find it on the MoHPC CD-ROMs!! It doesn't need to be high quality, PDF with scanned-in pictures would be sufficient. I'm from Germany and I'm not sure my HP dealer sells it 12Cs at all. Tony

Re: HP-12C Manual

Message #2 Posted by [gifron](#) on 30 July 2002, 1:28 p.m.,
in response to message #1 by Tony

ebay usually has some. if you don't want to wait for an auction to end, you might check the bull cabinet. they sometimes have manuals. if none are listed, email them because i've found they don't always keep the list current. address is <http://members.aol.com/tbcab/private/hewlettpackard.htm>

Re: HP-12C Manual

Message #3 Posted by [Tony](#) on 30 July 2002, 1:42 p.m.,
in response to message #2 by gifron

Thanks for the info! However, I'm located in Germany and don't want to pay 10 Dollar shipping fees for a 10 Dollar manual....

Re: HP-12C Manual

Message #4 Posted by [Renato \(Brazil\)](#) on 31 July 2002, 8:57 p.m.,
in response to message #3 by Tony

I found many Hp-12 manuals in used books stores, here in Brazil. There are many financial math books that use hp-12 as tool, and explain how to use the calc. Hope that helps. Renato

Re: HP-12C Manual

*Message #5 Posted by [Glen Kilpatrick](#) on 1 Aug 2002, 3:41 p.m.,
in response to message #4 by Renato (Brazil)*

I could swear I've posted this one before:

http://www.hp.com/cposupport/manindex/hp12cfinan81575_eng_man.html

gk :)

Re: HP-12C Manual

*Message #6 Posted by [Renato \(Brazil\)](#) on 1 Aug 2002, 10:01 p.m.,
in response to message #5 by Glen Kilpatrick*

This is actually a Solutions handbook - "designed to supplement the hp-12c owner's handbook". There are no operation instructions, just usage examples.

Also - yes, I am sure there was a post with this link before.

Re: HP-12C Manual

*Message #7 Posted by [Glen Kilpatrick](#) on 9 Aug 2002, 6:30 p.m.,
in response to message #6 by Renato (Brazil)*

Thank you, Renato. I had thoughten that this was "the real thing". I've never owned a 12C (thus never owned or even saw any such manuals), but the OmniGo 100 that I had for a while had a 12C emulator built-in, so I located this manual in the course of using the latter.

And of course since I was interested in solutions, it had everything (and more) that I was interested in, I never even noticed that it didn't have much on how to change the batteries, _etc._ :).

I'll amend my reference next time.

Re: HP-12C Manual

*Message #8 Posted by [Renato](#) on 11 Aug 2002, 1:12 a.m.,
in response to message #7 by Glen Kilpatrick*

HP-12c emulator for windows includes a help file that makes a quite decent operating manual.

You save my day!

*Message #9 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 2 Aug 2002, 2:39 a.m.,
in response to message #5 by Glen Kilpatrick*

Thank you, Glen.

I was searching for this fella and I was not known it was available for downloading. I needed the subjects to complete some material about then HP12C. Now it is on the fly.

Maybe you posted it in a period of time I was not available to access the Museum. I really don't remember seeing it here. As Renato (e aí? Tudo bem?) mentions that it happened, so it happened. For sure.

Cheers.

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hp48sx RevA

Message #1 Posted by [andy](#) on 30 July 2002, 9:53 a.m.

My hp48sx has the rev. A rom (which as quite a few known bugs). How does this affect its value (I also have the original manuals, the quick reference book, the hp eqn. library card, and the serial cable).

Andy

Re: hp48sx RevA

Message #2 Posted by [Frank](#) on 30 July 2002, 11:40 a.m.,
in response to message #1 by andy

Dissapointing I know, but I have not seen any of the 48 series bring much thus far, with GX still higher than SX. A NIB 48SX might reach 100\$ I don't know. Seems like most mint are in the 50-80\$ range, more if apps card packs are included of course.

Re: hp48sx RevA

Message #3 Posted by [Jeffrey_G](#) on 30 July 2002, 12:37 p.m.,
in response to message #1 by andy

I have a 48SX. How can I tell the ROM release?

Re: hp48sx RevA

*Message #4 Posted by [andy](#) on 30 July 2002, 12:48 p.m.,
in response to message #3 by Jeffrey_G*

To determine the ROM release of your 48sx do the following:

1.) press and hold the "ON" button 2.) press the "D" button then release both buttons 3.) your screen will go blank and have 3 vertical lines evenly spaced across. 4.) press the "backspace" key 5.) press the "eval" key and your ROM release will be displayed

6.) press "on"-"C" to exit

If you do everything properly you won't loose any of your files either.

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Rebuilding a Digital Cassette

Message #1 Posted by [andy](#) on 30 July 2002, 9:50 a.m.

I have some digital cassettes for the hp82161a that no longer work. I was thinking about disassembling one, removing the original tape, and rewinding new tape on.

If anyone has any advice, please post it.

Thanks,

Andy

Re: Rebuilding a Digital Cassette

Message #2 Posted by [Ellis Easley](#) on 30 July 2002, 12:32 p.m.,
in response to message #1 by andy

Don't forget the end-of-tape holes. Might be tricky to punch them without creating a weak spot where the tape might break in use. Find a reliable way to measure the length of the tape on an original one - counting turns of the hub depends on the thickness of the tape, need to count turns of a capstan. I have some very similar tapes of another brand that have less, thicker tape in them that I want to reload. Get a micrometer to measure the thickness of the original tape, the correct length of the thicker tape wouldn't fit on the reels. I've thought of doing this too - I hope the tape in a Compact Cassette will be compatible (haven't taken a measurement yet). May need to use tape from a longer cassette, C90 or C120 min., to get the right thickness - if the width and coating are right at all! If Compact Cassette tape is too narrow, next choice will be to try to slit 1/4" tape.

Re: Rebuilding a Digital Cassette

Message #3 Posted by [Tony Duell \(UK\)](#) on 30 July 2002, 1:45 p.m.,
in response to message #1 by andy

Are you sure it's the tape? Most of the time it's the pressure pad that decays and fails, and this can be repaired quite easily using doubled-sided adhesive foam tape and felt. I have an article I wrote for Datafile (HPCC club journal) on repairing these cassettes. I would be happy to have it available for distribution if anyone can suggest where I should upload it. It's a 13K LaTeX file, so it's not that large.

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Cards for the HP9810

Message #1 Posted by [Tony Duell \(UK\)](#) on 29 July 2002, 7:17 p.m.

As you've probably guessed by now, I am repairing an HP9810. The next part to do is the card reader. The first problem is that I don't have any cards for it. As I understand it, the cards for this series of machines (9810,9820) came in 2 lengths. 6" ones, which worked in both the 9810 and 9820, and 10" ones which were designed for the 9820 only. But a friend of mine in the UK has said that he's used the longer cards in the 9810. Does anybody know the real facts? Can I use the longer cards in the 9810 (I need to be sure if I am going to attempt to use them, so that I can be sure that any errors I get are due to real problems and not just due to using the wrong cards. Note, I don't care if the machine only puts 6" worth of data on the card. Thanks in advance for any help

Re: Cards for the HP9810

Message #2 Posted by [Katie](#) on 29 July 2002, 9:12 p.m.,
in response to message #1 by Tony Duell (UK)

Yes, both length cards work. I have a few of each and there are no problems reading/writing either. Furthermore, some of these cards were recorded way back when and they read just fine with complete programs on both the longer and the shorter cards.

If you have a deteriorated drive roller on the card reader, take a look at the article that I posted here on how to fix it. Also, I have a way to repair a deteriorated platten on the printer, but it's quite a lot of work to rebuild that.

Re: Cards for the HP9810

Message #3 Posted by [Tony Duell \(UK\)](#) on 30 July 2002, 1:48 p.m.,
in response to message #2 by Katie

Thanks for the information. So I can try out the longer cards and if/when I have problems I know it's a real fault to be diagnosed. That's useful. I've seen your article on repairing the roller (how _did_ you guess I would have to do that :-)). It looks fairly easy (I've had the reader mechanism apart already -- it's relatively simple compared to most things I work on). I am a little worried as to how well the O-rings will stay on the original hubs -- I would have thought that they might slip off sideways. I will probably make new (larger) hubs with a groove for an O-ring, like I did for the 9100 (Yes, I do have a lathe).

Re: Cards for the HP9810

Message #4 Posted by [Mike](#) on 30 July 2002, 3:13 p.m.,
in response to message #1 by Tony Duell (UK)

I have used both in the 9810 with no problems. Did you locate some cards to use? If not, I may have one or two to spare.

Also, I found the card readers very forgiving. I had a reader that would slip and I occasionally had to help pull the card through and it still read fine.

Re: Cards for the HP9810

Message #5 Posted by [Tony Duell \(UK\)](#) on 30 July 2002, 4:04 p.m.,
in response to message #4 by Mike

Thanks for the offer. I think I have managed to locate a few in the UK, but if that doesn't work out, I'll get back in touch with you. With regard to the reader being 'forgiving'. I think, that like the 9100 reader, the 4 tracks (in each direction) on a 9810 card are 3 data tracks (again, like the 9100, the 9810 uses 6 bit keycodes) and a clock track. I have no idea if the format is identical to that of the 9100, though. But the presence of the clock track means that the reader should work no matter what the card speed is (within reason). So I am not too surprised that you could get it to work by helping the card through by hand. Getting it to write reliably might be harder -- if the card is pulled too slowly then the data bits (and clock pulses) will be too close together on the card, and will not be able to be read. Still, we shall see. The motor in the reeader is a 24V permanent magnet DC motor and as far as I can see there's no speed control circuitry, either on the interface board or inside the motor. So the speed can't be _too_ critical.

Re: Cards for the HP9810

Message #6 Posted by [David Smith](#) on 30 July 2002, 5:57 p.m.,
in response to message #5 by Tony Duell (UK)

I am fairly sure the cards were not preformatted (I seem to remember a guy mentioning he bulk erased some), so the clock track is probably written along with the data.

Re: Cards for the HP9810

Message #7 Posted by [Tony Duell \(UK\)](#) on 30 July 2002, 7:11 p.m.,
in response to message #6 by David Smith

I am sure the cards are not preformatted. The card reader hardware writes the clock track as it writes the data (same on the 9100, BTW, except that the 9100 does rather more in hardware than the 9810 does). That's why the card speed is relatively critical for writing. If the card is fed too slowly, the bits will be written too close together, and will be unable to be read). To digress slightly, the HP71 and HP75 cards are pre-formatted -- the clock track is written at the factory. When you write on one of those cards, the card reader reads the clock track to determine when to write the next bit. That's why those machines can get away with hand-pulled cards for writing. The older machines (9100, 9810, 9820 which have a clock track that's written along with the data, and the HP65, HP67, HP97, HP41, which have a self-clocking data encoding scheme) don't have a pre-written clock track, which is why you have to have the card speed about right for writing.

Re: Cards for the HP9810

Message #8 Posted by [Katie](#) on 30 July 2002, 6:32 p.m.,
in response to message #5 by Tony Duell (UK)

The o-ring repair that I did has held up surprisingly well without having to cut a v-groove or gluing them on. I thought that they'd slip off too over time, but so far they haven't.

Also, the R/W head that I had originally was bad -- one open coil -- I managed to track down a place in California that had a spare head and would mount it. (This place specializes in repairing magnetic heads for all types of equipment. I sent them the head in the mount and they found that they couldn't fix the coil but that they had an exact replacement. I ended up not buying from them however, a well known collector friend came to my rescue with a spare 9810 reader assembly first) Let me know if you need their services and I'll dig up the contact information. But I think that bad r/w heads are not a common problem.

Re: Cards for the HP9810

Message #9 Posted by [Tony Duell \(UK\)](#) on 30 July 2002, 7:16 p.m.,
in response to message #8 by Katie

Something else to worry about. I'd not even considered an open-circuit head -- I've never seen that fault in an old disk drive, tape drive or card reader (but I guess it can happen). I will have to check this, and then demagnetise the head afterwards (the ohmmeter current can be enough to magnetise the head). Is this head anything close to standard, I wonder. It doesn't look particularly custom. Incidentally, there's little shim under one end of the head mounting block (between the block and the side plate of the reader). Is this standard practice from HP, or is it a kludge to correct for misalignment later? Anyone seen that sort of thing before?

Re: Cards for the HP9810

Message #10 Posted by [Katie](#) on 30 July 2002, 11:55 p.m.,
in response to message #9 by Tony Duell (UK)

My guess is that it's a head missalignment correction kludge. The replacement head that I installed (from my friend's spare reader assembly) and was able to read the cards written with the original head without any special alignment -- not that you can adjust the alignment anyway. I can't believe that HP would have done this, perhaps it was some past owner of the calc that was trying to adjust the head alignment in order to read cards from another calc that was misaligned. I used to do exactly that on my PET computer.

I've never seen a problem with magnetizing a tape head with the tiny current (~1 ma) from a multimeter, but I suppose if it were a really sensitive head, like in a disc drive it could be an issue.

I think that the 9810/20 head was made by Amperex for use in 4-track recorders, but I don't have a model number on it, just a recollection of my phone conversation with these repair specialists. Although I have never come across an open head coil either, they told me that it's a quite common occurrence and is often reparable if the coil break happens at the junction of the input pin and the coil wire. They dig through the epoxy fill and repair it, amazingly! The head that I had sent them had the coil break deep down and was not fixable.

Re: Cards for the HP9810

*Message #11 Posted by [Tony Duell \(UK\)](#) on 31 July 2002, 6:31 p.m.,
in response to message #10 by Katie*

It would appear that HP aligned the head into the diecast support frame, then epoxied it in place. And therefore any head assembly should be a drop-in replacement in any reader. But I guess if the side plates were slightly distorted then the head might not fit in quite the right position, so it would need an alignment shim. But I wouldn't have thought that alignment or head position where that critical -- the data density is pretty low, and the card can slip slightly sideways anyway. Be careful with the current from an ohmmeter. Some of the older analogue meters (which I prefer for most work) will supply 50-100mA on the ohms *1 range. Easily enough to magnetise a head or damage some components (I recall a story of an idiot who tested an entire box of 50mA fuses and claimed they were all open-circuit. Well, they were after he tested them...) Digital meters tend to use a lower current -- for most types, the current is chosen so that the voltage across the highest resistor that can be measured on a particular range is 200mV. Which would give a 1mA test current on a 200 Ohm range, agreed. I thought the head might be standard, for the simple reason that it doesn't come close to using half the card width. One day when I've got nothing better to do I'll measure (with a travelling microscope) the core positions on the head face relative to the mounting flange. I suspect I'll find that the track spacing is something fairly standard. And finally, corrosion of fine wire windings is fairly common. It's often thought to be due to contamination of the wire (e.g. with acids from the skin of the person who wound the coil) when the coil was made. I've found transformers that have failed in that way. I've never found a magnetic head that suffered from it, but I guess it can happen.

Re: Cards for the HP9810

*Message #12 Posted by [David Smith](#) on 31 July 2002, 7:33 p.m.,
in response to message #10 by Katie*

I know some people who CAN fix a broken head coil. Problem is they are the only people on the planet who can (or will) do it, they know it, and they charge accordingly... it takes about a kilobuck just to get them to answer the phone.

They also do unholy things with obsolete and degraded media. One client spent well over half a million dollars to have a reader built for some ancient tape format. The tapes were HIGHLY degraded and were destroyed in the recovery process but every bit of data was recovered.

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48 SX not responding

Message #1 Posted by [Larry Girvan](#) on 29 July 2002, 3:06 p.m.

Hi:

Does anyone know if it is possible to repair a 48 SX that got wet? (Roof Leak) The survey card still works in a 48GX but I want to know if I should just heave the SX or if it can be repaired/reprogrammed.

Thanks

Re: 48 SX not responding

Message #2 Posted by [Ron Ross](#) on 29 July 2002, 3:19 p.m.,
in response to message #1 by Larry Girvan

While it is no longer under warrenty, Hp will still repair (actually replace) your calculator with the equalivent replacement for a set fee. In your case, the equalivent would be a GX model. It would be exchanged for approx \$70 last time I checked (a couple years ago). Certainly less than a new GX (though it may possibly be a refurb or return).

Ph#970-392-1001 ext 0 last time I used.

Re: 48 SX not responding

Message #3 Posted by [David Smith](#) on 29 July 2002, 6:06 p.m.,
in response to message #2 by Ron Ross

A last ditch thing to try is cycling it through three separate baths of distilled water in an ultrasonic cleaner. Drain all the water out of it and dry it in an oven on LOW (less than 150F) for a couple of days at least with all the ports open, etc. This has worked for me on some rather badly muddled up HP42S machines.

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34C Thousands seperator

Message #1 Posted by [Mike](#) on 29 July 2002, 12:38 p.m.

Is there a way to change the thousands seperator on the 34C? I have checked the manual and don't see any mention of it. The one I have has the european (decimal point) for the thousands seperator.

Thanks,

Re: 34C Thousands seperator

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 29 July 2002, 1:05 p.m.,
in response to message #1 by Mike

Hi;

I remember one fact that may help you figure it out.

I had a classmate that owned one HP34C before buying a new HP41C. I remembered his 34 appeared to be damaged: everything worked fine, but [STO][ENTER] selftest return Error 9. He sent his USA original to Hewlett-Packard do Brasil and, a few weeks later, there she was... with a comma as radix mark. He called me and showed me the new 34C, "comma", instead of "dot".

It seems it's an internal choice. I did not open the calcualtor at that time, but I believe if it is not made with a jumper, it only can be accomplished with a new display driver OR a complete CPU, if it is internal.

Hope this info help you.

Cheers.

Re: 34C Thousands seperator

Message #3 Posted by [thibaut.be](#) on 29 July 2002, 1:54 p.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)

Yes, i think that on late spices a jumper did the job... I currently have a 37E opened, I'm gonna check if there is something that helps...

Re: 34C Thousands seperator

Message #4 Posted by [Luis](#) on 29 July 2002, 2:49 p.m.,
in response to message #1 by Mike

Yes, sure thee is a (very small) jumper on the Power PCB (the electronic board where the battery cables go to). With jumper: USA dot format; without it, European comma. Depending on your HP-34C (or any 30 series)you have different ways to diassembly that. Please take a look at <http://www.hpmuseum.org/collect.htm#variations>. There are some explanations about the two type construction. I would suggest to do it if you're electronic skilled or, at least, patient. Anyway, handle it carefully!! Good luck! Luis

Re: 34C Thousands seperator

Message #5 Posted by [Tony Duell \(UK\)](#) on 29 July 2002, 7:08 p.m.,
in response to message #1 by Mike

There is a soldered-in link on the PSU converter board, close to where the flexiprint connects this board to the rest of the machine. I _think_ it's shorted for US format, open for European (all machines seem to have been made with the link fitted, and it was cut on those sold in Europe). There's another link alongside it that seems to be something to do with test/diagnostics -- if it's in the wrong state, the machine won't power up at all. If you are used to fine soldering, you might try fiddling with the links.

Re: 34C Thousands seperator

Message #6 Posted by [Katie](#) on 29 July 2002, 9:50 p.m.,
in response to message #1 by Mike

Here are a couple of pics that I took of different Spice versions/models and marked the connector to cut to make the decimal point European (install a jumper to make it US).

<http://www.wass.net/repairs/Spice1.JPG>

<http://www.wass.net/repairs/Spice2.JPG>

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HP-11C disassembly

Message #1 Posted by [Tony](#) on 29 July 2002, 10:54 a.m.

Hi! My HP-11C has a lot of dust behind the display. I can remove the back cover but I cannot remove the printed circuit board! It is attached firmly but I cannot see any screws. Manufacturing year is 1985, USA. What do I have to do to get to the display? Thanks for help, Tony

Re: HP-11C disassembly

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 29 July 2002, 1:14 p.m.,
in response to message #1 by Tony

Hi;

there are two voyager basic types. The earlier models have the KBD assy and a display separate assy (the second one allows display cleaning, but it has flex circuit board, and it is a lot hard to maintain...). The new versions have one only PCB, and everything is built on it. If this is yours (it seems to me), the only two ways I know to clean the display are by using compressed air (avoid it because of static electricity) OR removing all plastic heat-molded rivets. It's time consuming and tiring, but if you really need to clean the display window, that's the only way I know.

Not that much helpful, I know, but may let you think about it.

Cheers.

Re: HP-11C disassembly

*Message #3 Posted by [Raymond Hellstern \(Germany\)](#) on 29 July 2002, 2:14 p.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)*

Hi,

cutting the heat stakes is a relatively easy job, if you have the right tool;-)

I usually take a very flat and sharp Revell hobby tool, which has four different shaped blades. This tool is made for cutting plastic edges.

It may be of use that you can leave the bottom row of stakes intact, it should suffice to lift the PCB a bit, and use a photo lens air cleaner to get rid of the dust. This way you don't need to re-heat the stakes before you reassemble the calc. The bottom row stakes give enough stability to the PCB to sit tight inside the housing.

Regards,

Raymond

Re: HP-11C disassembly

*Message #4 Posted by [ojm](#) on 29 July 2002, 2:41 p.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)*

I once cleaned out the display on my HP15C by gently lifting off the aluminum bezel on the front of the unit. In my case it seemed to be the best choice since the double-sided sticky tape that held it down had already begun to come unglued and lift up on its own. The clear plastic lens over the LCD comes off with it. This gives you access to clean off dust without having to open up the calculator and put its internals at risk. One must take care not to lose a small spring that grounds the aluminum piece to the unit's ground plane. I then reglued the metal piece with more double-sticky tape. This method may risk some cosmetic damage to the unit, but it avoids having to take it all apart and possibly damage it. (I would rather have an ugly calculator that works, than a pretty one that doesn't.)

Re: HP-11C disassembly

Message #5 Posted by [Tony](#) on 29 July 2002, 2:51 p.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)

Thanks Luiz!! Thanks Raymond!! Thanks ojm!!

Your answers resolve my problem.

Re: HP-11C disassembly

Message #6 Posted by [David Smith](#) on 29 July 2002, 6:01 p.m.,
in response to message #5 by Tony

I can definitely recommend NOT cutting the heat stakes loose. It is very difficult and time consuming to do properly and to get the machine back together again without causing a squishy keyboard can be a challenge.

Also do NOT use an air compressor. Almost all of them spew oil and dirty water along with air. Try canned lens/keyboard cleaning "air".

If you elect to try removing the front bezel you might try to get the commercial product called "UnDu". It is just the solvent heptane in an expensive little bottle. Heptane causes adhesives to temporarily loose their stick. When it (quickly) dries the stick returns. Do not get it on the keyboard background as it can leave "water" marks behind.

Re: HP-11C disassembly

Message #7 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 29 July 2002, 7:02 p.m.,
in response to message #6 by David Smith

Hi;

I am very curious about this "UnDu" solvent. I am almost sure there is no similar product in Brazil, but I'll try to find it anyway.

How expensive is it? If I can buy it, would you give some tips on how to use it? I once tried to remove the front bezel af an old voyager, and I did not get success (I stopped when it as about to bend). I have an old HP11C and I want to remove its back label, because I printed a new one and I want to put it there. How to remove the almost-erased, full-of-scratch, old one safely? Would this "UnDu" help doing it? There is no single gap between the back label and the inner glue; is it possible to remove without bending?

Wow! So many questions... Any answers?

Thanks.

Re: HP-11C disassembly

*Message #8 Posted by [David Smith](#) on 30 July 2002, 12:25 p.m.,
in response to message #7 by Vieira, Luiz C. (Brazil)*

UnDu is just the solvent heptane. It is sold in fancy little one ounce bottles for around \$5 and larger ones (3 oz) for around \$10. Considering a liter at a chemical supply house can be had for 5 dollars or so, it has quite a markup. Also many types of rubber cement thinner are sold in hardware stores for a few dollars a pint are just heptane (some are hexane).

I would try soaking a stong thin string in it (and mayby placing a few drops under the edge of the bezel) and using it like a cheese cutter to separate the adhesive (works great on calculator front labels). When fixing card readers I place a drop on an small Swiss army knife blade and lift the back label corners.

Again, keep it off the keyboard background. It can leave water marks behind. Does not seem to affect the cases or labels though.

Re: HP-11C disassembly

*Message #9 Posted by [Tony](#) on 30 July 2002, 4:22 a.m.,
in response to message #6 by David Smith*

Hi David, Well, I did in fact cut off all the stakes. After this it was easy to remove the circuit board and clean the display and the keys as necessary. Also, I had no trouble to put things together again. In order to avoid the squishy keyboard the curcuit board needs to be supported from the back. I used stripes of packaging foam and the back cover now holds the curcuit board firmly in place. Weeks pretty good.
Tony

Re: HP-11C disassembly

*Message #10 Posted by [john](#) on 30 July 2002, 10:47 p.m.,
in response to message #9 by Tony*

now i know how to get at the guts of a calculator, but what i want to know is where oh where do you 11c owners get replacement batteries???

Re: HP-11C disassembly

*Message #11 Posted by [Randy Sloyer](#) on 30 July 2002, 10:57 p.m.,
in response to message #10 by john*

If you are in the states:

Wal-Mart

K-Mart

RadioShack

for starters. At the "marts", go to the watch counter and ask for 357's (you don't get batteries when asking in sporting goods...)

or 44's or 76's

1.5 volt alkalines are fine, should be around \$2.00-\$3.00 each. There are people selling packs of 10 for \$5.00 on Ebay, but who know how old they are. Besides, if you have only 1 11C, thats about a 30 year supply, on average.

Re: HP-11C disassembly

*Message #12 Posted by [David Smith](#) on 31 July 2002, 9:59 a.m.,
in response to message #11 by Randy Sloyer*

A company called "Vinnic" sells very cheap batteries from China. Cards of 10 "LR44" batteries for around \$2.00 - \$2.50 These are proably what are showing up on Ebay. BTW, they seem to be rather good batteries. I have used LOTS of them without problem.

Re: HP-11C disassembly

*Message #13 Posted by [Randy Sloyer](#) on 31 July 2002, 7:17 p.m.,
in response to message #12 by David Smith*

Thanks David. That is good to know. I had seen the deals for \$4-5 for 10 and thought the old "if it sounds too good to be true..." I will check out the brands as it does hurt a bit forking over \$10 or so for a new set of batteries.

Re: HP-11C disassembly

*Message #14 Posted by [john](#) on 31 July 2002, 9:20 p.m.,
in response to message #13 by Randy Sloyer*

thanks, randy. didn't realize that 357, 44, and 76 were all equivalent and acceptable. case shows 871B.

Re: HP-11C disassembly

*Message #15 Posted by [Randy Sloyer](#) on 1 Aug 2002, 7:55 p.m.,
in response to message #14 by john*

Battery numbers are now the 1950's equivalent of tubes. You know, those old things that glowed in the dark and warmed your room in the winter. Pick a number and you can find a substitute for it. Not that it means a thing, but I have never heard of a 871B. So it was probably a substitution of a substitution. Which bears evidence to the fact that just about any battery that generates between 1.35 to 1.5 volts and is the same physical size will work. The only problem I have seen with the lower voltage batteries was on a 42S when using the infrared printer interface. The batteries were weak and the current required by the i/r diode managed to drop the supply voltage below the static ram retention level and bingo, instant cleared memory. I doubt you would see a problem like this with an 11C.

warm in the winter

*Message #16 Posted by [Ellis Easley](#) on 1 Aug 2002, 9:32 p.m.,
in response to message #15 by Randy Sloyer*

I have an old (~1968) 50 MHz HP oscilloscope which is about 1/2 tubes and 1/2 transistors, it draws 750 Watts so I only use it in the winter. Also, it has a high voltage transformer that operates at about 40 kHz. As it drifted, it would turn on a TV I used to have which had an ultrasonic remote control. Since the "on" button was also the "volume up" button, the TV would turn on and get louder and louder. Once, in a pinch, I taped a bedroom slipper to the front of the TV to cover the remote control

microphone.

Re: Is a cricket a "bug"?

*Message #17 Posted by [James M. Prange](#) on 1 Aug 2002, 11:30 p.m.,
in response to message #16 by Ellis Easley*

Good one.

Back around the mid-'70s, I assembled a Heathkit TV, including an ultrasonic remote control. Pretty nifty, but it took me a while to scrape up the money to buy a cabinet to put it in. But after a few weeks, it would, now and then, mysteriously turn itself on or off, change channels, turn the volume up or down, or adjust the colors. I spent some time troubleshooting that thing, and soon realized that disconnecting the microphone seemed to solve the problem, and then, eventually, I noticed that with the microphone connected, it sometimes went bonkers when a cricket chirped nearby. The solution was to tape a piece a cloth in front of the microphone until I finally got a cabinet to put it in.

Regards,
James

Re: Is a cricket a "bug"?

*Message #18 Posted by [Randy Sloyer](#) on 2 Aug 2002, 6:05 p.m.,
in response to message #17 by James M. Prange*

You're not going to believe this, but... you where not alone. This was not an isolated incident with the GR-900. Back in the 1970's I worked for Heath for a bunch of years. Ultrasonic technologies were pretty crude. Heath decided to go with low ultrasonic range transducers, I seem to remember it in the 20-30 khz range. Some of the lower end codes were actually audible to some people (me included!). It kept the costs lower and used common transducers. The only problem was, the

transmitters and receivers used LC circuits and had no real time base and always drifted off frequency. So they were not very reliable and of course when the receiver side went wacko, yep, all sorts of things would make the TV seem possessed. Remote control was always a weak point with Heath TV's. I think they got them straightened out by going digital after the GR-2000, but I was gone by then.

Re: Is a cricket a "bug"?

*Message #19 Posted by [Ellis Easley](#) on 3 Aug 2002, 4:10 a.m.,
in response to message #18 by Randy Sloyer*

My TV was an RCA. Once a co-worker had trouble with her RCA TV remote control and asked me to see if I could fix it. It was IR but only had four buttons like my ultrasonic one. It turned out that one of the solder joints on the LED had come loose. After repairing it, I used a photocell and oscilloscope to make sure it was working. It operated on the same frequencies as my ultrasonic remote.

That ultrasonic remote ran for the whole life of the TV on the original pair of Duracell AA's that came with the set.

When I was in high school (early 70's) a friend had a portable TV with remote control which had a mechanical, VHF only tuner driven by a motor. One position was "TV off". I don't remember if it had remote control of the volume. The remote control unit contained a bar of aluminum which was struck like a tuning fork when you pressed a button. You could hear some frequencies when it was struck, but I wonder if the TV responded to higher harmonics to make it less susceptible to common sounds? I believe the guy showed me that rattling keys in front of the set would make

it change channels.

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Does anyone have an HP 27S Owner's Manual in book form?

Message #1 Posted by [Frank Travis](#) on 29 July 2002, 8:50 a.m.

A few months ago I got a working HP 27S on Ebay, but it did not include the manual. I have been looking through used books stores and www.amazon.com (where I have obtained other HP calculator books). I already have the 5 CDs from Dave Hicks (which has the HP 27S Owner's Manual on it). But I want the HP 27S Owner's Manual in book form. Please state what amount of money you want for it and method of payment (i.e., personal check, money order, or PAYPAL).

Re: Does anyone have an HP 27S Owner's Manual in book form?

Message #2 Posted by [Frank](#) on 29 July 2002, 2:29 p.m.,
in response to message #1 by Frank Travis

Check the classifieds, one there for trade!

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HP 19c thinking of selling

Message #1 Posted by [Thad](#) on 28 July 2002, 11:08 a.m.

I have an hp 19c and charger that is excellent cosmetically, but the batteries do not seem to charge. Does ne1 know its approx. value.? Thanks.

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Is this a HP97S for sale?

Message #1 Posted by [PDP11](#) on 28 July 2002, 7:02 a.m.

This item is listed as a HP97 with instrument but I assume it is a HP97S. Comments please.

<http://cgi.ebay.com.au/ws/eBayISAPI.dll?ViewItem&item=1753097779>

This is not my sale but I have been bidding.

Regards, PDP11

Re: Is this a HP97S for sale?

Message #2 Posted by [David Smith](#) on 28 July 2002, 12:56 p.m.,
in response to message #1 by PDP11

It is not an HP97S. The 97S has an external interface pod. This looks like a '97 that has been directly interfaced. All the later HP97 machines had the place on their circuit board for the 97S pod to connect making such things fairly easy.

Re: Is this a HP97S for sale?

Message #3 Posted by [Vassilis Prevelakis](#) on 30 July 2002, 11:28 a.m.,
in response to message #2 by David Smith

What is also strange is the seller's description that numbers on the display of both the instrument and the HP-97 change when they are switched on.

The HP-97 loses its memory when you power cycle it. The changing numbers display either means that the HP-97 is broken, or that the instrument is directly affecting the operation of the HP-97 (so using it as a normal programmable calculator may no longer be possible). Alternatively, the modifications may have added non-volatile memory to the HP-97 (unlikely, but **very** interesting).

Lets hope that PDP11 posts a note when he has a chance to look at that HP-97.

Re: Is this a HP97S for sale?

*Message #4 Posted by [David Smith](#) on 30 July 2002, 12:27 p.m.,
in response to message #3 by Vassilis Prevelakis*

The HP97 interface pod basically wedges itself into the keyboard interface of the HP97. It just acts like it is pressing keys, etc. Later HP97 machines have the place for the HP97S pod cable. It looks like an empty standard DIP IC location (14 or 16 pin) on the circuit board.

Re: Is this a HP97S for sale?

*Message #5 Posted by [Erik Wahlin](#) on 30 July 2002, 6:28 p.m.,
in response to message #4 by David Smith*

Except for the connector location on the cpu board, the only other difference between a 97 and 97S is the 97S front label (missing on the ebay machine), a rectangular slot in the bottom case where the bcd cable attaches, and all the HP-97S's that I have seen (only 3) have a HP sticker on the bottom cover. I don't have my 97S in front of me to see whats on the sticker though.

Re: Is this a HP97S for sale?

*Message #6 Posted by [Katie](#) on 30 July 2002, 6:38 p.m.,
in response to message #5 by Erik Wahlin*

It's a warrantee sticker, at least that's what's on mine. It has the "date shipped" and various other variables. This seems to have been supported by a special division of HP.

Re: Is this a HP97S for sale?

*Message #7 Posted by [David Smith](#) on 31 July 2002, 10:01 a.m.,
in response to message #4 by David Smith*

Actually this could be a 97S if the guts from the pod had been mounted into the external device. The cable comming out of the calculator does look a whole lot like the HP97S cable and strain relief.

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HP 41 private programm

Message #1 Posted by [Ulrich Schaefer](#) on 28 July 2002, 1:39 a.m.

I have an old (navigation)programm (cards) for my HP-41CX which I want to modify, but it says "private" in the moment I want to edit it. How to overcome this problem?

Re: HP 41 private programm

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 28 July 2002, 2:20 a.m.,
in response to message #1 by Ulrich Schaefer

Hi;

have a look [here](#). For sure, the answer is there.

Cheers.

Re: HP 41 private programm

Message #3 Posted by [Ulrich Schaefer](#) on 28 July 2002, 4:35 a.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)

Thank you very much Luiz!

Re: HP 41 private programm

Message #4 Posted by [HrastProgrammer](#) on 1 Aug 2002, 1:57 a.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)

This shorter procedure worked for me just fine:

1. Load the program from the card (to be the last program in memory).
2. GTO ..
3. PRGM CAT 1 R/S (immediately after CAT 1)
4. SST (until you see .END. REG xxx)
5. DEL 001 (at .END. REG xxx)
6. <- (back arrow)
7. PACK

Re: HP 41 private programm

Message #5 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 1 Aug 2002, 9:52 a.m.,
in response to message #4 by HrastProgrammer

Hi;

I tried this sequence (or somethink close to it) some times, and it worked only with one of the 41's I tested. it seems to me (I think I read it somewhere) a slight change in the 41's OS did not allow it to work; I'm not sure, it must be checked.

It makes me remember the way the first enthusiasts got into Synth Prgm: by removing memory modules in the 41C. The kbd-only procedures were needed with the advent of the 41CV: no way to change mem modules.

How I miss this kind of brainy activity... not in my brain (going fine so far), just in the neighborhood. And I miss the release of this sort of teasing little boxes, too.

Cheers.

Re: HP 41 private programm

*Message #6 Posted by [Mike \(Stgt\)](#) on 2 Aug 2002, 7:52 a.m.,
in response to message #5 by Vieira, Luiz C. (Brazil)*

If it worked on one of your HP41 this should be enough to de-private the program. ;-)

If you have a ZEN-ROM at hand, you may use RAMED to change the END of your PROGRAM. Or take your program to an emulator of the HP41 (there are some useful arround) and manipulate it there.

Ciao.....Mike

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hp 35 batteries

Message #1 Posted by [bill ledeen](#) on 28 July 2002, 1:14 a.m.

does anyone know if it is possible to get a replacement ni-cd battery pack for a hewlett packard model 35 scientific calculator? I already have an AC charger but my battery pack has failed and the calculator seems to require the battery for operation.

Re: hp 35 batteries

Message #2 Posted by [Ellis Easley](#) on 28 July 2002, 2:11 a.m.,
in response to message #1 by bill ledeen

Actually, you can safely operate your 35 without the battery because the charger has separate outputs to charge the battery and to operate the calculator while the battery is charging. The gold plated metal fingers in the calculator's charger socket connect the battery to the calculator circuitry when the charger is unplugged. If you are having trouble using the calculator with the charger, maybe the charger is defective. The cord is subject to opening due to flexing, also I have read here several times that a transistor in the voltage regulator circuit inside the charger enclosure goes bad. Here's a thought - have you checked to make sure the "110/220" voltage switch on the charger is set correctly?

You can rebuild your battery pack, or get someone to rebuild it. The Museum has a page of information about this:

<http://www.hpmuseum.org/repair.htm>

Never throw away an HP battery pack because the parts can be used to rebuild the pack. There is a fellow who sells replacement battery packs of his own design to fit the 35 and other models, he offers them on Ebay. I don't see any of his auctions right now. However, I just noticed that his is the third name listed near the bottom of the Museum page I referenced above.

Also, you can sometimes find chargers for sale on Ebay.

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batteries for HP 10C

Message #1 Posted by [Thomas Zumbrock](#) on 28 July 2002, 12:29 a.m.

Hi!

I'm looking for the needed batteriy type aof an HP 10C calculator. Is there anybody around, who can gove me the appropriate information?

Greetings Thomas

Re: batteries for HP 10C

Message #2 Posted by [Ellis Easley](#) on 28 July 2002, 12:54 a.m.,
in response to message #1 by Thomas Zumbrock

If you mean the Voyager series like the 11, 12, 15, and 16C, it uses 3 button cells, either the LR44 alkaline type or the SR44 silver oxide type which last much longer than the alkaline. There are some details and alternate numbers in the Museum "Collector's Corner" section:

<http://www.hpmuseum.org/collect.htm#batts>

Re: batteries for HP 10C

Message #3 Posted by [thibaut.be](#) on 28 July 2002, 7:07 a.m.,
in response to message #2 by Ellis Easley

Indeed, all "44" batteries do the job...

For European collectors : most of you know that I work in the watches business. I can supply (by box of 10, indivudually sealed) RENATA 357 (equivalent to 44, Swiss made) batteries for € 12.57. This is "my" purchase price, so I make no money on this. This price is far down below retail price in Europe that is awfull for batteries...

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MALFUNCTION CARD

Message #1 Posted by [Marx Pio](#) on 27 July 2002, 6:34 p.m.

I repaired my 41 cardreader, but it can't read or write on cards it just pull cards and the 41 shows the message MALFUCTION CARD

Any suggestion?

Thx

Pio

Re: MALFUNCTION CARD

Message #2 Posted by [Tony Duell \(UK\)](#) on 27 July 2002, 6:53 p.m.,
in response to message #1 by Marx Pio

I've had this caused by dirty swtich contacts on top of the reader, which don't therefore close properly as the card passes through. If you are happy taking the reader apart (it's not _totally_ trivial, particularly the catches that hold the reader to the 41), then you can undo the screws holding the little PCB on top of the reader mechanism and pull it off the connecting pins. Then clean the contact pads on the PCB and _very carefully_ clean the contact springs.

Re: MALFUNCTION CARD

Message #3 Posted by [David Smith](#) on 27 July 2002, 11:01 p.m.,
in response to message #1 by Marx Pio

Make sure that all the wires to the head are connected properly. They have a tendency to pop out of their sockets during a roller repair.

Also if you have access to another reader verify that the cards are not written properly. A reader that writes but not reads is almost always caused by a bad tantalum filter capacitor on the sense amp chip power connections.

Re: MALFUNCTION CARD

Message #4 Posted by [Tony Duell \(UK\)](#) on 28 July 2002, 1:49 p.m.,
in response to message #3 by David Smith

The original message said that you got MALFUNCTION on attempting to _write_ to a card as well as on reading. As far as I know, bad head connections won't cause this, but the card reader _will_ give a MALFUNCTION if the card-at-head switch doesn't close soon enough after the motor switch.

Re: MALFUNCTION CARD

Message #5 Posted by [Andreas Müller\(GER\)](#) on 28 July 2002, 5:51 p.m.,
in response to message #1 by Marx Pio

Hi Marx, just today I succeeded in repairing one of my cardreaders. It could write cards, readable on any other cardreader, but doesn't read any card, written by itself or by any other cardreader. Its a CARD RDR 1E type. What I did: - Changed the Tantalum capacitors on the Sense Amplifier PCB (2x6,8µF/16V and 1x 3,3µF/16V) and - carefully demagnetized the head (the card slot was completely disassembled to get as close as possible to the head - see Tony Duell's advice). - Run some written cards through the reader (VER) until no errors occurred (about 7 times the same card than another and so on)- There was an order I could observe: In very bad condition it displayed MALFUNCTION. As the conditions became better it displayed CHKSUM ERR. From that moment on it could read any card I gave it to eat. Regards, Andreas

Thanks all

Message #6 Posted by [Marx Pio](#) on 28 July 2002, 11:03 p.m.,
in response to message #5 by Andreas Müller(GER)

Tony, David and Andreas

Thanks a lot for the replies they gave me hopes for fixing my 41 CR.

Thanks again,

Pio

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Connecting an HP41CX to a PC monitor

Message #1 Posted by [Theo Kastrissios](#) on 27 July 2002, 8:38 a.m.

Does anyone know if it's possible to connect an HP41C/CX to the serial port of a PC monitor, thereby using the monitor to view printed output instead of the dedicated HP41C/CV/CX printer ?

Re: Connecting an HP41CX to a PC monitor

Message #2 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 27 July 2002, 10:41 a.m.,
in response to message #1 by Theo Kastrissios

If you mean a DATA monitor, you need any terminal (communications) software on the PC, to look at serial port data.

If you are thinking about a VIDEO (CRT) Monitor, please see that the monitors have NO serial ports (the VGA connector is a 15 pin connector the size of a DB-9 format, which may look similar to a serial port).

Current monitors use frequencies not ever dream of in HP41 times, I think you should try to obtain a HP IL video adapter, connected to a standard, NTSC monitor (those with a RCA composite video input).

Please see the documentation coming with such HP IL video adapters, to ensure you are using the proper monitor and cable!

Re: Connecting an HP41CX to a PC monitor

Message #3 Posted by [Christof \(Davis, CA\)](#) on 27 July 2002, 12:58 p.m.,
in response to message #1 by Theo Kastrissios

I suppose it is possible that, if you found an old serial terminal, you could write something that would work, if you had a module that would output rs232 serial. (or rs422 for some old terminals).

Far easier, I think (if you are have a serial output available) is to use soemthing like minicom in *nix to view the serial port data. Not sure how readable it would be, but it's definitely hackable. tip is a bit less powerful than minicom, it may not work as well.

-Christof

Re: Connecting an HP41CX to a PC monitor

Message #4 Posted by [Ellis Easley](#) on 27 July 2002, 4:36 p.m.,
in response to message #1 by Theo Kastrissios

I agree that the only "easy" way to connect to the 41 is HPIL and there is (actually, are two versions of) HPIL adapter that display on a composite monitor. Now I'm not sure whether the 41 supports this next thing, but the 71 and the 75 have a "printer is" command that lets you direct printer output to another device, including the HPIL video adapter - which has a memory bigger than one screen in size, through which you can scroll.

Re: Connecting an HP41CX to a PC monitor

Message #5 Posted by [Christoph Klug](#) on 31 July 2002, 10:31 a.m.,
in response to message #4 by Ellis Easley

Best solution is working with the HP-IL/PC Interface Card and belonging software TRANS41. This configuration runs nice on modern PC's (also with special software tool under WIN2000) but your motherboard make available an 16 bit ISA-slot. Some modern motherboards have one or two ISA-slots or special add on expansion boards exist (for example for the HP vectra PC's). This solution gives you some advanced features - much more than only poor output to a video screen : printing, emualtion of a mass storage device (a virtual IL-Disc-Drive), data transfer to a DOS file and last not least exchange with HP-41 emulator software like EMU41 or V41. For all this applications proved software solutions exist. The HP-IL/PC Interface Card is availlable from me as a rebuild version of the HP82973A interface card.

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speeding up an HP41CX

Message #1 Posted by [Theo Kastrissios](#) on 26 July 2002, 11:15 p.m.

Can anyone tell me if speeding up the HP41CX by will adversely effect the time function on the machine. Also, if speeding up an HP41C will effect plug in modules such as quad mem and X-Functions? Thanks. TJK

Re: speeding up an HP41CX

Message #2 Posted by [David Smith](#) on 27 July 2002, 2:31 p.m.,
in response to message #1 by Theo Kastrissios

The clock module in the machine has its own crystal so it should work fine along with most of the various ROM module. Problems can arise with the card reader, HP-IL module, and some of the other hardware peripherals. Most speedup mods to the machine had a way of turning them on and off.

Re: speeding up an HP41CX

Message #3 Posted by [Tony Duell \(UK\)](#) on 27 July 2002, 6:57 p.m.,
in response to message #1 by Theo Kastrissios

The timer chips in the time module and 41CX (both normal and halfnut versions) have their own crystal and are not affected by the speedup mod. Nor should any ROM or RAM modules. But please remember that these modules were not designed to run at the higher speed, so some may not work correctly. You will just have to test all the functions of your machine if/when you've done the speedup to see if you have any modules that don't like it. IIRC, the card reader doesn't work properly on a speeded-up machine. The Wand normally works better on a faster machine. And some HPIL functions have problems (particularly if you're using a tape drive and have a file that spans the 2 tracks -- the machine can think the tape is taking too long to rewind).

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HP 67 Card Reader

Message #1 Posted by [Steven Faison](#) on 26 July 2002, 3:33 p.m.

I have an HP 67 calculator which has developed a gummy wheel which causes the card reader not to work.

Joe Rigdon who helped repair some battery chargers a couple of years ago for me apparently cannot be contacted at his last e-mail address. I've contacted the two companies listed in A Guide to HP Handheld Calculators and Computers and neither repair the HP 67 any longer.

Does anyone know who repairs HP 67 calculators presently?

Re: HP 67 Card Reader

Message #2 Posted by [Karl-Ludwig Butte](#) on 30 July 2002, 6:37 a.m.,
in response to message #1 by Steven Faison

Hi Steven,

there's an excellent description on how to repair a 67-card reader under <http://www.hpmuseum.org/repair.htm>. With that you can try it yourself if you have some watchmaker tools and a quiet hand. I have already repaired 4 65 /67 card readers successfully and would also offer it to you to repair yours. If you're interested or have any questions please contact me via LKL_Butte@web.de

Regards

K.-L. Butte

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HP97 sold on ebay 3 times?

Message #1 Posted by [Ellis Easley](#) on 26 July 2002, 9:58 a.m.

Are these three Ebay auctions offering the same HP97? All three are from the same seller and have this statement or similar: "There are some markings with pen near the print head and on the back of the case."

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1363967055> sold July 8.

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1365757810> sold July 16.

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1368583509> ends July 29.

The second and third have identical looking photos and the third might be a re-list, maybe the second buyer decided not to.

Re: HP97 sold on ebay 3 times?

Message #2 Posted by [Chris Catotti \(Florida\)](#) on 26 July 2002, 10:34 a.m.,
in response to message #1 by Ellis Easley

4 times ??

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1368583509>

Re: HP97 sold on ebay 3 times?

Message #3 Posted by [Ellis Easley](#) on 26 July 2002, 11:29 a.m.,
in response to message #2 by Chris Catotti (Florida)

Not to be picky, but that's one of the three!

Re: HP97 sold on ebay 3 times?

Message #4 Posted by [Chris Catotti \(Florida\)](#) on 26 July 2002, 1:22 p.m.,
in response to message #3 by Ellis Easley

OOPS!!

Reading glasses don't solve all of my reading problems at the computer ...

Re: HP97 sold on ebay 3 times?

Message #5 Posted by [Victor](#) on 26 July 2002, 1:28 p.m.,
in response to message #1 by Ellis Easley

The buyer of the first HP-97 left positive feedback:

"Very nice to deal with, fast shipment and product fine condition highly recommend"

Perhaps in the second auction, the buyer didn't want to pay the \$380.00. He has zero feedback.

Re: HP97 sold on ebay 3 times?

Message #6 Posted by [Steve Borowsky](#) on 26 July 2002, 9:37 p.m.,
in response to message #1 by Ellis Easley

If all three were originally owned by one company they would all be marked to indicate ownership in the same way.

Re: HP97 sold on ebay 3 times?

Message #7 Posted by [Dave Shaffer](#) on 26 July 2002, 11:25 p.m.,
in response to message #1 by Ellis Easley

They all look different to me - at least in the listings that are visible now (Friday evening, July 26).

The second and third pictures are clearly different - one shows the LEDs on and the other doesn't, and the amount of paper in the printer are different, and the accompanying materials are listed and show differently (one has a spare battery and some application PACs, the other apparently does not), and the first one listed has fewer associated items (and is the only one with the markings annotation).

As somebody else noted, maybe some outfit decided to get rid of a bunch of these.

Re: HP97 sold on ebay 3 times?

Message #8 Posted by [Ellis Easley](#) on 27 July 2002, 12:24 a.m.,
in response to message #7 by Dave Shaffer

The first one says: "There are some markings with pen near the print head and on the back of the case."

The second one says: "The calculator is in good cosmetic shape except for some transparent pen writing near the print head and on the bottom of calculator."

The third one says: "The calculator is in good cosmetic shape except for some almost transparent pen writing near the print head and on the bottom of calculator."

I agree the first auction has a different photo and it is offering fewer accessories. But I did a file compare on the first photo in each of the second and third auctions, and the files are identical. I'll allow for the possibility that the files having the same name might be causing some confusion in my browser due to caching, but I have hit "refresh" on both pages to try to eliminate that.

I'm not trying to cause trouble, I just think it is curious. I wouldn't be surprised if the third auction is a relist of the second, because the second buyer decided he wouldn't pay such a high price after all. I understand it happens.

Re: HP97 sold on ebay 3 times?

Message #9 Posted by [Shane Wright](#) on 27 July 2002, 4:55 p.m.,
in response to message #1 by Ellis Easley

There is some concern over the originality of each calculator that has been posted. To end the discussion any calculator sold by 'thisiswright@hotmail.com' is different from previous e-bay posts. I bought them from a surplus sale. Each one is in excellent condition and works great. Please feel free to bid on these calculators.

thanks -Shane

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System RPL on the HP49G

Message #1 Posted by [TJKAS](#) on 26 July 2002, 3:29 a.m.

Can someone please explain to me how you go about programming in System RPL for the 49G. I have read several articles/texts but what I want to know is how to do it from the beginning. That is how to install the required libraries - both on the HP49G and external and what steps you would use to start to program, compile etc in system RPL. I would be very grateful if someone could explain this WITH exmples.

Re: System RPL on the HP49G

Message #2 Posted by [Ellis Easley](#) on 26 July 2002, 9:46 a.m.,
in response to message #1 by TJKAS

I haven't done it yet but I have been searching for information. Have you read the items recommended in the "20 Essential Things..." file at hpcalc.org? (<http://www.hpcalc.org/details.php?id=4910>) Also, Jean-Yves Avenard's website (http://www.epita.fr/~avenar_j/hp/calcen.html) seems to be a fairly official source of program development information, since HP doesn't seem to have any on their website. His 49g page is mostly just about the FlashROM versions but the other pages (48g, 38g and 39/40g) have development tools and entry point lists you can download. I was surprised to see that you can program the 38/39/40g in SysRPL.

But speaking of HP, isn't it strange or depressing or something, that the web address molded into the cases of some of the recent models doesn't even exist? You would think they could at least have left an archive there with the good old "NOMAS" disclaimer.

Re: System RPL on the HP49G

*Message #3 Posted by [S. Martin](#) on 26 July 2002, 1:01 p.m.,
in response to message #1 by TJKAS*

Try looking at the quit thorough programming manual by Eduardo Kalinowski. It has just about everything you need to know. The second edition comes in two volumes, the manual and program examples. You can find it at:

<http://www.hpcalc.org/hp49/docs/programming/>

Re: System RPL on the HP49G

*Message #4 Posted by [Ellis Easley](#) on 26 July 2002, 5:04 p.m.,
in response to message #3 by S. Martin*

Yes, those are among the recommended books in the "20 Essential Things ..." file. I have only taken a quick look at them, but they are the most tutorial things I've seen.

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What is this HP-41 program doing?

Message #1 Posted by [HrastProgrammer](#) on 26 July 2002, 2:50 a.m.

```
LBL A
RCL Z  ST+ T  *  4  *
RCL Y  CHS  ST0 Z  X^2  X<>Y  -  SQRT
ST0 T  X<>Y  +  LASTX  R^  -
RCL Z  ST/ Z  /
END
```

Just a little exercise for the hot summer days ...

Re: What is this HP-41 program doing?

Message #2 Posted by [Ex-PPC member](#) on 26 July 2002, 4:12 a.m.,
in response to message #1 by HrastProgrammer

It is computing the real roots of a quadratic equation, where the coefficients have been entered into the X,Y,Z stack registers initially.

Re: What is this HP-41 program doing?

Message #3 Posted by [HrastProgrammer](#) on 26 July 2002, 6:33 a.m.,
in response to message #2 by Ex-PPC member

Bravo! I used it in the school, some 17 years ago. In fact, I have used the following program which can handle complex solutions as well:

```
LBL A
  CF 00  RCL Z  ST+ T  *  4  *
  RCL Y  CHS  STO Z  X^2  X<>Y  -
  X<0?  SF 00  FS? 00  CHS  SQRT
  FS? 00  GT0 01
  STO T  X<>Y  +  LASTX  R^  -
  LBL 01  RCL Z  ST/ Z  /
END
```

Real solutions: flag 0 cleared, X=x1, Y=x2 Complex solutions: flag 0 set, X=Im, Y=Re

The size of this program is 41 bytes (not counting LBL A and END). I am aware this is not optimal and would like to make a proposal: Who can write a shorter program? Only stack registers and flag 00 can be used. Alpha register and data registers cannot be used. Synthetic instructions are welcome but alpha register should not be disturbed.

Re: What is this HP-41 program doing?

Message #4 Posted by [HrastProgrammer](#) on 26 July 2002, 6:48 a.m.,
in response to message #3 by HrastProgrammer

This is a slightly modified version:

```
LBL A
  CF 00  RCL Z  ST+ T  *  4  *
  RCL Y  CHS  STO Z  X^2  X<>Y  -
  X<0?  SF 00  ABS  SQRT
  FS? 00  GT0 01
  STO T  X<>Y  +  LASTX  R^  -
  LBL 01  RCL Z  ST/ Z  /
END
```

39 bytes.

Re: What is this HP-41 program doing?

*Message #5 Posted by [Mike \(Stgt\)](#) on 26 July 2002, 8:57 a.m.,
in response to message #4 by HrastProgrammer*

Reminds me the integration with Simpson rule I've once done only on the stack.
Was useful when you had a table of points with uniform steps in X.

Ciao.....Mike

Re: What is this HP-41 program doing?

*Message #6 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 26 July 2002, 2:39 p.m.,
in response to message #3 by HrastProgrammer*

Hi, HrastProgrammer;

Hey, have a look [here](#). If you cannot open it, tell me and I'll send the text.

Cheers.

Re: What is this HP-41 program doing?

*Message #7 Posted by [HrastProgrammer](#) on 28 July 2002, 3:00 a.m.,
in response to message #6 by Vieira, Luiz C. (Brazil)*

Thanks Luiz ...

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HP320LX (is it old enough?)

Message #1 Posted by [Christof \(Davis, CA\)](#) on 25 July 2002, 10:36 p.m.

recently, an auctioneer was on ebay with a pile of 320LX machines - buyitnow price was low, came out to \$35 including shipping. So I took the risk, not knowing what she'd end up shipping.

The box and contents are in good shape, the 320LX itself needs cleaning and is in good shape, but obviously not NIB.

What she didn't say (and why this was a deal) is that it's a 4meg and wince2.0 upgrade unit!

Anyone else order one of these?

-And after all of that, there's the meat of the question. given that the only *nix I can find that supports these is minix or maybe netbsd, and both require largish additional filesystem accessories (128meg cf card, for example) I'm really wondering if anyone has given thought to burning new roms for these with some form of basic- *usable* OS.

I'm not enough of a code monkey to really fly with a project like that, but I'd put anything I could into it. The units are pretty cheap, and they are the last really useful qwerty based hp machine to run on AA power. (they also have the old style HP type keyboard instead of the jornada's soft touch monstrosity)

-christof

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more stat ops

Message #1 Posted by [Xtian](#) on 25 July 2002, 1:23 p.m.

Having had such great luck with my question about MEAN and SDEV, I will now ask about something much more complex (which I am guessing requires programming):

How can I get Sum of Squares and Mean of Sum of Squares on an HP 42S? The Notation for these are:

SS (Sum of Squares)

SSR/SSW (Rest/Within)

SST (Total)

MSS (Mean of Sum of Squares)

MSSA (Group A)

MSSB (Group B)

MSSR/MSSW (Rest/Within)

If I knew that my final on Monday would be muuuuuuuuuuch easier. :)

I thank you kindly in advance.

Re: more stat ops

Message #2 Posted by [David H Thompson](#) on 25 July 2002, 3:50 p.m.,
in response to message #1 by Xtian

What is the subject of your final exam?

Re: more stat ops

Message #3 Posted by [Xtian](#) on 25 July 2002, 4:02 p.m.,
in response to message #2 by David H Thompson

Linear Models (Economics!) ;)

Re: more stat ops

Message #4 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 25 July 2002, 5:59 p.m.,
in response to message #1 by Xtian

The statistics registers can be moved, but in a standard configuration (which I assume you have), are located in memories R11 to R16. There you will find sum of x, sum of x^2 , sum of y, sum of y^2 , sum of product xy, and number of pairs. All statistics like mean, sdev, etc. are calculated from these values. There are more options which you may enjoy knowing... after your exam! (Good luck!)

BTW, the issue regarding SDEV and Variance has to do with the difference between sample and population. The variance of a sample is larger than the variance of the population, by a factor of $(n/(n-1))$. Sdevs are the square root of variances in both cases. The calculator will give you the sample sdev, so you may need to correct for a population.

Please check all these hints before your exam, since I'm answering just from memory, and there may be small errors in what I recall.

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hp 41C repair center.

Message #1 Posted by [ricardo romero](#) on 25 July 2002, 9:44 a.m.

Does anybody knows where can I repair my HP 41 c??

feedback is appreciated

ricardo romero

Re: hp 41C repair center.

Message #2 Posted by [Raymond Hellstern \(Germany\)](#) on 25 July 2002, 12:45 p.m.,
in response to message #1 by ricardo romero

Here in the museum is a related page: <http://www.hpmuseum.org/repair.htm>

Raymond

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42S stat ops

Message #1 Posted by [Xtian](#) on 24 July 2002, 6:14 p.m.

Howdy.

I have a 42S (won it at an engineering frat rush party in '91!) I haven't used in ages and have long since lost the manual. It seems you can't find a manual online anymore, and can't buy it either. Sad.

Well, right now I simply want to use the MEAN and SDEV operations but have absolutely no clue as to how to use them. I have been tinkering with it for a couple days now and its not obvious to me. I have 3 numbers: how do I get them entered and get the mean of them? Ditto for stadnard deviation.

If some kind soul could answer me this I would be very happy. The rest I will have to figure out by playing with it.

Thanks!

Re: 42S stat ops

Message #2 Posted by [Vieira, Luiz C.](#) on 24 July 2002, 6:45 p.m.,
in response to message #1 by Xtian

Hi;

entering the three numbers for statistics requires [Sigma +] (Sigma means the sigma symbol) to be pressed. Instead, you should have a look at the menu available at [÷] (division) key; just press [SHIFT][dvision] and you are inside the Statistics menu.

Before starting, clear the previous menu data with [SHIFT][CLEAR] {CLSigma};

Then, one by one, enter each data (pair of data) and press [Sigma+], first key in the STAT menu;

After entering all data (your three numbers set), just press softkey for [MEAN] and [SDEV] in the same STAT menu.

If you need more info, send me an e-mail.

Hope it helps... for now.

Re: 42S stat ops

*Message #3 Posted by [Xtian](#) on 24 July 2002, 6:54 p.m.,
in response to message #2 by Vieira, Luiz C.*

Holy cow, it works!

I have an exam on Monday and this will make my life alot easier.

Thank you so much. Um... if I think of anything I'll email. :)

Re: 42S stat ops

*Message #4 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 24 July 2002, 7:01 p.m.,
in response to message #3 by Xtian*

Good news! Hey, ar'u in Texas?

If'u need so, I'm here. Be my guest. Anytime.

Best regards.

Re: 42S stat ops - SDEV gives funny results

*Message #5 Posted by [Xtian](#) on 25 July 2002, 1:29 p.m.,
in response to message #2 by Vieira, Luiz C.*

MEAN acts as I would expect, but I see now that SDEV does something strange.

The Standard Deviation of 20, 25, and 45 should be 175, but the 42S tells me 13.2288!
MEAN is correct (30), as is SUM (90).

Entering as such (after having CLSigma (cleared Sigma)):

STAT (menu)

Sigma+

25

Sigma+

45

Sigma+

SDEV

(Yes, I will buy the CD with the manual, but it won't get here to save me for my exam on Monday.)

The calculator is correct

*Message #6 Posted by [Jim L](#) on 25 July 2002, 1:58 p.m.,
in response to message #5 by Xtian*

I think you've confused standard deviation and variance.

I recommend much studying before Monday. ;-)

Re: The calculator is correct

*Message #7 Posted by [Xtian](#) on 25 July 2002, 2:15 p.m.,
in response to message #6 by Jim L*

Umm, right. I wanted $SDEV^2$, Variance.

Thank god for HP's products and the kind knowledgable folks on this forum. :)

Re: The calculator is correct

Message #8 Posted by [Xtian](#) on 25 July 2002, 2:28 p.m.,
in response to message #6 by Jim L

SDEV^2 is close to the Variance, but its not the same thing (in this case you get 175. xxxx instead of a whole number: 175.)

Does the 42S do Variance? (What I should have asked from the start.)

Re: The calculator is correct

Message #9 Posted by [rsenzer](#) on 25 July 2002, 7:56 p.m.,
in response to message #8 by Xtian

Hi Xtian,

I can't answer directly because I don't have a 42S. However, I have performed the calculations on a 32SII. The result of squaring the sample standard deviation on this calculator is :

174.999999999

So I think it's just a matter of rounding error.

The more important issue is distinguishing between sample statistics, which use a denominator of (N - 1) based on loss of a degree of freedom, and the population statistics, which use a denominator of N. [N being the number of data points.] On the 32SII, the sample standard deviation is given by s_x whereas the population standard deviation is given by [lower case greek letter] σ_x .

If a calculator has only one or the other, then

$$\sigma_x^2 = [(N - 1) / N] * s_x^2$$

and

$$s_x^2 = [N / (N - 1)] * \sigma_x^2$$

Just take the square root to compute σ_x or s_x .

Re: The calculator is correct

*Message #10 Posted by [Karl Schneider](#) on 26 July 2002, 12:56 a.m.,
in response to message #9 by rsenzer*

Most HP calc's offer only the sample standard deviation "s". To obtain the population s.d. ("sigma"), the manuals generally advise entering the mean as an extra datum, then finding "s".

The 32Sii offers both "s" and "sigma".

Re: 42S stat ops

*Message #11 Posted by [Tom \(UK\)](#) on 25 July 2002, 7:14 a.m.,
in response to message #1 by Xtian*

You can get the HP42S manual from this site via the manual CD's.

Goto:

<http://www.hpmuseum.org/software/swcd.htm>

You would want CD1, but the whole set is worth it.

Tom.

Re: 42S stat ops

*Message #12 Posted by [Fred Lusk \(CA\)](#) on 25 July 2002, 9:15 p.m.,
in response to message #1 by Xtian*

Always remember to clear the summation registers before entering a new data set.

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HP41's LCD Characters TTF File available

Message #1 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 24 July 2002, 12:48 p.m.

Hi;

I intend to turn it into an article, but I believe I can count on you , guys, to give me a feedback.

In 1995 I wrote a book about both HP41 and HP48 (Portuguese only) and it dealt with the transition "from the HP41 to the HP48" (in Portuguese, that's exactly the title: "Da HP41 para a HP48"). I was known about Wickes' "HP41/HP48 Transitions" when I was writing mine, and in fact I did not have the pleasure yet to read it. I have the first two volumes of the HP48 Insights, and I believe Transitions may also be a great reading.

At that time, I used to think how good would it be if I had TTF that could give me the LCD's characters for the HP41. In my book I used some BMP from transferred HP48 screen to the computer. But the LCD's characters in the HP41 are something more than BMP imageses.

After finishing the book, I spent some time researching, and found Corel DRAW! as the, at least for me, available tool to generate the TTF.

I spent one month, about one hour a day, Monday to Friday, and I could finally generate a TTF file with all characters in the 41's LCD, another with all possible keycodes for all HP calculators (recently updated to accept HP49's new characters), other three ones with all three-size HP48 characters, one with the inverted smallest HP48's font (softkey menus) and one with voyagers' LCD characters. Only one problem: I created them all as standard set, not symbol char sets, and some problems appeared.

Well, three fellows from here (contributors) have test-driven the HP41 LCD character font, and one of them alerted me about its size (somewhat tall). I fixed it and also converted the hole font to symbol font (in fact, I had to redraw the pattern and save all characters again; it took me a few couple of hours, but definitely a lot less time then when I created the files).

I asked Dave if he could host the HP41 TTF file (it is somewhat small, no need to zip it) and he

accepted. If you want to download it, go [here for the HP41 font](#), and if you want first to have a look at it, download [this PDF demonstration](#).

Please, 41 users and maniacs (as I am), send me any feedback about this TTF (like it or not, let me know). I'd gladly improve it, if needed.

The Voyager Charset is also something to see. If you want to try it, send me an e-mail. If people ask to, I'll ask Dave to host it too.

Hope you enjoy.

Best regards.

Re: HP41's LCD Characters TTF File available

*Message #2 Posted by [jose goncalves](#) on 24 July 2002, 4:07 p.m.,
in response to message #1 by Vieira, Luiz C. (Brazil)*

Good contribution, mr Vieira !

BTW, where can I find your book for sale ?

Re: HP41's LCD Characters TTF File available

*Message #3 Posted by [Chris Catotti](#) on 29 July 2002, 12:01 a.m.,
in response to message #2 by jose goncalves*

Wow! I think this is really great! Luiz, please contact me via email kd4ace@earthlink.net

I wold like permission to use your fonts on my module webpage, and also provide a lint to download your font.

<http://home.earthlink.net/~kd4ace/HP-41/HP-41.htm>

My webpage is a thought in progress, but your font has given me several ideas! Can I provide a download link, or Dave Hicks, should I point to the download at the HP Museum?

Thanks!

Chris.

Chris

Re: HP41's LCD Characters TTF File available

*Message #4 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 29 July 2002, 9:56 a.m.,
in response to message #3 by Chris Catotti*

Hi;

be my guest using the fonts anywhere they fit in. You do not even need to mention it's origin. Let's say it belongs to us (I'd rather be a j... if I try keeping it with me, don't you think?), 41 users.

There is (at least by now) no other downloading point than the Museum's. I asked Dave about it, and I guess it's fine pointing to it. As soon as I have my own page (time is coming, time is coming...) I'll let everybody know.

I also have a nice Voyager's style LCD TTF. I'm posting it here soon.

Thanks, Chris. Your recognition, as Mr. Goncalves', is more than gold. I posted my e-mail here, so you, please, feel free contacting me anytime. (I forgot this in first post...)

Cheers.

Re: HP41's LCD Characters TTF File available

*Message #5 Posted by [thibaut.be](#) on 29 July 2002, 5:07 p.m.,
in response to message #4 by Vieira, Luiz C. (Brazil)*

Hi Luiz,

Your fonts are just great. I just love them, and wish to congratulate you for the good job you did.

I just have a suggestion : wouldn't you extend the fonts to the small letters, so tht this font type could be used more extensively ?

Thibaut

Re: HP41's LCD Characters TTF File available

*Message #6 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 29 July 2002, 7:24 p.m.,
in response to message #5 by thibaut.be*

Hello, Thibaut;

thank you very much for your support. I believe I understood what you mean, and I agree with you. Anyway, let me see if I need to clear some points.

Just to figure it out: when you mention small letters you mean lower-case alphabet? If so, I tried some, but I encountered some difficulties building, e.g., lower-case x, that looks exactly as its upper-case counterpart, as some others. I do not know how to draw some lower-case letters with the 14-segment scheme. You know, I decided that building the font as closed as possible to the 41's LCD characters would satisfy the 41 team. But you are right again, a complete set of lower-case letters will allow the font to be used with other purposes, as for example the HP digital multimeters that use 14-segment display characters. I can build the lower-letters, no matter at all, I'd just like to know how to draw them, how would they look.

If you are not talking about this, just forgive me: what do you mean by small letters?

Thank you for your suggestions.

Cheers.

Re: HP41's LCD Characters TTF File available

*Message #7 Posted by [thibaut.be](#) on 30 July 2002, 5:08 a.m.,
in response to message #6 by Vieira, Luiz C. (Brazil)*

Yes, i was speaking about "lower case" letters... I arrived quite tired yesterday night and just did not remember how to say that...

well, my impression is that if it absolutely not possible to build a lower case letter different than the upper case scheme, use the upper case, but completing the whole alphabet would be great to use UMHO...

Best regards,

Re: HP41's LCD Characters TTF File available

*Message #8 Posted by [Chris Catotti \(Florida\)](#) on 30 July 2002, 9:41 a.m.,
in response to message #7 by thibaut.be*

There is great value in having the font set display EXACTLY as the HP-41 LCD, including the inability to display all ASCII values as a unique character (the boxed star gets a lot of use). Having said that, a separate EXTENDED HP-41 LCD FONT would be great too. The last font (From an HP-41 enthusiast) that is needed is the dot matrix printer.

Then anyone (me) could publish webpages about the HP-41 and show how the display and how the printer really looks.

Re: HP41's LCD Characters TTF File available

*Message #9 Posted by [thibaut.be](#) on 30 July 2002, 10:32 a.m.,
in response to message #8 by Chris Catotti (Florida)*

Yes, Chris, I totally agree, for consistency with the original purpose it would be good to dissociate the original font set and an extended 41 font set.

And why not creating the same for the printer fonts...

Note how paradoxal this comes : we had resolution 300, 600, 1200, 2400 dpi laser printers, and all we want now is to use the accuracy of this resolution... to print 6x7 matrix character types...

OK, guys. Consider it done!

*Message #10 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 30 July 2002,
10:40 a.m.,
in response to message #8 by Chris Catotti (Florida)*

Hí;

well, just give me a few days (I'm just finishing to do some urgent stuff) and I'll build the **82143A Char Set** (does it sound good? Suggestions? It will be ours, not mine, so you should suggest, too.).

I'll be testing the new typos this very weekend.

Thank you a lot.

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Lithium packs for display and storage

Message #1 Posted by [Michael Meyer](#) on 23 July 2002, 7:02 p.m.

I've been building battery packs lately with Eveready AA lithium batteries. For the HP-35 type, I glue three together, lightly grind the terminals and solder appropriately, and then use doll house copper ribbon wire to make the metal sheet contact between the outer cells. They solder quickly and easily and with low temp and no vents appear to be covered. These batteries have a ten-year shelf life, and from what I've read, may be useable beyond 20 years. They are supposed to be leak-proof as well. I like that I can store the calculators in my collection with the rechargeable batteries removed and can still turn them on, use them, and not have to worry about charging them. These batteries have about 5 times the life of alkaline batteries and have a much wider range of temperature stability. I know there's been discussion here about voltage differences, but I think it's minimal enough that I've encountered no problems and have read of no problems on the forum.

I'd be happy to post photos if anyone is interested...

Comments?

Michael

Re: Lithium packs for display and storage

Message #2 Posted by [David Smith](#) on 23 July 2002, 8:51 p.m.,
in response to message #1 by Michael Meyer

Make damn sure that nobody plugs in a charger with one of them installed... otherwise a small nuclear scale explosion may await.

Also NO commercial battery is leakproof. The same manufacturer also says that their "N" cells are leak proof. I have quite a pile of hopelessly corroded HP41 battery contacts that say otherwise.

It is always best to store a machine without the batteries installed. If you keep the pack near the machine then double bag it. The gasses and fluids that they will eventually belch and spew can

be deadly to ones precious machines.

Re: Lithium packs for display and storage

*Message #3 Posted by [Michael Meyer](#) on 23 July 2002, 9:04 p.m.,
in response to message #2 by David Smith*

Thanks for the "heads-up". I also wonder if keeping power on a circuit for many years can result in oxidation of the circuit by electrolysis, as suggested by Victor Toth.

Since I started collecting and rebuilding, I've left the rebuilt packs in the calculators. I now plan to remove them all and store them separately.

Just wondering, though, out of ignorance, what toxic gases a lithium cell could release? I thought lithium cells were pretty air-tight to prevent H₂O from reacting with the lithium. But I don't know.

Anyone know how safe these cells are, in terms of leakage? I know not to try to charge them.... and no one in my home is allowed to even touch my collection.

Michael

Re: Lithium packs for display and storage

*Message #4 Posted by [Ellis Easley](#) on 23 July 2002, 11:17 p.m.,
in response to message #3 by Michael Meyer*

I first met lithium batteries when the IBM PC/AT came out and, of course, I had to see what was inside the black box. There were two cells (the unit was 6V) which were hermetically sealed (no vents). I cut one open and a fuming liquid came out. I assumed there was metallic lithium in there and got a little freaked out by the liquid - it actually gave off a mist - so I wrapped it up in a bunch of paper towels and threw it in a metal garbage container - I figured the main thing was not too let it come into contact with water, because of the lithium - and prayed that it didn't start a fire. (It didn't)

Are these 1.5V lithium cells? I think I've seen such a thing, I would like to know how they get 1.5V since the other lithium cells seem to be either 3.0 or 3.6V nominal - maybe they have a built in electronic regulator? A series regulator would waste half the available power but would let you offer a AA replacement with long shelf life and high capacity. Could also be a step-down switcher in there, the only bulky part might be the inductor - that would have better efficiency and so would deliver more of the available power (even longer life).

Most regular batteries leak because they have to have a pressure relief vent to release the hydrogen that is generated if they are discharged too fast. There is an oxidizer inside to react the hydrogen to water and if the discharge rate is never too high, the pressure never gets high enough to activate the vent. I don't know if the chemistry in lithium cells involves hydrogen - or if there really is metallic lithium inside. One type of lithium cell has a name ("Li SO₂") that suggests sulfur dioxide is one of the chemicals inside - that might explain the fuming I saw, although I don't remember smelling sulfur dioxide.

Re: Lithium packs for display and storage

Message #5 Posted by [Michael Meyer](#) on 24 July 2002, 12:55 a.m.,
in response to message #4 by Ellis Easley

Thanks. I, too, have wondered how they get 1.5 volts. I've been buying these, though, in 4 packs at Office Depot for \$8.99. More expensive, of course, but if they equal 20 regular alkalines, store better, etc., they've seemed very worth it. I do suspect metallic lithium as the cells are so light. (Maybe it just means they don't need much lithium to have big amounts of energy...)

It makes sense that these batteries are fully sealed come to think about it. Sooo...

I'd still bet that these cells could sit in a calculator for several decades safely. But why take the risk....

I do keep a pair in my HP-25 and the three in my daily HP-67. I've run these for countless sessions with no sign of them letting up! I'll let you know if I have any problems. Let's check back in 20 years and see... <grin>

Michael

Re: Lithium packs for display and storage

Message #6 Posted by [Juergen Rodenkirchen \(Germany\)](#) on 24 July 2002, 5:52 a.m.,
in response to message #5 by Michael Meyer

As this thread made me concerned on storing battery packs in general, what about Ni-Cd packs? How long would you expect a (discharged) Ni-Cd akku pack can be savely stored without showing unwanted or harmful effects? Besides, what would you recommend on storing those? (If these questions should be stupid in a way, please accept my apology being not very skilled in HW-things ...).

Re: Lithium packs for display and storage

Message #7 Posted by [Ellis Easley](#) on 24 July 2002, 1:48 p.m.,
in response to message #6 by Juergen Rodenkirchen (Germany)

Most NiCads seem to leak eventually - although my HP97 that I got this Spring has its original 1977 battery in it and shows no sign of corrosion or leakage. I got a set of 4 "N" NiCads to use in my HP41C about two years ago, I've only charged them three times (very gently) and one of them has the white crystals forming around the positive terminal. Here is a very good article on the subject of battery leakage and corrosion in calculators from Viktor Toth's website:

<http://www.rskey.org/calccorr.htm>

The usual explanation for leakage is pressure buildup caused by the temperature increase that occurs if an aggressive (non-trickle) charging current continues to be applied after the cell is fully charged. One type of "smart" charging circuit has a thermistor mounted in the battery pack to sense the temperature and stop the full charging current once the temperature starts rising quickly.

But I have the N cells and also two Classic batteries I bought brand new from EduCalc (for the used HP75/printer/disk drive set they sold) which I only charged a few times, which I stored away from the calculator (no external leakage current), which leaked over the years anyway. So I have two theories about NiCad leakage: (1) they might tend to leak less if they are used regularly - sitting idle for extended periods after complete self-discharge, they seem to leak even though they are not subjected to overcharging. (2) Smaller cells (N, AA) seem to leak more than sub-C's - in the case of normal use and occasional overcharging, this would make sense since the smaller volume would reach a higher pressure after a shorter period of abuse.

I wish Nicads came with something to absorb and/or neutralize the electrolyte that escapes, like the felt rings for car battery posts - those work very well.

Re: Lithium packs for display and storage

Message #8 Posted by [Juergen Rodenkirchen \(Germany\)](#) on 24 July 2002, 2:14 p.m.,
in response to message #7 by Ellis Easley

Ellis, thanks for the comprehensive information! It really helps me a lot as it gives me deeper insight into this matter!

Re: Lithium packs for display and storage

Message #9 Posted by [David Smith](#) on 24 July 2002, 12:27 p.m.,
in response to message #5 by Michael Meyer

There are many different types of lithium chemistry available in batteries lithium-sulphur dioxide, -manganese, -thionyl chloride, -iodine, etc. Each has its own characteristics and output voltage. I think the 1.5V cells are manganese.

Unless your battery is like a space or implant qualified hermetically sealed unit (think hundreds or thousands of bucks each) then it has a seal in it of some sort. Also some kind of pressure vent seal. And as we all know from our engineering courses ALL seals leak, eventually.

Re: Lithium packs for display and storage

Message #10 Posted by [Michael Meyer](#) on 24 July 2002, 10:31 p.m.,
in response to message #9 by David Smith

I do believe that they CAN leak, but I'm still guessing it's rare. Let's ask: has anyone had a lithium (non-rechargeable) battery leak (Camera battery, etc.)?

NiCd's seem to leak with regularity, as do all the older NiMH batteries I've collected. Nearly all alkaline cells have leaked over the years if stored in items... I did find a pristine set of alkaline batteries (luckily) in an old calculator. Might be of interest to a flashlight collector or something... 25 year-old AA alkalines....

The non-rechargeable cells seem to leak when they become completely discharged, which would (again) take ten to twenty years if lithium's were stored. I swear I don't have any stock in these things, and certainly don't want to be blamed if they DO leak-- or find out the hard way myself-- but I am (still) guessing they're the safest to keep in something long-term....

Michael

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Charlemagne Proto

Message #1 Posted by [kim](#) on 23 July 2002, 4:51 p.m.

Following the thread about protos (Jaguar).

I have a 'Charlemagne' proto with an eprom on the back.

I bought it at a garage sale (knowing what is was).

Knowing that the target for such an item is limited (but definately there) I'm clinging on to it like it was made of GOLD.

anyone else out there with a similar device.

Kim

Re: Charlemagne Proto

Message #2 Posted by [James M. Prange](#) on 23 July 2002, 10:13 p.m.,
in response to message #1 by kim

Not quite so exotic, but I have what **appears** to be sort of a prototype 48G, although the seller didn't say so in his listing. From the case color and keys, it looks like a 48S, but the faceplate is for a 48G. The ROM is version H, which, as far as I know, was never publicly released. If I ignore the faceplate, it functions as a 48S. I saw it on eBay, and was the only bidder; I paid less than what would be typical for a 48S or 48G if I remember correctly.

It's the only calculator that I own as purely a "collectible". Although it works just fine as a 48S, the 48G faceplate makes it rather confusing to actually use it (at least, without an overlay). I have no idea of what the market value "should" be, but I'm not about to part with it anyway.

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HP 15C Issue

Message #1 Posted by [Andy](#) on 23 July 2002, 3:19 p.m.

This probably has an easy fix but I need some help -- I have a "C" in the lower right corner of my screen and can't get rid of it. It doesn't appear to affect routine calculations but drives me crazy every time I see it. Any suggestions? Thanks.

Re: HP 15C Issue

Message #2 Posted by [Raymond Hellstern \(Germany\)](#) on 23 July 2002, 3:41 p.m.,
in response to message #1 by Andy

Hi,

this is the indicator for complex mode. You should be able to turn it off by CF 8 or CF 9 .

Regards,

Raymond

Re: HP 15C Issue

Message #3 Posted by [thibaut](#) on 23 July 2002, 5:03 p.m.,
in response to message #2 by Raymond Hellstern (Germany)

Well, the 9 flag is for the flashing (out of range, error, ...) indicator. It won't clear the complex mode, only the 8 flag will do.

Re: HP 15C Issue

*Message #4 Posted by [Andy](#) on 24 July 2002, 11:22 a.m.,
in response to message #3 by thibaut*

Thanks -- CF 8 did it! Andy

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Need Advice: What models are non-programable but RPN?

Message #1 Posted by [Ken Smith](#) on 23 July 2002, 12:09 p.m.

Hi All -

I need to take a professional exam this fall. The test requires a calculator but it has to be non-programable.

I'm a devotee fan to my hp 48s and thus I can only use an RPN calculator.

Does anyone know of a RPN calculator (new or used) that has no programming features, but has scientific functions (10^x , e^x , LOG, LN, SQRT(x) etc.)

If so can you please let me know either by posting here or e-mailing me at htimsnoryb@yahoo.com

Thanks for your advice and recommendation:

ken

Re: Need Advice: What models are non-programable but RPN?

Message #2 Posted by [Ernie Malaga](#) on 23 July 2002, 12:50 p.m.,
in response to message #1 by Ken Smith

The non-programmable, scientific RPN calculators I know best are all really old ones:

HP-21, 27, 32E, 33E, 35, 45, 46, 91.

There's got to be more (in the more recent models), but, for the most part, modern HP calculators have been programmable.

All calculators listed above use rechargeable batteries and red LED displays, and were made between 20 and 30 years ago. Venerable stuff, really.

Re: Need Advice: What models are non-programable but RPN?

Message #3 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 23 July 2002, 1:16 p.m.,
in response to message #2 by Ernie Malaga

Hi;

The HP31, not listed, is also RPN, old LED-display model, and nonprogrammable.

I believe you are right, Ernie, and I do not know about any new RPN (LCD) HP that is not programmable. Even the financial nonprogrammable RPN ones (HP22, HP37) are old models. The still available HP12C and its predecessor, the HP38E/C, are RPN financial AND programmable.

One question: the HP19BII (I am not acquainted to this model) is both RPN and Algebraic. Is it PROGRAMMABLE or accpets math expressions as formulas stored in variables?

Re: Need Advice: What models are non-programable but RPN?

Message #4 Posted by [W. Bruce Maguire II](#) on 23 July 2002, 2:05 p.m.,
in response to message #3 by Vieira, Luiz C. (Brazil)

Luiz wrote:

One question: the HP19BII (I am not acquainted to this model) is both RPN and Algebraic. Is it PROGRAMMABLE or accpets math expressions as formulas stored in variables?

Luiz:

Yes, the 19BII **IS** programmable, just like the 17BII (and is actually a little *easier* to program since all the alphanumeric characters are on keys, rather than the alpha-menu approach that the 17BII uses).

I believe that the 19BII would be an excellent choice for an exam that disallows the super-powerful 48/49-type calculators, as it has the basic math/scientific functions built-in and could be programmed to provide a substantial amount of computing power! Also, since the 19BII is a "business/financial" calculator, engineering exams may just *overlook* its alphanumeric and programming capabilities. Then again, they may not... ;-)
Obviously, I would *check* rather than make any assumptions!

Bruce.

Re: Need Advice: What models are non-programable but RPN?

Message #5 Posted by [Ernie Malaga](#) on 24 July 2002, 7:14 p.m.,
in response to message #3 by Vieira, Luiz C. (Brazil)

Hey, Luiz, you left out the granddaddy of all them financial calcs: the HP-80 and its printing companion, the noisy HP-81. A cousin of mine had an 80 some 25 years ago; the only HP calculator I've ever seen with the ENTER key labeled "SAVE".

Sheesh.

-Ernie

Talking about oldies...

Message #6 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 24 July 2002, 8:53 p.m.,
in response to message #5 by Ernie Malaga

Hi;

I feel bad turning the thread in to another, but the subject is teasing, amazingly teasing.

You know what? I really did not remember. Here, in Brazil, Hewlett-Packard calculators became a fever in the mid 70's and the hole 80's. In the 90's I was out of the university and saw not that much. But I got contact with them only on 1984 (maybe 1985, I'm not sure), when I bought an HP41C.

I used to chase info about HP calculators, and I still have an issue of International Electronics announcing both HP41C and 41CV. I scanned it and sent them to Dave.

But the oldies were not part of my professional development. And I feel sad for it. When I read about the 9100, a calculator with no IC's (and it just here, in the Museum, that I got this information), I felt how far I was from calculator's history and technology.

I think of them, the oldies, as the best starting point. We would never have what we have today (HP calculators) if it is not because of them. Daring, innovative look, advanced technology, the user in mind... among many characteristics.

Simply amazing.

I miss a time I was not even known about...

Thanks, Ernie.

Cheers.

Re: Talking about oldies...

*Message #7 Posted by [Ellis Easley](#) on 26 July 2002, 11:23 a.m.,
in response to message #6 by Vieira, Luiz C. (Brazil)*

Here's another example of the impact of HP calculators: around 1984 or 85, when there were a lot of magazine articles celebrating the 10th anniversary of the personal computer, I read an article by (or about) the guy who started MITS with the Altair computer. He said he was inspired by an HP9100 that he used when he was in the Air Force.

When I was in high school, around 1972 or 73, I had a chance to use an HP desktop programmable for a few weeks. We had one semester of computer science which consisted of learning Basic using a teletype that was connected to a remote HP computer. We also spent a little time learning Fortran using a Basic language Fortran interpreter program. For a few weeks we had the use of the desktop machine with a plotter attached. As I recall, I was the only person interested in it. I remember writing graphing programs on it, I remember that it was necessary to send the plotter coordinate pairs of numbers but I don't remember any command codes like HPGL has - basically, the only command it had was "plot absolute". Also it didn't program in Basic but in some kind of keystroke language. It was the first calculator I ever used. Some years later (mid 80's) I found a 9100B in a surplus store and bought it because (1)I can't resist interesting electronic equipment AND (2)I thought it was the model I had used in high school. I've wracked my brain and I can't remember whether that machine had the green CRT or red LEDs. I just looked at the Museum articles on the early desktop models, and it is possible that it was a 9805 without the LED display!

Anyway, my 9100 came with some documentation relating to the project it had been used for by the military, a terrestrial-based location system. There is a brief scene in "The Andromeda Strain" where they are using some exotic equipment to track down something or someone, for a moment there is the image of what must be a 9100, with its three rows of green numbers. Based on this flimsy evidence, I like to imagine my 9100 is the one the Altair guy used, and that he

gave the filmmakers some shots of the machine to use in the movie.

Re: Talking about oldies...

*Message #8 Posted by [Masao Kinoshita](#) on 26 July 2002, 5:43 p.m.,
in response to message #7 by Ellis Easley*

>around 1984 or 85, when there were a lot of magazine >articles celebrating
the 10th anniversary of the personal >computer

Didn't Gwen Bell's group (the then Boston Computer Museum)determine
that the first personal (electronic) computer was the Kenbak-1? I think the
Honeywell Home Computer (N-M catalog) was even earlier, but since it cost
so much Gwen would probably have included her husband's PDP-8's as well
[imho].

HP content: Did HP name their HP 41 calculator/computer language,
"FOCAL," after the PDP-8 language? Was it really the winning name of a
contest?

Re: Talking about oldies...

*Message #9 Posted by [Ellis Easley](#) on 26 July 2002, 11:48 p.m.,
in response to message #8 by Masao Kinoshita*

I think the tenth anniversary of the Altair is what was being celebrated at
that time. As I understand it, the Altair was the first computer you could
buy all put together for about \$400, made possible by the Intel 8080
microprocessor and NMOS static RAMs. You couldn't do anything but
key in machine code by hand for a couple of years, I believe. Bill Gates
and Paul Allen moved to Albuquerque and started Microsoft there to port
Bill's Basic interpreter to the Altair. I'm not sure but I think the Altair
included the first implementation of the S-100 bus (it might have been
the Imsai). Maybe what they were celebrating in 1984 or 1985 was the
tenth anniversary of the personal microcomputer, or just the
microcomputer.

In my recent researches into the Olivetti Programma 101, I learned that
its designer recently wrote a book arguing that it was the first personal
computer. It came out in 1965, the same year as the PDP-8. Gordon Bell,
in "[Computer Structures: Readings and Examples](#)", includes the
Programma 101 as the limit of what can be called a stored program
computer. (The next chapter is about the HP9100.)

I'd like to read about the Boston Computer Museum and the Kenbak-1 and the Honeywell Home Computer. Can you point me to any sources of information?

HP 41 language: FOCAL, EUREKA...

*Message #10 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 27 July 2002, 10:49 a.m.,
in response to message #8 by Masao Kinoshita*

I used FOCAL in a PDP-11 in 1978, I remember its fractional line numbers...

I was dissapointed about the FOCAL naming on the HP41, because I feel it deserves something more original. I submitted EUREKA as a candidate for the contest, since it was an acronym for the disctintive HP41 features:

E: Expandability (hardware accessories and peripherals)

U: User-definable keyboard

R: RPN (Should I say more?)

E: Extensibility (programs can be called from other programs just as built-in functions)

K: Keystroke operation (compared to the BASIC calculators of the time, in which you needed to type "S I N (45) =")

A: Alpha features, unusual at the time

Re: HP 41 language: FOCAL, EUREKA...

*Message #11 Posted by [Ellis Easley](#) on 28 July 2002, 1:01 a.m.,
in response to message #10 by Andrés C. Rodríguez (Argentina)*

I never knew the HP41C language was called FOCAL, I thought it was just RPN. When did they name it that? (after the machine shipped, I gather) Why didn't the name catch on?

Re: HP 41 language: FOCAL, EUREKA...

Message #12 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 28 July 2002, 2:32 p.m.,
in response to message #11 by Ellis Easley

At the time the HP41 was introduced, HP operated the Users Program Library and published a quarterly newsletter called Key Notes for the Library subscribers. In a Key Notes issue, HP asked for submissions for a contest to give a name to the HP41 programming language. Perhaps it had to do with the idea of presenting the HP41 as a pocket computer, compared to Sharp and Radio Shack models based on the BASIC language.

RPN was used since the HP35 (or 9100?) just as the stack and postfix notation operating model, and did not mean any programmability in particular.

Apart from submitting EUREKA, I never knew anything more about the contest. Only in the last years somebody at this Forum mentioned that HP started calling it FOCAL, something to do with FortyOne C... A... Language. In my humble opinion, it is not a neat name, and also it was previously used for a language which ran in Digital Equipment Corporation machines (PDP-11, etc.). In fact, FOCAL was sort of a primitive BASIC, without subroutines; but easier than FORTRAN to learn. It has the distinctive feature of "fractional" program line numbers, so if you needed to insert a line between lines 1 and 2, you just number that line as 1.5 !

The classic versions of BASIC suggested the user to number the lines from 10 to 10, to allow for insertions; and some had a RENUMBER command to clean things up after many editing sessions.

Re: HP 41 language: FOCAL, EUREKA...

*Message #13 Posted by [Ellis Easley](#) on 28 July 2002, 6:05 p.m.,
in response to message #12 by Andrés C. Rodríguez (Argentina)*

I have Jake Schwartz's CD-ROMs which have all the Key Notes on them, I will look that up. Speaking of DEC, there are several books by Gordon Bell, who was the chief engineer at DEC for many years, which are available to be read online. One of them, "Computer Engineering", published in 1978, is just about DEC computers:

http://www.research.microsoft.com/users/gbell/Computer_Engineering/index.html

I've just scanned the index and don't see any mention of FOCAL. This is a hardware book but it does mention other languages. Is FOCAL a product of DEC or a third party?

FOCAL in DEC computers, and an old hardware story

*Message #14 Posted by [Andrés C. Rodríguez \(Argentina\)](#)
on 28 July 2002, 9:00 p.m.,
in response to message #13 by Ellis Easley*

I used DEC FOCAL in a PDP-11 (actually, it was the LSI-11 kit from Heathkit) around September, 1978. I was 20 years old and in the third year of my six-year degree in EE. As far as I can remember, it was a DEC product. Such LSI-11 (32 KBytes RAM) was one of the first computers we had in the university computer lab; before that year we used to go to an external computer center (IBM 360/370) to run our programs (mostly FORTRAN IV).

FOCAL came in a punched paper tape, which loads after loading an Octal Debugging Tool (ODT) and a Relocatable Loader (RLDR). So it took three paper tapes and about 15 minutes to boot the system before running any program. No wonder why the students (me included) preferred to program our handheld wonders! BASIC needed some 5 more minutes to boot, instead.

After those long boot delays, it was usual to have the computer hang up without evident reason. The delays were so frustrating that one student decided to investigate the cause of the problem. It had to do with different AC mains frequency. The LSI-11 derived a timing pulse from the AC supply, and the circuit caused a NMI (Non-Maskable Interrupt) to signal an impending power fail when the frequency decreases below a certain threshold. As the AC power in Argentina is 50 Hz, but the kit was calibrated for USA (60 Hz), our 20 milliseconds were too long a time for a circuit designed for 16.66 msec. That was the cause of the frequent NMI and subsequent hangups. It was very easy to solve... after knowing what was going on!

Re: Need Advice: - prob not too helpful, but interesting?

Message #15 Posted by [Tom \(UK\)](#) on 23 July 2002, 1:09 p.m.,
in response to message #1 by Ken Smith

Try the following web site (my old university):

<http://www.shef.ac.uk/ssid/admin/appcalc.html>

This is only any real use if the place where you are taking the exams has the same rules.

They list all the calculators approved at Sheffield university, the main thing they look for is not programmability but if they can display stored alpha information. (It can't use external programming cards either or make noise I think)

For some unknown reason they DO approve the HP42S (perhaps this is the reason they are popular...) but this is a mistake as the HP42S is able to store alpha but I think it slipped through because the letters are not printed on the keyboard (unlike the HP32S).

The list on the site is very interesting, I have not seen such a comprehensive list of calculators of all makes on the web. Try looking for the ones that are not approved.

They list the following HP RPN's as approved:

21S HP12C HP17B HP27S HP34C HP45 HP10B HP14B HP17B II HP32E HP37E HP10C
HP15C HP20S HP33C HP38C HP11C HP16C HP25 HP33E HP42S

Re: Need Advice: What models are non-programable but RPN?

Message #16 Posted by [Victor](#) on 23 July 2002, 1:42 p.m.,
in response to message #1 by Ken Smith

The National Semiconductor 4510 Mathematician, National Semiconductor 4640, Novus 4510 Mathematician, and Novus 4520 Scientist are all RPN non-programmable, as well as old LED models. All have log and trig functions. Only the 4640 and 4520 have scientific notation.

Re: Need Advice: What models are non-programable but RPN?

Message #17 Posted by [David Smith](#) on 23 July 2002, 4:52 p.m.,
in response to message #16 by Victor

Also don't forget the various commie calc from the old Soviet Union. Most were RSN (reverse Stalin notation... the Soviets invented RPN along with everything else, don't you know ;)

Re: Need Advice: What models are non-programable but RPN?

Message #18 Posted by [Masao Kinoshita](#) on 23 July 2002, 5:38 p.m.,
in response to message #17 by David Smith

I suppose this is just semantics, but HP doesn't consider using the 17Bii/27Sii (oops, I wish! :-) Solver the same as "programming." Don't take any chances with an exam, though. I'd make sure that your calculator is approved.

Re: Need Advice: What models are non-programable but RPN?

Message #19 Posted by [Karl Schneider](#) on 25 July 2002, 2:38 a.m.,
in response to message #16 by Victor

Hey, I remember the National Semiconductor 4510 "Mathematician" in the late '70s when I was an adolescent. My main impressions were poor quality of the keys, and the stack had only three elements -- somewhat constraining.

What kind of exam?

Message #20 Posted by [Karl Schneider](#) on 25 July 2002, 2:52 a.m.,
in response to message #1 by Ken Smith

Ken --

Just curious: What kind of professional exam are you taking?

I'm an engineer who has owned a 15C since November 1983, but has amassed a nice collection since February 2002 (34C, 41CV, 42S, 48G, 32Sii, 28C, 17Bii). After trying all of these, I got to thinking: If I were to take the Professional Engineer (PE) exam and were allowed to bring only **one** calculator (no backups), which would it be?

Ya know, probably the same ol' 15C -- easy-to-read display, built-in complex functions, matrix operations, solve, integration, and **everything** on the keyboard -- no menus or function spellings to remember.

The 15C is non-alphanumeric, and might pass muster. Check the list.

Re: Need Advice: What models are non-programable but RPN?

Message #21 Posted by [Chris Roccati](#) on 26 July 2002, 5:27 p.m.,
in response to message #1 by Ken Smith

Most of the old HP calcs probably are not considered as programmable, by modern standards - for example the HP11C is quite likely to be accepted...

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LED's needed

Message #1 Posted by [Michael Meyer](#) on 23 July 2002, 3:45 a.m.

Hi, it's me.

Does anyone happen to have some extra LED's from a dead HP-35, 45, 55, etc? I just bought an HP-55 that had something wrong with all three. I transplanted a set from a "spare" HP-35, and it works fine now, but I'd love to be able to put the spare 35 back together. Anyone have some dead parts I could use?

Thanks! Michael

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HP-95lx Prototype

Message #1 Posted by [Edwin Herdman](#) on 22 July 2002, 10:24 p.m.

I have acquired a prototype model HP-95lx. It is in very good condition. The OS boot indicates the project's working name by the message, "Welcome to Jaguar."

Anybody interested?

It is in very good condition.

Re: HP-95lx Prototype

Message #2 Posted by [Edwin H.](#) on 22 July 2002, 10:26 p.m.,
in response to message #1 by Edwin Herdman

But please email me, as I have little opportunity to check this forum.

Re: HP-95lx Prototype

Message #3 Posted by [r. d. bärtschiger.](#) on 22 July 2002, 10:31 p.m.,
in response to message #1 by Edwin Herdman

Interesting! Isn't the latest Apple os named, os is it code named, Jaguar?

Re: HP-95lx Prototype

*Message #4 Posted by [John K. \(US\)](#) on 22 July 2002, 11:47 p.m.,
in response to message #3 by r. d. bärtschiger.*

Isn't the latest Apple os named, os is it code named, Jaguar?

Yup, Mac OS 10.2 was/is code named "Jaguar." Oddly enough, it seems to be hanging around after the product intro as the name of the product.

[JamesBurkeMode]

It is interesting to note that the new version of OS X includes a handwriting recognition technology which, coincidentally or not, was developed for the last product released by Apple whose project code name became the product name -- the Newton.

[/JamesBurkeMode]

Re: HP-95lx Prototype

*Message #5 Posted by [r. d. bärtschiger](#) on 23 July 2002, 1:25 a.m.,
in response to message #4 by John K. (US)*

Oddly enough, it seems to be hanging around after the product intro as the name of the product.

Yes, I seem to recall reading that Jobs kept refering to the new os as Jagwire.

rdb.

Re: HP-95lx Prototype

*Message #6 Posted by [r. d. bärtschiger](#) on 23 July 2002, 2:05 a.m.,
in response to message #3 by r. d. bärtschiger.*

os is it code named,

It seems no matter how carefully one proofreads a posting, some errors will always sneak through. Of course I meant:

OR is it code named,

rdb.

Re: HP-95lx Prototype

Message #7 Posted by [Mike \(Stgt\)](#) on 23 July 2002, 6:02 a.m.,
in response to message #1 by Edwin Herdman

That would fit nice in my collection, but I have to save for the holidays :-) For sure you find somebody interested at HPLX-L, the mailing list for 95/100/200/700LX- and 1000CX-users (see <http://www.palmtop.net/> and follow the link).

Ciao.....Mike

Re: HP-95lx Prototype

Message #8 Posted by [kim](#) on 23 July 2002, 4:46 p.m.,
in response to message #1 by Edwin Herdman

As far as I recall

95LX was Jaguar (HW) 100LX was Cougar (HW) Omnibook 300 (the first one with MS OS in ROM) was Lion

Lots of carnivoures there.

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HP 15C

Message #1 Posted by [Jo-Anne Warner](#) on 22 July 2002, 11:20 a.m.

Any idea what the following error message means: E4? Thanks

Re: HP 15C

Message #2 Posted by [kimo](#) on 22 July 2002, 11:45 a.m.,
in response to message #1 by Jo-Anne Warner

The answer to your question comes from page 206 of the Owner's Hadbook.

"Improper Line Number or Label Call"

"Line number called for is currently unoccupied or nonexistent(>448); or you have attempted to load a program line without available space; or the label called does not exist."

Hope this is of help!

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HP 15C

Message #1 Posted by [Patti](#) on 22 July 2002, 10:08 a.m.

Any idea how to turn off the mode USER, GRAD and C that displays at the bottom of this calculator?

Thanks.

Re: HP 15C

Message #2 Posted by [Randy Smith](#) on 22 July 2002, 10:46 a.m.,
in response to message #1 by Patti

To clear USER press f USER (on the RCL key, bottom row), to clear GRAD press g DEG (on the 7 key), and to clear C (which means complex has been activated, press g CF (5 key) 8). f is the gold key and g is the blue key. Hope this helps, Randy

Re: HP 15C

Message #3 Posted by [Patti](#) on 22 July 2002, 11:07 a.m.,
in response to message #2 by Randy Smith

Thanks.

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Are collectors limited to ex-users

Message #1 Posted by [Steve \(Australia\)](#) on 22 July 2002, 8:28 a.m.

Just wondering. What proportion of HP calculator collectors are other than ex-users of these calculators?

When I say ex-users, I mean people who used these calculators when you only bought a TI if you couldn't afford an HP :-)

I wonder what happens when we've all gone to that great HP factory in the sky?

Re: Are collectors limited to ex-users

Message #2 Posted by [David Smith](#) on 22 July 2002, 10:14 a.m.,
in response to message #1 by Steve (Australia)

Once we go to the great HP factory in the sky, we will be turned away and sent to the great unemployment office in the sky... along with all the other Carlyzed ex HP employees.

Re: Are collectors limited to ex-users

Message #3 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 22 July 2002, 3:56 p.m.,
in response to message #1 by Steve (Australia)

Hi;

since collecting HP calculators became a profitable market, mostly because of obvious reasons (quality, brand heritage, price X benefits rate, etc), I believe just a few users are fierce collectors. I cannot think of my 13 calculators as just put-to-stand and look (I remember Toy Story II). How come an HP calculator not being used? That's what they're for, Good Lord! Being used. In great style. I cannot let them stood still as statues.

That's why I believe users will seldom become collectors. I will not.

(About the big HP factory in the sky... do they accept reservations?)

Re: Are collectors limited to ex-users

Message #4 Posted by [db\(martinez,california\)](#) on 22 July 2002, 10:00 p.m.,
in response to message #1 by Steve (Australia)

steve; two things: 1) around here many well meaning but missguided people who couldn't afford hp's bought national semiconductors too. i don't know why. it's amazing how much money can be freed up by eating ramen noodles and potatoes for a month. & 2) happy 565th month birthday.

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An o-ring for my card reader

Message #1 Posted by [Michael Reinold](#) on 22 July 2002, 3:59 a.m.

The card reader of my HP-67 has the well-known "gummy-wheel-problem". For this purpose I bought numerous silicone fuel tubings to cut little o-rings from. But none of them has the right diameter! Can anyone tell me where I can get one with the right size? (I live in Germany).

Greetings Michael Reinold

Re: An o-ring for my card reader

Message #2 Posted by [Ellis Easley](#) on 22 July 2002, 4:21 a.m.,
in response to message #1 by Michael Reinold

I had good results with some silicone tubing I bought at a hobby shop specializing in radio controlled model cars and airplanes. The outside diameter measures .220 inch and the inside diameter measures .093 inch. There were no specifications available at the shop, they just had two sizes, large and small! When you say "O-ring", you might be thinking of the alternative method using actual rubber O-rings instead of a piece of tubing. I think the size of O-ring used is 1/4 inch outside diameter, 1/8 inch inside diameter. If my memory serves me, it is a standard #5 O-ring. Two O-rings are used to replace the wheel. There are two regulars on this forum who have sold the parts for very little cost on Ebay - one guy sells the O-rings, the other guy sells the tubing, both supply detailed instructions. Mike Davis's tubing method is described in this [Museum Article](#). Mark Hoskins describes using O-rings to repair an HP41C card reader in this [Museum Article](#).

Re: An o-ring for my card reader

Message #3 Posted by [Tony Duell \(UK\)](#) on 22 July 2002, 6:47 p.m.,
in response to message #2 by Ellis Easley

I've found it much easier to use the O-rings than the silicone rubber tubing. It's often hard to find tubing where the bore is truly concentric with the outside. I use silicone rubber O-rings, size 005 (15/64" OD, 7/64" ID, 1/16" thick). Size 006 (1/4" OD, 1/8" ID) are rather too sloppy a fit for a card reader roller (although they are ideal for HP9100 keyboards). I've fixed both my 41 card readers, both my 67s, my 65 and my 97 that way with no problems at all (and yes, I do use all of them!).

Re: An o-ring for my card reader

Message #4 Posted by [Ellis Easley](#) on 23 July 2002, 4:37 a.m.,
in response to message #3 by Tony Duell (UK)

I seem to have the #5 right but the diameters wrong!

The SmallParts.com catalog doesn't refer to the number sizes explicitly but they do have three digits at the end of their part numbers that are the same for O-rings of given dimensions - 1/4"OD and 1/8"ID, 1/16" thick is -006 in all materials - but the dimensions that they give corresponding to -005 are 7/32"OD and 3/32"ID, 1/16" thick. Do you think this is the same as you are using?

I have yet to do a card reader repair with O-rings. (I've only done one period!) I have replaced all the O-rings on my 9100 keyboard - the feel that results gives a satisfaction similar to that of a well-built car door closing. Transports me back to 1968 (or 1969 actually, mine is a B). I'm glad to learn about the silicone rubber O-rings. I think this property listed in the catalog: "Excellent resistance to compression set" will be very advantageous for the card reader wheel application.

The SmallParts catalog has O-rings in a variety of materials including silicone rubber, also teflon (I don't imagine that would be any good for this application!) and a material called Viton which has this stern warning:

"Great care should be taken in regard to burning Viton. When burned it gives off highly carcinogenic hydrogen fluoride. Merely handling just-burned Viton can be dangerous."

p.s re: my tubing dimensions

*Message #5 Posted by [Ellis Easley](#) on 23 July 2002, 5:25 a.m.,
in response to message #4 by Ellis Easley*

I just multiplied the OD (.220") and ID (.093") (which I measured on my silicone rubber tubing with my trusty dial calipers) by 64 and got OD: 14.08/64" and ID: 5.952/64, surprisingly close (within 1%) to 7/32" and 3/32".

While the results I got with the tubing are satisfactory, there is a certain amount of "lugging" that is probably due to the irregularity of the wall thickness. I had planned on building a fixture with a dial indicator to select uniform bits of tubing before rebuilding my other units. But now I think I'm going to get the silicone rubber O-rings from SmallParts.com. For one thing, they are burnt orange in color, and I attended UT for a while (to everyone's dismay).

Re: p.s re: my tubing dimensions

*Message #6 Posted by [Katie](#) on 24 July 2002, 2:37 a.m.,
in response to message #5 by Ellis Easley*

If you're going to order from Small Parts, you should get their silicone rubber tubing 1/4" OD x 1/8" ID -- part # 210005, 10' for \$24. It's perfectly symetric, works much better than o-rings (in my experience) and doesn't need to be glued in place. I've done zillions of card reader repairs using this tubing and it always works and has no noticeable wear after 2+ years of use.

Lots of other collectors here have tried it too with very good results.

Re: p.s re: my tubing dimensions

*Message #7 Posted by [Ellis Easley](#) on 24 July 2002, 2:49 p.m.,
in response to message #6 by Katie*

I might order both silicone tubing and O-rings. The silicone tubing I have now works OK although it "sounds" like it's not extremely concentric. The 1/4" OD is slightly larger than the tubing I have now, which seems to be big enough to grip the card. Have you by any chance measured the diameters (ID and OD) of your tubing? Might rubber tubing be made slightly smaller than the nominal dimension, since it needs to be stretched a little to do its job?

Also, since reading an HP Journal article Dave Hicks pointed to, about the development of the HP65 card reader, I've been wanting to try polyurethane

tubing. The Journal article said a type of polyurethane is what they settled on for the wheel because its operation wasn't affected by oil on the card. SmallParts has polyurethane tubing in 1/4" OD/1/8" ID, P/N B207005. It costs half as much as the silicone. I've never seen polyurethane tubing (that I know of for sure) but I think it might be what comes with the "MityVac" vacuum pump. That tubing is extremely transparent. One of the qualities of polyurethane mentioned in the SmallParts catalog and the HP Journal article is resistance to oil which would be important for working on cars. The tubing that comes with the pump feels like a material that would be too hard for the purpose, although if the thickness and uniformity is just right, the hardness of the material shouldn't matter much. The pump tubing might be PVC. The pump booklet doesn't say anything about it.

Re: p.s re: my tubing dimensions

*Message #8 Posted by [Katie](#) on 25 July 2002, 3:05 a.m.,
in response to message #7 by Ellis Easley*

The Small Parts silicone tubing measures a true 1/4" x 1/8" (as far as I'm able to read on calipers without squishing the tubing). It seems to be impervious to most oils and solvents that I've tried on it and it is very close to the original HP tubing as far as transparency goes. I've tried lots of other tubing before finding this -- it's really the perfect stuff to use.

Re: p.s re: my tubing dimensions

*Message #9 Posted by [Achim](#) on 25 July 2002, 7:34 a.m.,
in response to message #6 by Katie*

>I've done zillions of card reader repairs ...

Then you and your calcs are quadrillions of years old, right? I ever dreamed of a stone-age HP with flintstone display and marble card reader ;-))

Re: An o-ring for my card reader

*Message #10 Posted by [Dave the "lostrabbit"](#) on 23 July 2002, 12:25 a.m.,
in response to message #2 by Ellis Easley*

SELLING the tubing and O rings on ebay? Geez, I have sent a bit of tubing and a couple of O rings all around the Planet for nothing but a postcard in return! It's not like an O ring is worth the price of a share of worldcom stock, ya know!

Re: An o-ring for my card reader

Message #11 Posted by [Ellis Easley](#) on 23 July 2002, 3:42 a.m.,
in response to message #10 by Dave the "lostrabbit"

Since I brought it up, I need to point out that when I saw their auctions for these items, they had listed them for about \$1 (for a few inches of tubing or several O-rings) and filled their auction pages with instructional information. To me, it looked much more like "getting the word out" than profiteering. Someone searching for a replacement card reader or calculator on Ebay might have seen these auctions and then might have enjoyed the great pleasure that comes from fixing something instead of throwing it away. Also, it can be hard to find the right size, as the original post illustrates.

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How to open a 9820A

Message #1 Posted by [Uwi](#) on 21 July 2002, 2:48 p.m.

Hi together

I just got a 9820A. As there are some problems with the machine I would like to open it. Any hints how this can be done? I removed the 4 screws at the bottom, which hold the keyboard, but I'm too shy to remove the keyboard, as it will not go off easily. Any hints welcome.

Greetings

Uwe

Re: How to open a 9820A

Message #2 Posted by [Achim](#) on 21 July 2002, 5:37 p.m.,
in response to message #1 by Uwi

You first have to remove the four screws below the top flap. Then shift the top cover to the right side and lift it. After doing this you can remove the keyboard but watch the AC-power cable connected to the line switch. You have to lift the keyboard a bit to get it clear of the cable. Then unplug the AC cable on the right of the card reader and the keyboard connector below the printer. Be VERY VERY careful when powering the machine up while the keyboard is loose. On the left side of the keyboard is a non-insulated connector which may touch the metal cabinet. When this happens you are likely to shorten and damage the keyboard electronics. I hope that helps. Achim

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what comes after trillion?

Message #1 Posted by [Jack Stafford](#) on 19 July 2002, 10:58 p.m.

Please,

Whats the next unit above trillions?

Thanks

Jack

Re: what comes after trillion?

Message #2 Posted by [Dave Shaffer](#) on 19 July 2002, 11:28 p.m.,
in response to message #1 by Jack Stafford

million = 10^6

Billion = 10^9 (i.e. 10 to the ninth power) (for Americans; not Brits!)

Trillion = 10^{12}

Quadrillion = 10^{15}

Quintillion = 10^{18}

Sextillion = 10^{21}

Septillion = 10^{24}

Octillion = 10^{27}

Nonillion = 10^{30}

Decillion = 10^{33}

When you've counted that high, come back for some more.

Re: what comes after trillion?

*Message #3 Posted by [Jack](#) on 20 July 2002, 12:53 a.m.,
in response to message #2 by Dave Shaffer*

Thank you, I'll be back for more... in about a zillion years.

Jack

Re: what comes after trillion?

*Message #4 Posted by [thibaut](#) on 20 July 2002, 2:29 a.m.,
in response to message #1 by Jack Stafford*

The next (integer) unit after one trillion is...

1,000,000,000,001...

;-)

Re: what comes after trillion?

*Message #5 Posted by [db\(martinez,california\)](#) on 20 July 2002, 6:25 p.m.,
in response to message #1 by Jack Stafford*

jack; the u.s. defense budget, thats what. the budget for the worthless war on some drugs is only .99999 t.

Re: what comes after trillion?

Message #6 Posted by [Sampy](#) on 21 July 2002, 6:15 p.m.,
in response to message #1 by Jack Stafford

Well trillion is not a unit but a multiplier, the unit would be \$ or Watts or seconds. I've not heard anything above a trillion but the greek bi/tri/quad/pent... seems to work.

Billion in England used to mean $1,000,000 \times 1,000,000$ (i.e. $[1 \text{ million}]^2$) or 10^{12} . The normally accepted Billion in England is now what the US uses, this used to be called an 'American or US billion'.

For scientific use the SI series of multipliers is:

$10^{\wedge}$ Name ... -18 Atto -15 Femto -12 Pico -9 Nano -6 Micro -3 Milli +3 Kilo +6 Mega +9 Giga +12 Tera +15 Petra ...

So a small distance would be 5pm or 5 pico meters. But in the world of finance poeple don't say 2 MegaDollars!

Sam.

Re: what comes after trillion? (petra typo ??)

Message #7 Posted by [Dave Shaffer](#) on 22 July 2002, 12:11 a.m.,
in response to message #6 by Sampy

Sam,

re: $10^{\wedge}$ Name ... -18 Atto -15 Femto -12 Pico -9 Nano -6 Micro -3 Milli +3 Kilo +6 Mega +9 Giga +12 Tera +15 Petra ...

+15 should be "peta" (no "r")

re: But in the world of finance poeple don't say 2 MegaDollars

Maybe not in the financial world, but scientists use mega and giga for costs all the time, with "bucks" rather than dollars, though (sometimes rather sarcastically - usually for the OTHER guys' projects!). One might well say "the space telescope cost about 2 gigabucks" in our parlance.

Scientific prefixes and notations

Message #8 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 23 July 2002, 9:23 a.m.,
in response to message #7 by Dave Shaffer

I frequently use Mega\$, Giga\$, etc, patly to differentiate because of the the Billion (10^{12}) vs Billion (10^9) discussion. In Spanish, Billion usually refers to 10^{12} , trillion is 10^{18} , etc. Some people, like the peruvian writer Mario Vargas Llosa, suggested to use "milliard" for 10^9 , which I understand is similar to the French usage.

I once enjoyed asking my boss for a +3 db salary raise, which sounds rather nice in a EE environment...

Re: Scientific prefixes and notations

Message #9 Posted by [David Smith](#) on 23 July 2002, 10:54 a.m.,
in response to message #8 by Andrés C. Rodríguez (Argentina)

I once wrote a spec where all the timings were given in femtofortnights (ffn's)

Re: Scientific prefixes and notations

Message #10 Posted by [Ellis Easley](#) on 23 July 2002, 11:30 p.m.,
in response to message #8 by Andrés C. Rodríguez (Argentina)

I've been thinking that in my high school German class, we learned that "Milliard" was the word used for "thousand million" (as the BBC newsreaders always used to say).

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HP-41C: Port problems

Message #1 Posted by [Juergen Rodenkirchen \(Germany\)](#) on 19 July 2002, 7:06 p.m.

Some days ago, I posted a note about a module conflict on my HP-41C in connection with the use of Memory Modules (original message will be attached below). In fact, I did receive a few responses: thanks again to all who made the effort to write! Alas, after checking and trying out what I was told (cleaning contacts and taking care of the correct port order), it seems that my problem is still not solved (same behaviour as before, that is). Besides, further experiments with a QUAD MM showed the following: Installed in port 1 or 4, the machine allows access to the full of 319 registers. Unlike that, if the QUAD would be plugged into port 2 or 3, SIZE 000 just shows 128 registers, indicating that only another 64 + 1 registers will be addressed. Any idea how this can happen and how this can get fixed? Thanks for your time!

< Original Message:

I have an HP-41C which shows some kind of failure when a Memory Module (MM) is plugged in (might well be that the same failure would show up with a Quad- or a completely different module, though I haven't checked it yet). The machines "operating mode" depends on the port that is occupied by the MM: When the machine is operated with a MM in port 1 it seems to work correctly (at least, the MM is recognized by means of SIZE). If a MM is plugged into ports 2 or 4, a very faint (actually barely perceptible) and high pitched tone is emitted by the machine and it doesn't respond to the keyboard anymore. In port 3 the MM is not recognized at all. Otherwise (without MM that is) the calc seems to work fine. Does anyone have an explanation for this behavior? >

Re: HP-41C: Port problems

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 19 July 2002, 11:14 p.m.,
in response to message #1 by Juergen Rodenkirchen (Germany)

Hi;

I still believe you have some contact problems, but with the new info, I'd check the integrity of the flex circuit itself, the one wrapped around the IO/BATT assy. It may have broken cooper trails. It is not that impossible...

Also, the contacts between the IO/BAT assy and the motherboard. If there's anything wrong in there, the modules' contacts may be fine, and the port's contacts may be not fine.

Well, you'll have other ideas, for sure. I have seen (and had my own experiences) that bad connections and bad contact are the most usual problems in HP calculators. A bit of solder and cleaning brought some fellas back to life (in this very week, I resoldered two HP12C, one HP11C, some SMD's on a mishandled HP48 and upgraded my HP42S to 32K! Busy days, when soldering is the special).

Cheers and success.

Re: HP-41C: Port problems

Message #3 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 20 July 2002, 12:49 p.m.,
in response to message #1 by Juergen Rodenkirchen (Germany)

I have had no Quad module to experiment with, and also my HP41 has some contacts problems, so my suggestion is mainly from similar but not equal experiences and some educated guessing.

The standard memory modules must be installed always in a consecutive manner and starting from port 1. I suppose the calculator searches for RAM starting at port 1 addresses, and then at the following ports. If it finds any unused addresses, it will assume there is no more RAM to look for. It may be similar with the Quad, so unusual behavior in ports 2,3 or 4 as you observed may be caused by conflicting addresses or because the firmware in the calculator finds an unexpected condition and "hangs up" or triggers other error conditions.

Other modules such as extended functions and extended memory also have specific rules specifying which sequence the ports are to be used for.

My guesses may be wrong, and it may well be that the Quad has fixed (hardwired) addresses, since it occupies a defined address space in full. In that case, it should work at any port. Please see the Quad Module documentation to see if this is the case. In the meantime, using it at port 1

shouldn't be an issue.

Re: HP-41C: Port problems

*Message #4 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 20 July 2002, 6:47 p.m.,
in response to message #3 by Andrés C. Rodríguez (Argentina)*

Hi;

There is a particular case. I have a 41C in the box (I mean, disassembled) and four memory modules. I remember when I had only one module I could plug it in any port; the fact is that only when it was plugged in Port 1 I could use all memory for programs. In ports 2, 3 or 4 I should "map" the 64 registers, because a gap would exist. It seems to me the 41's OS searches for memory in a bottom-to-top scan (Maybe it's faster). I remember I could access higher registers, store numbers in there, switch the calculator off, move the memory module to another port, switch it on and search for the register that would contain the numbers I stored.

I did not have any other module, I could get them (X-Functions, X-IO and Navigation) only after buying a 41CX. I never used them in a 41C, so I do not know what sort of reactions may come with modules between two memory modules.

At the time I was writing this post, Juergen answered; but I would mention that it is stated in the 41C manual that the Quad Memory Module (QMM) can be plugged in any available port. No restrictions.

Cheers.

Thanks a lot for your inputs!

*Message #5 Posted by [Juergen Rodenkirchen \(Germany\)](#) on 20 July 2002, 3:25 p.m.,
in response to message #1 by Juergen Rodenkirchen (Germany)*

Luiz, Andres, thanks a lot for your valuable info concerning my current problem. I'll try to "digest" what you told me and hopefully be able to fix this HW problem from your hints! B.t.w. Andres, the QMM documentation says that it can be used in any port, proving your guess the QMM having a fixed address space :-). Thanks again!

Re: Thanks a lot for your inputs!

*Message #6 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 20 July 2002, 7:13 p.m.,
in response to message #5 by Juergen Rodenkirchen (Germany)*

Ok, so now I know the Quad is not port-dependent (I first thought otherwise, now it is clear)
Thank you, Juergen and Luiz!

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The way that it is moved through the Meta kernel from port1 to port2.

Message #1 Posted by [Hiroshi Ito](#) on 19 July 2002, 12:27 p.m.

I installed Meta Kernel(Ver2.30) in HP-48GX (ROM Version R). I have an 128k RAM card and an 1M RAM card. I attach 128k-RAM-CARD to port1. I attach 1M-RAM-CARD to port2-9. I want precious port1 to merge in port0. Besides, I want to use MetaKernel. Can I travel in MetaKernel from port1 to port2?

Re: The way that it is moved through the Meta kernel from port1 to port2.

Message #2 Posted by [J.C. Randerson](#) on 19 July 2002, 10:41 p.m.,

in response to message #1 by Hiroshi Ito

I have MK 2.2 on ROM card, and it uses all of Port 1, nothing else can be stored there. You cannot then merge Port 0 and 1. (Try it, you'll get a "Port Not Available" error message.) You should still have about 120KB in Port 0, and about 131KB in each of the remaining Ports of your RAM card. The MK filer will allow you to easily move things throughout this remaining memory. The MK Filer is probably the best calculator memory tool I've ever seen!

regards,

J.C. Randerson Pueblo, Colorado

Re: The way that it is moved through the Meta kernel from port1 to port2.

Message #3 Posted by [Hiroshi Ito](#) on 20 July 2002, 8:16 a.m.,

in response to message #2 by J.C. Randerson

Thank you for responding.

I am very much satisfied with the function of "Meta Kernel 2.30" as well as you, too. But, I must endure it only by the memory of PORT0. I want move Meta Kernel to PORT2.

Re: The way that it is moved through the Meta kernel from port1 to port2.

Message #4 Posted by [J.C. Randerson](#) on 20 July 2002, 6:56 p.m.,
in response to message #3 by Hiroshi Ito

It is impossible to move MK to Port 2 as Ports 2 thru 32 are uncovered on the HP48. If you need a better memory structure buy an HP49, everything you need is built into ROM and all Ports are free.

regards,

J.C. Randerson

Pueblo, Colorado

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Checking Lewis chip based calculator ROM images

Message #1 Posted by [Christoph Giesselink](#) on 19 July 2002, 10:47 a.m.

You can find a ROM CRC checking program for Lewis chip based calculator ROM images [here](#).

Christoph

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problems with my hp48g memory expand

Message #1 Posted by [jorge arango](#) on 19 July 2002, 10:29 a.m.

I'm looking for help with my hp48g.

I expanded my hp48g to 384 kb, the resident memory (port 0) to 128 kb and 2 additional ports of 128kb each one.

in this moment en i turn on the the calculator , display the message " warning: invalid card data", i make the sequence of PINIT, chage the batteries, and i still receving the message. additional when i transfer any library and tried to storage en port 0 , it displays " STO error: object in use", or if i storage in port 1 "port 1 is merged"

i need help !!!!!!!

Jorge Arango

Re: problems with my hp48g memory expand

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 19 July 2002, 10:59 p.m.,
in response to message #1 by jorge arango

Hi;

when you say "expanded my hp48g to 384 kb" you mean you opened the calculator and soldered memory I.C's? Or you plugged memory cards?

I am curious to know about it... If you opened it, how did you enlarge its memory? Did you follow any particular instruction set?

I have a 48G+ and I was once told it is possible to increase its memory to more than 300K. But I have not seen any instructions to do so. If you followed some receip, I'd like to read it.

Can you share?

Cheers.

Re: problems with my hp48g memory expand

Message #3 Posted by [Jonathan Busby](#) on 19 July 2002, 11:48 p.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)

Vieira, Luiz C. (Brazil) said :

"I have a 48G+ and I was once told it is possible to increase its memory to more than 300K. But I have not seen any instructions to do so. If you followed some receipt, I'd like to read it."

Go to the "HP 48 Calculator Unofficial Upgrade Page" for all your memory upgrading needs. :) :

<http://www.geocities.com/CapeCanaveral/7584/>

Jonathan

Remove the random permutation of "NOSPAM" from my e-mail address before replying.

Re: problems with my hp48g memory expand

Message #4 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 20 July 2002, 12:55 p.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)

Luiz: as Jorge message does not refer to a -GX, memory cards are not an option; so he must have opened it.

I have a 48G+ too, and am also curious about expanding it to more than 300 KBy RAM, to be able to run the HrastrProgrammer HP41 Emulator, which can only run in a 49 or a 48 GX with extra RAM. However, the dollar rate may prevent me to be active about such luxuries for quite a while!

Kind regards

Oops! You're right...

Message #5 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 20 July 2002, 6:33 p.m.,
in response to message #4 by Andrés C. Rodríguez (Argentina)

Hi, Andrés;

I did not notice that. In fact, Jorge mentions a 48G. Sorry...

Now I am worried about what may be wrong: the IC's themselves? Is there a way to check for their integrity? If a bare memory card is inserted in a 48GX, will it generate such warning messages?

I'm guessing Jorge has done everything by the numbers, so my best guess (too weak, I know) is checking for the IC's. If you, Jorge, are confident about what you've done, there's no need to check for soldering and connections (I would...).

I'd like to help a bit more.

Success.

Just a question

Message #6 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 20 July 2002, 7:18 p.m.,
in response to message #5 by Vieira, Luiz C. (Brazil)

Are the firmware (ROM images) of a 48G, 48G+ and 48GX exactly the same? (This time I have no experience to boot) I know the 48GX treats differently the RAM installes in its two slots, what is expected when you expand internally a 48G+?

Today seems to be the "address space day" apart from being the "friends day" in my country at least... It commemorates Neil Armstrong walk in the moon, July 20, 1969.

All MoHPC friends: have a nice friends day!!

Re: Just a question

Message #7 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 20 July 2002, 11:03 p.m.,
in response to message #6 by Andrés C. Rodríguez (Argentina)

Hey, guys, and Andrés;

we do not have a "friends day" here in Brazil (al least, not that I know), but the moon walk is a celebration. In USA, at least.

Thanks for your kindness, Andrés.

About 48 internals: sometimes these "just a question" tease us. At the moment I read it at first, I thought: "No way they are different" ("De jeito nenhum que elas são diferentes!"; this is my actual thought...). But I started thinking about it and one question came to me: not the system itself, because they would have different versions, and we have only one set of ROM images for the three of them, but I think of some HW difference. I have a working 48G MBoard with no LCD (broken), no RAM (donated to the 42S) and three broken cooper trails (may be repaired). I would like having a look at one 48GX's board. Andrés, when you write different ROM images, you mean they would have different addresses so the 48G/G+ would only see a fixed amount of RAM while the GX would be able to see more? Is that it? If so, I am now curious to know about it.

Greetings.

Re: Just a question

Message #8 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 21 July 2002, 2:48 p.m.,
in response to message #7 by Vieira, Luiz C. (Brazil)

I would like to know if there is specific code in the GX ROM (for instance, to manage RAM card detection, RAM card protection, card battery monitoring, ports addressing, etc.), and if such code is not present in the G+ ROM (since it is not supposed to be used). If that were the case, it may well happen that a G+ cannot "see" extra RAM installed (soldered) by the user.

Of course, hardware provisions for address decoding, etc are also needed, apart from the code needed to manage the extra RAM.

I understand there are people who found success expanding their G+, so it may be possible; I don't

know any details about how...

Re: Just a question

Message #9 Posted by [Jonathan Busby](#) on 22 July 2002, 2:58 a.m.,
in response to message #8 by Andrés C. Rodríguez (Argentina)

Andrés C. Rodríguez (Argentina) wrote :

"I would like to know if there is specific code in the GX ROM (for instance, to manage RAM card detection, RAM card protection, card battery monitoring, ports addressing, etc.), and if such code is not present in the G+ ROM (since it is not supposed to be used). "

AFAIK the ROM code among the different 48 models is the same for any given ROM version.

"I understand there are people who found success expanding their G+, so it may be possible; I don't know any details about how..."

Yes, it is possible and has been done many times. A few companies including Cynox (http://www.weinert-engineering.de/index_e.htm) even offer pre-upgraded 48's . For technical details on doing it yourself see the link I just posted in this thread : <http://www.geocities.com/CapeCanaveral/7584/> . Much useful information can also be found at www.hpcalc.org by searching for upgrade, card or hardware for example.

Jonathan

Remove the random permutation of "NOSPAM" from my e-mail address before replying.

Re: Just a question

Message #10 Posted by [Ellis Easley](#) on 22 July 2002, 5:24 a.m.,
in response to message #9 by Jonathan Busby

I don't know what happened to "jorge" but between him and "Hiroshi Ito", I'm all revved up to expand my 48G's RAM so I can use MetaKernel! That's what I like about the Forum - it gives me ideas to try out on my calculators.

BTW, I've been wondering what the message is in the graphics that flash very briefly on the screens of the 39G and the 49G when they are reset. Finally, I used my PC Cam to take a video of it so I could look at a still frame. It says "Powered by The [???]Meta Kernel" (I can't make out the three symbols before Meta Kernel). So, I guess I'm already using MetaKernel in those calculators. The 49G FAQ suggests that it is only software that makes the 49G any faster than the 48G (which seems to be part of what MetaKernel does for the 48G).

After staring at the screens through a bunch of reboots, I think the three letters might be "MDC". Maybe that is a combination of the initials of the programmers? (their names and pictures can be displayed by pressing some additional keys [F2, F3, APPS, VAR, HIST, $\sqrt{}$, SIN, COS] from the test screen [ON-F4]) Or a corporation whose name I should recognise? I had been expecting a "J" for Jean-Yves, who seems to be the main guy behind

MetaKernel, or an "A" for his last name. Also I see that the graphics says "ver. 3.00". Jean-Yves 48 MetaKernel page (from about 2000) refers to a possible "MetaKernel 3.00" for the 48GX - that must be what went into the 49G after HP hired him. Also the 49G flashes a credit for the CAS before the one for MetaKernel, which the 39G does not. I wonder if the 40G does, since it contains CAS? The 49G also displays a "crossword" with the names of the developers plus "vger" and "aco" when you execute "RULES"; when you press "EEX" from the test screen you see a picture of a 49G prototype; and there is a Tetris game you can start by entering "HpMad" (including quotes) on an entry line, such as in the MODE setting screen. Apparently there is another Tetris game, invoked by typing MINEISBETTER at a certain spot, in the ROMs after 1.18 (the last production release ROM). I learned most of this in the 49G FAQ from hpcalc.org.

Re: Just a question

Message #11 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 22 July 2002, 10:27 a.m.,
in response to message #10 by Ellis Easley

Thank you, Jonathan and Ellis!

Re: Oops! You're right...

Message #12 Posted by [jorge arango](#) on 22 July 2002, 10:27 a.m.,
in response to message #5 by Vieira, Luiz C. (Brazil)

I didn't the work, i payed for that. who i check the ic's?

Re: Oops! You're right...

Message #13 Posted by [Ellis Easley](#) on 22 July 2002, 5:16 p.m.,
in response to message #12 by jorge arango

Whoever did the work should be able to find out why it isn't working. Do you know if they tested it after doing the modifications? It would be meaningful to know if it was working, then stopped working correctly.

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Re: Polar to Rectangular etc. on the 48 Series

Message #1 Posted by [James M. Prange](#) on 19 July 2002, 5:35 a.m.

Press the MTH key, then the VECTR menu key, then the NXT key to get to the RECT, CYLIN, and SPHER coordinate system mode setting keys. Press NXT again to get back to the first page of the menu, where you'll find the V\-> command, which will return the components of a complex number or vector as real numbers appropriate to whichever coordinate system and angular modes are in effect. You could also use OBJ\-> to take these objects apart. On the same menu page you have the \->V2 and \->V3 commands for making vectors from real numbers. Note that RECT, CYLIN, and SPHERE are also available as commands.

MTH NXT and menu key CMPL gives you a page and a half of commands for working with complex numbers.

Play around with these commands a bit, and I think that you'll find the 48 very easy to use, even though a complex number is a different object type, not just two numbers.

SYSEVAL does have some dangers. The only argument checking that it does is to make sure that there's a user binary integer in level 1. Then it goes to whatever address you gave it and executes whatever happens to be there. If you give it the wrong address, or give it the right address but don't have whatever arguments that that routine requires on the stack, then you may very well get a warmstart or find yourself at the "Try To Recover Memory?" screen. So if you use it in a program, make sure that the program checks for any needed arguments before doing the SYSEVAL, and double check the binary integer value (including the base) before you run it.

Similar precautions apply to the LIBEVAL command, except that it will error out if the library function doesn't exist.

Make sure that you always have a recent backup.

And yes, I'm sure that there must at least be addresses for displaying complex number and vectors in the different coordinate system and angular units, and for taking complex numbers and vectors apart and putting them back together again, but why do easy things the hard way?

If you want to learn more about what "internal" routines are available, then visit www.hpcalc.org and see the wealth of information about SysRPL programming available there.

Regarding LASTX, I'm not too sure what you're asking for; do you mean that you want to put only whatever was previously on level 1 before the most recent command was executed back on the stack? The following program should restore whatever was the level 1 argument for the last command that took any arguments. Note that it doesn't restore what was on level 1 before commands that don't take any arguments, like CLEAR, DEPTH, STD, MEM, and so on. If flag -55 is set, then it errors out. If flag -55 is clear but the last argument buffer is empty, then it puts the number 0 in the last argument buffer.

```
\<<
  DEPTH \-> d
  \<< LASTARG DEPTH d -
    IF
      DUP
    THEN
      DUP2 2 + ROLLD DROPN DUP
    END
  DROP
\>>
\>>
Checksum: # 558Fh
Bytes: 69
```

Is that what you're looking for?

Regards,
James

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Re: Polar to Rectangular etc. on the 48 Series

Message #1 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 19 July 2002, 12:06 a.m.

Hi;

just to add some info over Ron's answer.

It's stated in the 48's manual that it uses only rectangular-represented complex numbers as internal parameters; polar is a representation of those rectangular complex numbers.

If you use any HP calculator that does not work with complex numbers, then you use R->P and P->R with Y- and X-registers contents (HP11C, HP41, HP10C, HP25, among others). Both HP15C and HP42S maintain this feature, adding R->P and P->R to complex representations. While the HP15C will accept only rectangular complex numbers for calculus, the HP42S can work in any of both representations: Polar or Rectangular. That is, you can enter two polar-represented complex numbers and add them in the HP42S. You cannot do this in the HP15C, all you must do is enter each polar complex number, convert them to rectangular (each at a time), use them as you want and convert the result back to polar.

When I use complex numbers in the HP48, I only convert from Polar to Rectangular to show a particular result. I feel more comfortable knowing I do not need to worry about entering numbers in this or that mode (even 3D coordinates). If I need the elements of a particular representation, say, argument, absolute value, real or imaginary part, I use the functions to extract them from the defined mode and no longer will convert from one representation to another so I get those elements. Say, having ANY complex number in level 1, polar or rectangular mode, you can:

take its absolute value with **ABS** take its argument (angle) with **ARG** take its real part with **RE** take its imaginary part with **IM**

I must confess I miss these features in the earlier models. I admit that I got acquainted to them and I feel them somewhat closer to the actual meaning of the complex representations.

I hope this post gets useful for you.

Best regards.

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Emmanuel Compes, aka Xeq41

Message #1 Posted by [Dave Mabry](#) on 18 July 2002, 9:06 p.m.

Emmanuel,

Since you have not replied to my e-mails about the Paname module you sold me, I wonder if you might respond to a request here. Can you let me know why you haven't sent the overlays that were supposed to be included in the auction and why you haven't replied to any of my last few e-mails?

To the rest of the forum,

This user occassionally puts his Paname modules for the HP41C for sale here, but I bought one on e-bay from him. He wanted to be paid by Western Union, which I did at a significant cost relative to the cost of the module itself. That way he got the money within minutes of the auction ending. You see, he is in France. It took him over three weeks from that time before he even sent it. I got it less than one week after it was put into the mail.

Oh well, it's just time. But then he didn't include the overlays that were supposed to be included. Again, no big deal. I e-mailed him, two times before he answered, and then he said he'd send them out "soon". It's been two months since then and now he isn't responding to my e-mails. And I've only sent him about three or four in the two months time, so I'm not pestering him.

Just a friendly warning, that you might want to think twice before dealing with him.

Re: Emmanuel Compes, aka Xeq41

Message #2 Posted by [David Smith](#) on 18 July 2002, 10:08 p.m.,
in response to message #1 by Dave Mabry

I purchased a PANAME module from him also. My payment was lost in the mail (US express mail, trackable). He was quite patient and understanding of the wonders of the US Postal Service at its finest. After 6 weeks the postal service found the payment and returned it to me. I resent it to Emmanuel and very shortly received my module. I had no problems at all with this seller.

Re: Emmanuel Compes, aka Xeq41

Message #3 Posted by [Massimo Gnerucci \(Italy\)](#) on 18 July 2002, 11:43 p.m.,
in response to message #1 by Dave Mabry

I bought one of his Paname modules months ago.

We had a nice e-mail exchange and he was very helpful on arguments not directly related to this sale.

You see, he is in this game - as a developer - since years.

I know he is on the move from time to time and he told me he could move again during this year.

Or, as an amateur astronomer, he is just hunting stars right now...

So, please, be patient: he is a nice guy.

Ah, the overlays are just reprints on cardboard (mine are): you have to cut them by yourself.

Greetings,
Massimo

[More info...](#)

Re: Emmanuel Compes, aka Xeq41

Message #4 Posted by [Steve \(Australia\)](#) on 19 July 2002, 10:19 a.m.,
in response to message #1 by Dave Mabry

Yeah, well I ordered some stuff from him about 2 years ago now I guess.

It was fairly pricy stuff. (well, by my standards anyway)

Anyway it got ost in the mail. Some time after Emmanuel got back to me saying he'd been able to extract the \$\$\$ from the french postal system (It had been sent insured).

So he then tried to gather together duplicates of what he had sent me.

Well I managed to get some of the stuff, but the bulk of it has never arrived, and I guess I've just written it off as experience.

Re: Emmanuel Compes, aka Xeq41

Message #5 Posted by [Dave Mabry](#) on 19 July 2002, 8:42 p.m.,
in response to message #1 by Dave Mabry

Could just be a coincidence, but just after this was posted Emmanuel e-mailed me that my overlays would be going out tomorrow.

Giving him the benefit of the doubt, after three months of him replying to one of every two or three of my e-mails, maybe I needed to be VERY patient. In any case, time will tell.

Sorry to have brought this up to the forum. It is good that most of your dealings with him have been alright. Perhaps mine will turn out that way, given enough time.

Re: Emmanuel Compes, aka Xeq41

Message #6 Posted by [Philip Reagan](#) on 21 July 2002, 9:39 p.m.,
in response to message #1 by Dave Mabry

I've been in the middle of a transaction with him for the last several months. He has indicated that he has been dealing with a tragic death in the family. He has come through on a portion of the transaction and he has communicated with me recently regarding the remainder of the transaction. I believe he'll come through if you give him some time.

Re: Emmanuel Compes, aka Xeq41

Message #7 Posted by [Matthias Wehrli](#) on 26 July 2002, 2:58 p.m.,
in response to message #6 by Philip Reagan

I also bought a second paname from him. I paid on teh 24.4. and got my module today!!! He also told me about his death in his family. Sorry about this Emmanuel. We feel with you..I can accept that delay. I also got the 4 overlays. But I'm a bit dissapointed cause they are plain paper, which you have to cut yourself (the HP41 has 35 keys). This makes $4 \times 35 = 140$ keys you have to cut!!!!

Re: Emmanuel Compes, aka Xeq41

Message #8 Posted by [Raymond Hellstern \(Germany\)](#) on 26 July 2002, 7:38 p.m.,
in response to message #1 by Dave Mabry

Hi,

I traded modules with him last year with no problem. He's very friendly. Ok, the transfer took a while, but as said above, it worked fine.

Just my experience.

Regards,

Raymond

Re: Emmanuel Compes, aka Xeq41

Message #9 Posted by [GE \(France\)](#) on 2 Aug 2002, 5:11 a.m.,
in response to message #8 by Raymond Hellstern (Germany)

I got a Paname module from him. There was some delay, but personally I care more about the stuff itself. The module arrived in good shape, but the promised documentation was not included. Lucky that I got it independently as a PDF off the Web. So this was a reasonable deal. Prices are high, but you are nobody ****forces**** you to buy this stuff !!

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Re: Polar to Rectangular etc. on the 48 Series

Message #1 Posted by [Ron Ross](#) on 18 July 2002, 2:18 p.m.

While that conversion isn't quite as nice as on a 42s, it is still fairly straightforward.

Use your parenthesis above the division key. next key in the value: ie (3 4) Then use your green shift key and also use the polar (above the MTH key) and VIOLA!! Rect->Polar

Also works in reverse and also between(play with to understand) and also RAD conversions are also directly manipulated also.

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HP-42S =DOLAM Entry

Message #1 Posted by [HrastProgrammer](#) on 18 July 2002, 8:37 a.m.

Well, after disassembling a significant part of HP-42S ROM (revision C) I must correct a little detail in J-F Garnier's article 'HP-42S: New Facts'. I haven't found =DOLAM entry at the address #02C6E as stated in the article. This address is inside =SKIPOB so it is impossible for =DOLAM to exist there. This is the code:

```

02C4B    =SKIPOB
02C4B 841      ST=0 1
02C4E    L_02C4E
02C4E 137      CD1EX
02C51 06      RSTK=C
02C53 D9      C=B A
02C55 06      RSTK=C
02C57 20      P= 0
02C59 D1      B=0 A
02C5B 871     ?ST=1 1
02C5E 80      GOYES L_02C66
02C60    L_02C60
02C60 142     A=DAT0 A
02C63 164     D0=D0+ 5
02C66    L_02C66
02C66 131     D1=A
02C69 143     A=DAT1 A
02C6C 34CF820 LC(5) =PRLG    * =DOLAM should be inside this instruction !!!
02C73 8A6     ?A#C A
02C76 C0      GOYES L_02C82
02C78 1C4     D1=D1- 5
02C7B 133     AD1EX
02C7E 808C    PC=(A)
02C82    L_02C82
02C82 3482D20 LC(5) L_02D28
02C89 8A6     ?A#C A
02C8C 70      GOYES L_02C93
02C8E CD      B=B-1 A
02C90 421     GOC L_02CA3
02C93    L_02C93
02C93 8AD     ?B#0 A

```

```
02C96 AC          GOYES L_02C60
02C98   L_02C98
02C98 07          C=RSTK
02C9A D5          B=C A
02C9C 07          C=RSTK
02C9E 135         D1=C
02CA1 03          RTNCC
02CA3   L_02CA3
02CA3 184         D0=D0- 5
02CA6 51F         GONC L_02C98
```

Furthermore, I haven't found this entry anywhere - maybe I am wrong but it seems that lambda support don't exist at all in the HP-42S. Just my 2 cents ...

Re: HP-42S =DOLAM Entry

*Message #2 Posted by [J-F Garnier](#) on 19 July 2002, 6:41 a.m.,
in response to message #1 by HrastProgrammer*

You may be right, Hrast. I may have been fooled by the PRLG word just at this address ...

Thanks.

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amusement for the advanced programmers of ya'

Message #1 Posted by [Dave the "lostrabbit"](#) on 18 July 2002, 12:22 a.m.

Somehow tonight I managed to run across this site. Even though it is not HP related, it is still pretty fascinating in its own funky kind of way. Read the "how it works" etc. part. Makes you wonder if this is why the stock market is having a bad time! Note to Dave Hicks---Please forgive me if you find this unacceptable for the forum. Thanks! Dave

heres the link: <http://8ball.federated.com/>

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HP49 Printing

Message #1 Posted by [Mike](#) on 17 July 2002, 8:23 p.m.

I have the good fortune to enjoy toying with an HP49. Fortunately setting flag 117 returns soft keys similar to my old 48S. Problem Statement: We have developed a simple list program: « DEPTH •LIST SORT REVLIST DUP 'OFILE' STO LIST• DROP » The "DUP 'OFILE' STO" posts a textfile which is easy to transfer to my PC, but difficult to parse using excel (linebreaks do not equal record breaks). My goal is to collect data using the hp49, then analyse it on the spot. Later, back in the office, to load the records into a master list for further analysis. Is there a way to use the PRST command to generate a textfile to HOME on the 49? for simple transfer to my PC? I have use HPComm software, but can only create the link using the start server command.

Re: HP49 Printing

Message #2 Posted by [James M. Prange](#) on 17 July 2002, 9:27 p.m.,
in response to message #1 by Mike

I don't think that PRST is the command you're looking for. Maybe change your program to:

```
\<< DEPTH \->LIST SORT REVLIST DUP \->STR 'OFILE' STO LIST\-> DROP \>>
```

and use the character commands to work with the string?

But what type of objects are on the stack when you start? How many? How do you need it formatted for use on the PC?

Regards,
James

Re: HP49 Printing

Message #3 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 18 July 2002, 12:14 a.m.,
in response to message #1 by Mike

Hi;

I agree with Mr. Prange, transferring a string object will parse "spell checking", so you will have no problem transferring. Anyway, your Linebreak characters can be easily found (POS) and replaced by the ones -record breaks- you need (REPL); put this in a loop that will end when POS returns zero, and your former string with linebreaks will contain record breaks in their places.

There is also the translation code issue. Have you tried changing it?

I'm not sure these are the problems, neither if my suggestions will (help) to solve them, but, as Mr. Prange mentioned, some more data will help us understanding.

Hope it helps a bit more.

Cheers.

(try the HP48G related material, mostly the AUR manual; a lot of good stuff in a better, concise text is there. And most of it "fits" on the 49's resources)

Re: HP49 Printing

Message #4 Posted by [Mike Neu](#) on 20 July 2002, 2:31 p.m.,
in response to message #1 by Mike

Fellows; Luiz, James Thanks for the feedback. To answer Mr. Vieira 's question. Input will be via unskilled hands. Two entries go onto the stack;

FI Last Name [ENTER] @Character string, including spaces {0.102 0.507 0.437 0.252 0.7654}
[ENTER] @ a list, containing three to five measurements, measured to 10/10,000 inch.

[En1] @ stores this info as a list {average minimum FI LAST {RAW DATA} There may be from ten to twenty records during the day, once all measurements are completed.... At the end of the day,

[WINN2] @ sorts the records in descending order, and posts data to [OFILE2]. Now a string, thanks to Mr. Prange's advice.

At this point the field mission is complete and the HP49 returns to my skilled? hands. At my office, I will transfer [OFILE2] to my PC (and rename) for record retention. On request, I will import each data file into EXCEL, and prepare a pivot table to post results. I'm lazy, so most of this is presently done via macros. Presently? A fair question to ask. Presently, this is being done with an aged HP notebook, using a DOS application written in Alpha 4. "Unskilled hands" are intimidated by the notebook, unwilling to try or learn. Getting data entry has been problematic. Even in my skilled hands, the notebook can be unnerving. Three hours to generate the measurements, then entry, analysis, and reporting.... in one nanosecond or less, please. The mighty 49 is my Trojan horse. It is eminently more suitable to the task, and has eager operators to provide data entry. One calculator, several buttons, far less intimidating, much better suited to the task. Programs behind the softkeys: [En1] %%HP: T(1)A(D)F(.); « DUP DUP DUP SORT HEAD SWAP (sum)LIST 3. ROLL SIZE / 3. DROP 4. PICK 4. PICK SWAP 4. PICK 4. PICK 4. ->LIST REVLIST SWAP DROP SWAP DROP SWAP DROP SWAP DROP » [WINN2] %%HP: T(1)A(D)F(.); « DEPTH -> LIST SORT REVLIST DUP ->STR 'OFILE2' STO LIST -> DROP » [OFILE2] %%HP: T(1)A(D)F(.); "{ { 0.6123 0.3210 PTY { 0.3210 0.6540 0.8620 } } { 0.4560 0.1230 VQM { 0.7890 0.4560 0.1230 } } { 0.2580 0.1470 MQV { 0.2580 0.1470 0.3690 } } }"

PS: "your Linebreak characters can be easily found (POS) and replaced by the ones -record breaks- you need (REPL); put this in a loop that will end when POS returns zero" I understand this advice, and I know exactly what Mr. Vieira has in mind. The syntax in the 49 AUR manual also seems straightforward. Unfortunately, my 49 thinks otherwise. I'm sure that a sharp programmer, will quickly conclude from the instructions in [En1] that our 49 programming experience is in it's infancy. Any more advice?

Re: HP49 Printing

*Message #5 Posted by [mike](#) on 20 July 2002, 2:49 p.m.,
in response to message #4 by Mike Neu*

Long on talk, missed my question. How do I insert a carriage return (space up, line break, any name will do) on that text string? [right shift] [.] just adds a line break to the text for the program? I remember that this is an an ascii chr 10. This agrees with the; symbol number and function given on the 49. How do I apply it to the string?

Re: HP49 Printing

Message #6 Posted by [James M. Prange](#) on 20 July 2002, 8:26 p.m.,
in response to message #4 by Mike Neu

Well, first off, I suggest that when you upload programs to your PC in ASCII mode, you use HP Kermit translation mode 3 instead of 1. You can set that by executing 3 TRANSIO, or in the "TRANSFER" input form you can choose "\->255" for the "Xlat:" field. I find it much easier to read or edit that way; pure ASCII text, and you can use copy and paste from a text editor to a Forum message (and vice versa) without having to mess around with non-ASCII characters. I don't believe the 49G guides include the Kermit translations, but they should be on page 27-16 of the HP 48G Series User's Guide; if you don't have it, you can download a scanned PDF copy from [hpcalc.org](http://www.hpcalc.org); see <http://www.hpcalc.org/details.php?id=3937>. In the forum you can use the preformatted text option (see <http://www.hpmuseum.org/artfmt.htm> for details) to avoid things like unwanted newlines after a hyphen.

Personally, I like to add the information from the BYTES command so that anyone who copies a program can verify that he got it exactly right.

Note that there's a lot of information about these calculators at <http://www.hpcalc.org/>, and most of the information about the 48 series (and even the 28 series) also applies to the 49G.

Also note that the usenet newsgroup comp.sys.hp48 rather specializes in the 28 series, 48 series, 38G, 39G, 40G, and 49G calculators. You can search the newsgroup archive at http://groups.google.com/advanced_group_search?group=comp.sys.hp48, which can be customized to your preferences by using <http://www.google.com/help/customize.html>. But GOOGLE only updates a few times a day, so if you wish to participate it's better to use a different server. If your ISP doesn't provide a usenet server, then I recommend <http://www.mailgate.org/index.html> for a free web-based server, or after you've signed up at mailgate, you can use your own newsreader and the newsreader.mailgate.org server. This Forum is great, but the Museum seems to specialize in out-of-production models; I hope that not all of these calculators will "qualify" for the museum anytime soon.

For your EN1 program, note that DUP DUP DUP can be replaced by DUPDUP DUP, DUP DUPDUP, or (I believe very slightly faster) DUP DUP2. The sequence 3. DROP seems particularly pointless. The 49G command NIP can replace SWAP DROP. I haven't figured out why they named it NIP; maybe it makes sense in French. In general, don't put more copies of anything on the stack than you'll actually use, that way it will be easier to keep track of what's actually on the stack, the program will run faster, and you won't have to go to the trouble of discarding unneeded copies later.

If you want to do statistical analysis, the 49G has lots of commands for that, but they do

require that the data is in the form of a matrix stored in '\GSDAT', so as long as you only want the minimum and average, it's probably just as easy to stick to using lists.

As a replacement for:

```
%%HP: T(3)A(R)F(.);  
@ Checksum: # 7F0Eh  
@ Bytes: 104.5  
\<<  
  DUP DUP DUP SORT HEAD SWAP \GSLIST  
  3. ROLL SIZE / 3. DROP 4. PICK 4. PICK  
  SWAP 4. PICK 4. PICK 4. \->LIST  
  REVLIST SWAP DROP SWAP DROP SWAP DROP  
  SWAP DROP  
\>>
```

I'd suggest:

```
%%HP: T(3)A(R)F(.);  
@ Checksum: # EF5Fh  
@ Bytes: 54.  
\<<  
  DUP \GSLIST OVER SIZE / OVER SORT HEAD  
  4. ROLL 4. ROLL 4. \->LIST  
\>>
```

Much smaller, and I'd bet faster, although it's hard to get anything done in a nanosecond when using a 4MHz processor.

Regarding "carriage return" characters, yes, I think that you want character 10. I believe that the calculator manual refers to it as "newline", but in ASCII it's called "Line Feed" or "LF". I'll use the HP Kermit "backslash" translation "\010". The ASCII "Carriage Return" or "CR" is character 13. Note that when you transfer a string in HP Kermit ASCII translation mode 1, 2, or 3, "\010" is translated to "\010\013", which is expected as an "End-Of-Line" marker for text files in the MS DOS/Windows world.

Anyway, I'll guess that the best thing for you to do is replace every space character in your string with a "newline" character, even though that may give you a few more newlines than you really need. You could loop through the string looking for every occurrence of " " and using REPL to replace it with "\010", like this:

```
%%HP: T(3)A(R)F(.);
```

```
@ Checksum: # B40Bh
@ Bytes: 47.
\<<
  WHILE
    DUP " " POS DUP
  REPEAT
    "\010" REPL
  END
  DROP
\>>
```

but the 49G provides the faster, shorter, and easier SREPL command specifically for this task. Try:

```
%%HP: T(3)A(R)F(.);
@ Checksum: # 179Fh
@ Bytes: 30.
\<<
  " " "\010" SREPL DROP
\>>
```

If you also want to get rid of the "{ " and " }" delimiters, you can use:

```
%%HP: T(3)A(R)F(.);
@ Checksum: # A0B7h
@ Bytes: 70.
\<<
  "{ " "" SREPL DROP
  " }" "" SREPL DROP
  " " "\010" SREPL DROP
\>>
```

Regards,
James

Re: HP49 Printing

Message #7 Posted by [James M. Prange](#) on 20 July 2002, 10:49 p.m.,
in response to message #6 by James M. Prange

PS:

If you're trying to key this stuff in directly on a calculator instead of downloading it, don't key in the "backslash translations" literally; translate them first. That is, for "\->" use ALPHA RightShift right-arrow (above the 0 key). For "\GS", if you're not already in program entry mode ("PRG" at the upper right of the display), then do RightShift ENTRY (above the ALPHA key), and when in program entry mode use RightShift SIGMA (above the S key), and then backspace to get rid of the extraneous space character. For "\010", use RightShift newline (above the . key).

Regarding Google, you can also just browse the newsgroup at <http://groups.google.com/groups?q=comp.sys.hp48>.

Re: HP49 Printing

Message #8 Posted by [Mike Neu](#) on 21 July 2002, 6:31 a.m.,
in response to message #7 by James M. Prange

James Thank you for your help, and the hyperlink to Google. Mike

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"Yellowed" Spice Keys (originally light beige)

Message #1 Posted by [Luis](#) on 17 July 2002, 1:21 p.m.

Some beige keys of the Spice series becomes light "yellowed". I guess it's due to something like smoke on the enviroment where they were (or are) used. Is there some another cause for that? Is it possible to "clean" it?

Re: "Yellowed" Spice Keys (originally light beige)

Message #2 Posted by [Tony Duell \(UK\)](#) on 17 July 2002, 6:07 p.m.,
in response to message #1 by Luis

The plastic cases of some DEC terminals and computers (VT100, Rainbow, Pro, etc) also turn yellow. It's generally beleived that sunlight (or other UV light) causes this, and that the effect is not reversable. Or at least nobody has found a satisfactory way of reversing it. This may be related, it may not...

Re: "Yellowed" Spice Keys (originally light beige)

Message #3 Posted by [Frank](#) on 18 July 2002, 2:22 p.m.,
in response to message #2 by Tony Duell (UK)

Laundry Bleach will sometimes whiten a bit. Wonder if the new stuff for teeth has any affect. Try both at your own risk!

Re: "Yellowed" Spice Keys (originally light beige)

Message #4 Posted by [Frank](#) on 18 July 2002, 2:20 p.m.,
in response to message #1 by Luis

It is UV aging. There are additives for plastics used to help reduce aging and UV acceleration tests to help evaluate.

Re: "Yellowed" Spice Keys (originally light beige)

*Message #5 Posted by [Andreas Stockburger \(EU\)](#) on 19 July 2002, 5:29 a.m.,
in response to message #4 by Frank*

Hi,

several of my calcs has these keys. But why cleaning them ? They are OLD and they are USED. Why should a 90 year old man ("used") looks like a 25 years old ("new in box") ?

Andreas

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printer cable for 9866

Message #1 Posted by [Georg Schäfer](#) on 17 July 2002, 11:53 a.m.

Hello,

I have a 9830 computer and a 9866 printer, but no data cable. Can anybody tell me, whether the cable is a simple pin-to-pin-connection or are there some crossed wires?

TIA Georg

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HP-41 Math/Stat Pac?

Message #1 Posted by [Karl Schneider](#) on 17 July 2002, 2:34 a.m.

I've seen a "Math/Stat Pac" ROM included in various 41C* auctions. This module is listed in a 1987 HP calc accessories brochure, but not in the HP-41CV accessories flyer from 1982. The Pac's manual has not been scanned for the MoHPC CD set, to my knowledge.

Q: Does the Mat/Stat Pac include *all* the functionality comprised by the "Math I" and "Stat I" Pacs available in the early '80s? (I have both of these, with manuals.)

Thanks,

Karl

Re: HP-41 Math/Stat Pac?

Message #2 Posted by [thibaut.be](#) on 17 July 2002, 2:46 a.m.,
in response to message #1 by Karl Schneider

yes !

Re: HP-41 Math/Stat Pac?

Message #3 Posted by [Raymond Hellstern](#) on 17 July 2002, 5:57 a.m.,
in response to message #1 by Karl Schneider

as thibaut.be already wrote, you'll have the whole functionality of both modules. You can imagine it as if two modules were in the same port at the same time. You could even make your own Math/Stat pac by soldering both ROM pcb's into one module case;-)

Raymond

Re: HP-41 Math/Stat Pac?

*Message #4 Posted by [Chris Catotti \(Florida\)](#) on 17 July 2002, 9:01 a.m.,
in response to message #3 by Raymond Hellstern*

The MATH/STAT PAC for the HP-41 comes with the Math Pac Manual, The Stat Pac Manual, and a card 00041-9056 "ABOUT THIS PAC AND ITS MANUALS" that says there is no seperate manual, just use the two manuals,

You can not just solder a MATH PAC and a STAT PAC together, you would get a port conflict. You can solder one application ROM with a system addressed ROM, such as TIME MODULE, EXTENDED FUCTIONS/EXTENDED MEMORY, EXTENDED MEMORY, QUAD MEMORY, HP-IL, etc.

See the BUTCHER'S BLOCK articles by David (Ebras) White in the PPC Journals for some great write-ups on module doubling and module tripling.

Re: HP-41 Math/Stat Pac?

*Message #5 Posted by [Raymond Hellstern \(Germany\)](#) on 17 July 2002, 6:35 p.m.,
in response to message #4 by Chris Catotti (Florida)*

Of course you're right regarding putting (or better not) the ROMs together.

I simply forgot these port-coding mechanics while writing the article.

Maybe too long ago since I fiddled with modules;-)

Regards,

Raymond

Combining HP41 ROMs.

Message #6 Posted by [Tony Duell \(UK\)](#) on 17 July 2002, 6:03 p.m.,
in response to message #3 by Raymond Hellstern

Actually, although the Math/Stat Pac contains the same code as the separate math pac and stat pac, you can't just solder the 2 PCBs together to make the combined pack. To understand why not, you have to know something about the HP41 memory layout. The Nut CPU can address 64K words of ROM. By convention, this is divided up into 16 4K pages. The first 8 pages (0-7) are used for 'system' functions -- the HP41 firmware itself, printer ROM, HPIL ROM, Time module ROM and service module. The top 8 pages are allocated to the I/O ports, 2 pages to a port. Note that strictly this is only a convention (which is why you can put the HPIL ROM into a port, even though it needs to fit into one of the system pages). Devices plugged into the port are responsible for decoding the full 16 bit address and deciding if they should respond or not. To help them do this, there are 2 pins on each port that are wired differently (either to the +ve supply line or not connected) on each port. So a module can tell which port it is plugged into. Most plug-in ROMs (apart from special ones, like printer or HPIL) do use these lines, and then the ROM appears in one of the 2 pages allocated to that port. That way you can plug any module into any port. Now, 2 pages for each port is 8K of memory. Most of the early modules were only 4K long _and appeared in the lower page of the 2 allocated to the port they were plugged into_. The math pac and stat pac both do. Therefore if you do manage to wire them both into the same port, you'll just get 2 ROMs conflicting in the lower page, so nothing will work. The genuine Math/Stat pac contains an 8K ROM which puts the Math part and the Stat part in different pages, as you might expect. There is no way to fiddle this -- there is no way to move a ROM between the low and high pages of a given port. You can make a ROM (or other module) appear to be in a port other than the one it's physically plugged into (by miswiring the 2 select lines), which is how you can double up the Extended Memory modules. They use _one_ of the 2 select lines to decide where to appear in the (separate) RAM memory map, so by soldering 2 of those together and fiddling the select lines, you can end up with a double-capacity module that fits into one port (and, indeed, which can share a port with a ROM module). Oh, yes, a couple of exceptions. A few 4K modules occupy the upper page only, and these can be combined with a 'normal' 4K module in the same port. ZenROM is one such. And the card reader ROM is hardwired to appear in page E (lower page allocated to port 4). OK, the card reader will only physically fit in port 4, so it doesn't really matter, but if you did manage to wire it into another port you'd discover that the ROM (which, in this device is a normal 8 pin DIL chip) ignores the select lines.

Re: Combining HP41 ROMs.

Message #7 Posted by [Mike \(Stgt\)](#) on 19 July 2002, 8:13 a.m.,
in response to message #6 by Tony Duell (UK)

You should not put the Card RDR ROM to an other page than E. The 2-word GTO/XEQ (on carry/no carry) are "hard coded", not port dependent.

Ciao.....Mike

BTW, this list was obviously scanned for email addresses as I received spam to "Mike (Stgt)". The addition 'Stgt' I only use on this list to show my location. M.

Re: Combining HP41 ROMs.

Message #8 Posted by [Tony Duell \(UK\)](#) on 19 July 2002, 1:51 p.m.,
in response to message #7 by Mike (Stgt)

Well, the physical ROM in a 41 card reader is an 8 pin chip that will _always_ appear in page E. That chip has no pins to select which page it would appear in. I suppose the only way you could move the ROM software to another page would be by copying it into an MLDL box. And I guess you're telling me that if you do this it won't run. Interesting.

Re: Combining HP41 ROMs.

Message #9 Posted by [Mike \(Stgt\)](#) on 23 July 2002, 6:20 a.m.,
in response to message #8 by Tony Duell (UK)

Not only in an MLDL it would fail, in an SW emulation too. Well, I never tried it anyway :-)

If you look the firmware listings (VASM, MCode) you see at once, that far jumps (Go To/Execute - on Carry/on No Carry) are normaly coded "port independent" with 3 10-bit words (by calling a appropriate Main Frame routine with a relative address where to go realy). All 2-word GTO/XEQ in the Card RDR ROM go directly on page E.

Ciao.....Mike

BTW - who is reading along VASM listings anyway <VBG>

Re: HP-41 Math/Stat Pac?

Message #10 Posted by [John Breda](#) on 1 Aug 2002, 2:38 p.m.,
in response to message #1 by Karl Schneider

I believe it does. I would like copies of your math and stat manuals however since I have lost mine. Are you willing to help? jbreda@massmed.org

Re: HP-41 Math/Stat Pac?

Message #11 Posted by [Ellis Easley](#) on 1 Aug 2002, 9:57 p.m.,
in response to message #10 by John Breda

Are you aware of the Museum CD-ROM set? It includes scans of manuals for many HP calculators and accessories including the 41C Math Pac and Stat Pac. Here is a page with a list of the contents:

<http://www.hpmuseum.org/software/swcd.htm>

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***%^&#^ I love this hobby!!!!!!**

Message #1 Posted by [Michael Meyer](#) on 17 July 2002, 12:48 a.m.

Dear HP Calc Community,

I got a crippled HP-97 in the mail the yesterday. I came home from work and set out to do the overhaul. I rebuilt the battery, and one thing led to another. 3 a.m. I was done... new card reader roller, polished switches and cleaned case (scrubbing the casing in the sink with soap and a brush). I have a great, working, flawless 97.

Now I know many here have done this, and though I already own one HP-97, I'd never fixed one... because the one I have was working and fixed already.

Excuse my enthusiasm. THIS THING IS AWESOME! Incredible engineering. Beautiful circuits and keyboard design. A thing of art and beauty to behold. Inside and out! No wonder Mark Sims (Texaspyro) loves these things!! I can see why!!!

About 5 hours of calculator heaven. Now I'm excited and ready to fix my next one... maybe one that needs even more extensive work. Darn... missed one by a buck on eBay today. There will be others.

I've been doing this over three years now. I thought I'd tire of this by now, but I haven't. I still love it!

One last thought. I looked into insuring my collection, but my homeowner's insurance guy says I really need an appraisal of my collection. I told him that * I * was the most qualified person I know (in town) to appraise these. He suggested I become a certified appraiser in this area, which I will look into. In the mean time, are any of you officially certified to do an appraisal of my collection (by photos or list?) If not, I just may find out how to become an officially certified appraiser myself and offer it as a service to the Museum community!

I think I'm going to go look at my HP-97. And my HP-25. And my HP-67.....

Michael

Re: *%^&#^ I love this hobby!!!!!!

Message #2 Posted by [Ron Ross](#) on 17 July 2002, 7:21 a.m.,
in response to message #1 by Michael Meyer

Perhaps auctions of similiar condition calculators would be sufficient for insurance purposes. Then just photograph your collection to the extent to authenticate the condition of your calculators. After all, insurance is to replace cost value. That is how antique value is determined. By the market place, otherwise it is old junk.

Insurance appraisals

Message #3 Posted by [Michael Meyer](#) on 17 July 2002, 12:05 p.m.,
in response to message #2 by Ron Ross

Thanks...

I suggested that very thing to my agent, but for some reason he didn't think that would be acceptable to the company. It made sense to me, too. It still seems better than nothing....

Michael

Re: *%^&#^ I love this hobby!!!!!!

Message #4 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 17 July 2002, 10:56 a.m.,
in response to message #1 by Michael Meyer

Hey, Doc;

new prescriptions?

HP-therapy! Repair your calculator as a way to deeply understand the universe and RPN at the same time!

Hey, guys, no flames, please. Doc knows I respect this a lot. But having fun is essential. And if we can join having fun and having a working calculator, I'm in!

I have just upgraded my HP42S to HP42S+ (32K). I understand your words, Doc. And I feel glad for you, too.

Best regards.

Re: *%^&#^ I love this hobby!!!!!!

*Message #5 Posted by [Michael Meyer](#) on 17 July 2002, 12:09 p.m.,
in response to message #4 by Vieira, Luiz C. (Brazil)*

Hi Luiz!

I absolutely view this as therapy!! Being at one with HP hardware and RPN..

I suspect that most of the people on this forum feel the same way.

Michael

Please, put my name in both lists...

*Message #6 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 17 July 2002, 7:41 p.m.,
in response to message #5 by Michael Meyer*

... and I'll be happy!

(god rading your posts again, Doc; and good knowing you're gatting back to your oldies... Success!)

Cheers!

Re: Please, put my name in both lists...

*Message #7 Posted by [db\(martinez,california\)](#) on 17 July 2002, 9:53 p.m.,
in response to message #6 by Vieira, Luiz C. (Brazil)*

i don't know if dr. maslow would agree, but for me, soldering my trusty 41 back together after a bad fall was a "peak experience".

spell checking my own post... Gee!

*Message #8 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 18 July 2002, 12:02 a.m.,
in response to message #6 by Vieira, Luiz C. (Brazil)*

I was about to remove it and write it again, but that would disrupt the thread, and Mr. db (cal) would have its post lost in time, so I decided to add an add (?)

Please, read this in my previous post:

(good reading your posts again, Doc; and good knowing you're getting back to your oldies... Success!)

Thanks and apologies.

Zen and HP Calculators

*Message #9 Posted by [Michael Meyer](#) on 18 July 2002, 12:53 a.m.,
in response to message #8 by Vieira, Luiz C. (Brazil)*

See. It shows that some of us men don't just think about one thing. (No matter what Freud said. If he was so smart, why is he dead now? And why didn't he collect HP's!)

Nope. Only calculators:

"Hey, check out the figure(s) on THAT beauty!"

or, "Those are the biggest stack I've ever seen!"

"You can't put that there. That's a female end."

"Wait a minute while I put this sleeve on my unit."

"Are you sure that'll fit in that case?" ("I din't know they made them that big.")

And of course, "Don't go dead on me now! We're just starting go get going! (programming, of course..) Don't you hate it when these things lose their power too quickly!

But, seriously, speaking of Zen: I thought I might have gotten my worst e-Bay

deal months ago when I spent \$10 on an old HP multimeter. I saw the low price and bought it without knowing the model and with no picture. When I got it, it was this big, ugly, heavy 1960's looking instrument. But guess what. It works!! So, I can now repair my vintage calculators with a vintage multimeter. It has a big LED readout (consisting of separate dots), multiple dials and inputs, but best of all, it really does look cool powered up on my work bench.

Say, it would be fun to see if there's a way to post pictures of people's work benches.. maybe in the article forum or something.

Peace, Michael

You're the only one...

Message #10 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 18 July 2002, 1:22 a.m., in response to message #9 by Michael Meyer

... that can post this in here without flames. And now let's go for old LED-display HP multimeters before they go to e-Bay...

By the way, has anyone seen Dave around? Is he in China again? I miss his posts and I'm waiting for an answer to allow people downloading TTF for 41's LCD character Set and Voyager Character Set. They look great when printing docs using them as display reference. If you see Dave somewhere, tell him to say Hi.

Cheers. (I'll stop pulling the thread more than it has to. Promise!)

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Long live RPN

Message #1 Posted by [SHIF](#) on 17 July 2002, 12:28 a.m.

I don't get it. Why did HP stop making scientific calculators with RPN? The venerable financial model 12c and others still use RPN as well as some of the graphing models. All of the current scientific models use algebraic entry logic, which seems illogical to me. The 32Sii is an awesome machine which was manufactured for many years. Why is it no longer made?

Re: Long live RPN

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 17 July 2002, 12:35 a.m.,
in response to message #1 by SHIF

That, we all want to know, too.

Cheers. (and, if new in here, welcome! You get the spirit of this forum, as you have these questions, too.)

Re: Long live RPN

Message #3 Posted by [J.Manrique](#) on 17 July 2002, 2:57 a.m.,
in response to message #1 by SHIF

Why? Perhaps they are working in new RPN models.. why not? Use your ilusions.. I hope so.

The king has dead, long life the king, long life the RPN ;-)

Best regards.. J.Manrique #1077 HPCC Member

Re: Long live RPN

Message #4 Posted by [Tom \(UK\)](#) on 17 July 2002, 1:21 p.m.,
in response to message #1 by SHIF

Well it's a long story but calculators have become a cheap item. To make any money in the modern world you have to sell at a high price for small volumes or a low price in big volumes. Most calculator buyers are not prepared to spend a lot of money on a RPN calc because you can buy a much cheaper non-RPN one. (Most calculator buyers don't see the added value of RPN).

The pioneer series is being phased out (only the HP20S left?) and there appears to be no money to develop the next series of RPN calcs and HP can't spare the engineers to do it because they are working on PDA's etc. that HP think they can make more money on.

I think the HP12C was kept because in the world of accounting money is not so much a problem and the 12C is a nice desk toy. (Why they don't have a 11C or 15C in the same case I don't know).

Anyway that's the way I see it - hopefully HP will prove me wrong and introduce a new RPN scientific (something like the HP42 - but don't mention the 'war' ... sorry I mean the 'HP42' because the thread will go on forever.....)

Re: Long live RPN

Message #5 Posted by [Trisnadi](#) on 17 July 2002, 8:45 p.m.,
in response to message #4 by Tom (UK)

In the scientific calculator world, seems to me the algebraic calculators are leading the markets. Here in Southeast Asia, I believe Casio has the largest market share and all algebraics (does Casio make RPN?). I personally like RPN compared to the algebraics and also few others here that have been using RPN, but the most engineers don't. It is reasonable that currently HP focused on algebraic calcs because of the market. Probably that's why HP stops the 32sii (sad!).

As for 12c, here I found quite many people are using 12c especially business analysts. It is more to the reputation of the 12c and it is recognised as "standard financial calculator" for business analysts. So they always refer to "that small horizontal calculator" for financial calcs probably without even notice the brand.

As Indonesian proverb says "where there is sugar, there are ants."

Trisnadi

Re: Long live RPN

*Message #6 Posted by [Ed Martin](#) on 17 July 2002, 10:04 p.m.,
in response to message #5 by Trisnadi*

It seems a shame to me that HP can't market more calculators that let the user decide. Few of the "uninitiated" will look at or even consider an RPN calc, but we all know that once you try it, you don't want to step back down to algebraic.

HP had the foresight to create dual algebraic/RPN calcs (17B-II, 19B-II, 49G). Why can't they adopt this as a standard design philosophy and maybe educate a few of the algebraic masses along the way?

- Ed

Re: Long live RPN

*Message #7 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 17 July 2002, 11:57 p.m.,
in response to message #6 by Ed Martin*

May your words be read (heard) by those who need to...

Good words.

Re: Long live RPN

*Message #8 Posted by [Marcus](#) on 30 July 2002, 10:42 p.m.,
in response to message #7 by Vieira, Luiz C. (Brazil)*

Some mumble-mumble years ago a business major told me that HP 12C calculators were the ONLY calculators permitted in the U.S.A. professional CPA exam, so they were kept in production long after similar scientific calculators were unavailable.

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Leather case

Message #1 Posted by [SHIF](#) on 16 July 2002, 4:50 p.m.

I have a 41CX (no longer used because I like my 32Sii much better) and a hardshell leather case made by "Q-Sack". Has anyone heard of these cases? If so, are they still in production? Can I get one for my 32Sii calc?

Re: Leather case

Message #2 Posted by [Richard Garner](#) on 16 July 2002, 7:50 p.m.,
in response to message #1 by SHIF

Procalc has them or something close.

Re: Hard leather case for HP 32SII

Message #3 Posted by [Frank Travis](#) on 22 July 2002, 8:26 a.m.,
in response to message #1 by SHIF

A good place to get a hard leather case for the HP 32SII (however to fit the HP 32SII in it you wil have to take off the vinyl slipcase) is Calcpro website www.calcpro.com. I have bought from them many times and have had good dealings with its manager, Paul Nelson.

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17IIB TAN implementation

Message #1 Posted by [Jan \(Switzerland\)](#) on 16 July 2002, 9:44 a.m.

17IIB – an excellent calculator for everyday work - unfortunately does not have trigonometry functions. It is easy to implement series expansions for SIN and COS in the HP solver. Of course TAN can be calculated from SIN/COS. It would, be more elegant to have a series expansion for TAN too, since it would allow to calculate the ARCTAN directly.

The series expansion for TAN appears to be not so practical for a pocket calcs, since it requires the implementation of Bernoulli Numbers. Anybody knows a simpler way?

Thanks

Jan (Switzerland)

Re: 17IIB TAN implementation

Message #2 Posted by [W. Bruce Maguire II](#) on 16 July 2002, 12:21 p.m.,
in response to message #1 by Jan (Switzerland)

Jan:

Please check out my last 17BII trig. post in the Articles section. If that doesn't work for you, then it will at least give you a start on your own implementation.

<http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/articles.cgi?read=222>

Bruce.

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HP-48GX Manual

Message #1 Posted by [Carlos Lee](#) on 15 July 2002, 9:29 p.m.

Please... anyone knows where I can find a HP-48G Series Advanced User's Reference manual (hardcopy, PDF,ect.)....Thanks.

Re: HP-48GX Manual

Message #2 Posted by [Ed Martin](#) on 15 July 2002, 11:09 p.m.,
in response to message #1 by Carlos Lee

Yes, Calcpro (www.calcpro.com) is selling them for the bargain price of \$29.95 - I should have mine delivered tomorrow.

Ed

Re: HP-48GX Manual

Message #3 Posted by [Carlos Lee](#) on 22 July 2002, 7:17 p.m.,
in response to message #2 by Ed Martin

Thanks a lot Ed...!!!!

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HP 21 Rechargeable Battery Needed

Message #1 Posted by [Sarah Mulder](#) on 15 July 2002, 1:04 p.m.

I have been looking for a set of two rechargeable batteries for my HP21 Calculator. I have discovered that it needs two 4 volt rechargeable batteries but I am unable to find where to purchase these. If anyone knows where I can find two rechargeable batteries for my HP21 Calculator, it would be greatly appreciated.

Thanks,

Sarah (for Vic)

Re: HP 21 Rechargeable Battery Needed

Message #2 Posted by [thibaut.be](#) on 15 July 2002, 1:39 p.m.,
in response to message #1 by Sarah Mulder

Hello,

So you have the original battery pack ?

If so, it is quite easy with a cutter to open the old one and replace the original dead batteries with 2 AA rechargeable batteries.

Finding a woodstock battery pack is not only difficult, but if successful very expensive.

Don't forget that woodstock calcs might fry if connected on the power supply without batteries !

Re: HP 21 Rechargeable Battery Needed

*Message #3 Posted by [jose goncalves](#) on 15 July 2002, 4:37 p.m.,
in response to message #2 by thibaut.be*

Two 4 V batteries ? I don't think this is the correct value ! pls check that.

Re: HP 21 Rechargeable Battery Needed

*Message #4 Posted by [thibaut.be](#) on 15 July 2002, 5:03 p.m.,
in response to message #3 by jose goncalves*

Of course you're right, AA rechargeable batteries supply 1,25 V, and that's just what a woodstock need, ie 2,5 V.

Re: HP 21 Rechargeable Battery Needed

*Message #5 Posted by [Tony Duell \(UK\)](#) on 15 July 2002, 6:23 p.m.,
in response to message #1 by Sarah Mulder*

Why do you believe it needs 2 * 4V batteries? Every Woodstock (HP2x) series machine I've repaired runs off a 2.5V (or so) battery pack consisting of 2 AA-size NiCd cells in series. If you have the original battery pack, you can carefully cut it open, extract the original cells and put new ones in. If you don't have the original pack, you need to find one, either working, or to be rebuilt. As a general comment, never throw out old HP calculator battery packs -- the plastic housing, and some of the metal contact strips are needed to rebuild the pack.

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HP42S

Message #1 Posted by [Gary Fok](#) on 15 July 2002, 12:51 p.m.

Dear Sir/Madam,

My HP42S went out of service. I have not use it for a couple of year. When I start to turn on the calculator. I got nothing. Would somebody help me to repair it ?

Best regards,

G.F.

Re: HP42S

Message #2 Posted by [Frank B. \(Germany\)](#) on 15 July 2002, 1:11 p.m.,
in response to message #1 by Gary Fok

Hi, I think the thing one wants to try first is shortening the battery contacts with a paper clip for a few seconds/minutes(after removing the batteries). This revived my HP42s. Frank.

Re: HP42S

Message #3 Posted by [Gary Fok](#) on 1 Aug 2002, 12:51 p.m.,
in response to message #2 by Frank B. (Germany)

Hi Frank, it seem the paper clip work! Thanks!

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HP-41C Addendums

Message #1 Posted by [barry](#) on 15 July 2002, 2:24 a.m.

purchased some HP-41C manuals yesterday, inside the HP-41C Owner's Handbook was an addendum card: it contains updating info for Owner's Handbooks p/n 00041-90001 Rev B, printed in August '79; it contains short update regarding continuous memory and the fact that disruptions may occur when devices (modules, etc) are plugged in; it also gives the fix (R&R'ing the battery pack). the other addendum was in the Financial Decisions Pac manual; it too is a short one & applies to manuals w/ p/n 00041-90042 (original printing & Rev B); anyone needing these addendums email me; i will scan them and forward via email. tnx, barry carson city, nv

Re: HP-41C Addendums

Message #2 Posted by [Chris Catotti \(Florida\)](#) on 17 July 2002, 10:09 a.m.,
in response to message #1 by barry

I think I could use a copy. An email to you bounced back:

----- Transcript of session follows ----- 550 5.1.2 ... Host unknown (Name server: nospamworldnet.att.net: host not found)

Thanks!

Chris.

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A method to print directly from the serial port of HP-49G

Message #1 Posted by [Hiroshi Ito](#) on 14 July 2002, 4:49 a.m.

Is there a printer which can print it from the serial port of 49G? I was hoping that even 49G could be printed easily like 48GX. Sorry to say, an infrared rays port wasn't mounted on 49G. I was given up if it couldn't be printed directly from 49G. However, I discovered that there was a menu of APPS -> 2 IOfunctions -> 4 print in 49G. Does this mean that the printer which can be connected to 49G exists?

Re: A method to print directly from the serial port of HP-49G

Message #2 Posted by [Raymond Hellstern \(Germany\)](#) on 14 July 2002, 3:52 p.m.,
in response to message #1 by Hiroshi Ito

If you have a serial printer...or maybe a second 49G.

Raymond

Re: A method to print directly from the serial port of HP-49G

Message #3 Posted by [Hiroshi Ito](#) on 15 July 2002, 11:00 a.m.,
in response to message #2 by Raymond Hellstern (Germany)

I have each one 48GX and 49G. I don't have a cereal printer. 48GX is convenient because an infrared rays printer can be connected. I am hoping to connect a miniature printer to 49G.

Re: A method to print directly from the serial port of HP-49G

Message #4 Posted by [James M. Prange](#) on 15 July 2002, 8:25 p.m.,
in response to message #3 by Hiroshi Ito

I've printed to the serial port of an Epson impact dot-matrix printer from the 49G. It worked pretty well, as long as I had the printer input buffer enabled. The reserved variable PRTPAR sets the line width and end-of-line characters. Of course, a wide-carriage dot matrix impact printer isn't what I'd consider "suitable" for a calculator printer.

Be aware that flow control is no longer available for the print or serial I/O commands on the 49G. On the 48 series, software flow control (XON/XOFF) was available, but the developers of the 49G seem to think that it's not worth having, so your printer will have to be able to keep up with the input as fast as the 49G can send it; make sure it has an input buffer large enough to handle whatever you intend to send it.

There are entries (SysRPL or using the SYSEVAL command) for converting characters 10, "\", and 128-255 to the HP Kermit style "backslash" character translations; KVISLF if you want character 10 translated to CRLF or KVIS if you want character 10 left as is; otherwise these entries respect the translation mode as set in IOPAR. These are for character string objects only. This may be useful if you don't care to install a special font set in your printer. If I'm not mistaken, *some* of the 49G print commands translate "NUL" (character 0), "", and "\" to "\00", "\" and "\" respectively.

Another possibility is to transfer the object to be printed to a 48 series calculator and print it to an 82240 printer by IR from there. For object types that are new to the 49G, you'll have to convert to something the 48 recognizes as a valid object type, such as a string or GROB. This goes for preventing exact integers from being converted to reals too. The entries DECOMP\$ or EDITDECOMP\$ may be useful for converting to a string with line breaks in suitable places for the 82240 printers. DECOMP\$ gives you a string formatted as you'd see it on the stack, and EDITDECOMP\$ gives you a string formatted as you'd see it in the command line editor. The UserRPL command \->STR will convert any object to a string, but doesn't "wrap" the string to fit the display/printer width. The UserRPL: command \->GROB is another possibility, but I haven't experimented with it much.

Good luck, and let us know if you find a suitable hand-held sized printer.

Regards,
James

Re: A method to print directly from the serial port of HP-49G

Message #5 Posted by [Ellis Easley](#) on 16 July 2002, 12:36 p.m.,
in response to message #4 by James M. Prange

I've never actually looked for one, but I know there are thermal printers that print on rolls similar to - maybe the same as - the 2.25" paper that the HP82240A/B uses. I just measured a Walmart receipt, it is 3.125" wide - a Radio Shack receipt is the same, I know they use a stand-alone printer (not a cash register).

I just did a search for "strip printer" - which I learned is also a term for a kind of film developing equipment - and found a site which specializes in POS (point of sale) equipment, this is their page of thermal "receipt" printers:

<http://www.register5.com/register5/midrange1.html>

I looked at the specs on the two cheapest ones (around \$300) and they have both serial and parallel interfaces. One uses 58 mm paper, the other uses 80 mm paper - these would be 2.25" and 3.125", approximately. These would probably print normal ASCII characters the same as an 82240, at least.

I'm going to try printing from my 49G through a 48G, since I have one and an 82240.

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copyrights

Message #1 Posted by [Jack Stafford](#) on 14 July 2002, 12:29 a.m.

I have attempted to email David regarding permission to use some of his calculator photos on a webpage I'm doing which depicts my calculator collection. So far no reply. He may be too busy or his email address (from the museum web site) may not be the proper place to reach him for this type of request. Can anyone here advise? or.. provide permission? I intend to credit him for the photos used on my page as well as provide links to the museum.

Thanks Jack

Re: copyrights

Message #2 Posted by [Stephan](#) on 15 July 2002, 1:27 a.m.,
in response to message #1 by Jack Stafford

Sorry, I am not in the pos. to give you permissoin but just be patient Dave always gave me a replay althoug it may take a wile.

best regards Stephan

Re: copyrights

Message #3 Posted by [Mike \(Stgt\)](#) on 15 July 2002, 5:07 a.m.,
in response to message #2 by Stephan

IMHO, it depends who asks. Alas, he never replied my inquiry to use one photo for an article.

Ciao.....Mike

Re: copyrights

*Message #4 Posted by [Jack Stafford](#) on 15 July 2002, 7:27 p.m.,
in response to message #3 by Mike (Stgt)*

My first attempt was June 9th. But, I'll keep waiting.

I thought I might catch him lurking around here. :)

Thanks

Jack

Re: copyrights

*Message #5 Posted by [Mike \(Stgt\)](#) on 23 July 2002, 7:38 a.m.,
in response to message #4 by Jack Stafford*

My first attempt was January 15th this year, next January 22th. Then I gave up as others did get replies at that time.

Ciao.....Mike

Re: copyrights

*Message #6 Posted by [Jack Stafford](#) on 23 July 2002, 10:29 p.m.,
in response to message #5 by Mike (Stgt)*

Mike,

Do you know if the other requests were granted or not?

Jack

Re: copyrights

*Message #7 Posted by [Mike \(Stgt\)](#) on 24 July 2002, 7:42 a.m.,
in response to message #6 by Jack Stafford*

Hi Jack,

it was someone from Switzerland, but AFAIK he did not ask for usage of
pics from Dave.

Ciao.....Mike

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HP-67 problem

Message #1 Posted by [Achim](#) on 13 July 2002, 12:39 p.m.

Recently I received a HP-67 which shows the following failure: when switched on (in run-mode) the display shows "00000.0". Numeric key entry gives nothing but math functions seem to work. E.g. entering "h 2" displays pi as "31415.9". All calculations seem to work fine, only the display is weird. Values between 0 and 9.999E19 give a wrong display, while values greater than 1E20 are displayed correctly. Pressing one of the definable keys causes the calculator to hang up. When switching to PRGM the display constantly shows "992 31 25 24". No keystroke changes this display. Any idea of what is defective? Maybe memory? Thanks, Achim

Re: HP-67 problem

Message #2 Posted by [Tony Duell \(UK\)](#) on 13 July 2002, 4:52 p.m.,
in response to message #1 by Achim

My first guess would be one or more of the 8 pin ROM/RAM ICs (all HP-custom, of course), but don't ask me which one. It could be just about any IC on the board, though.

Re: HP-67 problem

Message #3 Posted by [David Smith](#) on 17 July 2002, 5:12 p.m.,
in response to message #1 by Achim

My first guess whenever I see a display with lots of zeroes and no keyboard inputs is the ACT chip. It is the 22 pin, 0.4 inch wide chip. By far this chip is the most common to fail in any Woodstock series machine (which the '67 and '97 are internally).

Re: HP-67 problem

Message #4 Posted by [Tony Duell \(UK\)](#) on 17 July 2002, 6:10 p.m.,
in response to message #3 by David Smith

Odd... I generally find ROM0 (The 18 pin chip) to be the normal cause of a 67 that ignores the keyboard and has odd displays. I have had ACT failure too, though.

Re: HP-67 problem

*Message #5 Posted by [Achim](#) on 19 July 2002, 4:12 a.m.,
in response to message #4 by Tony Duell (UK)*

Is there any possibility to get these chips other than fragmenting another HP-67?

Re: HP-67 problem

*Message #6 Posted by [David Smith](#) on 19 July 2002, 10:08 a.m.,
in response to message #5 by Achim*

You can get the ACT chip from any Woodstock series machine (except possibly the HP27). I know HP21 and HP25 chips work just fine. The ACT chip is unique to the HP67 as it contains a ROM with cpu instructions in it.

Re: HP-67 problem

*Message #7 Posted by [Tony Duell \(UK\)](#) on 19 July 2002, 1:55 p.m.,
in response to message #5 by Achim*

Both chips are HP-custom parts so you can't go and get them from the local electronics shop. The ROM0 is unique to the HP67. Although other machines (Woodstocks, Topcats) use a similar combined ROM0 and display anode decoder, they contain different code, so can't be used in a 67. The ACT chip can be obtained from a number of machines, though. I think the one from any Woodstock _apart from the HP27_ or any Topcat is worth trying. I've swaped them round in the past and had the machines work correctly. It certainly won't damage anything to try it. The HP27 is strange, the chips are NMOS, not PMOS (as in all the other Woodstocks, 67, Topcats), so the power supply polartity is different too. Don't try that chip in a 67.

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42s

Message #1 Posted by [Jason](#) on 13 July 2002, 1:12 a.m.

HELP i need a manual for the hp42s any ideas would be helpful

Re: 42s manual

Message #2 Posted by [thibaut.be](#) on 13 July 2002, 12:53 p.m.,
in response to message #1 by Jason

42S manuals are difficult to find if you want the original one. Otherwise the museum CD's are a very good and complete alternative.

There are some for sale on ebay, but they tend to reach high prices.

If you go to the HP parts website you'll see that the manual can still be ordered but it is unfortunately a low quality xerox copy and very expensive (>\$40 !)

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42s

Message #1 Posted by [Juan LaGamma](#) on 13 July 2002, 12:04 a.m.

What do you think about a 42s made in Brazil. Please help me, i can buy one.

Re: 42s

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 13 July 2002, 2:17 a.m.,
in response to message #1 by Juan LaGamma

Hi;

many 42S were built in here. I have a Brazilian made, and I know a few guys that also have their 42's made in Brazil.

I am not sure they were exported, but Hewlett-Packard is a world-wide co, so, don't feel bother about that. Just give the girl a chance. If you can, test it before buying.

Cheers.

(In time: where in the Planet are you?)

Re: 42s

Message #3 Posted by [Raymond Hellstern \(Germany\)](#) on 14 July 2002, 3:33 p.m.,
in response to message #1 by Juan LaGamma

Hi,

dependent on the condition of the machine, and a suitable price, simply buy it. The 'B' can't be worse than the 'ID' made;-)

Raymond

Re: 42s

Message #4 Posted by [Renato\(Brazil\)](#) on 14 July 2002, 5:59 p.m.,
in response to message #1 by Juan LaGamma

If you don't want it, brazilians will. Just give them a chance to buy a Brazilian calc. I've been to the Brazilian HP calc manufacturing plant in the 70s. I was a teen, but was impressed by HP and the pride of the workers. My dad had a Brazilian 21, I had a Brazilian 34c (with the bad keyboard), I now have a Brazilian 15c (my brother gave it to me). My wife has a Brazilian 20s. You know what - get it. If you don't like it, maybe I will buy it from you - if the price is ok. Regards from Brazil - there is more than footbal (NOT SOCCER) and Carnival here. Renato

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The 42S's are gone

Message #1 Posted by [CJ](#) on 12 July 2002, 7:18 p.m.

I came home tonight and had a voice message from California.

A very nice women from HP informed me that my 42S order could not be completed and it was being cancelled. She stated that they could not complete the order because they are out of units.

Oh well... Missed that one.

I was one of the few that had Jul. 24, 2002 ship dates. I guess they couldn't find anymore or didn't have enough to fill all the orders.

Christopher

Re: The 42S's are gone

Message #2 Posted by [Y. Samuel Arai](#) on 15 July 2002, 2:37 p.m.,
in response to message #1 by CJ

Same message was left for me here as well. I wonder how they came up with this July 24th ship date? Sam

>I came home tonight and had a voice message from >California. > >A very nice women from
>HP informed me that my 42S order >could not be completed and it was being cancelled. She
>stated that they could not complete the order because they >are out of units. > >Oh well...
>Missed that one. > >I was one of the few that had Jul. 24, 2002 ship dates. I >guess they
>couldn't find anymore or didn't have enough to >fill all the orders. > >Christopher

Re: The 42S's are gone

Message #3 Posted by [Karl Schneider](#) on 16 July 2002, 1:51 a.m.,
in response to message #1 by CJ

Nah! You can still get one of those Indonesian service-replacement units. Just visit

<http://cgi.ebay.com/ws/eBayISAPI.dllViewItem&item=1366824203>

and bid at least \$250 to get in the game. Or, for a mere \$350 you can "Buy It Now" and avoid the auction!

Hmm, no bids yet...

I guess those who may have needed a bona fide service replacement unit are SOL from HP's standpoint.

Re: The 42S's are gone---A call for philanthropy!

Message #4 Posted by [W. Bruce Maguire II](#) on 16 July 2002, 1:07 p.m.,
in response to message #3 by Karl Schneider

... I guess those who may have needed a bona fide service replacement unit are SOL from HP's standpoint.

No more than those who need a bona fide shirt-pocket RPN scientific calculator! <:-/

Karl:

I, personally, was lucky enough to get ONE 42S service replacement. After someone first posted here asking about the mystery "part", I decided to call HP. The lady that I talked to told me that the part was a service *manual*. I asked her if she was sure. She said "yes." I asked her if her computer gave her more information about the part than the web-site, because the web-site was ambiguous. She restated that it was, in fact, a service MANUAL. I posted here with that information.

A day or two later, though, someone posted that they had known for some time that these were CALCULATORS---not manuals---and they had purchased one (or more).

I decided to take the chance that the post was not a hoax, and I ordered one. Even though I knew that these units were worth much more than the ~\$95 price tag, I decided that if they really were 42s, that each person here had a moral obligation to not order more than ONE. I have no plans to EVER sell my new 42S; it goes to one of my kids---in about 12 years!

Bruce.

To anyone who got more than ONE 42S from HP as a result of posts in this forum: be a *SPORT!* Give something back to the forum that benefited you!

I would suggest the following. Keep one unit for yourself (and feel very fortunate) and sell---for \$95 + shipping---your additional service replacements HERE to the people who tried and didn't get one. A look at past postings on this subject will give you the identities of the *legitimate* disappointed collectors.

Re: The 42S's are gone---A call for philanthropy!

*Message #5 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 17 July 2002, 12:28 a.m.,
in response to message #4 by W. Bruce Maguire II*

Hi;

I 100% agree with Mr. Maguire II, mostly because we all sort of belong to this community in a way we (at least almost all) would not take advantage from each other; instead, we would try to extend this advantage among all others. I have done some things I do not (and never will) regret, and I did not ask for anything back as payment. Those who know what I am talking about will understand better. I believe collectors-only do not participate in this forum as fans and users, and for these fans and users I believe what can be done, must be done. Many, many people in here helped me and consequently others in many situations. I try doing the same, and in this extreme case, I cannot agree more with Bruce Maguire II.

I have only one earlier brazilian HP42S (1989's) and recently bought an used, newer one (1993's), also brazilian, so none is a Hewlett-Packard's original spare.

I will upgrade the earlier one to 32K thanks to the tips that have been posted here and to clarifying, helpfull Randy Sloyer's e-mails. I decided to upgrade the earlier one just because it is already opened and the newer is scratch-free (I'll not violate the lady), so I'll keep using the 32K's "in the field" (classroom) and keep the newer (1993) for home activity. Just in case.

For those who had the chance to buy more than one spare from HP, this gesture to a contributor (no reseller or collector-only) will be seen as more than philanthropy, instead a noble, mate respectful consideration.

Cheers

Re: The 42S's are gone--- If you have an xtra please call/Mail

Message #6 Posted by [Eric](#) on 17 July 2002, 12:49 a.m.,
in response to message #4 by W. Bruce Maguire II

I have been trying to get a Hp 42S for a reasonable price to add to my collection, without any success. I am still interested. I have no HP 42S from before an I have never sold a calculator in my life. I do have a lot of Hp 32S's, HP 15C's and 16C's for trade though. Regards Eric

Re: The 42S's are gone--- If you have an xtra please call/Mail

Message #7 Posted by [W. Bruce Maguire II](#) on 17 July 2002, 12:29 p.m.,
in response to message #6 by Eric

Eric wrote:

I have been trying to get a Hp 42S for a reasonable price to add to my collection, without any success...

I do have a lot of Hp 32S's, HP 15C's and 16C's for trade though.

Good luck, Eric. Maybe someone who got more than one service replacement will contact you.

On the other hand, 15Cs and 16Cs can be worth a *lot* of money! If you were to place an ad in the classifieds saying that you have other calc.s to trade---including 15Cs and 16Cs---I'd wager you would get some responses. Then you can see if any of the offers seem reasonable to you. Seems reasonable to me! ;-)

Bruce.

(text correction): The 42S's are gone

*Message #8 Posted by [Karl Schneider](#) on 17 July 2002, 1:45 a.m.,
in response to message #3 by Karl Schneider*

A small correction to my earlier post: The URL for the 42S auction is:

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1366824203>

(I had unknowingly edited out the "?" following "dll".)

BTW, I agree wholeheartedly with W. Bruce McGuire.

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Origin of my HP-67

Message #1 Posted by [Michael Reinold](#) on 11 July 2002, 4:43 a.m.

I'm a little bit confused about the origin of my HP-67. It's serial number is 1609A00264 and it has the known arc-sin-bugs.

The character 'A' in the middle obviously means that the machine was made in america. But the label on the back says 'Made in Singapore'.

How can this be? Does the label not belong to the calculator? (The Card Reader is repaired, so it had been opened).

Can anyone tell something about it?

Thanks Michael

Re: Origin of my HP-67

Message #2 Posted by [Raymond Hellstern](#) on 11 July 2002, 7:48 a.m.,
in response to message #1 by Michael Reinold

Hello,

it's like nearly everywhere else these days;-) Some parts were made here, some there.

I'd assume that the back label was made in Singapore, and the housing was put together in the U. S.

But since you said the unit had been opened, maybe it's simply a replacement back label... which could be from stock of HP, or a reprint (fake)

Cheers,

Raymond

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HP Part numbers 32S, 32SII, 20S, 22S and 42S

Message #1 Posted by [Eric Edwards](#) on 10 July 2002, 9:29 p.m.

Does anyone know if all the Pioneers use exactly the same Vinyl Pouch. If there is a difference are you able to point out what this difference is?

I am looking for the HP Part Numbers for the 32SII pouch and also 42S and 20S and 32S.

HP Part No. Vinyl Case 32SII?

What is the part number for the Pioneer Battery door? i.e. 32SII (The semi purple/transparent plastic piece protecting the battery compartment)

HP Part No. Battery Door 32SII?

Finally what is the Part Number for the Manual(english)for: HP Part No. Manual 32S?

HP Part No. Manual 32SII?

HP Part No. Manual 20S?

HP Part No. Manual 22S?

HP Part No. Manual 42S?

Thanks Eric

Re: HP Part numbers 32S, 32SII, 20S, 22S and 42S

Message #2 Posted by [thibaut.be](#) on 11 July 2002, 4:03 a.m.,
in response to message #1 by Eric Edwards

I don't know the exact hierarchy for Pioneer part numbers, but I can empirically assert that both the pouch and the battery door fit on all models.

Re: All pouches are NOT created equal . . .

Message #3 Posted by [Paul Brogger](#) on 11 July 2002, 10:15 a.m.,
in response to message #1 by Eric Edwards

I don't know about the part numbers, but there are (at least) two different pouches:

The better (I think) higher-end pouch is stitched together, and is formed from a relatively complex vinyl material with a leather-like grain on the outside and a nylon-ish, fabric-like texture on the inside. I find these easier to use, as the calculator slides in and out smoothly.

The lower-end pouch (which I believe was consistently provided with the lower-end models like the 20S) has "welded" (melted-together) seams and is formed from a solid vinyl without a padded texture. I find these to be all but useless, as once the calculator is crammed all the way in, the slick vinyl inside grabs on and won't let go. (Maybe if I used one more regularly, it would expand and better serve its purpose, but I've not bothered to break one in.)

Re: All pouches are NOT created equal . . .

Message #4 Posted by [Tom \(UK\)](#) on 11 July 2002, 12:21 p.m.,
in response to message #3 by Paul Brogger

I seem to have 1 of each:

HP32SII bought in 1999 - Vinyl / nylon with internal stitching.

HP42S made in 1989 - Vinyl only with external welded seam.

So the earlier higher spec machine has the cheaper case? The welded version is loose enough to slip on/off OK, the stitched version is still a tight fit.

Tom.

Re: All pouches are NOT created equal . . .

Message #5 Posted by [Richard Garner](#) on 11 July 2002, 12:50 p.m.,
in response to message #4 by Tom (UK)

I don't know how many were made, but I have seen the 42s shown with a hard plastic slide on cover like some of the TI calcs have. So I guess you can say there are 3 different pouch/covers HP offered with this series of calcs. Then there are about 4 independent companies that make or made pouches, hard plastic cases, hard leather cases and soft leather cases for this series as well. And as far as I am aware, they are all interchangeable within the series.

Re: All pouches are NOT created equal . . .

Message #6 Posted by [Wes Fujii](#) on 16 July 2002, 2:37 p.m.,
in response to message #5 by Richard Garner

Make that 4 different pouches. I bought the optional HP black leather pouch back in the '80s with my HP-27S. I still use the leather pouch with my HP-32SII because I like it a lot better than the cheap vinyl ones.

Re: All pouches are NOT created equal . . .

Message #7 Posted by [John K. \(US\)](#) on 11 July 2002, 8:52 p.m.,
in response to message #3 by Paul Brogger

I don't think that which version of the slip case was included with the calculator was related to how much the unit cost. Rather, it had more to do with when the calculator was made. All of the cheap-looking ones that I have come with early production units (pre-1990) of all types (20S, 14B 32S, 42S), but I haven't really been able to correlate the change between styles to an exact date, since there seems to have been some overlap.

Pioneer manuals part numbers 20S, 21S, 22S, 32S, 32SII and 42S

Message #8 Posted by [J. Lopez \(New York\)](#) on 11 July 2002, 9:24 p.m.,
in response to message #1 by Eric Edwards

Some Pioneer manuals part numbers:

- HP 20S: 00020-90001
- HP 21S: 00021-90043 (reorder number: 00021-90025)
- HP 22S: 00022-90016 (reorder number: 00022-90015)

- HP 32S: 00032-90040 (reorder number: 00032-90039)
- HP 32SII: 00032-90068
- HP 42S: 00042-90001

These are all English versions of the manuals.

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OT: Have you heard the news?

Message #1 Posted by [Massimo Gnerucci \(Italy\)](#) on 10 July 2002, 12:57 p.m.

Jul 8, 2002: eBay to acquire PayPal

http://www.paypal.com/cgi-bin/webscr?cmd=_ir-release&rid=312476

Your feelings?

Greetings,

Massimo

Re: OT: Have you heard the news?

Message #2 Posted by [gifron](#) on 10 July 2002, 1:40 p.m.,
in response to message #1 by Massimo Gnerucci (Italy)

Might know! eBay's becoming the WalMart of the net. I've never liked using eBay's payment methods, and now it seems likely PayPal will be messed up, too.

There's an old Latin saying which may be appropriate here - Ohus wellus (oh well).

Re: OT: Have you heard the news?

Message #3 Posted by [thibaut.be](#) on 10 July 2002, 4:26 p.m.,
in response to message #2 by gifron

ebays gets 3 fees - listing fees - %age on sale - % on payment, incl. shipping costs....

multipmy this by the amount of transactions...

And i'ts not finished : I've got plenty of ideas to improve (understand: increase the final rpices) of the sales of their listings...

They are reaaaalllly good....

Re: OT: Have you heard the news?

Message #4 Posted by [Ellis Easley](#) on 12 July 2002, 7:57 p.m.,
in response to message #3 by thibaut.be

I have an email today from Ebay saying I can be notified by cell phone about auctions.
Catch phrase: "Never be outbid again!"

It's the MicroSoft Model

Message #5 Posted by [Mike](#) on 10 July 2002, 5:12 p.m.,
in response to message #1 by Massimo Gnerucci (Italy)

[b]If you can't beat them, buy them.[/b]

Re: It's the MicroSoft Model

Message #6 Posted by [Massimo Gnerucci \(Italy\)](#) on 11 July 2002, 1:44 a.m.,
in response to message #5 by Mike

Hi Mike, I've seen that you recently started some "PayPal only" auctions. Did you change your mind about them?

Maybe this takeover will end up in a better seller and buyer protection. Paying a little more fees would compensate for this...

Greetings,
Massimo

The Ultimate Acquisition

Message #7 Posted by [thibaut.be](#) on 11 July 2002, 5:22 a.m.,
in response to message #1 by Massimo Gnerucci (Italy)

The last thing ebay needs to buy as this stage to have a complete service is USPS...

To Ebay management, if you do so, maybe you'll think at a reward fee to me for this idea....

Re: OT: Have you heard the news?

Message #8 Posted by [Frank](#) on 11 July 2002, 7:32 a.m.,
in response to message #1 by Massimo Gnerucci (Italy)

Feelings: Rates will go up further for these services, following the recent trend with includes auction prices, payment services, and shipping services. There is room for more lower priced competition in these markets, but the early birds ghave the markets so it's tough to penetrate.

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weird 97 keyboard behaviour

Message #1 Posted by [jose goncalves](#) on 9 July 2002, 8:30 p.m.

I've been trying to revive an HP97 and some of it is already operating. But the thing that I'm concerned with right now is the behaviour of the kb. The leftmost part of it operating ok, but the right part (the one with the number keys) is dead. Can anyone tell something about it ?

Re: weird 97 keyboard behaviour

Message #2 Posted by [Erik Wahlin](#) on 10 July 2002, 9:56 a.m.,
in response to message #1 by jose goncalves

This might be a bad connection between the CPU board and keyboard inside. Take off the back cover and check the gold coated contacts. Probably one or more of the contacts is not making good contact. You might have to spread the contacts apart a little bit.

Re: weird 97 keyboard behaviour

Message #3 Posted by [Katie](#) on 10 July 2002, 10:59 a.m.,
in response to message #1 by jose goncalves

Another possiblity is that the gold plated contact grid under the right side of the keyboard has shifted out of place. (There are two grids, one under the left half, one under the right.) This has happended to me several times, but only after I've opened up the keyboard to clean it. It shouldn't shift while in use, unless the calculator was dropped or something.

Re: weird 97 keyboard behaviour

Message #4 Posted by [jose goncalves](#) on 10 July 2002, 11:18 a.m.,
in response to message #3 by Katie

Thank you for suggestions. I'll check them later today.

Re: weird 97 keyboard behaviour

Message #5 Posted by [Tony Duell \(UK\)](#) on 10 July 2002, 6:48 p.m.,
in response to message #1 by jose goncalves

There is no obvious 'separation' between the 2 halves of the keyboard in the _electrical_ diagram of the matrix, although (electrical) rows of 4 keys are often either all from the left side or all from the right side. Do you get all the display digits appearing correctly (use the COS key or something to get a display will 10 digits). If the display is fine, then the keyboard must be being scanned correctly (the same chip -- 'cathode driver' -- handles both). For much the same reason it can't be a bad connection between the CPU board and the keyboard -- that would take out an entire column, which would include keys from both parts of the keyboard). My guess is a mechanical problem with the keyboard. Take it apart (after removing the keyboard/display from the top case, take out all the screws on the back and lift off the PCB. Then remove the insulators and the contact sheets. Look for coffee spills (!) and check that the parts are assembled correctly. One insulator either side of the contact sheet, contact sheet with the convex surface towards the keys.

Re: weird 97 keyboard behaviour

Message #6 Posted by [jose goncalves](#) on 11 July 2002, 7:58 a.m.,
in response to message #5 by Tony Duell (UK)

OK, I'll do try this, because I've been checking contacts between the kb assy and the logic pcb but could't find any thing wrong. TKS

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HP9810 keyboard fault

Message #1 Posted by [Tony Duell \(UK\)](#) on 9 July 2002, 5:07 p.m.

I've got a fault that I can't see how it could occur. A few of the keys on an HP9810 keyboard are intermittant (they work better if pressed hard). Of course this is a contactless keyboard, so it's not just dirty contacts. I think I understand how the keyboard should work. Each key is really a transformer, with 2 windings made from PCB tracks. Pressing a key brings a 'core' close the tracks, increasing the coupling. The secondaries of all the transformers are wired in series to form the 'sense loop' that's connected to the encoder board. The primaries of each pair of keys differing only in the LSB of the keycode are also connected in series (but one of the transformers is wired to invert the phase of the output pulse -- that's how they are distinguished). The 37 pairs of primaries are then wired (with a diode in series to prevent sneak paths) in 37 locations of a 10*4 matrix. This matrix is scanned by the encoder board electronics. OK, the problem is that a few keys don't work. They're not all in the same row or column of the matrix. They're not even in pairs in the same matrix location (which would tell me to check the associated diode and/or the primary tracks). They're random. And it's not the key plungers or the 'cores' -- swapping those round doesn't help -- the same locations on the PCB still fail. I've even tried cleaning the PCB surface -- no change. I don't see how it can be open-circuit connections as that would take out more than 1 key always. And, yes, it's not a firmware problem causing the machine not to recognise certain keys -- there is no key-pressed signal from the encoder board when a faulty key is pressed. I am running out of ideas, can anyone else suggest anything?

Re: HP9810 keyboard fault

Message #2 Posted by [Randy Sloyer](#) on 9 July 2002, 10:10 p.m.,
in response to message #1 by Tony Duell (UK)

Okay, so I don't know one blessed thing about a 9810. But here's my 2 coppers worth:

Stupid question:

Do you have access to a working 9810?

Answer = No: Sorry, out of ideas.

Answer = Yes: On the good 9810, get out your trusty oscilloscope. What is the frequency, pulse width and amplitude of the signal on the primary side of the keyboard trace? Compare these values to the unit that is not working. What is different? I'll bet you'll find something here. Probably the amplitude or rise time. I'm sure it will be a time domain problem since we are strictly AC here. As you say, totally random.

Since it is really a variable transformer based on your description, the faster the key comes into proximity with the traces, the faster the input to output coupling, hence the change in behavior when you press hard.

Sorry if you've already been there, done that. But I would like to know what you find wrong. Curious I am.

Re: HP9810 keyboard fault, redux

*Message #3 Posted by [Randy Sloyer](#) on 9 July 2002, 10:53 p.m.,
in response to message #2 by Randy Sloyer*

As a follow up to my previous post, I really think this is some type of pulse width or amplitude problem. My rationalization:

If a key press is by way of coupling a pulse from one matrix line to another, the keys "transformer" must develop magnetic flux in order to pass the current. The rate at which the transformer develops this flux is affected (to a very small extent) by the speed at which the key is pressed. Ideally, when the unit is working properly, speed is not an issue as there is sufficient voltage to induce flux and perform the pulse coupling. But in the case of this unit, if the voltage supply is low, or varying, the rate at which the iron core approaches the pulse can make a difference. It is the rate of rise in the induced current that causes the flux to reach a point where coupling can occur.

I think it comes down to a case of (dv/dt) . We don't have it on the (v)oltage side, but by decreasing the (t)ime side the key works. I think.

Re: HP9810 keyboard fault

Message #4 Posted by [Katie](#) on 10 July 2002, 12:14 a.m.,
in response to message #2 by Randy Sloyer

Tony,

I don't have any clues at the moment to help you out but I do have a working 9810 and high-quality test equipment. Let me know what measurements I can make on mine that will help you to diagnose the problem further.

-Katie

Re: HP9810 keyboard fault

Message #5 Posted by [Tony Duell \(UK\)](#) on 10 July 2002, 6:36 p.m.,
in response to message #4 by Katie

Thanks for the offer. Let me make a few more tests on mine to attempt to narrow down the area, and then I might well ask you to check a few signals on the board in your machine. Of course anything I discover will be reported here.

Re: HP9810 keyboard fault

Message #6 Posted by [Tony Duell \(UK\)](#) on 10 July 2002, 6:34 p.m.,
in response to message #2 by Randy Sloyer

No, I don't have a working 9810... But I do intend comparing waveforms between the defective keys on this keyboard and the good ones. I hope to see something a little marginal. Incidentally, when I said 'press the key hard' I meant hard, not qquickly. For the good keys, I can press them as slowly as I like, and they 'make' with the key a mm or so from the PCB. For the defective keys, I can press them down the PCB with no effect, but if I really press on them (from that position) then they often work. Hitting them fast has no effect. Which is to be expected. The primaries of the 'transformers' carry a repetitive pulse waveform and it's this signal that needs to couple to the secondary/sense loop. If the keys were magnets and were trying to induce a voltage in a single winding then, yes, I would expect how fast I pressed the key to have some effect.

Re: HP9810 keyboard fault

Message #7 Posted by [Les Bell \[Sydney\]](#) on 11 July 2002, 9:25 p.m.,
in response to message #6 by Tony Duell (UK)

Tony, the fact that the keys work if you "_really_" press on them" makes me wonder if it couldn't be hairline cracks in the PCB traces. Does the PCB deform under pressure?

Best,

--- Les [<http://www.lesbell.com.au>]

Re: HP9810 keyboard fault

Message #8 Posted by [Tony Duell \(UK\)](#) on 12 July 2002, 2:08 p.m.,
in response to message #7 by Les Bell [Sydney]

Yes, I thought of cracked traces. The only problem is, the 'primary' of a defective key is in series with that of a 'good' key, and _all_ the 'secondaries' are in series. So a simple open-circuit trace would not account for the odd defective keys I have. You'd have to have a crack that was normally closed, opened as soon as you started to press a 'defective' key, then closed again under hard pressure. While not impossible (bad connections do the most amazing things!), I am hoping there's a simpler explanation.

Re: HP9810 keyboard fault

Message #9 Posted by [katie](#) on 12 July 2002, 2:48 p.m.,
in response to message #8 by Tony Duell (UK)

Since none of the low-level component testing indicates a problem with the keys or the circuit board, what about looking for something higher-level and subtle. How about noise on one (or more) of the power supply lines. Those old filter caps don't last forever, and that can cause all sorts of weird behavior like you're having. Alex Knight found that to be the problem in his (and my) HP-46.

Re: HP9810 keyboard fault -- The answer ???

*Message #10 Posted by [Tony Duell \(UK\)](#) on 27 July 2002, 4:37 p.m.,
in response to message #9 by katie*

A few weeks ago I was asking about a 9810 keyboard that had 3 keys that only worked if pressed hard. Today I was able to spend some more time on it. In the meantime I've read the HP journal articles on the 9820 (same design of keyboard) and discovered that the 'core' doesn't increase coupling between the 'windings' when the key is pressed. In fact it acts as a shorted turn and reduces the coupling. Normally equal-and-opposite pulses are induced in the 2 transformers at each matrix location when that location receives a current pulse in the primary windings. These induced pulses cancel out, so nothing much gets to the comparator. But when a key is pressed the pulse from that key is reduced, so the pulse from the other key at that location trips the comparator. Interesting, but I didn't see how it would help trace the fault. The idea of supply line noise was certainly reasonable. But this time it wasn't the fault. The supply lines all looked 'clean' and extra decoupling didn't help. At this point I decided to investigate the comparator. I discovered that all keys provided a reasonable pulse in the sense loop, even the dead ones. There were variations between the keys, and yes, the dead ones were on the low side, but this seemed to indicate that the keyboard matrix and drivers were fine. I did notice that all the faulty keys had even-numbered keycodes, which means they all involved the same half of the LM711 dual comparator. A few tests showed the voltages were reasonable. So I followed the advice I gave somebody else here a few weeks back and gave it a shot of freezer spray. Many more even numbered keys died also. And upon warming it up again, the keys all started working, and in fact the dead ones got better too. The only problem is that the LM711 seems to be unobtainable now. The fact that I need a TO100 10-lead metal can version just makes life more difficult. However, replacing the 2 22k resistors near this chip with 33k ones has helped. The keys seem to work reasonably well now. I don't know how long it will last (presumably the LM711 will just get worse), but at least I now think I know what the fault is.

Re: HP9810 keyboard fault -- The answer ???

*Message #11 Posted by [Katie](#) on 27 July 2002, 10:17 p.m.,
in response to message #10 by Tony Duell (UK)*

True the LM711 is no longer made but it's easy to find the commercial temperature version ("C" suffix) in the 14 pin DIP form. The DIP form of this has the same pin ordering as the metal can, pins 1,7,8 and 14 are not used. It should be easy to extend each lead straight down into the circuit board -- there won't be any crossovers. Look for LM711CN on the internet. Here's one place that has them for \$.49 each:

<http://www.goldmine-elec.com/images/Pages016-019.pdf>

If you need the pin-outs on this let me know.

Re: HP9810 keyboard fault -- The answer ???

*Message #12 Posted by [Tony Duell \(UK\)](#) on 28 July 2002, 1:40 p.m.,
in response to message #11 by Katie*

Thanks for the info. Of course it'll probably cost me a lot more than \$0.49 to transfer the money, and to have the part shipped, etc. Still, it won't be too expensive in the end. But I'll explore my own junk box a bit more first, I've got all sorts of things in there... As regards pinouts, I have 'Towers International Op-Amp Selector' (admittedly an old edition, but it doesn't matter for this). It lists just about every op-amp and comparator ever made, with 1 line of characteristics and pinouts. All versions of the LM711 are in there (I have checked). So yes, I'd have no problems kludging in a DIL version if I have to.

Re: HP9810 keyboard fault -- The answer ???

*Message #13 Posted by [Katie](#) on 28 July 2002, 5:14 p.m.,
in response to message #12 by Tony Duell (UK)*

Here's another (better?) option. Use an LM319H as a replacement. It's what National Semi recommends and it's still available in a TO-5-10 (like a TO-100) case. It has two separate open-drain outputs instead of a common output like the LM711, but because they're open-drain they can just be tied together and it should work identically to the LM711. What are missing on this are the strobe inputs, it has independent grounds instead, but I don't know if the 9810 is even using those. The only other issue is that you'd have to cross over two pins to match the ordering of the LM711. Digitkey has them for \$3.00 in single quantities and I'm sure that there's a vendor in the UK that has them too.

Re: HP9810 keyboard fault -- The answer ???

*Message #14 Posted by [Tony Duell \(UK\)](#) on 28 July 2002,
9:23 p.m.,
in response to message #13 by Katie*

I had considered using the LM319/393/339 comparators. Unfortunately the 9810 does use the strobe inputs, which makes life a little harder. I mentioned that there were 2 keys at each matrix location, one which causes an in-phase pulse to be generated, the other which causes an antiphase pulse to be generated. The 2 stions of the LM7111 are connected (using a pair of indentical resistor chains and a centre-tapped pulse transformer) so that one triggers on the in-phase pulse, the other on the antiphase pulse. There is a 7 bit keyboard scan counter (I'll number the bits 0-6). Bits 1 and 2 select one of 4 rows in the matrix of keys. Bits 3-6 select one of 10 rows. Which leaves bit 0. You guessed it, the state of bit 0 determines which comparator is enaabled via the strobe inputs. When the comparator triggers, it triggers a monostable. This stops the scan counter and tells the CPU that a key is pressed. Since the counter is stopped, the pressed key is always selected and keeps on seeing current pulses in its primary, Therefore the compaarator keeps on triggering, the monostable is retriggered, and the counter says stopped. When you release the key, the counter starts running again. So yes, the strobe inputs are essential. It would be possible to use

a 319 or similar with external circuitry to gate the output, but I'd rather not have to.

more fun with coils

*Message #15 Posted by [Ellis Easley](#) on 28 July 2002, 12:44 a.m.,
in response to message #10 by Tony Duell (UK)*

Regarding the transformer coupled keyboard, in a slightly related way, I've got an HP3480A nixie tube digital voltmeter which has BCD outputs and remote control inputs which are isolated with transformer coupling. The transformers are implemented with ordinary axial lead inductors. The hot side "windings" are all on one PCB and the other side on another PCB. The inductors are laid out so when the PCBs are in place, they are close enough together to couple. To achieve the required spacing, or for other mechanical reasons, the PCBs are so far apart that the inductors on one side have long leads holding them up off the PCB. To reduce the number of transformers required, some logic serializes several bits to one transformer, then de-serializes them on the other side.

I have another much more recent meter, HP3456A, which also uses transformer coupling between a guarded (mostly) analog chassis and a digital display and I/O chassis. HP uses the terms "inguard" and "outguard". In this case, each end has two toroidal inductors mounted on the PCB. A four wire harness goes from one PCB to the other. The two pairs of wires go onto the PCB at each end but each pair only connects to the ends of a short length of wire that passes through a toroid as a one turn winding. The signaling is like HPIL in that each channel transmits in one direction. It is like the IBM PC keyboard in that one start bit plus eight data bits are transmitted and the receiver is a 9 bit shift register, when the start bit reaches the ninth flip-flop, the output interrupts a microprocessor to read the data bits. But where the PC keyboard has a separate clock signal, this circuit recovers a receive clock from the serial stream. There is an edge for every data bit because a pulse of one polarity is transmitted for a "1", and the opposite polarity for a "0". This is similar to the "Manchester encoding" used in Ethernet where the goal is to achieve a zero DC level, which is also part of the reason for "eight-to-fourteen" encoding used in compact disk. By using 14 code bits for 8 data bits, they accomplish run length limiting and have leftover bits (or redundant codes) which are selected to bring the DC average to zero, which is important for the IR receiver.

Just thought you'd like to know!

I'm going to try making a switch from your description of the 9810 keyboard. In high school I built a project that worked on the principle of a shorted transformer secondary. It was a length of 1/4" steel rod bent into a large "U". At each end was a coil of about 100 turns of #20 wire. The "U" was attached to the top of a box with the ends pointing down. A short length of aluminum tube (I used the can of a small electrolytic capacitor) circled the steel rod, free to slide from one side to the other. A motor driven switch energized the coils alternately with about 24 VAC. When the coil under the aluminum tube was energized, the tube would fly to the other side. Another electromagnet project I have plans for, but haven't built, although I have seen one in operation, has an solenoid-type electromagnet mounted on a horizontal support, the coil vertically oriented so the pole is looking down on an open space. A photocell is mounted on a vertical support which is holding the horizontal support. The photocell controls the current to the electromagnet so that the current is in direct proportion to the light hitting the photocell. There are two control pots: one controls the overall gain, and the other controls the response time, from the photocell to the coil. You place a light source so it illuminates the photocell with light passing under the electromagnet. Now that it's all built, you hold a light steel object, supporting it from the bottom, under the coil so that it is partially blocking the light to the photocell. The perfect object is the tiny globe that comes with a pencil sharpener. Then you adjust the gain till the electromagnet lifts the object, which reduces the light on the photocell, which lowers the drive to the electromagnet. By adjusting the controls you can make the object float. Then you can set it spinning and it will spin for quite a while. I imagine eddy current are what finally slows it down, since it is moving in a magnetic field. With the gain control you can move it up and down a little. With the delay control you can make it bounce up and down a little.

Re: more fun with coils

Message #16 Posted by [Tony Duell \(UK\)](#) on 28 July 2002, 1:47 p.m., in response to message #15 by Ellis Easley

Many older digital voltmeters had transformer-isolated input stages. My old Solartron has a VCO (as a frequency-to-voltage converter) in the input module, the output of which is transformer coupled to what is effectively a frequency counter (!). But my somewhat more recent Fluke (but still old enough to have a pair of 4040's to control it) had optoisolators on the 'guard crossing PCB'. Getting back to transformers, have to seen the pulse transformers in the HP9100 ROM assembly (just to bring this back on topic). The inductive sense

loops from the ROM PCB itself go via PCB pins to the sense amplifier PCBs. On those PCBs there are just tracks to complete the loop (i.e. the pins are just joined together). But round one of the pins is a little toroidal core with a secondary winding on it, the ends of which connect to the sense amplifier. Yes, the PCB pin is a single turn primary. Neat! (but then so much of the 9100 is). If you want to make a 9810-like keyboard, then start by reading the HP journal articles on this site (including the ones on the 9820). There is some information on how the keyboard should work there.

Magnetic Suspension

*Message #17 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 28 July 2002, 2:44 p.m.,
in response to message #15 by Ellis Easley*

Ellis:

Look for Popular Electronics magazines around 1974 or the "Electronics Experimenters Handbook" from the same PE editors, and you may find an example of your magnetically suspended earth globe... I am not sure about the exact issue it appeared in.

Thank you for a nice reading about electronics, coils, etc.

Re: Magnetic Suspension

*Message #18 Posted by [Ellis Easley](#) on 28 July 2002, 6:11 p.m.,
in response to message #17 by Andrés C. Rodríguez (Argentina)*

Yes, the plans I have are from a magazine article, probably the same one - that's about when I was in high school!

Re: HP9810 keyboard fault

*Message #19 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 10 July 2002, 7:53 a.m.,
in response to message #1 by Tony Duell (UK)*

Tony: I don't know the 9810, but the keyboards of similar equipment of the date were capacitive-coupled instead of magnetic (transformers) as your posting implies. I am just guessing, once again, but I suggest you may check which kind of coupling is used in this case.

Re: HP9810 keyboard fault

Message #20 Posted by [Tony Duell \(UK\)](#) on 10 July 2002, 6:27 p.m.,
in response to message #19 by Andrés C. Rodríguez (Argentina)

I've worked on plenty of capacitive keyboards (mostly Keytronics) to know how they work and what the PCB traces look like. Typically you 'scan' one plate of the 'capacitors' and look for voltages on the other plate. I've seen this done with TTL and 4000-series CMOS chips, I've seen it done with a variety of ASICs. The HP9810 keyboard is nothing like that. Under each key are 2 spiral 'windings'. One is connected between the Row and Column scan lines (I gave more details of exactly how in my original post). The other is connected to the input of a comparator (LM711) via a pulse transformer. I am sure the key operation is inductive not capacitive.

HP9810 keyboard

Message #21 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 11 July 2002, 8:20 a.m.,
in response to message #20 by Tony Duell (UK)

Tony: I knew you are very well qualified about hardware and many times I enjoyed your detailed descriptions. I was puzzled about the "inductive" coupling keyboard, but please don't take my previous suggestion as disrespectful.

Re: HP9810 keyboard -- apology and more info

Message #22 Posted by [Tony Duell \(UK\)](#) on 11 July 2002, 2:04 p.m.,
in response to message #21 by Andrés C. Rodríguez (Argentina)

Tone-of-voice doesn't come across very well in this forum :-). I was not being disrespectful at all. But I am sure it's an inductive keyboard and I wanted to save other people from wasting their time by making suggestions appropriate to the capacitive type. Anyway, I spent a little more time on it this afternoon. It is certainly inductive, and the 'windings are wired in series as I suggested before. This pretty much rules out an open-circuit connection. The diodes on the keyboard PCB (09810-66533) all test fine on my meter, but that's just a forward voltage test, so it's not certain that's not the problem. Now for the interesting bit. I reversed the phase of the sense loop by swapping over the 2 wires in the red/black twisted pair on the encoder PCB. This should swap over the 2 keys at the same matrix location (in other words, the '1' key should send 0, the '0' key should send 1, the 'sub/return' key should do sqrt(x), etc. I wanted to see if the fault moved to the other key, Now for the strange part. The faulty keys start working (both 0 and 1 work, although they send the 'other' digit, for example when '0' didn't work before), but other keys, in unrelated locations, then fail. All I can tell you is that swapping the pair back again got the original fault back, which is good in a way. At least it's not random. Oh well,

mort things to think about.

Accept my apologies, please

Message #23 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 11 July 2002, 4:46 p.m.,

in response to message #22 by Tony Duell (UK)

Tony: Certainly tone of voice doesn't come across very well, and perhaps my case is worse because of idiomatic issues. In my previous message, I was trying to apologize, I tried to mean I may had been inadvertently disrespectful to you without such intention.

I do respect your skills, and also know from your previous postings you have been extremely kind to others. My guess about "capacitive", while well-intended (I worked with such keyboards too, and also found some with Hall-effect switches!), was clearly wrong.

Back to inductive coupling

*Message #24 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 12 July 2002, 8:05 p.m.,
in response to message #23 by Andrés C. Rodríguez (Argentina)*

Hey you, guys!

I sometimes amaze myself with posts in here. Reading Andrés' and Tony's posts brought me back to a time when men respected each other in such a manner they would feel embarrassed if misunderstood. That's the spirit that maintain this forum a place to stay all over. Good readings.

Tony, Andrés (I read some news about Argentina; are you alright?); is there anything about inductive, capacitive coupled keyboards that can be found at Internet? I am a lot curious, and all info in your posts teased me.

I have been dealing with rubber, membrane kbd solutions, and I do not know about capacitive and inductive ones.

Thanks for any info.

Keyboards...

Message #25 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 13 July 2002, 10:13 a.m.,
in response to message #24 by Vieira, Luiz C. (Brazil)

Luiz:

Thank you for your comments. I agree one of the pleasures about this site is that most of the people here are true gentlemen and ladies (should we say gentlepersons?).

I have not detailed information about the inductive or capacitive keyboards, the latter consisted in a printed circuit board where there were islands of copper (usually covered with an ant solder mask or such). The space beneath each key formed two semicircular islands, which will become "capacitively" coupled when the key travelled down. The bottom of the key included an aluminum foil (usually attached to the plastic by means of a piece of plastic foam). When this foil approaches the PCB islands (there was no electric contact), these become coupled. I suppose specific ICs apply signals to scan the keyboard and to detect the signals from the "sense" side of each key.

About the situation here (and certainly I will not discuss anything political or controversial in this Forum), I may say usual life goes on; we look awful in international TV news, but not everything goes that bad. We have deep economic problems, and our international purchase power decreased to 25% from usual, just in a few months. There are usually peaceful protest marches and a very large underemployment. Many qualified professionals are going to work overseas. I hope things will improve in a couple of years, but only after a societal agreement which is still insufficient. There is a wrong tendency here to blame external factors (which may exist indeed); I think we should stop such blaming and start working to solve our own problems.

In the meantime, tourism is almost incredibly cheap from anybody coming from other countries, so all you are welcome! Apart from ski centers, beaches, whale sightseeing, city life and falls (just to mention some touristic options), HP 20S, 17Bii, 48G+/GX and HP 49 are still available here. By the way, the 48 models are cheaper than a 12C (!)

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A couple of HP9810 questions

Message #1 Posted by [Tony Duell \(UK\)](#) on 9 July 2002, 4:59 p.m.

A couple of questions about the HP9810 desktop calculator : (1) What should you get if you press 1/x with a cleared stack (in particular, what should the exponent be)? (2) How do you change the angle mode with the optional Maths ROM cartridge. I know it's displayed using the 3 LEDs above the definable keypad, but how do you set it? Thanks in advance for any help.

Re: A couple of HP9810 questions

Message #2 Posted by [Katie](#) on 10 July 2002, 12:24 a.m.,
in response to message #1 by Tony Duell (UK)

1) You get 9.999999999 e 98 (weird!)

2) <Table> <1> = degrees
<Table> <2> = radians
<Table> <3> = grads

<Table> is the "K" key if you're missing the keyboard overlay.

Initially the d/r/g mode is not set to anything, the first press of a trig function key will set it to degrees -- that's what the manual says.

Re: A couple of HP9810 questions

Message #3 Posted by [Tony Duell \(UK\)](#) on 10 July 2002, 6:09 p.m.,
in response to message #2 by Katie

Thanks for your reply. You see, I have a non-working 9810 on the bench that sometimes decides to do something sane... And when it does, 1/0 does indeed give 9.99999e98 (it was that last digit that worried me -- did I have a register/ALU/firmware problem?). Apparently that's OK. And yes, the maths ROM behaves as you suggest. None of the LEDs come on at first, then the 'degrees' one comes on when I use a trig function. I will try the Table key next time I have the machine in a state to even try to work :-). I do have the overlay. And I do like those little clips on the ROM module to hang the overlay on to store it. A very neat HP idea :-)

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VASM listings needed ...

Message #1 Posted by [HrastProgrammer](#) on 9 July 2002, 3:17 a.m.

I am looking for a few VASM listings which I don't have yet. These include: Printer, Card Reader, HP-IL and Timer. Of course, I am ready to pay for them.

In the case someone is interested, I would like to trade a HP-41X Extended MicroCode Emulator for them. The one who will send me these listings (either in the paper or electronic form) will get the latest (HP-48GX and HP-49G) version of HP-41X for free !!!

Best regards.

Re: VASM listings needed ...

Message #2 Posted by [Mike \(Stgt\)](#) on 10 July 2002, 11:18 a.m.,
in response to message #1 by HrastProgrammer

I may send you VASM of Timer 1C. What do you prefer, paper or scan? If you get the VASM listing of HP-IL, could you please forward a copy to me.

TIA

Ciao.....Mike

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HP 9820A

Message #1 Posted by [thibaut.be](#) on 9 July 2002, 3:13 a.m.

I've just received a 9820A I bought in Germany.

The unit seems to be in good condition, lest the "5" key is missing.

When I plug it and I turn it on, only the fan works (quite silently) and nothing appears on the screen. I opened it and noticed that 2 small and dimmed lights burn close to the card reader.

I have to this stage these questions : - does anyone have an idea of what I could do or check to have my unit work ? - does anyone know where I could find som magnetic cards ? - can anyone service this unit (preferably in Europe, for shipping is quite expensive (unit weights 18 kg)) ?

Thibaut

Re: HP 9820A

Message #2 Posted by [Tony Duell \(UK\)](#) on 9 July 2002, 2:25 p.m.,
in response to message #1 by [thibaut.be](#)

I don't know how similar this machine is to the HP9810, but I think some boards (at least) are the same. I have a 9810 in bits on the bench at the moment, you see, and anything I say below relates to that machine. Firstly, what test equipment do you have? The processor in the 98x0 series is a bit-serial design (mostly...) so it's hard to do any serious logic debugging without a logic analyser. The display on these machines is driven by the main CPU (which has to select each digit and turn on the right segments -- presumanbly in the 9820 it selects a column of dots and turns on the right dots). So unless the processor, RAM, ROM, and memory controllers are all working, you won't get a display. The lights in the card reader are normal -- there should be 4 of them, 2 on top and 2 hidden inside. These are part of optical sensors to detect the card, etc. The fact that they're appearing indicates that there's something on the main +5V line, but you still need to check the PSU voltages. And that would be my first test. On the 9810 there are clearly marked testpoints on the PSU boards for all the voltages apart from the +5V rail. Check the lot. The machine will not work if any of the supplies are missing (OK, the +24V one is only

for the printer, I think). The +/-12V lines are needed by the firmware ROMs, the +16V and +20V lines are needed by the RAM. Then check the +5V rail at the power pins of the convenient chip -- on the display board or keyboard encoder, for example. If all the power lines are OK< next unplug the keyboard connector from the main backplane, remove the printer (if fitted -- does the 9820 have this option?) and the card reader interface. None of those are needed to get a display, and one could be locking up the I/O bus. Still noting? If you have a 'scope or logic analyser, look for activity on the pins of the test connector on the 09810-55613 board (CPU control/microcode). Those pins are bascially the microcode program counter, the microcode address change bits, and the condition flag. If you see changing logic levels there, then at least the CPU clock and microcode program counter are running. After that, we need to get into _serious_ troubleshooting...

Re: HP 9820A

*Message #3 Posted by [thibaut.be](#) on 10 July 2002, 4:37 a.m.,
in response to message #2 by Tony Duell (UK)*

Thanks !

I'll check with a voltmeter the different supplies and if unsuccessful will disconnect the reader and the printer... That's all I'm able to do, since I've got _no_ electronics/electrics education or skills at all !

Re: HP 9820A

*Message #4 Posted by [Achim](#) on 13 July 2002, 12:27 p.m.,
in response to message #3 by thibaut.be*

I've repaired some 9810's which also were apparently dead. They had serious electronic defects on the logic boards and it took some weekends to repair. To do this you need test equipment (e.g. a logic comparator HP-5011T), the schematics, and deep understanding of TTL logic. And last but not least a "licence to solder". A second, working machine is also of great help. Greetings from germany, Achim

Re: HP 9820A

*Message #5 Posted by [Tony Duell \(UK\)](#) on 13 July 2002, 4:50 p.m.,
in response to message #4 by Achim*

I've repaired logic faults in the 9810 as well, and it's not totally trivial :-). The 9810 is (mostly) a bit-serial machine which means you need a storage 'scope or logic analyser to grab one of the serial signals and look at the individual bits. If you don't have a way to do that, you're working 'blind'. The 3 most important tools in repairing a 9810 are a (simple) logic analyser (HP's LogicDart is excellent if you can find one), a good soldering iron, and even if I say so myself, a brain. You need a good understanding of how the circuit should work, and what the signals are telling you about the fault. Given that, it's not impossible, though. The last fault I had was the keyboard LEDs malfunctioning, and some of the mode select keys doing the wrong things. I decided to attack the former fault first. After I verified that the latch strobe signal for the LED output latch was occurring correctly, I realised that this fault could be caused by the logic that selects between 8 and 16 bit I/O transfers. It's a couple of chips on the -66511 card, and a little bit of testing showed that there was a 7404 that was not a NOT gate :-). Replacing it cured both faults :-). To monitor points on the PCBs in the cardcage, I normally solder short lengths of wire to the appropriate pins, then put the card in place, power the machine up, and probe the free ends of the wires. I should make a set of extender boards I guess. Feel free to ask me about these machines, I'll happily share the little knowledge I have.

Re: HP 9820A

*Message #6 Posted by [Achim](#) on 14 July 2002, 6:21 p.m.,
in response to message #5 by Tony Duell (UK)*

That sounds very interesting because I still have a small defect on one of my 66511-boards which I couldn't fix yet: the STOP-key doesn't work under certain circumstances, e.g. when FIXED-mode or one of the function-block LEDs is lighted. Can you tell me which of the 7404's has to be replaced?

HGP98x0 I/O interface repairs

*Message #7 Posted by [Tony Duell \(UK\)](#) on 14 July 2002, 7:00 p.m.,
in response to message #6 by Achim*

In my case it was the 7404 in the front bottom corner of the card, but the fault was not the same. Still, it could be worth checking (see below). I don't generally like 'lucky dip' servicing, though, I prefer to think about the fault and work out what could be causing it. I am going to number the ICs starting with U1 in the rear top corner, going along the top row of the card, then starting again at the rear of the second row, and so on. The 7404 I just mentioned is then U20. OK, are you getting an STP/ signal from the keyboard under all conditions? Check at the input of U3a. This should go low whenever Stop is pressed. If not, you have a fault in the keyboard. Now look at the output of U3a (it's a 7404 again). Does it go high when Stop is pressed. No, U3 is bad. The output of U3 goes into the AOI gate U9 (7453), which seems to generate some kind of I/O flag. The 'enable' input for the stop signal comes from (wait for it), the I/O size (8/16 bit) logic. Check U19d (3001/74H08), U20 (7404) and U12b (7420). Also check U9 itself, of course. STP/ also goes into a circuit that produces a condition code signal to the microcode sequencer when a key is pressed. It consists of U5d (7400), U1b (3001/74H08), U4a (7400). I don't think this is the problem, but it might be worth checking. You are sure the problem is on the -66511 card, I trust.

Re: HGP98x0 I/O interface repairs

*Message #8 Posted by [Achim](#) on 15 July 2002, 3:52 a.m.,
in response to message #7 by Tony Duell (UK)*

THX for your reply. Yes I'm shure that the problem is in the 66511 card because changing this causes the fault to disappear. I forgot to mention one more fact: often it helps to press STOP twice! It seems to be a kind of timing problem or weak output signal of one IC which is very hard to find. I also observed that the fault vanished when the machine was warm.

Re: HGP98x0 I/O interface repairs

*Message #9 Posted by [glynn](#) on 15 July 2002, 5:11 a.m.,
in response to message #8 by Achim*

...which also brings to the discussion other methods of diagnosis, especially in the case of those faults which are both repeatable and seem to be thermally exacerbated.

Have you tried the stuff in a can which "freezes" components? Selectively isolating chips by subjecting the candidates to this treatment, and looking to see when the fault reappears?

This is admittedly a crude technique for finding the fault, but it has been known to work-- and it does have the advantage of not requiring a logic analyzer and the associated training.

Re: HGP98x0 I/O interface repairs

*Message #10 Posted by [Achim](#) on 15 July 2002, 3:57 p.m.,
in response to message #9 by glynn*

I used this cooling agent years ago and indeed forgot about it. This really could be a way to find out weak parts. Maybe I'll try this. Another challenge is to build extender cards to raise the electronic boards for better access. Has anyone build something like this yet?

Re: HGP98x0 I/O interface repairs

*Message #11 Posted by [Tony Duell \(UK\)](#) on 15 July 2002, 6:17 p.m.,
in response to message #10 by Achim*

I've not tried extender boards yet (I use the poor-man's solution of soldering a few inches of wire onto the pins I want to look at, then putting the board back into the machine, and probing the free ends of the wires). But the 98x0 is slow enough that you probably could use extenders with no problems. Be warned that although all 4 processor boards have a 18 pin (per side) and a 15 pin 0.156" edge connector, the connectors are in different positions on the 4 cards. I guess this is to prevent you putting the cards in the wrong slots. Anyway, you'd either have to make up 4 extender boards, or

more sensibly, separate 15 and 18 pin ones. For the memory box, you could get away with an extended for the rear (22 pin per side) connector only -- the front connector only carries the ROM address, data and select signals which are taken to the backplane behind the display PCB. You wouldn't need that for testing. You would need to make up a lot of extenders to work on the board in the memory box, though. Incidentally, has anyone else noticed that (with one exception), if you put the board component side up, edge fingers towards you, then the colours of the handles give the last 2 digits of the part number (using the resistor colour code). That -66511 card has 2 brown handles, for example. The exception is the display. It's -66542, but has yellow (4) and brown (1) handles. But on my display board, you can see where the word 'red' was etched into the copper and then scratched off.

Re: HGP98x0 I/O interface repairs

*Message #12 Posted by [Tony Duell \(UK\)](#) on 15 July 2002, 6:07 p.m.,
in response to message #9 by glynn*

Freezer spray is very useful :-) (for finding thermal faults, and for a few other applications that I won't go into here). However, I do somewhat take exception to your last comment '...and the associated training'. FWIW, I've never had any formal training or education in electronics, fault finding, or anything like that. I'm entirely self-taught. These days some people seem to believe that the only way to know how to do something is to be 'trained' to do it. Meaning that the person doesn't really understand the subject, he can just follow a few instructions and will be totally lost if anything unusual comes up. And as you might have guessed by now, the 'unusual' has a habit of occurring :-) Sorry if this sounds like a flame, it's not directed at anyone here. It is directed, thought, at the idiots who believe that I can't possibly understand <foo> because I've not been on some stupid 2 week course, even though I've been doing <foo> for the last 10 years!

Re: HGP98x0 I/O interface repairs

*Message #13 Posted by [Tony Duell \(UK\)](#) on 15 July 2002, 6:00 p.m.,
in response to message #8 by Achim*

Have you tried a can of freezer spray? You know, that stuff that cools components down to -20C or so? Squirt each chip on the -66511 card in turn and see if you can make the fault come back. Apart from that, you could try tracing the signals with a good 'scope to check they are all valid logic levels. Thermal faults are often (electrolytic-) capacitor related, but I can't think of a timing capacitor in this area. There are a few on the keyboard encoder PCB, but you know that's not the cause of the problem.

Re: HP 9820A

*Message #14 Posted by [thibaut.be](#) on 10 July 2002, 4:34 p.m.,
in response to message #2 by Tony Duell (UK)*

I've checked the voltage tester points and yes, all were amazingly pretty accurate : exactly the voltage on my (analog) voltmeter.

There are indeed 4 lights (I did not see at first sight the 2 hidden lights) on the card reader.

I took off the printer and the reader, but still no response...

The good news is that I met a former HP employee who gave me the name of the guy who took care of the customer service in the seventies... maybe he could give me a hint...

Anyway many thanks for your precious advice.

Best regards, Thibaut

Re: HP 9820A

Message #15 Posted by [Tony Duell \(UK\)](#) on 10 July 2002, 6:22 p.m.,
in response to message #14 by thibaut.be

I have now seen the pictures of the 9820 on this site (my home PC has a text-only display, so it wasn't possible to see them last night). It looks very similar to the 9810 inside -- I think that apart from the firmware ROMs, the keyboard and the display, it's pretty much identical. So my comments on the 9810 might be appropriate. OK, your PSU is working. In one way that's good, because it's not a simple PSU in some ways. For reference, the +5, -12, and +16V lines track the +12V line, the +24V line tracks the +16V line and the +20V line is a zener on top of the +16V line. So if one line is out it can bring others down with it. The bad news is that CPU problems are not going to be easy to diagnose without a logic analyser and the ability to use it. To get a display, much of the machine has to be working (all 4 CPU boards, the memory control boards, ROM and RAM). Figuring out which has failed without being able to check signals is going to be a nasty job. How I would attack this (given the equipment and knowledge I have) would be : Check Clocks -- bit clock and micorcode clock. If mising, debug the clock PCB. Then check that the microcode PC is changing. Are the ROM outputs doing something sane (you can't really tell if they're right, but at least you can spot totally dead microcode PROMs). Is it trying to access the main firmware ROM (check the address shift register and address decoder). Is it trying to access RAM (ditto, and also the memory timing circuit). Is it getting data back to the ALU? Is it ever loading bits into the I/O register? DO they appear on the I/O bus? Is it generating a display strobe (the last problems could be caused by the I/O interface or the CPU control cards -- Q register, I/O control, etc). Is the display PCB itself working? Doing all that 'blind' would seem to be rather difficult!

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HP32SII repair

Message #1 Posted by [Tom Brentnall](#) on 8 July 2002, 5:12 p.m.

After my second 32SII lost the use of a column of keys, I figured there must be a weakness (probably mechanical) that might be able to be fixed or cleaned.

Since I can't find a new 32SII, I tore my first one apart and made some observations that allowed me to fix my newer one.

This fix may be applicable to you if the following test works: If the right row of keys (+, -, x, etc.) doesn't work, try squeezing the bezel below the display and just above the 1/x or E+ key: gently pinch the back of the calculator to the front of the calculator. If that makes the right row work, there is probably a bad connection between the keyboard and the PCB.

Since I didn't have much luck opening my first unit, I decided to use precision surgery rather than opening my second one. The PCB is fastened using twisted metal tabs. I used a soldering iron to melt open a small (5 mm dia) hole in the back just over the twist tab near where the pressure solved the bad key problem. I then inserted a needle-nose pliers into the hole, twisted the tab a little tighter and the calculator now works like new!

For problems near the right side: the tab is located 97 mm from the bottom and 11 mm in from the edge. There is a tab on the left symetrically located, as well as one in the center.

Use the hot tip to carve the plastic away, and trim any flashing with a flush cutting diagonals. I was going to use a "Moto-Tool" to carve a hole, but was afraid the dust would do additional harm.

My model is one of the newer units with a single sided PCB with no mylar or foil to be concerned with. I only had to twist the tab 1/10 of a turn or so. Too much could break it off. I just twisted the tab a bit and then tested the keys, stopping whe it was enough. I read in your forum where some people had luck using an ultrasonic cleaner, but I don't have one, so I tried this. Also, your case will be stronger when you drop it, if you don't have to cut the plastic rivets and pry it apart.

True, there is a little hole in the back, but I just put a sticky label over it to keep dust out.

Re: HP32SII repair

Message #2 Posted by [Randy Sloyer](#) on 9 July 2002, 9:38 p.m.,
in response to message #1 by Tom Brentnall

Another original repair idea! Glad it worked for you, Tom.

I would be interested to know what went wrong with the opening of the first unit. Cut fingers? Warped / bent case back? Drill the top stakes too deep?

As for the ultrasonic method, this works for when the keyboard has been flooded with the beverage of your choice. Liquefied sugar, cream and even mud and come to mind as common killers of the keyboard. It may have fixed your problem by way of the mechanical vibration reseating the PCB to keyboard flex circuit but I wouldn't count on it.

If the problem reoccurs, I would recommend replacing the foam pressure pad under the flex circuit of the keyboard. Changing the pressure on the connector by way of hold down tabs works but the foam looses it "spring" over time.

You took the right approach. Surgery is most successful when the diagnosis is correct. Good work, doctor.

Re: HP32SII repair

Message #3 Posted by [W. Bruce Maguire II](#) on 9 July 2002, 10:43 p.m.,
in response to message #1 by Tom Brentnall

Tom:

Excellent instructional post. This is *exactly* the kind of information that should be posted to the **Articles** section of the Museum for posterity! Could you please post it there?

Thanks,
Bruce.

Are you a king or smth?

Message #4 Posted by [W. Bruce Maguire III](#) on 10 July 2002, 4:10 a.m.,
in response to message #3 by W. Bruce Maguire II

nt

Re: HP32SII repair

Message #5 Posted by [Geoff Garner](#) on 24 July 2002, 12:11 a.m.,
in response to message #1 by Tom Brentnall

I have a related question pertaining to an HP 42S that I recently purchased (used); however, the issue relates to the case and could pertain equally to the 32SII.

I find that the top part of the brown bezel of my 42S (the part of the bezel that has the 42S and the words "RPN SCIENTITIC") tends to pop up slightly; i.e., it comes away from the case at the top. When it pops up, there is perhaps between 1/32 and 1/16 inch of space between the bezel and the top surface of the calculator. If I push it down, it stays down for a few minutes and then pops up again; it is as if whatever adhesive is holding the bezel to the case is no longer effective near the top (if indeed there is adhesive).

I am curious as to whether anyone else has experienced this problem, either with a 42S, 32S, or 32SII (it seems that the issue is relevant for all 3 calculators as they all have the same type of bezel, apparently attached in the same way. If so, how was the problem addressed? Is a possible fix to simply apply a small amount of glue or cement to the underside of the bezel? If so, are there any precautions that must be taken; e.g., to apply glue under the bezel, it would be necessary to bend the bezel up slightly, but I would not want to risk bending it so much that it breaks off. In addition, what would be the best type of cement to use? If I do glue it, would there be any side effects later, e.g., would the ability to open the case in the future, if necessary, be affected? Any experience that anyone has had with this issue would be helpful.

Thanks. Geoff Garner

Re: HP32SII repair

Message #6 Posted by [Randy Sloyer](#) on 24 July 2002, 9:13 p.m.,
in response to message #5 by Geoff Garner

My 10+ year 42S did the very same thing (well, almost). While it was only the corners that came loose, it was most annoying as they rubbed on the case most noticeably upon removal. Eventually, I gave up on trying to stick the corners back down and the brown wore away to the bare aluminum. I never got up the courage to glue them down until... it died one day and required major surgery. With the help and support of the great people here, I cracked open my 42S and was able to repair it. What I learned about the bezel problem was this:

It is attached to the plastic frame with a thin, double sided adhesive film. Over time, the adhesive looses it tack and the bezel pops up. Especially if it has seen any direct stress. My unit took a lot of abuse in my briefcase because I always seem to carry more stuff than the

case was designed for. So I was always squeezing the bezel through the slip case. The formed shape of the display window bezel pushes the stress out to the corners and given enough time, things loosen. Or perhaps yours has been cleaned with something the adhesive didn't like. Don't know for sure, but I do know that after disassembling the unit, the top part of the bezel has less than 1/4" of stick-em across the top that holds it down. When you look at the top horizontal line of the bezel, the first 3/16" of metal beginning at the LCD is totally unsupported. Very small surface area with a high stress.

If you want to glue it back down, no problem. I would recommend a small amount of 2 part 5 minute epoxy. You can use a hair dryer and warm the double sided adhesive film to soften it if you can't get under the bezel all the way across the top. You should be able to pop up any area still stuck down, just don't use any force. A wooden toothpick is about the biggest pry-bar I would use. Use another toothpick and force a small amount of mixed epoxy under the metal all the way across the top. Working across, push the bezel down with your finger, let it relax and then clean up and excess with a paper towel and a clean toothpick to clean the groove between the bezel and case. You'll need **very little** epoxy to do the job. When all the excess has been cleaned up, hit it with the hair dryer again for 15 seconds or so to accelerate the cure. Then just use your fingers to keep pressing it down until the epoxy grips. Worked for me.

I would advise against any "super glue" type products as they all outgas on curing and they leave behind a permanent white film. Most ugly against the brown case. It's also too easy to stick your finger to the bezel...

Some of the others here have used a "shoe goo" rubbery stick-em for this kind of repair, but I have not tried it. Perhaps someone else may share their experiences.

Re: HP32SII repair

*Message #7 Posted by [David Smith](#) on 25 July 2002, 12:30 p.m.,
in response to message #5 by Geoff Garner*

I think that the HP labels pop up on the corners where they were handled by the person installing them and left finger oil on the adhesive. Over the years the oil caused the adhesive to loose tack. The front label on the classics pop up about 90% of the time on the right end and 10% on the left end (but never on both ends)... about the same percentage as right versus left handed assemblers.

Re: HP32SII repair

Message #8 Posted by [Raymond Hellstern \(Germany\)](#) on 25 July 2002, 12:57 p.m.,
in response to message #5 by Geoff Garner

This seems to be quite normal. I've many different Pioneer models, and especially the higher priced ones (w/two lines display) have this 'feature'.

Most of the 'cheaper' models (10B to 14B) don't seem to loose contact that much;-)

My first 42S (Made in USA) doesn't have the problem, all other 42S's have it.

Raymond

Re: HP32SII repair

Message #9 Posted by [Randy Sloyer](#) on 25 July 2002, 1:37 p.m.,
in response to message #8 by Raymond Hellstern (Germany)

Wow Dave, right hand hand vrs left hand! Never would I have thought of that one!.

As for Raymond's comment about the 10/14/20/30 models, I agree that they don't loosen for a very good reason - the bezel is larger on those models. When Hp made the econo-mode pioneers, they dispensed with the seperately applied Hp logo and increased the height of the bezel and just printed the logo on the top of bezel. The net effect was to increase the surface area of the adhesive.

Re: HP32SII repair

Message #10 Posted by [David Smith](#) on 25 July 2002, 6:05 p.m.,
in response to message #9 by Randy Sloyer

I was scrapping out a really gross HP45 and noticed that the front label was lifting on one corner (as most of them are now doing). When I fully removed the label I could see the pattern of a finger print in the adhesive where it was lifting. A little more detective work (and keeping track of a bunch of machines) seemed to have solved the mystery of why one end of the front label of HP machines seems to not stick down... and 9 out of 10 times it's the right side that is lifting. I assume the same thing applies to the other HP labels, but since they have more surface area don't exhibit the problem as clearly.

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HP-97 Power/Charging Problem

Message #1 Posted by [sok](#) on 8 July 2002, 2:36 p.m.

I have a HP-97 that I purchased from a Cal-Tech student while attending Pasadena City College in 1979. I haven't used it in a while but I recently moved and came across it. I found that the batteries were NG, so I replaced the battery pack with SANYO Quick Charge NiCad batteries, N-1200SCF. They are 1.2v, 1100mah units. After reassembling the pack, and charging the pack overnight, I turned on the calculator and right away within a few seconds had a low-battery LED indication. I then removed the pack and measured the voltage...below 3 volts. When I assembled the pack, each battery showed a voltage of approx. 0.7 volts per cell. Obviously, the pack did not charge overnight. Today, I have placed the pack on an external charger, charging at 280ma (max is 350ma for quick charge). A previous check about an hour ago showed the pack at 5.63 volts. I'm sure that I have a problem with the charging circuit of the calculator. Does someone have a schematic of this circuit that I can use in troubleshooting this problem?? Any info would be greatly appreciated. TIA..sok.

Re: HP-97 Power/Charging Problem

Message #2 Posted by [David Smith](#) on 8 July 2002, 6:09 p.m.,
in response to message #1 by sok

There is an HP97 service manual on the HPMUSEUM CDROM set.

Things to check first are the battery contacts in the battery box and the charger contacts at the plug. Also the charger wires are prone to breakage in the plug at the calculator end. Check the voltage at the charger plug while flexing the cable around.

Re: HP-97 Power/Charging Problem

Message #3 Posted by [sok](#) on 9 July 2002, 1:26 a.m.,
in response to message #2 by David Smith

David, Thank you for your response. I had checked the charger and had voltage, but I had not checked the connector plug at the calculator end of the charger. When I did, there was no voltage. Problem Solved....Thank you, again....sok.

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Disabling Internal Hp-41 roms(long)

Message #1 Posted by [Rick Garza](#) on 8 July 2002, 2:35 p.m.

<crazy bizzare esoteric stuff follows>

Is there a way to 'fool' the hp-41 internal roms to remain in sleep on a CV? The idea is an external shadow rom that occupies the entire 64k space and still have the internal regs/mframe stay disabled so as not to draw power or conflict with "now" external instruction fetches.

If it was a C, or an older CV I could cut traces -- but this model has everything neatly buried inside a single chip....and besides its a new challenge.

I know that PWO (PowerOn) is driven by the CPU to disable -- but its also an input for the PowerOnReset circuit. So I wonder can I drive it from the outside? Would this cause the the usual POR? Or with all the RUN/STANDBY/SLEEP smarts would it be just be safely ignored and look for instructions anyway? I know its CMOS and its NEVER ok to have driving pins tied directly together, but I have managed to pull this off it the duty cycle is closely watched....

I have also looked at SYNC but not sure if it would be of any use at all. Looks like its mainly for timing and syncing regs/display/etc and the serial roms respond to the internal addrdecode primarily.

Banking (the Hp scheme) would work only if the 1Lxx internal chiproms are new enough to support it -- and why would they in bank1 and \$0000-\$3fff? But maybe?

Theres always relocating code up to \$8000 but I lose being able to use all those nice roms that have been developed over the years...

The ugliest is to make an external state decoder that watches for long instructions and translates code BEFORE it gets to the cpu, but this could get complicated. It does have the advantage of nice unlimited banking possibilities(not the kind you can deposit--chuckle--).

I ask these questions because I am now committed to making this HP-41CV act as a microCNC controller and will have a plugin that ends in a USB connector.

I am familiar with all the modern stuff. After looking at PICs, Rabbits, ARMs, etc and designing a unit from scratch(been there done that too many times!) the HP-41 is very very attractive and besides its turning into a lot of....FUN! My hats off to the design team, and to think back then I bought a TI!

Who sayz u cant tich an oldog nwe trix?

Regards, Rick

Re: Disabling Internal Hp-41 roms(long)

Message #2 Posted by [Meindert Kuipers](#) on 8 July 2002, 3:05 p.m.,
in response to message #1 by Rick Garza

Just have a look at www.kuipers.to/hp41. The (preliminary) specs for an MLDL, which can easily be used for a EPROM box can be downloaded there. I certainly looked at the possibility to disable the internal ROMS, and the best option is probably to remove them from the internals. A good alternative however is to use the diagnostics ROM entry point to bypass the internal ROMS on startup. This prevents you from doing too dramatic internal changes. Even in the 'standard' configuration can the '41 be tricked in almost anything by using the various entry points at the end of any ROM.

Meindert

Re: Disabling Internal Hp-41 roms(long)

Message #3 Posted by [Rick Garza](#) on 8 July 2002, 3:29 p.m.,
in response to message #2 by Meindert Kuipers

Meindert,

I dled the service manual and I have looked thru it. When you jump to the diagnostic you then execute code in thatquad right?

Then the ISAs are all coming from a space outside the internal roms, so they wont respond because instructions requested are simply not in the local range,right? But if code anywhere has a LONG refernce to the lower space it will recreate the problem.

Or did I misread and have that wrong? Also these entry points your mentioning, arent they just quad2quad policed jumps? Or ways to include banking in the upper ports?

Where can I find more info? All these different mnemonics that all mean the same can drive

you nuts....

BTW good luck on your mldl2000 (looks nicely done) I also am using a cheap fpga.

Re: Disabling Internal Hp-41 roms(long)

*Message #4 Posted by [David Smith](#) on 8 July 2002, 6:11 p.m.,
in response to message #3 by Rick Garza*

The ROMs for the half nut machines are located in the display module. They cannot be accessed without ruining the machine. Also you cannot cut the lines to the module without losing the display.

Re: Disabling Internal Hp-41 roms(long)

*Message #5 Posted by [John Ioannidis](#) on 9 July 2002, 12:54 a.m.,
in response to message #1 by Rick Garza*

I assume that if you are embarking on such a project, you already have some way of emulating hp41 ROMs with external hardware (if not: I have a PIC-based emulator, look in www.tla.org/hp41/mldl/). My emulator will actually interpret all four ENBANK commands, so you get four shadow roms in each 4k slot. This way, with some careful programming you can get 128K of mcode in the upper half of the address space, so you don't really need to disable the internal roms. Plus, you still have the hp41 "mainframe" roms, and you can stick in a printer and a time module that will certainly be of use in a CNC situation.

You may also want to check out the ZWorld microcontrollers (www.zworld.com); you can program them in a C-like language, and if you burn one you can always buy another! I've done interesting stuff with a PK2270.

Cheers

/ji

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article about Apollo spacecraft computer

Message #1 Posted by [Ellis Easley](#) on 8 July 2002, 11:16 a.m.

There have been some discussions here about the computers used in the space program in general and on the Apollo spacecraft in particular. While following a link Massimo gave me to some information about the Olivetti Programma 101, I found an IEEE Transactions article from 1963 describing the design of a computer to be used on the Apollo spacecraft. It was published in a 1971 book about computer design which can be read online:

http://www.ulib.org/webRoot/Books/Saving_Bell_Books/Computer_Structures:_Readings_and_Examples/00000166.htm

The book also has an article about the HP9100. It is a compilation of three articles from the Hewlett-Packard Journal.

http://www.ulib.org/webRoot/Books/Saving_Bell_Books/Computer_Structures:_Readings_and_Examples/00000263.htm

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HP calculator popularity

Message #1 Posted by [Trisnadi](#) on 7 July 2002, 8:14 p.m.

Watching the discussions about HP42S and HP32Sii prices, I am just curious about the popularity of HP calculators in various country. Apparently in the US is the most popular. In Indonesia, where some of the HP calculators are made, not many Indonesian use HP calculators, mostly they use Casio. For example, among Indonesian in my office floor, only 2 of us are using HP calcs of of about 20 people. What about other countries?

Trisnadi

Re: HP calculator popularity

Message #2 Posted by [Ron Ross](#) on 7 July 2002, 8:30 p.m.,
in response to message #1 by Trisnadi

Your assumption is wrong about the US. Most popular is Texas Instruments. Only old timers and a few discerning Engineering types and some engineering students use HP. Ti out sells Hp by a 10-1 margin in high end graphics (at least, if Ti can call the Ti-83 such). In scientific pocket calcs, it is probably more like a 100-1 (probably being conservative again).

Re: HP calculator popularity

Message #3 Posted by [Iqbal](#) on 7 July 2002, 9:23 p.m.,
in response to message #2 by Ron Ross

In Trinidad, West Indies 100% of land surveyors use HP calculators. Most use the HP42S, some use 48GX and one that I know use the 32SII because the numbers/letters are large. Most other people aren't even aware that HP makes calculators. I really don't mind because no one in my workplace asks me for my calculators borrow. They can't seem to understand how to use a calculator without an equal sign.

Re: HP calculator popularity

Message #4 Posted by [Trisnadi](#) on 8 July 2002, 2:00 a.m.,
in response to message #3 by Iqbal

In terms of field of expertise, here in Indonesia, apparently HP calculators are mostly used by those who work in oil and gas business. I've never seen anybody uses TI calcs here.

Trisnadi

Re: HP calculator popularity

Message #5 Posted by [Kenji Nagahama](#) on 8 July 2002, 11:45 p.m.,
in response to message #4 by Trisnadi

I am working in a Japanese engineering company relating oil and gas business, too (sometimes I work for Indonesian oil company).

Generally speaking (not only my company), most of people use CASIO or SHARP in Japan which are Japanese brands. HP calc is unfortunately VERY rare because HP calc division failed marketing and has recently withdrawn here. I think it was not caused by Japan's non-tariff barriers. Their marketing strategy might be wrong, because HP's PDA, workstation, PC, printer etc. carve out some market shares in Japan.

As far as my company, some advanced users have HP200LX and others. I am a HP's user (49G, 32SII, 17BII) now, while used to have a CASIO's pocket computer. I satisfy the quality and performance of HP's very much.

Re: HP calculator popularity

Message #6 Posted by [J.C. Randerson](#) on 9 July 2002, 9:13 p.m.,
in response to message #5 by Kenji Nagahama

Can HPs be found at all in your area of Japan?

J.C. Randerson

Re: HP calculator popularity

*Message #7 Posted by [Kenji Nagahama](#) on 11 July 2002, 9:11 p.m.,
in response to message #6 by J.C. Randerson*

I do not know the general situation of engineering business relating to oil and gas field in Japan but probably HP users are also very rare as general in Japan. Since my company runs international business, I feel some advanced users who are particular about handheld tools. Actually some of my neighbors in my office use HP-200LX but it is PDA unfortunately (not so-called calculator). I haven't seen HP 'calc' users in my department but a few in other sections. Also some Americans are working in my company, who probably have HP (I haven't confirmed yet).

There is a bulletin board on the web organized by (former) authorized retailer and it is the only place to find HP calc's freak and they have the same troubles. We (they and I) cannot ask neighbors if we have questions about HP's complicated calc such as 48/49 series.

Re: HP calculator popularity

*Message #8 Posted by [Trisnadi](#) on 11 July 2002, 9:55 p.m.,
in response to message #7 by Kenji Nagahama*

Just check the authorised HP dealer here, on one store they do sell HP calculators, but mainly the 10B and 12C. For the scientific version they sold HP-32Sii perviously before it got discontinued (their price list was US\$ 74). They do not have the price list for HP 20S, so apparently the HP 20S is not available here.

Trisnadi

Re: HP calculator popularity

*Message #9 Posted by [KATO Takenori](#) on 12 July 2002, 9:49 a.m.,
in response to message #7 by Kenji Nagahama*

I've never seen any geologist using HP RPN calc in Japan.

Re: HP calculator popularity

Message #10 Posted by [Trisnadi](#) on 8 July 2002, 2:05 a.m.,
in response to message #2 by Ron Ross

Really? I didn't know TI outnumbers HP calcs! In contrast I've never seen anybody here in my workplace uses TI calcs...

Trisnadi

Re: HP calculator popularity

Message #11 Posted by [Mark Peters](#) on 25 July 2002, 8:21 p.m.,
in response to message #10 by Trisnadi

Land Surveyors in New Zealand use HP calcs almost exclusively. I work at the University where the surveyors are trained and we are very frustrated by HP continually showing contempt for the surveying/engineering professions by discontinuing popular makes of calculators.

Our 50+ students buy HP's when they enter their training with the view that it will last them a very long time. We are currently trying to source a large enough supply for our new intake next year, anyone able to point us to a good supply of 32Sii's?

Re: A good source of HP calculators

Message #12 Posted by [Frank Travis](#) on 26 July 2002, 8:32 a.m.,
in response to message #11 by Mark Peters

A good source of HP 48GX calculators (as well as plug in application cards and accessories) is Calcpro website www.calcpro.com. They are in Corvallis, Oregon, USA. I have purchased from them many times and have had good dealings with its manager, Paul Nelson. I just got another HP 48GX from them. I do not believe Calcpro has HP 32SII calculators anymore. Good luck!

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New ebay twist? Make a PDF of manual and sell it?

Message #1 Posted by [Gene](#) on 7 July 2002, 1:23 p.m.

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1364986185>

This is the TI-58/59 Service manual. If I am reading the ad correctly, the seller will deliver the manual as a PDF file or on a CD ROM.

Imagine that...you would never run out of the item being sold.

Gene

Re: New ebay twist? Make a PDF of manual and sell it?

Message #2 Posted by [Todd G. \(CT, USA\)](#) on 7 July 2002, 3:00 p.m.,
in response to message #1 by Gene

Unless Texas Instruments has granted the seller a license to make and sell copies, the seller is clearly violating copyright laws. I believe eBay has rules about this....

<http://pages.ebay.com/help/community/png-copyrighteditems.html>

Re: New ebay twist? Make a PDF of manual and sell it?

Message #3 Posted by [Ellis Easley](#) on 8 July 2002, 6:54 a.m.,
in response to message #1 by Gene

I've seen a xerox copy being sold on Ebay twice with the very same JPEGs each time. At least once was from Germany. I don't know why this guy is just offering one copy - he should make it a dutch auction with infinite units available! He should state how many megabytes the file is, so a person could decide whether to get the CD.

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code names

Message #1 Posted by [steve leong](#) on 7 July 2002, 9:15 a.m.

I was looking in the museum the other day and noticed that the 10c,11c,12c,15c,and 16c did not have code names listed is that an omission of the museum, or was this done by hp, or do we just not know?

Voyager codenames

Message #2 Posted by [Todd G. \(CT, USA\)](#) on 7 July 2002, 11:51 a.m.,
in response to message #1 by steve leong

Here are the codenames for the Voyager models.

11C: 1.0 12C: 1.0 15C: 1.5 16C: PR 10C: 0.5

¿¿??

Message #3 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 7 July 2002, 5:58 p.m.,
in response to message #2 by Todd G. (CT, USA)

Am I missing something?

Re: ¿¿??

Message #4 Posted by [Todd G \(CT, USA\)](#) on 7 July 2002, 7:47 p.m.,
in response to message #3 by Andrés C. Rodríguez (Argentina)

Like what? Those are the codenames.

So...

*Message #5 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 8 July 2002, 1:43 p.m.,
in response to message #4 by Todd G (CT, USA)*

codename(11C)=codename(12C)?

Re: So...

*Message #6 Posted by [Juergen Rodenkirchen](#) on 8 July 2002, 3:43 p.m.,
in response to message #5 by Andrés C. Rodríguez (Argentina)*

Right, curious but true: codename(11C)=codename(12C)! Take it as a matter of fact, they were both equally codenamed :-)

Re: ¿¿??

*Message #7 Posted by [Juergen Rodenkirchen](#) on 8 July 2002, 5:06 a.m.,
in response to message #3 by Andrés C. Rodríguez (Argentina)*

Yes, Mr. Todd is right! The numbers (the code-names actually) probably have been chosen so as to indicate the degree of "sophistication" of the calc in question (and in relation to each other). As for the 16C, presumably "PR" has been chosen as "code-name" to indicate that it's a PRogrammers calc. B.t.w., if you want to learn more on this topic in general, try to get a copy of Wlodeks really excellent book "A guide to HP handhels calculators and computers" from which I have my information too (see the "Books and Magazines" chapter on this site).

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HP 42s prices!!

Message #1 Posted by [Tony](#) on 6 July 2002, 12:56 p.m.

How long do you think prices for the 42s will continue to rise? They are selling for approx. £200 on ebay - will they peak or have they peaked already?

Thanks and I look forward to your thoughts.

Re: HP 42s prices!!

Message #2 Posted by [Richard Garner](#) on 6 July 2002, 3:14 p.m.,
in response to message #1 by Tony

Prices are still going up, but it looks as if they are leveling off more. As soon as the MUST HAVE buyers and GREEDY sellers are appeased, the prices will come down. I don't see it happening before the end of the year though and I don't see the prices going below \$150 for a long time after that. That's just my opinion as a day to day watcher.

If you are looking to sell the more of the original items supplied by HP in the box, including the box, the bids will go higher. If you are looking to buy, what are you willing to pay. I bought my first 42s new from EduCalc for \$85 ten years ago. I bought my second on eBay for \$140 about 18 months ago. I would love to have a 3rd, but I'm not willing to pay more than \$150 for one.

Re: HP 42s prices!!

*Message #3 Posted by [Iqbal](#) on 6 July 2002, 5:01 p.m.,
in response to message #2 by Richard Garner*

Richard, I tend to disagree with you. Especially the part about 'greedy sellers'. Since 1999 I was lucky to find a dealer who was willing to sell me his service replacement HP42S anytime he got from HP. I sold these for \$150 plus shipping. Then I started to realise that a lot of people that bought from me, were re-selling them on ebay for over \$250, either as new in non-retail box or slightly used. What was I supposed to do? Continue selling them at \$150 a piece and loose [the way I see it], or raise the price to what the market dictates? Well I decided to raise the price. Now that I sell the HP42S for \$235 plus shipping, I have seen the last two new in box service replacement HP42S go over \$300 [\$350.31 and \$238.51 to be exact]. That price is really high. I don't believe it would remain that high, maybe I am wrong. I feel around \$250 is where it would most likely settle. But I guess we'll just have to wait and see.

42S prices? Have you seen 32SII prices??

*Message #4 Posted by [Todd G. \(CT, USA\)](#) on 6 July 2002, 5:59 p.m.,
in response to message #3 by Iqbal*

The greedy seller syndrome has trickled down to the 32SII units too. Ever since they were discontinued, prices have shot up (irrational exuberance some would say).

Some sellers on eBay and elsewhere are asking nearly \$100, and one who purports to "add value" is asking \$175. Now I understand supply and demand and basic economics, but I think some of these prices are just wishful thinking on the part of sellers. If they can sell these calculators for these prices, more power to them. However, the 32SII is quite a prevalent calculator, and prices should not be this high for long.

My \$0.02 Todd

Re: 42S and 32SII prices

*Message #5 Posted by [Trisnadi](#) on 6 July 2002, 7:53 p.m.,
in response to message #4 by Todd G. (CT, USA)*

I've noticed the 32Sii (and 42S) in the last few days, and I was stunned by the price of both calcs. I don't have any idea about calculator collection activities in the US but I assume that is the main thing raising the calc price.

I cannot blame to either the sellers or the buyers, as this represents a very high demand recently, and I don't really understand why.

Trisnadi

Re: 42S and 32SII prices

*Message #6 Posted by [Ron Ross](#) on 6 July 2002, 9:04 p.m.,
in response to message #5 by Trisnadi*

I don't believe the 42s or 32s are reeeally collectors items (most collectors already have one). I believe the prices are sky high because engineers who have one, now realize that if they ever lose Hp working calc #1 will have to use a 48G series or switch to Ti, and are willing to pay \$\$\$ to have a spare rather than either of the other two options.

Me, I use the 48, but I do prefer the 32 or 42 for general number crunching. However an Hp48G is expendiable in comparison (how much longer is any RPN expendable??)

Re: 42S and 32SII prices

*Message #7 Posted by [Joan Cardenas](#) on 7 July 2002, 4:47 p.m.,
in response to message #6 by Ron Ross*

I think you're completely right Ron. And I say this because is exactly my case. I bought a new HP-42s a few months ago and I have two news HP-32sii, and a week ago I win an e-bay auction and I pay \$250 for a HP-42s. The reason?. If you like a calculator and think that is the perfect choise for you, are you going to think about \$100?. Unfortatunately, it seems there's not market for smart, little and powerfull RPN calculators, and seriously, I can't imagine myself being in a meeting with armani suits chaps and using a rainbow calculator like TI or HP49, and of course HP48 is too big so why not spend some money in a second HP-42S?

Re: 42S prices? Have you seen 32SII prices??

*Message #8 Posted by [tom](#) on 7 July 2002, 2:10 p.m.,
in response to message #4 by Todd G. (CT, USA)*

Wasn't it H. L. Mencken who said; "No one ever went broke underestimating the "intelligence" of the American public." ? Particularly when new HP32SII calcs can still be found by the hundreds at retail outlets for less than \$50, with a little effort. I have to think that knowledgeable collectors look at an asking price of \$175, and just laugh.

Re: 42S prices? Have you seen 32SII prices??

*Message #9 Posted by [Todd G. \(CT, USA\)](#) on 7 July 2002, 3:06 p.m.,
in response to message #8 by tom*

Yeah, same with manuals. Imagine buying a manual for \$20.50 one day and trying to sell it for \$40 the next day. And we thought Enron and Worldcom were bad. Nobody is stopping folks from paying these prices, but with a little work, one can find the exact same stuff for a whole lot less.

Re: 42S prices? Have you seen 32SII prices??

*Message #10 Posted by [David Smith](#) on 7 July 2002, 4:21 p.m.,
in response to message #9 by Todd G. (CT, USA)*

For a LOT of people, spending even a few minutes trying to save 20 bucks on a manual is a losing proposition. If you need it, don't have the time to find it, and somebody has it for a few bucks more than you could find it for after a few hours searching... believe me, a bird in the hand can be worth a lot more than 20 bucks in the bush.

Re: 42S prices? Have you seen 32SII prices??

*Message #11 Posted by [Todd G. \(CT, USA\)](#) on 7 July 2002, 5:58 p.m.,
in response to message #10 by David Smith*

Hey, if you need it ASAP, nobody's stopping you from buying it. Pay whatever you want... it's your money. However, it's been my experience, people are willing to work a little to save a few bucks. Kinda like my friend who drives 40 miles out of his way to save 5 cents per gallon of gas.

What about battery packs? Would you pay \$100 for a dead battery pack for an HP41C? I think that's a bit over the top, don't you? That said, there may be someone somewhere who'll pay it.

Re: 42S prices? Have you seen 32SII prices??

*Message #12 Posted by [tom](#) on 8 July 2002, 6:14 a.m.,
in response to message #10 by David Smith*

Paying \$40 for a \$5 manual may be fine for some people, but it still doesn't solve the "time" issue. You have to wait for the auction to end, and the item to be shipped. Seems that if a 32SII owner "needs" some information, he could order a replacement manual from HP, call HP tech support, or post questions on this forum. All would make far better use of his time. And money.

Re: 42S prices? Have you seen 32SII prices??

*Message #13 Posted by [J.C. Randerson](#) on 7 July 2002, 5:39 p.m.,
in response to message #8 by tom*

I think "readily available at the local retail level" is relative. I have never seen an HP32 sold at the retail level anywhere in Colorado. To buy mine I always had to send off for one. Indeed, to buy an HP calc in Colorado, you had to be dedicated, and really hunt them down. Recently I haven't seen any HP calcs sold by anyone anywhere in Colorado. In an odd twist, though, during a visit to the University of Wyoming, the bookstore there had a bunch of HPs, the 6s,30,48, and 49, but again, no HP32s.

J.C. Randerson

Re: 42S prices? Have you seen 32SII prices??

*Message #14 Posted by [tom](#) on 7 July 2002, 6:07 p.m.,
in response to message #13 by J.C. Randerson*

wow. In MA, HPs are carried by Office Max, Staples, Best Buy, and even WalMart. Lucky, I guess.

Re: 42S prices? Have you seen 32SII prices??

*Message #15 Posted by [Mike Sebastian \(Texas\)](#) on 7 July 2002, 10:52 p.m.,
in response to message #8 by tom*

This knowledgeable collector knew where to find 32SII units until May, when they all disappeared. For example, the Fry's in Arlington had a couple of dozen in stock the first weekend of May, but they were all gone two weeks later. A similar situation occurred with a local calculator wholesaler - by the end of May, he had sold all his 32Sii units. Fortunately, I have a few acquired in the normal course of collecting. (No, they're not for sale.)

I expect that once people get past the hoarding phase and sanity returns, the prices will come down.

Re: 42S prices? Have you seen 32SII prices??

*Message #16 Posted by [tom](#) on 8 July 2002, 5:34 a.m.,
in response to message #15 by Mike Sebastian (Texas)*

Well, Smile Photo had 9 in stock, as of July 1. And most local college bookstores in the Western MA area still have them. All around \$50. One friend in CA, just bought 30 of them, from an Office Max store. One just needs to be determined to find them.

Greedy?

*Message #17 Posted by [Mike](#) on 6 July 2002, 8:13 p.m.,
in response to message #2 by Richard Garner*

I'll give you \$125 for an unmarked 42s, since that's all you think they are worth. Heck! I'll give you \$150 for it.

Where should I send the payment?

I have heard so many complain about the prices but when it comes time to sell their stuff, they sell it for the same prices as everyone else.

See, supply-and-demand good when they want to sell but is evil when they want to buy.

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HP 82143 protocol

Message #1 Posted by [Vassilis Prevelakis](#) on 6 July 2002, 8:52 a.m.

I am looking for pointers on the protocol used for the communication between the main 82143 unit and the module that plugs into the HP-41 port (essentially the flat end of the 82143 cable that contains the HP-41 ROM and printer interface logic). I.e. I want to know what is going on in the wire that runs between the printer with the HP-41.

Why I want this info: To use the HP-41 module to talk to a different printer, or to interface the printing mechanism of the 82143 to a different computer.

Thanks

**vp

Re: HP 82143 protocol

Message #2 Posted by [Tony Duell \(UK\)](#) on 6 July 2002, 6:16 p.m.,
in response to message #1 by Vassilis Prevelakis

I don't know the exact details (one day I must figure them all out), but I have a little general information that might be useful. The 82143 'module' contains 2 chips, both direct-on-board. One is the ROM containing the HP41 Mcode to drive the printer. The other is called NPIC (Nut Peripheral Interface Chip), I believe. It's basically a pair of 56 bit shift registers, one for data from the HP41 to the 82143, one for data from the 82143 to the HP41 (the latter is things like the switch settings, etc). There are 3 logic signals on the 82143 (peripheral) side : A bidirectional data line, a clock line (sourced by the peripheral) and a direction line (also sourced by the peripheral). There is something about various 'ready' flags that you can see on the data line under certain conditions, but I would have to do some digging to find the details. The other wires in the cable are power, ground, and IIRC a signal to say the printer exists (may not be used???)

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HP49G

Message #1 Posted by [Juan Carlos](#) on 5 July 2002, 8:04 p.m.

How can I get a RPN manual for a HP49G?

Re: HP49G

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 6 July 2002, 2:00 a.m.,
in response to message #1 by Juan Carlos

Hi;

all HP48 related RPL/RPN material will fit fine, if you don't mind searching for hidden keys and menus. As a regular HP product, at least for now, there is none. Anyway, there is a two-volume book named **Science and Engineering Mathematics with the HP 49 G**, by Gilberto Urroz (try www.greatunpublished.com, bookstore, search). I am waiting for mine and I bought them because they were very well recommended by contributors in here. In time: I cannot tell you this publication covers RPN/RPL specific matters, but it seems to have a lot of good material.

If you wanna try...

Success.

Re: HP49G

Message #3 Posted by [Ellis Easley](#) on 8 July 2002, 7:12 a.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)

What about the HP 49G Advanced User's Guide and other manuals which can be downloaded from hpcalc.org?

Re: HP49G

*Message #4 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 8 July 2002, 11:45 p.m.,
in response to message #3 by Ellis Easley*

Hi;

I have not found yet a better source of RPL-related material that would fit in the HP49G's RPL structure than the ones written for the HP48G series. I downloaded and printed the Advanced User's Manual and it was not THAT much helpful; indeed, it has a lot of info about using an HP49G in algebraic mode, and some reference to its use in RPL/RPN fashion.

Is there anything else that can be downloaded? I do not know anything about them. Would you help me, too? Just a hint of some titles, so I can have and indicate them.

Thank you and best regards.

Re: HP49G

*Message #5 Posted by [Ellis Easley](#) on 9 July 2002, 2:58 a.m.,
in response to message #4 by Vieira, Luiz C. (Brazil)*

I just got my 49G a month ago, so I'm not an expert. I have the 48 manuals and I will take your advice. I agree the 49G AUR continues the regular user's guide emphasis on algebraic mode.

I downloaded a file from hpcalc.org called "20 Essential Things to Know About the HP-49G: A guide for the hopelessly confused!" (<http://www.hpcalc.org/details.php?id=4910>). It is a little out of date - it says you can download the HP49G AUR from hp.com, which you can't, although you can get it from hpcalc.org. It lists a number of books including the one by Urroz that you named, also several books by Eduardo M. Kalinowski that can be downloaded: 48G UserRPL and SysRPL that apply to HP49G, and 49G SysRPL. In addition it lists several websites including one which has a CAS manual which you can download. I also downloaded a pocket guide from hpcalc.org (I didn't get one with my unit).

Also, hpcalc.org has an FAQ, a number of lists of commands and such by Joe Horn, and a number of ROM images including 1.19-6 which seem to be the recommended best one to use, although as far as I can tell, you can't get it from hp.com because it is not released.

Re: HP49G

*Message #6 Posted by [James M. Prange](#) on 9 July 2002, 6:37 a.m.,
in response to message #5 by Ellis Easley*

I'll add that the newsgroup comp.sys.hp48 is a good place to add questions about the 28 series, 48 series, 38G, 39G, 40G, and 49G. You can search the newsgroup archives at http://groups.google.com/advanced_group_search?as_ugroup=comp.sys.hp48 or just browse at <http://groups.google.com/groups?q=comp.sys.hp48>. Google isn't up-to-the-minute with its updates, so to participate it would be better to use some other method, such as <http://www.mailgate.org> or the newsreader.mailgate.org server with your own newsreader.

Not that there's anything wrong with this forum; but the museum is mostly for out-of-production models.

Regards,
James

Thank you, both.

*Message #7 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 9 July 2002, 11:50 a.m.,
in response to message #6 by James M. Prange*

Hi;

thank you, Ellis and James; good source of reference.

Sometimes we do not find the time to delve into some sites and find what you have found.

This is golden info. Thanks for sharing.

Cheers.

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Saturn processors

Message #1 Posted by [Randy Sloyer](#) on 5 July 2002, 9:38 a.m.

I would like to poke around a bit in my 42S rom. Just because its there. I've been able to download it to my 48G and get it to a PC. So now it's time for the dissassembler. As I have never seen anything done specifically for the 42S, I was wondering if the processor in the 48's is identical in core features? If it is, I could use the tools already out there for the 48.

Good way to go, or am I going to have start from scratch?

Re: Saturn processors

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 6 July 2002, 2:10 a.m.,
in response to message #1 by Randy Sloyer

Hi;

Both calculators share different O.S. structure (RPL/RPN, just to start), but you are correct when mentioning Saturn-based platform for both. If you think this way, chances are that some routines already built in the 42's O. S. will run under the 48's O.S. control, BUT... will you find input/output points to, say, read and write data? Maybe routines' structure allow parameters to be passed as arguments, but I believe memory referenced contents will be the best way to give the routines their arguments and read results back. Will the 48's O.S. crash this way?

You know what? I'm curious, now. Will you let us know what you have been doing?

Success!

Re: Saturn processors

Message #3 Posted by [Randy Sloyer](#) on 6 July 2002, 7:55 a.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)

Thanks Luiz.

I've been daydreaming after reading this article: [HP-42S New Facts](#). Just for fun, I would like to try and extend my 42S in two areas:

1. IR Input
2. Load common programs I use into a ROM

These two desires are somewhat exclusive of one another, that is if I can get (1) to work, I don't need (2). But I think the ROM might be the easiest to do. The hardware position is already there, all I have to do is figure out what format the code needs to be in. And of course this requires an understanding of the machine. I've already started on my own disassembler based on the opcode listing from HP for the 48. Maybe it's all a waste of time, but I'm sure I'll learn something out of the exercise and that's enough for me.

I would most certainly share whatever information I might discover in this exploration.

Re: Saturn processors

Message #4 Posted by [Jonathan Busby](#) on 8 July 2002, 12:26 a.m.,
in response to message #3 by Randy Sloyer

To the best of my knowledge there have been 5 versions of the Saturn processor. Here they are in chronological order :

- 1LF2 :

Original stand alone processor used in the 71B. Clock speed was 640 KHz.

- 1LK7 :

Stand alone updated version of the 1LF2 used in the 18C, 28C and later versions of the 71B. Added some new instructions including those designed to speed up RPL execution.

- 1LR2 :

Strictly speaking, "1LR2" isn't really the designation for the Saturn core but instead an integrated cpu/ram/rom/display-driver IC. (among other things) This also had the code name "Lewis" and was used in the 28S, 17B, 19B, 27S, 42S, 17BII, and 19BII. The low level software based interfaces of the Lewis peripherals are probably very similar to those of the 28C as it's basically the 28C motherboard "on-a-chip" . Maximum rated clock speed is around 2 MHz. In terms of software compatibility with the 1LK7, the Lewis instruction set is a superset. Many instructions have been added.

For the most detailed explanation yet of the Lewis hardware see <http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/articles.cgi?read=275> .

Also, for some pointers to information relating to the Lewis chip see :

<http://groups.google.com/groups?hl=en&lr=&ie=UTF-8&oe=UTF-8&selm=htng9uo2ho8lsmpur7nus3ob52ie94631h%404ax.com&rnum=1>

- 1LT8 :

This is a leveraged redesign of the Lewis also known by the code name "Clarke" . On the software side, the CPU instruction set is pretty much the same as the Lewis but the low level software based interfaces to the on board peripherals have changed. The Clarke is another multi-function IC and in addition to the functionality provided by the Lewis (minus the on-board RAM) the Clarke added a UART, an updated

display driver with a different display bitmap organization and software configurable memory controllers. The clock speed is also around 2 MHz .

- Yorke : (Internal HP designation unknown)

This is the chip used in current high end HP graphics. It's basically identical to the Clarke on the software side. On the hardware side the speed has been increased to 4 Mhz and instructions timings have been improved. (either by doubling the rate at which the internal ALU/control-unit works or expanding the amount of data operated on at a time internally to 8 bits.)

Also in the Saturn based chip family are the Bert and Saca (Sacajawea) ICs used in some Pioneer models but I believe they use the same Saturn core as the Lewis. (albeit running at a lower speed such as 640 KHz)

If you're looking for disassemblers probably the most sophisticated and feature rich one (on any platform) would be SADHP . (<http://www.hpcalc.org/details.php?id=3815>) Unfortunately it only supports the 48SX/GX but with some minor modifications to the source code it should be able to work with the 42S .

Hope this helps...

Jonathan

Remove the random permutation of "NOSPAM" from my e-mail address before replying.

Re: Saturn processors

Message #5 Posted by [Randy Sloyer](#) on 8 July 2002, 1:30 a.m.,
in response to message #4 by Jonathan Busby

Thanks Jonathan!

Most helpful. Since you seem to know a get deal about the the Saturns - do you know if the system rom of the 42S was done in assembly or in RPL? I think it might have been RPL since it was after the 28 series machines.

I ask only because if it was done in RPL, its going to be I think somewhat tougher to understand since a compiler always generates more code than necessary to do the job.

Re: Saturn processors

Message #6 Posted by [Jonathan Busby](#) on 8 July 2002, 5:47 p.m.,
in response to message #5 by Randy Sloyer

Randy Sloyer wrote :

"do you know if the system rom of the 42S was done in assembly or in RPL? I think it might have been RPL since it was after the 28 series machines."

It's a combination of RPL and pure assembly I believe.

"I ask only because if it was done in RPL, its going to be I think somewhat tougher to understand since a compiler always generates more code than necessary to do the job. "

Actually, applying the word "compiled" to RPL is kind of a misnomer - it's "compiled" in the same sense that assembly is "compiled" . It's really a "Threaded Interpretive Language" (TIL) like Forth for example. An RPL program is basically a sequence of 5-nibble pointers to ROM subroutines possibly intermixed with embedded objects. (for information on how an RPL program is executed see sections 2.3-2.4 of RPLMAN.DOC which can found in <http://www.hp48.org/hp48/compilations/horn/horn4.zip>) For the bulk of an RPL program there is a direct 1-to-1 correspondence between each symbol/token/identifier in the source code and the 5-nibble binary addresses in the output file. This combined with the fact that RPL is a higher level language than assembly with many more facilities makes reverse engineering RPL easier.

Jonathan

Remove the random permutation of "NOSPAM" from my e-mail address before replying.

Re: Saturn processors

Message #7 Posted by [Randy Sloyer](#) on 8 July 2002, 8:28 p.m.,
in response to message #6 by Jonathan Busby

Thank you again Jonathan for the great help. The information is most appreciated.

I obviously have not dug very deep into this project at this point. I have been studying the "The guide to Saturn Assembly Language" by F.H. Gilbert. Its all starting to make some sense as I have only ever worked with Intel machines from the 8008 onward. The Saturn kind of reminds me of a 8051 with Z80 addressing modes but of course with those whopper 64 bit registers.

With all the pointers you've given me, I have a few weeks of well directed work ahead. Thanks again.

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STUPID BUTUSEFUL CHALLENGE #879

Message #1 Posted by [thibaut.be](#) on 5 July 2002, 4:47 a.m.

The formula for constant annuity (TVM reimbursement) is :

$$a = PV * i / (1 - (1+i)^{-n})$$

write a program in as few possible steps to solve this equation, where you have previously entered the following variables in the stack : PV (= present value or lendend amount, i (= interest (not in %, ie 6% = .06), n (number of payments

NB : European people : i has to be converted from the basic rate. If rate is anuual and payments are monthly, then $im = 1 - (1+iy)^{(1/12)}$

American people : the shown rate is different from the yield, but the monthly rate is calculated by dividing the annual rate by 12, so $im = iy/12$

Thibaut

Re: STUPID BUT USEFUL CHALLENGE #879

Message #2 Posted by [thibaut.be](#) on 5 July 2002, 5:21 a.m.,
in response to message #1 by thibaut.be

Oops, I posted the message above to fast.

- the PV, n and i vlaues can be stored wherever you want - hint : use no register (sto and rcl cost bytes !), but do use the stack. BTW, this is an excellent stack exercice.

My solution is 15 steps long, including LBL/RTN. Who give a better one ?

It could be 17 steps long with a 12C for the rollup function does not exist in the 12C (you spend 2 more bytes * 2) but the lbl and rtn funtions do not exist either (you save 2 bytes)

Amazing how fast the answer is given on a 41C (< 1sec) and on a 12C (<2.5 sec, v. <2 sec with the solver)

Enjoy !

13 steps - listing included...don't read unless you want to see it!

*Message #3 Posted by [Gene](#) on 5 July 2002, 4:58 p.m.,
in response to message #2 by thibaut.be*

Ok, to make up for NOT READING the earlier challenge completely (I used a numeric key), I have a 41c style solution with 13 steps, including LBL and RTN.

My inputs are n, PV, and i in the Z, Y, and X registers. I assumed that n is total number of payments and i was the periodic interest rate...if the payments are monthly then i is the monthly interest rate.

Interestingly, I have 15 step solutions for PV, n, i and PV, i, n as the input order.

LBL 01 x Lastx 1 + RUP (Roll Up) CHS Y^x 1 - CHS Divide RTN

That seems to work. Anyone less than 13? Gene

Re: 13 steps - listing included...don't read unless you want to see it!

*Message #4 Posted by [Ed Martin](#) on 5 July 2002, 8:51 p.m.,
in response to message #3 by Gene*

This is cheating ... a bit.

If you put -n on the stack instead of N, you can do it in 12 steps:

LBL 01 * LASTx 1 + RUP y^x CHS 1 + / RTN

- Ed

My solution...

Message #5 Posted by [thibaut.be](#) on 6 July 2002, 2:04 a.m.,
in response to message #2 by thibaut.be

Also 13 steps, without LBL and RTN, with n in Z, PV in Y and i in X :

LBL A ENTER Roll Down * Roll Up 1 + Roll Up CHS y^x 1 - CHS / RTN

Re: STUPID BUTUSEFUL CHALLENGE #879

Message #6 Posted by [Jim Kimes](#) on 7 July 2002, 6:07 p.m.,
in response to message #1 by thibaut.be

I suggest that when such challenges are posted--and they can be quite useful--a solved example be included so that the challengees will know positively they've understood the problem and exactly what kind of problem it is they're challenged to solve. In this case I could have produced a formula but I wouldn't have known for sure that the formula was exact without a sample by which to proof my work. Thanks.

Re: STUPID BUTUSEFUL CHALLENGE #879

Message #7 Posted by [thibaut.be](#) on 8 July 2002, 11:25 a.m.,
in response to message #6 by Jim Kimes

example :

You purchase a house for \$500.000. You pay it back in 15 years. Rate is 5.5/year.

Month rate is $.05/12=0.42\%$ /month. 15 years is 180 month

Key in 180 ENTER 500.000 ENTER .0042 R/S (or XEQ...)

Your should read a monthly payment of 3.964,39 per month...

Re: STUPID BUTUSEFUL CHALLENGE #879

Message #8 Posted by [Jim Kimes](#) on 12 July 2002, 5:38 p.m.,
in response to message #7 by thibaut.be

Thanks for the example. Helps immensely.

Re: STUPID but Useful Challenges

Message #9 Posted by [Paul Brogger](#) on 8 July 2002, 10:39 a.m.,
in response to message #1 by thibaut.be

I would think that the creative finance people from Enron and WorldCom could put their vast experience to use and contribute a few helpful hints under this Subject line . . .

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Useless challenge No. 2

Message #1 Posted by [Nenad Vulic \(Croatia\)](#) on 5 July 2002, 3:08 a.m.

No. 1 is in the thread somewhere below. I remember this one that I have read somewhere decades ago:

Write a program which if number "1" is in the display (X register) would turn it into "2", and if the number "2" is there it will turn it into "1", in as few as possible steps, without using numeric, EEX or CHS keys.

There was a solution in 3 steps, say:

LBL A: ... : ... : ... : RTN

Re: Useless challenge No. 2

Message #2 Posted by [thibaut.be](#) on 5 July 2002, 3:17 a.m.,
in response to message #1 by Nenad Vulic (Croatia)

Well, I don't know if this the one you thought, but here is mine (and with a 12C !)

LBL A 1/x g e^x g INTG (or INT) RTN

3 steps...

Re: Useless challenge No. 2

Message #3 Posted by [Nenad Vulic \(Croatia\)](#) on 5 July 2002, 7:27 a.m.,
in response to message #2 by thibaut.be

Obviously you are right. If I knew the answer, it would not be a challenge:)

Re: Useless challenge No. 2

Message #4 Posted by [Gene](#) on 5 July 2002, 7:41 a.m.,
in response to message #3 by Nenad Vulic (Croatia)

How about

1 $x=Y$? 2

Gene

Re: Useless challenge No. 2

Message #5 Posted by [Fred](#) on 5 July 2002, 7:51 a.m.,
in response to message #4 by Gene

Without any numeric !!!!!!!!!!!!!!!!!!!!!!!!!!!!!

Re: Useless challenge No. 2

Message #6 Posted by [J-F Garnier](#) on 5 July 2002, 11:58 a.m.,
in response to message #5 by Fred

Without numeric of course, otherwise the obvious solution is: $3 x <> y$ - or $2 x <> y /$

Doh!

Message #7 Posted by [Gene](#) on 5 July 2002, 4:59 p.m.,
in response to message #5 by Fred

Oops. Must read closer!

Re: Useless challenge No. 2

Message #8 Posted by [Tony Duell \(UK\)](#) on 5 July 2002, 1:42 p.m.,
in response to message #1 by Nenad Vulic (Croatia)

For the HP41, how about : LBL A : $1/X$: ST+ X : RTN That's only 2 more instructions

Re: Useless challenge No. 2

Message #9 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 5 July 2002, 4:34 p.m.,
in response to message #8 by Tony Duell (UK)

Hey, Tony;

you do SW as well! Good knowing. So far, you have shown as a great knowledge over HW affair. Now you come with a brilliant SW solution.

Touchè!

(How come your post appear two times in the same thread as being only one? I select one and both become selected... Wizard's stuff!)

Re: Useless challenge No. 2

Message #10 Posted by [Tony Duell \(UK\)](#) on 5 July 2002, 5:37 p.m.,
in response to message #9 by Vieira, Luiz C. (Brazil)

To be honest, I had seen it (or a very closely related challenge) before. But I solved it then (after thinking about it for a few hours), so I think it was fair to post that solution. I wasn't copying somebody else's solution, I was copying my own :-). And no, I am not a programmer. I am much more of a hardware hacker type...

Re: Useless challenge No. 2

Message #11 Posted by [Juergen Rodenkirchen](#) on 5 July 2002, 6:38 p.m.,
in response to message #10 by Tony Duell (UK)

Anyway, Tony, a real beautiful solution indeed! Thanks for that little masterpiece!

Hats off - Chapeau!

Message #12 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 6 July 2002, 10:01 a.m.,
in response to message #10 by Tony Duell (UK)

While I liked the CrossTalk XVI introduction lemma, which said: "Beware of programmers who carry screwdrivers", Tony showed again that many times a HW person bring clever and elegant solutions on the SW field! Congratulations, Tony!

Andrés (being an EE, I appreciate HW too!)

Notes: CrossTalk XVI was a communications program, terminal emulator, etc for the IBM PC in 1985. HW, SW: Hardware, Software.

Re: Useless challenge No. 2

Message #13 Posted by [Tony Duell \(UK\)](#) on 5 July 2002, 1:42 p.m.,
in response to message #1 by Nenad Vulic (Croatia)

For the HP41, how about : LBL A : 1/X : ST+ X : RTN That's only 2 more instructions

Re: Useless challenge No. 2

Message #14 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 5 July 2002, 4:34 p.m.,
in response to message #13 by Tony Duell (UK)

Hey, Tony;

you do SW as well! Good knowing. So far, you have shown as a great knowledge over HW affair. Now you come with a brilliant SW solution.

Touchè!

(How come your post appear two times in the same thread as being only one? I select one and both become selected... Wizard's stuff!)

Re: Useless challenge No. 2

Message #15 Posted by [Tony Duell \(UK\)](#) on 5 July 2002, 5:37 p.m.,
in response to message #14 by Vieira, Luiz C. (Brazil)

To be honest, I had seen it (or a very closely related challenge) before. But I solved it then (after thinking about it for a few hours), so I think it was fair to post that solution. I wasn't copying somebody else's solution, I was copying my own :-). And no, I am not a programmer. I am much more of a hardware hacker type...

Re: Useless challenge No. 2

Message #16 Posted by [Juergen Rodenkirchen](#) on 5 July 2002, 6:38 p.m.,
in response to message #15 by Tony Duell (UK)

Anyway, Tony, a real beautiful solution indeed! Thanks for that little masterpiece!

Hats off - Chapeau!

*Message #17 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 6 July 2002, 10:01 a.m.,
in response to message #15 by Tony Duell (UK)*

While I liked the CrossTalk XVI introduction lemma, which said: "Beware of programmers who carry screwdrivers", Tony showed again that many times a HW person bring clever and elegant solutions on the SW field! Congratulations, Tony!

Andrés (being an EE, I appreciate HW too!)

Notes: CrossTalk XVI was a communications program, terminal emulator, etc for the IBM PC in 1985. HW, SW: Hardware, Software.

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HP 67 Display Problem

Message #1 Posted by [J C Latta](#) on 5 July 2002, 12:18 a.m.

I have an HP 67 that works great. However the display (the red LED digits) have become dim; significantly so but I can still see them. Does anyone know the source of this problem and can recommend a repair service that can handle fixing this?

Thanks.

Re: HP 67 Display Problem

Message #2 Posted by [David Smith](#) on 5 July 2002, 4:29 p.m.,
in response to message #1 by J C Latta

There is a current source circuit on the CPU card that can affect the display level. It is composed of a matched pair of transistors.

Also the ROM0 chip that drives the display anodes is powered through a resistor. The value of this resistor (or the chip itself) also affects the display level.

Also the cathode driver chip on the keyboard can affect the display level.

Finally the middle horizontal segment of the displays is driven differently than the other segments. A difference in the brightness of this segment vs the others may may be adjusted by varying one of the resistors on the keyboard circuit.

Re: HP 67 Display Problem

*Message #3 Posted by [J C Latta](#) on 6 July 2002, 3:09 a.m.,
in response to message #2 by David Smith*

Mr. Smith,

I am a finance person, not an engineer. Do you have a recommendation on someone who can fix this display problem?

Thanks.

J C Latta

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Hp-41 execution redirection

Message #1 Posted by [Rick Garza](#) on 4 July 2002, 8:58 p.m.

I am trying to understand how the hp-41c transfers execution control if it sees a diagnostic module installed at page 4.

Is the Instruction Addressing hardware redirected within the cpu? Or is it just a jump to page 4 and all the instructions within that rom are hardcoded to page4 and above(an absolute code segment)?

I'd appreciate it if any gurus out there still can answer this one since I dont have a copy of the service module. I understand it was for hp internal use only.....

Regards

Re: Hp-41 execution redirection

Message #2 Posted by [HrastProgrammer](#) on 5 July 2002, 12:47 a.m.,
in response to message #1 by Rick Garza

At the addresses #0180 and #01AD in the HP-41 ROM there is a GSUBNC #4000 instruction. If the diagnostic module exists then execution is transferred to the address #4000. If it doesn't exists then a simple return occurs (this is a nice feature of the Nut CPU).

Re: Hp-41 execution redirection

Message #3 Posted by [HrastProgrammer](#) on 5 July 2002, 12:52 a.m.,
in response to message #2 by HrastProgrammer

Forgot to say: the diagnostic module is tested every time when waking up from light or deep sleep.

Re: Hp-41 execution redirection

Message #4 Posted by [J-F Garnier](#) on 5 July 2002, 11:50 a.m.,
in response to message #2 by HrastProgrammer

To be more precise, the gosub is even not executed if the target address is empty (0). On Saturn processor (HP71B..HP49G), the 0 opcode (RTNXM: return and set external module missing) provides the same kind of function.

J-F

[Hello HarstProg!]

Re: Hp-41 execution redirection

Message #5 Posted by [HrastProgrammer](#) on 7 July 2002, 2:43 a.m.,
in response to message #4 by J-F Garnier

Thanks for the correction, J-F :-)

How do you do? Are you still working on Emu42?

Re: Hp-41 execution redirection

Message #6 Posted by [Mike \(Stgt\)](#) on 8 July 2002, 11:10 a.m.,
in response to message #1 by Rick Garza

There once was a paper from PPC about MCode, in addition a listing of the service module SM-1:C. With a ZENROM and an MLDL or adequate you may type in the 4k. Or much easier with one of the 41-emulators (from W. Fulrow, J-F Garnier, HrastProgrammer or mine if you have access to VM/ESA). Then you may use your favoured editor and make a BIN from that listing. ;-)

Hello J-F and Hrast! After several month out of 41-business I'm about to update my site at compuserve. Could you pls sent me your valid URL for the latest revision of your emulators? TIA.

Ciao.....Mike

Re: Hp-41 execution redirection

Message #7 Posted by [HrastProgrammer](#) on 9 July 2002, 1:40 a.m.,
in response to message #6 by Mike (Stgt)

Hi Mike ... nice to see you ...

My homepage is <<http://hrastprogrammer.tripod.com>>. It was updated before a month or so with the latest info about HP-41X Extended MicroCode Emulator for HP-48GX and HP-49G.

Re: Hp-41 execution redirection

Message #8 Posted by [Mike \(Stgt\)](#) on 10 July 2002, 11:30 a.m.,
in response to message #7 by HrastProgrammer

Hello!

Sorry to appear only infrequent on this list. I was monopolized by my HP200LX. I just try to 'finish' my Coconut emulator "NutEm". Still looking for a way to migrate FORTRAN to an other platform.

Ciao.....Mike

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Understanding serial

Message #1 Posted by [Jean-Paul Christophe](#) on 4 July 2002, 5:39 p.m.

Hi ! My last HP Calc 32Sii (buy twooo years ago) had serial # ID 94201992 (made in Indonesia). Does'it mean that it was bild in week 42 year 1999 or in 1992 ?

Re: Understanding serial

Message #2 Posted by [Jean-Paul Christophe](#) on 4 July 2002, 5:45 p.m.,
in response to message #1 by Jean-Paul Christophe

sorry, I found the answer in "serial number" !

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HP-41C: Module conflict

Message #1 Posted by [Juergen Rodenkirchen](#) on 4 July 2002, 4:15 p.m.

I have an HP-41C which shows some kind of failure when a Memory Module (MM) is plugged in (might well be that the same failure would show up with a Quad- or a completely different module, though I haven't checked it yet). The machines "operating mode" depends on the port that is occupied by the MM: When the machine is operated with a MM in port 1 it seems to work correctly (at least, the MM is recognized by means of SIZE). If a MM is plugged into ports 2 or 4, a very faint (actually barely perceptible) and high pitched tone is emitted by the machine and it doesn't respond to the keyboard anymore. In port 3 the MM is not recognized at all. Otherwise (without MM that is) the calc seems to work fine. Does anyone have an explanation for this behavior?

Re: HP-41C: Module conflict

Message #2 Posted by [jose goncalves](#) on 4 July 2002, 4:55 p.m.,
in response to message #1 by Juergen Rodenkirchen

I once had a similar problem that was only solved by turning to another module of the same type. I still think it was a problem with the module itself and I was not able to find a solution. I still have the "problematic" module because maybe I can revive it.

Re: HP-41C: Module conflict

Message #3 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 4 July 2002, 5:41 p.m.,
in response to message #1 by Juergen Rodenkirchen

Hi;

check module's contacts. There are two contacts at the I/O assembly that are used to address the inserted modules. If there is a bad contact in any of them, you'll probably have problems (I am not sure if they will be like the ones you mentioned).

The only time I experienced this was when I tried plugging a MM in an HP41CV. You know, I rebuilt the babe believing it was a 41C, and it was a 41CV. After plugging the MM, the machine started a continuous, low-power tone. I removed the batteries and tried other doors.

Only one accepted the module, and I am almost sure it was port 1. Without the module, I executed SIZE 000. Surprise: 00 REG 319. It was a 41CV!

This is not your case, I know, but I needed to tell the tale.

Cheers. And have a carefull look at the contacts.

Re: HP-41C: Module conflict

Message #4 Posted by [CJ](#) on 4 July 2002, 7:57 p.m.,
in response to message #1 by Juergen Rodenkirchen

That is normal. In a 41C the first MM has to be in port 1 the second one in port 2 and so on.

You can not put say, a PPC-Rom in port 1 and a MM in port 2 also MM can not skip ports.

Like:

port 1: MM

port 2: PPC

port 3: MM

This is explained in the directions for the modules.

Christopher

Re: HP-41C: Module conflict

Message #5 Posted by [Juergen Rodenkirchen](#) on 5 July 2002, 10:36 a.m.,
in response to message #1 by Juergen Rodenkirchen

Thanks a lot for the information, Christopher! I didn't know that the order in which MMs have to be plugged in do obey a strict rule! As for Jose and Viera: Thanks for your input anyway. Guess, we've just learned a new bit about our calculators, don't we? :-)

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american made

Message #1 Posted by [steve leong](#) on 4 July 2002, 8:11 a.m.

Can anyone tell me which calculators have been made in the USA? also what years they were made here?

Re: american made

Message #2 Posted by [Rupert \(Northern Italy, EU\)](#) on 4 July 2002, 4:24 p.m.,
in response to message #1 by steve leong

For sure, the HP11C and the HP15C were made in the USA in the early eighties. I had a HP11C, now dead, and still have a working HP15C. The HP67 was made in the USA, too (I have got one from eBay, but it's not in good condition).

--

Re: american made

Message #3 Posted by [jose goncalves](#) on 4 July 2002, 4:57 p.m.,
in response to message #2 by Rupert (Northern Italy, EU)

I am sure that my 55, 45 and 25 are American made. I bought them in late 1974 and early 1975. My 1981 41c and my 1982 28s are also American, for sure.

Re: american made

*Message #4 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 4 July 2002, 5:52 p.m.,
in response to message #3 by jose goncalves*

Hi;

there are some ladies built in USA, and the HP48SX and the HP16C were both of them; at least mine are. At the time they were available, some HewPack calcs were produced here, in Brazil (HP11C, HP12C, HP15C, HP41C/CV) and others in Singapore (both 82104A - card reader - and 82143A - Printer - are from there).

My US\$ 0.15.

Re: american made

*Message #5 Posted by [Les Bell \[Sydney\]](#) on 4 July 2002, 7:16 p.m.,
in response to message #4 by Vieira, Luiz C. (Brazil)*

Luiz, may I ask you, in a spirit of friendship, not to refer to that once-proud company as "HewPack"? Either "Hewlett-Packard" or "HP" (pronounced "Aitch-Pee") are fine. The company may now be a shambles that is easily outclassed by TI or even Casio, but even I draw the line at calling it something that sounds like a drunk vomiting.

Kind Regards,

--- Les [<http://www.lesbell.com.au>]

Re: american made

*Message #6 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 5 July 2002, 12:29 a.m.,
in response to message #5 by Les Bell [Sydney]*

That was for shorten, never to turn Hewlett-Packard's good name into a shambles. I always try not to make confusion with the company's shorten HP and dimensional units, so I do not use it as often.

I'll gracefully accept the request, as I completely agree with it. As no one else mentioned before, I was sure it would be sort of fancy reference. Anyway, as long as I remember, I did not read any one else using this short reference of mine.

Thanks calling my attention. The explanation goes to anyone that have not been reading my posts in here and does not know how I consider the brand and its

creators.

Cheers.

Re: american made

*Message #7 Posted by [Les Bell \[Sydney\]](#) on 5 July 2002, 5:26 a.m.,
in response to message #6 by Vieira, Luiz C. (Brazil)*

Thanks, Luiz. I, for one, appreciate it. It's a small thing, but it really grates . . .

Best,

--- Les [<http://www.lesbell.com.au>]

What a nice gesture!

*Message #8 Posted by [Jordi Hidalgo](#) on 5 July 2002, 7:02 a.m.,
in response to message #6 by Vieira, Luiz C. (Brazil)*

Thanks so much, Luiz.

Best wishes,

Jordi Hidalgo
[HPCC](#) member #1046

Re: american made

*Message #9 Posted by [Ellis Easley](#) on 8 July 2002, 7:23 a.m.,
in response to message #6 by Vieira, Luiz C. (Brazil)*

HEWPACK and variations are the cable addresses for the various HP offices around the world. HEWPACK alone is Palo Alto. I don't know who assigned those addresses.

Re: american made

*Message #10 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 9 July 2002, 12:05 p.m.,
in response to message #9 by Ellis Easley*

Hi;

again, thanks Ellis and R.D.Bärtschiger.

I felt myself confused because of Les Bell's request, but I felt constrained and I decided to decline. Also, Jordi Hidalgo's agreement made me think that was the best decision.

As I mentioned before, I used to believe that using this shorten version of Hewlett-Packard's name was fancy; from now on, keeping that practice is not enough reason to harm neighborhood. I understand that it is not good practice, so I'll turn that off, mostly because I respect everyone that participates in this forum.

Thank you all.

Re: american made

*Message #11 Posted by [r. d. bärtschiger.](#) on 5 July 2002, 1:39 a.m.,
in response to message #5 by Les Bell [Sydney]*

I have heard these calculators being referred to as 'HewPac' since at least 1973.

rdb.

Re: american made

*Message #12 Posted by [Trisnadi](#) on 4 July 2002, 8:30 p.m.,
in response to message #2 by Rupert (Northern Italy, EU)*

My 32S is American. That is all I have... :)

Trisnadi

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Last known serial number list

Message #1 Posted by [Chris Avram](#) on 4 July 2002, 5:46 a.m.

I wonder if the Museum could start a last known serial number list to go with the earliest list?

<http://www.hpmuseum.org/collect.htm#numbers>

Chris

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HP-12C Variation

Message #1 Posted by [Chris Avram](#) on 4 July 2002, 5:40 a.m.

Hi,

Just bought a new HP12C in Australia S/N CN212 03991.

It uses a single Lithium 3V CR2032, not three cells. Extra flyer (P/N 00012-90506) describes the new battery. Handbook still describes three batteries. The handbook is edition 3 (c) 1982 P/N 00012-90001 printed 11/94.

The f shift key legends are orange not gold, contrast is even less than the g shift blue legends.

Logo is stuck on polished metal.

This is my first 12C, very nice, so I am not complaining.

The local book shop was pleased to have stock at last.

Chris

Re: HP-12C Variation

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 4 July 2002, 7:28 a.m.,
in response to message #1 by Chris Avram

Hi;

I bought one a few months ago (about three), and it seems mine is the same as yours (serial # CN11805303), also Lithium 3V CR2032 and extra flyer describing how to change battery, handbook keeps three LR-44 explanation.

Just to mention. This is the ChiNa way...

Cheers.

Re: HP-12C Variation

*Message #3 Posted by [Markus \(D\)](#) on 4 July 2002, 8:16 a.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)*

The support area of HP's web site has a page about replacement batteries for calculators. They say that all HP12C starting with serial # CN11500001 are now using 1 3-volt CR2032 battery rather than the traditional 3 1.5-volt button-cells. (I think they also redesigned the door of the battery compartment in the same style like on recent HP19BII units.)

Re: HP-12C Variation

*Message #4 Posted by [jose goncalves](#) on 4 July 2002, 8:58 a.m.,
in response to message #1 by Chris Avram*

Where was it manufactured ? Check the back "label". I recently bought a 19bII with the new battery cover, that seems to be the solution for the well known weakness of the clamshells.

Re: HP-12C Variation

*Message #5 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 4 July 2002, 9:21 a.m.,
in response to message #4 by jose goncalves*

Hi (Oi, José; tudo certo?)

the CN in the serial # means ChiNa-made. Mine reads Fabriquè en Chine and Made in China.

Cheers. (Té mais)

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HP Museum and Newspapers

Message #1 Posted by [Gianmaria \(Italy\)](#) on 4 July 2002, 2:38 a.m.

Hi there, last week the local newspaper (Giornale di Brescia) has dedicated a big article (italian language only) to my HP calculators collection and how it means for me and for the history of technology.

You may be able to see it, and a photo of me near the "HP glass", pointing the browser here: http://www.giornaledibrescia.it/giornale/2002/06/30/17,PRIMO_PIANO/T5.html

Take note that speaking of HP calculators I've cited as reference the HP Museum, you will see the link at the end of the article.

Happy July 4 to all! Gian

Re: HP Museum and Newspapers

Message #2 Posted by [Gianmaria \(Italy\)](#) on 4 July 2002, 2:49 a.m.,
in response to message #1 by Gianmaria (Italy)

Sorry for the confusion, unfortunately the Giornale di Brescia web site allows only registered users to views articles on-line, here is a valid URL: <http://www.hpcalculators.net/hp%20calculators.htm>

Thanks for reading! Gian

Re: HP Museum and Newspapers

*Message #3 Posted by [Johnny Bjoern Rasmussen](#) on 4 July 2002, 4:46 a.m.,
in response to message #2 by Gianmaria (Italy)*

Nice article Gian!

To bad about the italian language, it would be nice to se an english translation of it though ;-) I really like your rack. It looks very nice, and I would like to se some more pictures of it. As I'm in the middle of building a displaying rack of my own right now, I think it would be great to se some other racks for displaying our calculators...

Thanks! Johnny

Re: HP Museum and Newspapers

*Message #4 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 4 July 2002, 9:15 a.m.,
in response to message #3 by Johnny Bjoern Rasmussen*

Hi;

first, congratulations, Gianmaria. That´s a nice way to show your work and talent.

And Johnny, try Altavista, Translate, Italian to English, Tranlate a Web Page and copy-and-paste Gianmaria´s page address. The results is an English version, readable page. I can get some Italian words, but I also needed the translation to understand some expressions.

Hope it helps.

Re: HP Museum and Newspapers - machine translations

*Message #5 Posted by [Dave Shaffer](#) on 4 July 2002, 1:50 p.m.,
in response to message #4 by Vieira, Luiz C. (Brazil)*

I tried Luiz's tip on altavista translation of the article about Gianmaria's collection.

While I certainly now know more, the translation is pretty rough! I was especially amused by "but that he did not succeed to ignite" in reference to, I presume, a calculator which would not "turn on."

Despite its shortcomings, the altavista site does seem to be a good place to visit if you need a quick and dirty translation.

Re: HP Museum and Newspapers

*Message #6 Posted by [thibaut.be](#) on 4 July 2002, 5:32 a.m.,
in response to message #2 by Gianmaria (Italy)*

Auguri !

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Short Battery Life 41CX

Message #1 Posted by [T Smith](#) on 2 July 2002, 9:06 p.m.

I searched the archives, but didn't see anything related to my question, so apologies if this has already been discussed.

My 41CX has started eating batteries every few months, even when the calculator is not turned on! I read an earlier post in which someone said it could be the main power supply capacitor, but I'm thinking that would be the case, only when the power is turned on.

I measured the current draw with the calculator both off and on. When on, it varies, but seems to be a little over .001A. When off, the current is .00002A (measured with an HP multimeter, of course:-)). Now assuming an N size battery gives 50mAH (I have no idea what the actual number is), this would yield only about 3 months of battery life when off! This is fairly close to what I'm getting. And I killed 2 sets of batteries, so it's unlikely that I got a bad set of batteries.

Has anyone experienced this before or have any ideas what it could be?

Is there a schematic available, or is it possible to remove the keyboard to see if there is junk underneath that might be causing leakage in the off-state.

Thanks for any suggestions. Tom

Re: Short Battery Life 41CX

Message #2 Posted by [David Smith](#) on 2 July 2002, 10:12 p.m.,
in response to message #1 by T Smith

"N" cells produce a lot more than 50maH. The average power consumption of a turned off 41CX is around 5-10uA. Many of mine will keep their memory active for up to a month with no batteries.

Re: Short Battery Life 41CX

*Message #3 Posted by [Ellis Easley](#) on 8 July 2002, 8:29 a.m.,
in response to message #2 by David Smith*

I was going to say that non-rechargeable batteries aren't rated in A-H, since the last time I looked at the Eveready website, the individual data sheets for Energizer cells only gave the capacity in terms of hours connected to a standard load (I think it was 100 ohms) until the voltage fell below a certain value. But when I looked just now (<http://data.energizer.com/>) there is a chart with a summary of specs for all Energizer sizes and it has a column for capacity in mA-H - it says N cells have 1000 mA-H!

Re: Short Battery Life 41CX

*Message #4 Posted by [Tom \(UK\)](#) on 3 July 2002, 7:13 a.m.,
in response to message #1 by T Smith*

I don't know what the circuit is, but from the memory retention ability of the HP41 when the batteries are removed I'd guess the main power supply capacitor is on the 'battery' side of the on/off control. So if the capacitor was draining the batteries it would not matter if the calculator was turned on or off. Electrolytic capacitors are famous for getting worse with age so I'd replace this as a first fix.

Re: Short Battery Life 41CX

*Message #5 Posted by [T Smith](#) on 3 July 2002, 3:37 p.m.,
in response to message #4 by Tom (UK)*

Thanks David and Tom. Since my 41CX is drawing 20uA, and a standard CX should draw 5-10uA, then that doesn't seem like enough of a difference to drain the batteries that fast (assuming my meter is correct at that low range). I guess it's possible I got 2 sets of bad batteries.

Anyway, I will change the main capacitor and see if that reduces the "off" current. Thanks for the help!

Tom in Houston

Re: Short Battery Life 41CX

Message #6 Posted by [David Smith](#) on 3 July 2002, 5:10 p.m.,
in response to message #5 by T Smith

Well actually, 20uA vs 5 uA is a 4 times reduction in battery life. If you can expect a year of life from an idle set of batteries, then that is pretty close to what you are seeing. A lot of 41 series machines only seem to get around six months or so out of their batteries anyway.

Re: Short Battery Life 41CX

Message #7 Posted by [Dave Shaffer](#) on 4 July 2002, 1:56 p.m.,
in response to message #6 by David Smith

Maybe I've been lucky, but it seems to me that you should get a lot more than a year from a set of '41 batteries.

I've had a 41CX since the early 80's, and to the best of my recollection, it is on its third set of batteries, and I think I put those in when I went on a foreign trip where it was absolutely necessary that the calculator be operable. (i.e. there was unknown life left in battery set #2). I do not use this machine very much, and never with any power draining accessories.

My even older '11C is also on its third set of batteries. It gets somewhat more everyday use, but also not a lot.

Based on these experiences, a '41 just sitting there, turned off, should get much more than a year from a set of batteries. Change that capacitor!

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HP 9845B: Any expertise out there?

Message #1 Posted by [Dave Brown](#) on 2 July 2002, 7:11 a.m.

I am currently warming up/drying out a 9845B that has been in 'inadequate' storage for some years. (plus the dual 8 inch disk drive that goes with it) There is a fair amount of operating/programming literature with it but there is virtually nothing in the way of servicing/technical info. Is there a source of any technical info on these beasts anywhere? I am reluctant to power it up without at least some basic information on hand(if only to defeat Murphy)but I may just have to do that (cringe!) if I can't find any.

DaveB

Re: HP 9845B: Any expertise out there?

Message #2 Posted by [Petr Horsky](#) on 14 July 2002, 11:13 a.m.,
in response to message #1 by Dave Brown

Dave,

You might have already powered the machine on in the meantime, but if not, there is a couple of hints I can recollect:

1) I think the only user manual shipped with the HP 9845 that concerned also the hardware was the "Getting Started" and don't remember anything particularly interesting mentioned inside.

2) You can run the machine even with virtually all peripherals removed (or disconnected), including namely the tape drives, all ROMs from the drawers, all interfaces (obviously), and the whole CRT unit. Then you should wait a minute after powering the machine up to pass through the internal tests, type PRINTALL IS 0 <Exec>, switch the PRT ALL key on, and, for instance, type LIST <Exec>. If you are lucky enough, this will print the free memory capacity on the internal printer.

The above (except for the ROMs) is positively applicable to HP 9845A, but, according to my dim memory, I saw the same with HP 9845B, too. Needless to say, this all is meant to minimize

the potential damage in case something is wrong with the power supply.

3) I think the first reasonable thing after powering up is to check the test voltages on the top of the power supply unit.

4) If the machine is / was dirty, personally, I would chiefly fear of a possible discharge upon the HV transformer in the CRT unit. (You can then hear a sort of gentle ringing even in case the image on the screen still looks undistorted.) After a while, this is usually irreparable, as the discharge quickly burns in a path on the transformer's surface.

5) One typical failure are burnt lamps (miniature bulbs, in fact) in the tape drives that serve to search for the tape beginning. Hence, if you can't see the light inside the drive, don't insert a cartridge there or you wind its tape out.

6) Also, rubber covering the shaft in the drive that propels the cartridge's central roller has often dilapidated in the course of time.

In case you have no access to a more reliable source, I hope this may be of some basic help. If you succeed, I would be glad to hear more from you. Strange enough, I can't get in touch with anybody still running an HP 9845B worldwide, and, for the moment, don't know how to get beyond the "MEMORY TEST IN PROGRESS" message hanging on the screen of mine and probably indicating the LPU (Language Processor) failure.

Best regards, Petr Horsky

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Rubber keys: How're they lasting?

Message #1 Posted by [David H Thompson](#) on 1 July 2002, 6:37 p.m.

Hello, I don't have an HP 49G, but I was wondering; how are the controversial rubber keys standing up to daily use?

Re: Rubber keys: How're they lasting?

Message #2 Posted by [J.C. Randerson](#) on 1 July 2002, 11:29 p.m.,
in response to message #1 by David H Thompson

The HP49 is a strange beast. I have one Indonesian HP49, from when they first came out, that's been pounded on terribly, with no wear on the keys. I had 2 Chinese HP49s that I sent back to HP because in just a few months time the paint wore almost completely off. I also sent back an Indonesian HP49 because the screen scratched badly with no abuse at all. I now have 3 Chinese HP49s, all fairly new, and how they'll perform? - impossible to tell. I like the HP49 better than the TI89, but you can't trust to having just one, especially now that they've been discontinued.

J.C. Randerson

Re: Rubber keys: How're they lasting?

Message #3 Posted by [Juergen Rodenkirchen](#) on 2 July 2002, 3:24 a.m.,
in response to message #2 by J.C. Randerson

The 49 really has been discontinued?! This is new to me! Since when have they been discontinued?

Re: Rubber keys: How're they lasting?

Message #4 Posted by [J.Manrique](#) on 2 July 2002, 5:01 a.m.,
in response to message #3 by Juergen Rodenkirchen

As far as I know hp49g hasn't been discontinued, and it will be top calculator for next course "Back to School" promotion.. at least in Spain.

Thanks, J.Manrique

Re: Rubber keys: How're they lasting?

Message #5 Posted by [J.C. Randerson](#) on 2 July 2002, 10:18 p.m.,
in response to message #3 by Juergen Rodenkirchen

The distributor I buy from, Samson Cables, has told me the HP49 is a discontinued item.

Re: Rubber keys: How're they lasting?

Message #6 Posted by [Y. Samuel Arai](#) on 2 July 2002, 1:41 p.m.,
in response to message #2 by J.C. Randerson

What do you do that require the use of three 49G's? Just curious! Sam

Re: Rubber keys: How're they lasting?

Message #7 Posted by [J.C. Randerson](#) on 2 July 2002, 10:30 p.m.,
in response to message #6 by Y. Samuel Arai

I do a lot of on the keyboard programming. After all the programmers from the ACO were laid off, I knew that no new CAS features would be added, so if I wanted something, I had to program it myself. I'm very hard on equipment, I really use the hell out of stuff, so I always buy a backup of anything I like. One HP49 fell out of my pocket and down a cliff while surveying part of the ranch. I sent it back to HP, but I was honest about how I broke it, so they wouldn't warranty that one. In this special case of the HP49, I really like it, so 3 of them is actually a minimum number. I will probably buy a few more when I save a few more pennies.

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FORTH on HP-71B

Message #1 Posted by [Hiroshi Ito](#) on 1 July 2002, 10:48 a.m.

I began the study of "the FORTH/ASSEMBLER ROM HP82441A for HP-71B". But I met difficulty from the beginning.

HP-71B is indicated with "OK (3)". But, I don't know how a result of a calculation can be confirmed.

<Q1> Can I confirm it if I do what with "579" which for example is the answer of "123+456"?

123 456 [ENDLINE] # OK (2) # + [ENDLINE]" # OK (1) # <Is an answer indicated if it does what?>

<Q2> And, do you keep it as a program code which a name was attached to, or can you carry it out if you do what?

Re: FORTH on HP-71B

Message #2 Posted by [Daniel Diggelmann](#) on 1 July 2002, 3:13 p.m.,
in response to message #1 by Hiroshi Ito

Hello Hiroshi,

The answer of the calculation can be displayed with "." But I don't know how to store it as a program.

Daniel

Re: FORTH on HP-71B

Message #3 Posted by [Raymond Hellstern \(Germany\)](#) on 1 July 2002, 4:20 p.m.,
in response to message #2 by Daniel Diggelmann

Hi,

have you tried "!" ?

Raymond

Re: FORTH on HP-71B

Message #4 Posted by [Tony Duell \(UK\)](#) on 1 July 2002, 6:46 p.m.,
in response to message #1 by Hiroshi Ito

A couple of general points. (1) Forth is a somewhat unconventional language, so if you have never used Forth before, you need to get a (good) book on it. 'Starting Forth' is not too bad. And (2), HP71 Forth is an unconventional version of Forth. You really do need to find at least the Forth/Assembler ROM user manual and preferably also the IMS (source listings -- yes, they do exist!). To answer your questions. The number in parentheses after the OK (as in OK (3) -- the '3' here) is the number of numbers on the Forth (integer) stack. Suppose we start with an empty stack (the machine shows OK (0)). Then type 12 34 That will place 2 numbers (twelve and thirty-four) on the stack so the machine will reply with OK (2). Then type + and you'll get OK (1). The + 'word' in Forth takes 2 numbers off the stack, adds them, and puts the result back on the stack. So now the stack contains one item. To display the top of stack you use the word . (that's a single period/full stop). It takes the top number off the stack and displays it. So in this case you'd get 46 OK (0). The 46 is the sum of 12 and 34, the (0) means that's nothing left on the stack. Of course you can do it all in one line 12 34 + . (note that the spaces are important -- the names of Forth words can contain any characters apart from space (and newline), and the forth command line parser looks for spaces to work out where the name of each word ends). Technically you can't write programs in Forth -- all you can do is define new words. Of course the definitions can be very complicated (and you can define words using words that you've just defined) so what you can end up with is a single word that when executed runs your application. Here's a simple example of defining a word : SQ DUP * ; (type everything from the colon to the semicolon inclusive). This is called a 'colon definition' (for obvious reasons). In this case it defines a new word called SQ which when executed will perform the operations DUP, then * in that order. DUP duplicates the top item of the stack, * multiplies the top 2 items on the stack, replacing them with the product. So SQ (defined like that) will square the top number on the stack. Try it. After defining SQ as above, type 5 SQ You'll get OK (1). Where's the answer? Still on the stack, of course. Type . to display it. Or type something like 7 SQ . to do it in one line.

Re: FORTH on HP-71B

Message #5 Posted by [HIroshi Ito](#) on 2 July 2002, 11:57 a.m.,
in response to message #4 by Tony Duell (UK)

I understood "." and ": SQ DUP * ;". But, how to use "!" couldn't be understood.

I sometimes write the following program, and help myself. Then, it is kept with the name which it liked in 9114B HP-IL Disc Drive. Can you describe the program of the dialog type which complex control structure exists in with "FORTH", too?

```
$ 10 NAME TEST $ 20 INTEGER N,I $ 30 REAL A,S $ 40 INPUT "NUMBER=";N $ 50  
IF N <= 0 THEN 40 $ 60 A=0 $ 70 FOR I=1 TO N $ 80 INPUT "SAMPLE(";I;")=";S $ 90  
A=A+S $ 100 NEXT I $ 110 PRINT "ANSWER=";A $ 120 END $ COPY TEST TO  
T20020702:FD
```

"amazon.com" is available even from Japan. I want to learn it if there is a reference book for the initiation person. Thank you.

Re: FORTH on HP-71B

Message #6 Posted by [Katie](#) on 1 July 2002, 6:59 p.m.,
in response to message #1 by Hiroshi Ito

Here's a primer that I found on-line describing the basic FORTH language.

http://developer.apple.com/hardware/pci/pdf/4th_OF_A.pdf

The FORTH on the 71b is a pretty decent implementation with all of the standard elements and a good interface to the floating point routines built into the 71b. You can also interface with BASIC programs that you write on the calculator.

online FORTH primer

Message #7 Posted by [Ellis Easley](#) on 8 July 2002, 8:13 a.m.,
in response to message #6 by Katie

There is a second part (4th_OF_B) in the same directory.

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Short & Sweet Math Challenges for HP fans #5

Message #1 Posted by [Ex-PPC member](#) on 30 June 2002, 7:31 p.m.

Last week's challenge dealt with multiprecision computations. It needed some amount of real programming work, so it didn't get as many replies as previous, easier ones. This week's challenge is therefore shorter & sweeter as it needs just a little empirical search, plus simple formula-fitting and evaluation programming and a pinch of theoretical work thrown in for good measure.

Foreword

Imagine that you are a Maths teacher and you are preparing tomorrow's class, which will introduce your students to **Cardano's formula** for solving the reduced cubic equation:

$$x^3 + p \cdot x + q = 0$$

Given **p** and **q**, Cardano's formula gives this value for x:

$$x = \text{CURT}(-q/2 + \text{SQRT}((q/2)^2 + (p/3)^3)) + \text{CURT}(-q/2 - \text{SQRT}((q/2)^2 + (p/3)^3))$$

where SQRT means "square root" and CURT means "cube root". Though the formula isn't really particularly complex, you are understandably worried that your students will find it somewhat complicated and weird-looking, so you decide that giving a simple numerical example will make it seem all the more familiar.

With this noble idea in mind, you then try this example, to be developed in the class:

$$x^3 + 2 \cdot x - 7 = 0$$

This corresponds to $p = 2$ and $q = -7$, and Cardano's formula gives:

$$\begin{aligned} x &= \text{CURT}(7/2 + \text{SQRT}(49/4 + 8/27)) + \text{CURT}(7/2 - \text{SQRT}(49/4 + 8/27)) \\ &= \text{CURT}(7/2 + \text{SQRT}(1355/108)) + \text{CURT}(7/2 - \text{SQRT}(1355/108)) \\ &= \text{CURT}(7/2 + 3.54207513984) + \text{CURT}(7/2 - 3.54207513984) \\ &= \text{CURT}(7.04207513984) + \text{CURT}(-0.04207513984) \\ &= 1.9167562361864 - 0.3478098331340 \\ &= 1.5689464030524 \end{aligned}$$

which is indeed a root of the equation. Let's check it:

$$\begin{aligned} x^3 + 2 \cdot x - 7 &= 1.5689464030524^3 + 2 \cdot 1.5689464030524 - 7 \\ &= 3.862107193895 + 3.137892806105 - 7 \\ &= 0 \end{aligned}$$

Now, you fear understandably that such festival of floating point, many-decimal numbers will not really make the point any simpler, and will probably bore your intended audience, faced with using their calculators extensively in order to find the answer and check it as well. So, you are kept wondering:

"What I really need is to find a simpler example, some suitable values for p and q which will make all intermediate and final results small integer or rational numbers, so that no calculator shall be necessary to perform the computations and the whole process will seem much simpler, allowing my students to focus on the formula, not on the computational drudgery"

So that's what S&SMC#5 is all about:

The Challenge

1. Use your favorite HP calculator to try and find values of p and q which will make **all** intermediate and final results in the evaluation of Cardano's formula either exact integers or rational fractions, so that no irrational number ever appears and all computations can be carried out either mentally or simply by hand.
2. Once you have found a sufficiently large number of solutions (p,q), use your HP calculator to find suitable formulas that will generate them all (polynomial fitting, perhaps ?) or deduce such formulas theoretically. Ideally, the formulas would take as input the desired value for the final root, and would produce p and q such that the resulting cubic equation would have that root and would be extremely simple to solve, as requested.

Recommended HP calculator

- For finding solutions (p,q) any programmable model will do, from the HP-10C or HP-25C onwards. The faster, the merrier, but the programming itself is pretty trivial.
- For fitting the solutions to a polynomial, I guess any model from an HP-11C onwards will be adequate.

Estimated difficulty and allotted time

Pretty easy. Really "short and sweet" this time. Also, you have **two weeks** to try your hand with this challenge. At the end of that period, I'll post the usual **Final Remarks**, including solutions and snippets of code if necessary. If the number of postings in this thread warrants it, I will then post the next challenge, S&SMC#6.

By the way, I can't resist: if any of you finally developed some multiprecision routines, you can test that the root of the above equation, to 77 decimals places, is:

$x = 1.56894640305238226735233475168775140550168711365188103792946945170655431302272$

A question to you, Valentin Albillo (Ex-PPC), regarding your "challenges"

Message #2 Posted by [W. Bruce Maguire II](#) on 3 July 2002, 2:12 p.m.,

in response to message #1 by Ex-PPC member

Dear Valentin:

(aka Ex-PPC Member)

(aka Ex-PPC #4747)

(aka HPCC #1075)

I'm curious Valentin; out of the population of regular viewers/participants in the MoHPC forum, how many do you actually *believe* have so much free time on their hands that they want someone to give them math/calculator-related homework?

After reading all your "challenges" up to this one (number *five*), I sense a strong air of condescension. I guess others who have responded in the past don't feel this way, or don't care, but I must say that I'm continually amazed. Your "challenges" are *not* the light-hearted, friendly kind (like "who can generate the number 100 in the fewest keystrokes without hitting a number key?"); rather, they are the instructor/pupil kind of challenges---where Valentin is the instructor and we are the pupils.

It seems to me that your "challenges" serve only *you*. Who knows how many weeks/months/years you spend on some of these trivial pursuits, before you issue your challenge and smugly enjoy the "inferior" efforts produced by your "pupils"?

I know that there is *absolutely* no way for me to voice my disgust with the tone of your "challenges" without sounding petty. And you certainly have *every* right to continue to post your "challenges"---I am certainly no moderator for this forum---but I wanted to let you know that there is at least *one* person on this list who is "smart" enough (in your eyes maybe) to realize the purpose of your tests. It is clear to this non-pupil that your "challenges" are wholly self-serving. I, personally, am far too busy to indulge your ego.

I have a question for any HP-fan who *has* been responding to Valentin's "challenges". I have to ask: are you not able to challenge *yourself*? If you enjoy this type of pursuit (I, myself, have been known to tilt at a few mathematical windmills with my HPs! ;-)), then I would submit that there is an overwhelming amount of material available in books and on the Internet that will provide you with enough challenges for a lifetime. And you can pursue *these* challenges on your own timeframe and not suffer the supercilious responses of the self-satisfied Valentin Albillo.

And finally, Valentin, I would assert that your contributions to this forum are miniscule compared with what they *could* be. You haven't posted anything in the "Articles" section; why? I present your posts about trigonometric functions on the HP-12C as an example. You asked for information from others, posted patronizing responses to anyone who offered solutions, and refused to *ever* respond to multiple requests that you post the code that *you* developed. A subsequent issue of the HPCC Datafile exposed *why* you wouldn't respond to anyone asking to see your programs: you had to make sure that your work was *in print* before revealing it to anyone! You clearly have the time and ability to do good things with HP calculators. If you cared less about elevating your self-image, *many* might benefit from your work.

For any who have access to the (excellent!) HPCC Datafile publications, I invite you to read the Editor's note at the bottom of page 20 of the Jan/Feb 2002 issue (V21,N1) and the first paragraph of Wlodek's article on page 16 of the Mar/Apr 2002 issue (V21,N2). They unintentionally betray how Valentin feels about his "teachings". That is, the sharing of knowledge is not what is important; what is important is that Valentin takes center-stage!

Bruce.

(I may be wrong, but at least I have the courage to post with my NAME and my E-MAIL address!)

An answer

Message #3 Posted by [Nenad Vulic \(Croatia\)](#) on 4 July 2002, 3:23 a.m.,
in response to message #2 by W. Bruce Maguire II

Bruce wrote:

"...who can generate the number 100 in the fewest keystrokes without hitting a number key?"

CLx, 10^x, 10^x, ENTER, X

I did not feel smart enough for the previous challenges, but I love this one. It took only a few seconds of my time...

and with a 12C...

Message #4 Posted by [thibaut.be](#) on 4 July 2002, 4:20 a.m.,
in response to message #3 by Nenad Vulic (Croatia)

CLX e^x ENTER e^x g INTG D %

;-) I also enjoyed this one... LOL !

shorter absver for HP 12C

Message #5 Posted by [mapet](#) on 4 July 2002, 5:05 a.m.,
in response to message #4 by thibaut.be

CLX e^x ENTER %T - 4 keystrokes

OVER

Re: shorter absver for HP 12C

Message #6 Posted by [thibaut.be](#) on 4 July 2002, 5:23 a.m.,
in response to message #5 by mapet

yes, indeed, ;-)

alternative anserws

Message #7 Posted by [mapet](#) on 4 July 2002, 5:26 a.m.,
in response to message #5 by mapet

ENTER EEX ENTER %T

and my favourite but longer one:

CLX EEX ENTER % 1/x

OVER

and the best answer....

Message #8 Posted by [mapet](#) on 4 July 2002, 5:30 a.m.,
in response to message #7 by mapet

EEX ENTER %T

OVER :-) LOL

Re: and the best answer....

Message #9 Posted by [Thibaut](#) on 4 July 2002, 9:51 a.m.,
in response to message #8 by mapet

... or

S+ ENTER %T

;-)

Re: A slightly-better answer

Message #10 Posted by [Karl Schneider](#) on 4 July 2002, 4:20 a.m.,
in response to message #3 by Nenad Vulic (Croatia)

Nenad --

Your technique was the same one I had in mind, except that x^2 could be substituted for ENTER, * (except if you're using a 12C):

CLx, 10^x , 10^x , x^2

4 operations; total number of keystrokes dependent on calculator model...

Some shorter options, but some shortcuts too...

Message #11 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 4 July 2002, 7:52 a.m.,
in response to message #10 by Karl Schneider

[EEX] [10^X] (2 keystrokes)

or

[ACOS] (1 keystroke, assuming GRAD mode and a cleared machine)

or

[R/S] (1 keystroke, calling a one line program: 01 1E2)

or

[ON] (1 keystroke, on a Continuous Memory calculator which displayed 100 when turned off)

or

A wand scan of a "100" data sticker (1 button press and a handstroke)

or ...

The consequence

Message #12 Posted by [Nenad Vulic \(Croatia\)](#) on 4 July 2002, 8:22 a.m.,
in response to message #11 by Andrés C. Rodríguez (Argentina)

... is that the number of responses in this thread proves that Bruce was obviously right.

Re: Some shorter options, but some shortcuts too...

Message #13 Posted by [thibaut.be](#) on 4 July 2002, 9:50 a.m.,
in response to message #11 by Andrés C. Rodríguez (Argentina)

You're cheating, you're not using a 12c ;-)

Sorry, no 12C here

Message #14 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 4 July 2002, 10:22 a.m.,
in response to message #13 by thibaut.be

Yes, I have no 12C at hand. And I was not taking it too seriously, as you surely noticed.

Correction

Message #15 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 4 July 2002, 10:25 a.m.,
in response to message #11 by Andrés C. Rodríguez (Argentina)

First example has a $[x^2]$ missing, so it is 3 keystrokes.

Please see: Me. Bruce's challenge didn't specified any particular model (12C or whatever)

Re: Correction

Message #16 Posted by [John Ioannidis](#) on 5 July 2002, 11:43 a.m.,
in response to message #15 by Andrés C. Rodríguez (Argentina)

I think the arccosine of zero in grad mode wins the originality contest, even though it is five keystrokes on most handheld HPs: [shift] [GRD] [CLx] [shift] [ACOS]. Congratulations Andrés!

I would count [EEX] and [.] as numeric keys.

Thank you! (GRAD ACOS)

Message #17 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 5 July 2002, 12:20 p.m.,
in response to message #16 by John Ioannidis

Thank you, John, for the originality nomination. Around 1977 I needed to program my HP 25 to "bounce" some values at the 100 boundary; my function needed to work this way:

[x always had a value between 0 and 200]

If $x < 100$, then $f(x) = x$

If $x > 100$, then $f(x) = 100 - x$

By using GRAD mode (the function had nothing to do with angles), it was very convenient to execute:

SIN ASIN

and that was all about it!

I suppose the faint and very old memory of that case influenced my answer...

Re: A question to you, Valentin Albillo (Ex-PPC), regarding your "challenges"

Message #18 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 4 July 2002, 8:34 a.m.,
in response to message #2 by W. Bruce Maguire II

Hi, Mr. Bruce

I intend no harm, and if I offend someone, please, believe this is not the purpose.

I'd like to express my concerns about the way people show their thoughts: maybe the way I express myself seems offensive to someone, but it may also be fairly accepted in my own community. That's why I sometimes think a lot before writing anything in here, mostly because I'm a foreigner and I may not understand the real meaning of some idiomatic expressions, but some words speak for themselves.

I felt (my own opinion, please) sometimes that Mr. Ex-PPC Member presented the challenges in a way not compatible with this forum's way. In some (many) cases, the single mentioning of any HP calc as a wonderful, supreme or-the-like instrument, made me suspect about the real concern: solving the problem OR pointing HP calcs as not enough for the job.

I solved one or two challenges for my own, but I didn't think of them, the way they were shown, with the purpose to serve this forum's primary needs. I suspect Mr. Ex-PPC member (as a super-hero with his identity revealed) may disappear for a while OR change his identity again, I don't know.

I agree with Mr. Maguire's post primary concerns, **and I don't want my friends in here to understand my own post as a negative criticism to someone else's**, only another view of his mention.

Cheers.

Re: A question to you, W. Bruce Maguire II

Message #19 Posted by [Ellis Easley](#) on 8 July 2002, 9:03 a.m.,
in response to message #2 by W. Bruce Maguire II

As they say in talk radio, "I love you, man", but while Ex-PPC might be pretentious, you are a trouble maker. There's no harm in Ex-PPC's challenges. And regarding the use of aliases, will you say unequivocally that you are not "John Smith", the author of this message:

<http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/forum.cgi?read=19556>

Re: A question to you, W. Bruce Maguire II

Message #20 Posted by [W. Bruce Maguire II](#) on 8 July 2002, 7:13 p.m.,
in response to message #19 by Ellis Easley

Ellis:

You wrote:

As they say in talk radio, "I love you, man", but while Ex-PPC might be pretentious, you are a trouble maker. There's no harm in Ex-PPC's challenges. And regarding the use of aliases, will you say unequivocally that you are not "John Smith", the author of this message:

<http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/forum.cgi?read=19556>

Well, I guess it depends on what you mean by troublemaker... ;-) And actually, I thought there was a very small amount of harm in Valentin's (Ex-PPC's) posts---they are so downright condescending that I thought they slightly harmed *everyone* in the forum. You, and possibly others, may disagree with that notion. That's OK with me. The message really was to Valentin; although he never responded to my questions before, so I didn't really expect a response this time.

As to the alias and the above message, I will *unequivocally* state that I did *NOT* post that message. I'll go one better: I give you my word. I have *never* posted here using any alias. Mike *has* accused me of trying to fool people by using my TWO e-mail addresses! He caught me! ;-) I didn't think *anyone* would figure out that "W. Bruce Maguire II, maguire@AnalyticInvestments.com" and "W. Bruce Maguire II, maguire@ti.com" were the same... That Mike's a clever one!

I *do* admit to silently laughing when I saw the post, though. Believe it or not, there are other people present who don't like Mike's business practices either.

I've never felt that I had anything to gain by posting anonymously, or anything to lose by using my real name and e-mail address. I'm curious why Valentin (Ex-PPC) feels differently.

Bruce.

Re: A question to you, W. Bruce Maguire II

Message #21 Posted by [Ellis Easley](#) on 9 July 2002, 3:34 a.m.,
in response to message #20 by W. Bruce Maguire II

"John Smith"'s remark about not accepting PayPal made me think of you - maybe I've got a screw loose!

Re: A question to you, W. Bruce Maguire II

Message #22 Posted by [W. Bruce Maguire II](#) on 9 July 2002, 12:28 p.m.,
in response to message #21 by Ellis Easley

"John Smith"'s remark about not accepting PayPal made me think of you - maybe I've got a screw loose!

Ellis:

No, you don't have a screw loose---at least I don't think you do... ;-) That is the *exact* same complaint that *I* had about Mike's business. But, as I said, there are others around that have privately voiced to me (via e-mail) similar views regarding Mike's business.

Speaking of a screw loose, I still need to check-up on HP screws at McGuckin's for someone (I'll have to check the archives to see who I owe that to)! It's not you, is it? If it is, then I appreciate the subtle reminder! ;-) To be honest, I've had precious little time to devote to all-things-HP lately...

Bruce.

Re: A question to you, W. Bruce Maguire II

Message #23 Posted by [Ellis Easley](#) on 10 July 2002, 11:06 a.m.,
in response to message #22 by W. Bruce Maguire II

I've learned a lot about screws since that discussion started. I now have a number of different #2 and #3 screws including a #2 Plastite, none of which are quite right. Currently I believe the original screw was a "Plastite 60-1" and while that is obsolete, and the most widely made Plastite screw now is "Plastite 48-2", at least one manufacturer offers a "Plastite 48-1", which I think will fit. I need to make some microscope observations before I ask a dealer to try to get some.

Here is a link to the original thread: <http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/archv008.cgi?read=17614>

And my three updates: <http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/archv008.cgi?read=17963>

<http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/archv008.cgi?read=18432>

<http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/archv008.cgi?read=19079>

Re: Short & Sweet Math Challenges for HP fans #5

Message #24 Posted by [Rupert \(Northern Italy, EU\)](#) on 4 July 2002, 4:17 p.m.,
in response to message #1 by Ex-PPC member

>
> $x^3 + p \cdot x + q = 0$
>
> Given p and q, Cardano's formula gives this value for x:
>
>
> $x = \text{CURT}(-q/2 + \text{SQRT}((q/2)^2 + (p/3)^3)) + \text{CURT}(-q/2 - \text{SQRT}((q/2)^2 + (p/3)^3))$
>

Well, if I'm not wrong, the signs in the second term are a bit
messed up. The correct version should be rather:

$$x = \text{CURT}(-q / 2 + \text{SQR}((q / 2) ^ 2 + (p / 3) ^ 3)) - \text{CURT}(q / 2 + \text{SQR}((q / 2) ^ 2 + (p / 3) ^ 3))$$

>
> $x^3 + 2 \cdot x - 7 = 0$
>
> This corresponds to p = 2 and q = -7, and Cardano's formula gives:
>
>
> $x = \text{CURT}(7/2 + \text{SQRT}(49/4 + 8/27)) + \text{CURT}(7/2 - \text{SQRT}(49/4 + 8/27))$
> $= \text{CURT}(7/2 + \text{SQRT}(1355/108)) + \text{CURT}(7/2 - \text{SQRT}(1355/108))$
> $= \text{CURT}(7/2 + 3.54207513984) + \text{CURT}(7/2 - 3.54207513984)$
> $= \text{CURT}(7.04207513984) + \text{CURT}(-0.04207513984)$
> $= 1.9167562361864 - 0.3478098331340$
> $= 1.5689464030524$
>

Again, the final result is right (I checked it with the HP48G+ ROOT
finder :)) but the signs in your intermediate passages are all
messed up: $\text{CURT}(-0.04207513984)$ would give a complex result.

Anyway, if I haven't misunderstood what is being asked, it looks
too easy: I just imposed that the fractional parts of the two
terms of the Cardano's formula and of the root must be equal to
zero. There is plenty of results: I enclose below the
quick'n'dirty :) BASIC listing I wrote to generate them:

DIM d, t1, t2, x AS DOUBLE
DIM p, q, kp, kq, maxnum AS DOUBLE

maxnum = 1000

OPEN "c:\outfile.dat" FOR OUTPUT AS #1

CLS

```

FOR p = 1 TO maxnum
kp = (p / 3) ^ 3
FOR q = -1 TO -maxnum STEP -1
kq = q / 2
d = SQR(kq ^ 2 + kp)
t1 = -kq + d
t2 = kq + d
x = t1 ^ (1 / 3) - t2 ^ (1 / 3)

IF t1 - INT(t1) = 0 AND t2 - INT(t2) = 0 AND x - INT(x) = 0 THEN

PRINT "p="; p; "q="; q; "d="; d; "t1="; t1; "t2="; t2; "x="; x

PRINT #1, "p="; p; "q="; q; "d="; d; "t1="; t1; "t2="; t2; "x="; x

END IF

NEXT q
NEXT p

CLOSE #1

END

```

I haven't had much time, so I tested the algorithm in BASIC and used my HP48G+ only to check the results. Here is a sample of the output:

```

p= 6 q=-7 d= 4.5 t1= 8 t2= 1 x= 1
p= 9 q=-26 d= 14 t1= 27 t2= 1 x= 2
p= 12 q=-63 d= 32.5 t1= 64 t2= 1 x= 3
p= 15 q=-124 d= 63 t1= 125 t2= 1 x= 4
p= 18 q=-19 d= 17.5 t1= 27 t2= 8 x= 1
p= 18 q=-215 d= 108.5 t1= 216 t2= 1 x= 5
p= 21 q=-342 d= 172 t1= 343 t2= 1 x= 6
p= 24 q=-56 d= 36 t1= 64 t2= 8 x= 2
p= 24 q=-511 d= 256.5 t1= 512 t2= 1 x= 7
p= 27 q=-728 d= 365 t1= 729 t2= 1 x= 8
p= 30 q=-117 d= 66.5 t1= 125 t2= 8 x= 3
p= 30 q=-999 d= 500.5 t1= 1000 t2= 1 x= 9
p= 36 q=-37 d= 45.5 t1= 64 t2= 27 x= 1
p= 36 q=-208 d= 112 t1= 216 t2= 8 x= 4
p= 42 q=-335 d= 175.5 t1= 343 t2= 8 x= 5
p= 45 q=-98 d= 76 t1= 125 t2= 27 x= 2
p= 48 q=-504 d= 260 t1= 512 t2= 8 x= 6
p= 54 q=-189 d= 121.5 t1= 216 t2= 27 x= 3
p= 54 q=-721 d= 368.5 t1= 729 t2= 8 x= 7
p= 60 q=-61 d= 94.5 t1= 125 t2= 64 x= 1
p= 60 q=-992 d= 504 t1= 1000 t2= 8 x= 8
p= 63 q=-316 d= 185 t1= 343 t2= 27 x= 4
p= 72 q=-152 d= 140 t1= 216 t2= 64 x= 2
p= 72 q=-485 d= 269.5 t1= 512 t2= 27 x= 5
p= 81 q=-702 d= 378 t1= 729 t2= 27 x= 6

```

p= 84 q=-279 d= 203.5 t1= 343 t2= 64 x= 3
 p= 90 q=-91 d= 170.5 t1= 216 t2= 125 x= 1
 p= 90 q=-973 d= 513.5 t1= 1000 t2= 27 x= 7
 p= 96 q=-448 d= 288 t1= 512 t2= 64 x= 4
 p= 105 q=-218 d= 234 t1= 343 t2= 125 x= 2
 p= 108 q=-665 d= 396.5 t1= 729 t2= 64 x= 5
 p= 120 q=-387 d= 318.5 t1= 512 t2= 125 x= 3
 p= 120 q=-936 d= 532 t1= 1000 t2= 64 x= 6
 p= 126 q=-127 d= 279.5 t1= 343 t2= 216 x= 1
 p= 135 q=-604 d= 427 t1= 729 t2= 125 x= 4
 p= 144 q=-296 d= 364 t1= 512 t2= 216 x= 2
 p= 150 q=-875 d= 562.5 t1= 1000 t2= 125 x= 5
 [...]

The search is limited to 1000 (maxnum) 'cause there are too much results, anyway it's easy to modify that limit in order to go further.

Turning the line "FOR q = -1 TO -maxnum STEP -1" into "FOR q = 1 TO maxnum STEP 1", I found that, if a couple (p,q) is a valid result and gives a root x, then (p,-q) is still a valid result and gives a root -x, too.

If that is what it's being asked, maybe I'll find the time to go ahead with polynomial interpolation of the results in order to have some fun with my HP48. :)

--

Re: Short & Sweet Math Challenges for HP fans #5

Message #25 Posted by [John Ioannidis](#) on 5 July 2002, 12:24 a.m.,
 in response to message #24 by Rupert (Northern Italy, EU)

You are wrong on so many counts.

1. $\text{cbrt}(-x) = -\text{cbrt}(x)$, so the signs are correct.
2. The cube root of a real is a real, regardless of whether that real is positive or negative. (Yes, I know about the other two complex roots, but that's really (no pun) for a complex number with a zero imaginary part. Think algebraic fields).
3. Your program missed the obvious solution $p=-6$, $q=4$ (with root 2). No wonder, since...
4. Computers (and calculators) do arithmetic with finite precision; your test " $t1 - \text{int}(t1)$ " is bound to fail when $t1$ should be an integer but isn't because of rounding errors.

Re: Short & Sweet Math Challenges for HP fans #5

Message #26 Posted by [Rupert \(Northern Italy, EU\)](#) on 6 July 2002, 8:12 p.m.,
in response to message #25 by John Ioannidis

> You are wrong on so many counts.

>

> 1. $\text{cbrr}(-x) = -\text{cbrr}(x)$, so the signs are correct.

>

> 2. The cube root of a real is a real, regardless of whether that real is positive or negative. (Yes, I know about the other two complex roots, but that's really (no pun) for a complex number with a zero imaginary part. Think algebraic fields).

>

Here is an example: $(-8)^{(1/3)}$.

MATHCAD: $1+1.732050807568877*i$

HP48G+: (1, 1.73205080757)

HP32SII: x:1 y:1.732050808

etc.

> 3. Your program missed the obvious solution $p=-6$, $q=4$ (with root 2).

Well, I didn't even search for negative values of p .

Since it's the weekend :-) I took the time to look for

the right version of the Cardano's formula for the cubic equation

$x^3+P*x+Q=0$ and found the following:

$$x = \frac{(-Q + \sqrt{Q^2 + 4*P^3/27})/2}{1}^{1/3} + \frac{(-Q - \sqrt{Q^2 + 4*P^3/27})/2}{1}^{1/3}$$

Now my new quick'n'dirty program tests all the couples (p,q) , $(-p,q)$, $(p,-q)$, and $(-p,-q)$, too.

DECLARE FUNCTION test (dummy\$)

DIM p, q, r AS DOUBLE

DIM SHARED p0, q0, r0, e, eps, epsx AS DOUBLE

DIM maxnum, k, k1p, q2, dummy AS DOUBLE

k = 4 / 27

e = 1 / 3

eps = .000001

epsx = .0001

CLS

PRINT ""

INPUT "Max p, q "; maxnum

```
OPEN "c:\outfile.dat" FOR OUTPUT AS #1
```

```
FOR p = 1 TO maxnum
```

```
k1p = k * (p ^ 3)
```

```
FOR q = 1 TO maxnum
```

```
q2 = q ^ 2
```

```
r0 = q2 + k1p
```

```
p0 = p
```

```
q0 = q
```

```
dummy = test("")
```

```
q0 = -q
```

```
dummy = test("")
```

```
r0 = q2 - k1p
```

```
p0 = -p
```

```
q0 = q
```

```
dummy = test("")
```

```
q0 = -q
```

```
dummy = test("")
```

```
NEXT q
```

```
NEXT p
```

```
CLOSE #1
```

```
END
```

```
FUNCTION test (dummy$)
```

```
DIM sr, t1, t2, x AS DOUBLE
```

```
IF r0 >= 0 THEN
```

```
sr = SQR(r0)
```

```
IF ABS(sr - INT(sr)) <= eps THEN
```

```
sr = INT(sr + .5)
```

```
t1 = (-q0 + sr)
```

```
t2 = (-q0 - sr)
```

```
IF t1 >= 0 AND t2 >= 0 THEN
```

```
x = (t1 / 2) ^ e + (t2 / 2) ^ e
```

```
IF ABS(x - INT(x)) <= epsx THEN
```

```
x = INT(x + .5)
```

```
PRINT "p="; p0; "q="; q0; "discr.="; r0; "t1="; t1; "t2="; t2; "x="; x
```

```
PRINT #1, "p="; p0; "q="; q0; "discr.="; r0; "t1="; t1; "t2="; t2; "x="; x
```

```
END IF
```

```
END IF
```

```
END IF
```

```
END IF
```

```
test = 0
```

```
END FUNCTION
```

Output with search limited to a maximum absolute value of 1000
for both p and q:

p=-3 q=-2 discr.= 0 t1= 2 t2= 2 x= 2
p=-6 q=-9 discr.= 49 t1= 16 t2= 2 x= 3
p=-9 q=-28 discr.= 676 t1= 54 t2= 2 x= 4
p=-12 q=-16 discr.= 0 t1= 16 t2= 16 x= 4
p=-12 q=-65 discr.= 3969 t1= 128 t2= 2 x= 5
p=-15 q=-126 discr.= 15376 t1= 250 t2= 2 x= 6
p=-18 q=-35 discr.= 361 t1= 54 t2= 16 x= 5
p=-18 q=-217 discr.= 46225 t1= 432 t2= 2 x= 7
p=-21 q=-344 discr.= 116964 t1= 686 t2= 2 x= 8
p=-24 q=-72 discr.= 3136 t1= 128 t2= 16 x= 6
p=-24 q=-513 discr.= 261121 t1= 1024 t2= 2 x= 9
p=-27 q=-54 discr.= 0 t1= 54 t2= 54 x= 6
p=-27 q=-730 discr.= 529984 t1= 1458 t2= 2 x= 10
p=-30 q=-133 discr.= 13689 t1= 250 t2= 16 x= 7
p=-36 q=-91 discr.= 1369 t1= 128 t2= 54 x= 7
p=-36 q=-224 discr.= 43264 t1= 432 t2= 16 x= 8
p=-42 q=-351 discr.= 112225 t1= 686 t2= 16 x= 9
p=-45 q=-152 discr.= 9604 t1= 250 t2= 54 x= 8
p=-48 q=-128 discr.= 0 t1= 128 t2= 128 x= 8
p=-48 q=-520 discr.= 254016 t1= 1024 t2= 16 x= 10
p=-54 q=-243 discr.= 35721 t1= 432 t2= 54 x= 9
p=-54 q=-737 discr.= 519841 t1= 1458 t2= 16 x= 11
p=-60 q=-189 discr.= 3721 t1= 250 t2= 128 x= 9
p=-63 q=-370 discr.= 99856 t1= 686 t2= 54 x= 10
p=-72 q=-280 discr.= 23104 t1= 432 t2= 128 x= 10
p=-72 q=-539 discr.= 235225 t1= 1024 t2= 54 x= 11
p=-75 q=-250 discr.= 0 t1= 250 t2= 250 x= 10
p=-81 q=-756 discr.= 492804 t1= 1458 t2= 54 x= 12
p=-84 q=-407 discr.= 77841 t1= 686 t2= 128 x= 11
p=-90 q=-341 discr.= 8281 t1= 432 t2= 250 x= 11
p=-96 q=-576 discr.= 200704 t1= 1024 t2= 128 x= 12
p=-105 q=-468 discr.= 47524 t1= 686 t2= 250 x= 12
p=-108 q=-432 discr.= 0 t1= 432 t2= 432 x= 12
p=-108 q=-793 discr.= 442225 t1= 1458 t2= 128 x= 13
p=-120 q=-637 discr.= 149769 t1= 1024 t2= 250 x= 13
p=-126 q=-559 discr.= 16129 t1= 686 t2= 432 x= 13
p=-135 q=-854 discr.= 364816 t1= 1458 t2= 250 x= 14
p=-144 q=-728 discr.= 87616 t1= 1024 t2= 432 x= 14
p=-147 q=-686 discr.= 0 t1= 686 t2= 686 x= 14
p=-162 q=-945 discr.= 263169 t1= 1458 t2= 432 x= 15
p=-168 q=-855 discr.= 28561 t1= 1024 t2= 686 x= 15

I got results with $p > 0$ only doing a search with a maximum absolute
value > 1000 for both p and q, but results with $p < 0$ and $q > 0$
(as $(-6,4)$) are still missing:

p= 1 q=-1331 discr.= 1771561 t1= 2662 t2= 0 x= 11
p=-1 q=-1331 discr.= 1771561 t1= 2662 t2= 0 x= 11
p= 1 q=-2197 discr.= 4826809 t1= 4394 t2= 0 x= 13

```

p=-1 q=-2197 discr.= 4826809 t1= 4394 t2= 0 x= 13
p= 1 q=-2744 discr.= 7529536 t1= 5488 t2= 0 x= 14
p=-1 q=-2744 discr.= 7529536 t1= 5488 t2= 0 x= 14
p= 1 q=-3375 discr.= 1.139063E+07 t1= 6750 t2= 0 x= 15
p=-1 q=-3375 discr.= 1.139063E+07 t1= 6750 t2= 0 x= 15
p= 1 q=-4096 discr.= 1.677722E+07 t1= 8192 t2= 0 x= 16
p=-1 q=-4096 discr.= 1.677722E+07 t1= 8192 t2= 0 x= 16
p= 1 q=-4913 discr.= 2.413757E+07 t1= 9826 t2= 0 x= 17
p=-1 q=-4913 discr.= 2.413757E+07 t1= 9826 t2= 0 x= 17
p= 1 q=-5832 discr.= 3.401222E+07 t1= 11664 t2= 0 x= 18
p=-1 q=-5832 discr.= 3.401222E+07 t1= 11664 t2= 0 x= 18
p= 1 q=-6859 discr.= 4.704588E+07 t1= 13718 t2= 0 x= 19
p=-1 q=-6859 discr.= 4.704588E+07 t1= 13718 t2= 0 x= 19
p= 1 q=-8000 discr.= 6.4E+07 t1= 16000 t2= 0 x= 20
p=-1 q=-8000 discr.= 6.4E+07 t1= 16000 t2= 0 x= 20
p= 1 q=-9261 discr.= 8.576612E+07 t1= 18522 t2= 0 x= 21
p=-1 q=-9261 discr.= 8.576612E+07 t1= 18522 t2= 0 x= 21
p= 2 q=-4096 discr.= 1.677722E+07 t1= 8192 t2= 0 x= 16
p= 2 q=-4913 discr.= 2.413757E+07 t1= 9826 t2= 0 x= 17
p= 2 q=-5832 discr.= 3.401222E+07 t1= 11664 t2= 0 x= 18
p=-2 q=-5832 discr.= 3.401222E+07 t1= 11664 t2= 0 x= 18
p= 2 q=-6859 discr.= 4.704588E+07 t1= 13718 t2= 0 x= 19
p=-2 q=-6859 discr.= 4.704588E+07 t1= 13718 t2= 0 x= 19
p= 2 q=-8000 discr.= 6.4E+07 t1= 16000 t2= 0 x= 20
p=-2 q=-8000 discr.= 6.4E+07 t1= 16000 t2= 0 x= 20
p= 2 q=-9261 discr.= 8.576612E+07 t1= 18522 t2= 0 x= 21
p=-2 q=-9261 discr.= 8.576612E+07 t1= 18522 t2= 0 x= 21
p=-3 q=-2 discr.= 0 t1= 2 t2= 2 x= 2
p= 3 q=-6859 discr.= 4.704588E+07 t1= 13718 t2= 0 x= 19
p= 3 q=-9261 discr.= 8.576613E+07 t1= 18522 t2= 0 x= 21
p=-3 q=-9261 discr.= 8.576611E+07 t1= 18522 t2= 0 x= 21
p= 4 q=-9261 discr.= 8.576613E+07 t1= 18522 t2= 0 x= 21
p=-4 q=-9261 discr.= 8.576611E+07 t1= 18522 t2= 0 x= 21
p=-6 q=-9 discr.= 49 t1= 16 t2= 2 x= 3
p=-9 q=-28 discr.= 676 t1= 54 t2= 2 x= 4
[...]
```

> No wonder, since...

>

> 4. Computers (and calculators) do arithmetic with finite precision;

> your test "t1 - int(t1)" is bound to fail when t1 should be an integer

> but isn't because of rounding errors.

Now I have introduced a tolerance in the tests, but some results are still missing.

Well, I' didn't resist the temptation to give it a try,
but I'm not a mathematician nor a programmer.

From a pratical point of view, any result that get the job done is good
Doing a technical job, when I run into an equation I just solve it...

--

Re: Short & Sweet Math Challenges for HP fans #5

Message #27 Posted by [John Ioannidis](#) on 7 July 2002, 12:20 p.m.,
in response to message #26 by Rupert (Northern Italy, EU)

> Here is an example: $(-8)^{(1/3)}$.

Is it too much to hope that people first use their brains and then their calculators? $(-2)^3 = -8$, therefore $(-8)^{(1/3)} = -2$.

I did say that you should only think in terms of real numbers. If you work with complex numbers, then -8 is really $(-8, 0)$ (or $-8+0j$), which will indeed have three cube roots: $(-2, 0)$, $(1, \sqrt{3})$, and $(1, -\sqrt{3})$. If you raise any of these three complex numbers to the third power, you get $(-8, 0)$.

That's high school math, it's not like it's complicated!

The order in which you actually do the arithmetic in order to calculate the roots may require you to apply the distributive property of multiplication and take the negative sign outside the second cube root to get your calculator to compute the real cube root rather than one of the complex cube roots. But this doesn't mean that the formula is incorrect.

Re: Short & Sweet Math Challenges for HP fans #5

Message #28 Posted by [Alex Binca](#) on 7 July 2002, 3:02 p.m.,
in response to message #27 by John Ioannidis

> That's high school math, it's not like it's complicated!

Hey, why don't you try to be a little nicer. Being nice to other people it's taught in kindergarten. It's not like it's complicated!

:) :)

-- Alex Binca

Re: Short & Sweet Math Challenges for HP fans #5

Message #29 Posted by [Rupert \(Northern Italy, EU\)](#) on 12 July 2002, 6:41 p.m.,
in response to message #26 by Rupert (Northern Italy, EU)

Judging by some replies I've got since now,
it looks like I've been talking in Greek language.
The point is that, using either a CAS or a calculator,
the result for the cubic root of a negative real number
will always be a complex number, or an error message. ;-))
Just this.

Once again, as a little example here are the results
for $(-8)^{(1/3)}$:

Mathcad : $1 + 1.732050807568877i$

HP48G+ : (1, 1.73205080757)

HP32SII : x: 1 y: 1.732050808

HP15C : Re: 1 Im: 1.732050807

HP41CX + Math I Pac: $Z^{1/N}$, with $N=3$: $U=1$ $V=1.732050808$
 $U=-2$ $V=0$
 $U=1$ $V=-1.732050808$
 Z^N , with $N=1/3$: $U=1$ $V=1.732050807$

Yorkem (HP49G emulator): $2*((1+i*\text{SQRT}(3))/2)=1+i*\text{SQRT}(3)=$
 $=(1, 1.73205080757).$

It looks like the good ol' 41CX is the overall winner,
being the only one that gives the full result, satisfying
also those peoples who pretend $(-k)^{1/3}$ is just
equal to $-(k^{1/3})$.

Well, now back on topic.

Since the cubic equation is just a particular case of
a third grade equation, then its roots can be computed
using polynomial root finding algorithms rather than
the Cardano's formula, overriding the troubles it involves.

Here is a new quick'n'dirty listing for the HP48 based
upon the PROOT (Polynomial ROOT) command
(tried also ROOT together with a deflation routine,
but it's obviously slower).

The program just discards those values of P and Q that
generate complex roots or real but non-integer roots.

var: RUN

```
<< 0 FIX 1 CF
    1E-5 'EPS' STO
```

```
"ENTER LIMIT"
{ ":MAX P,Q: "
{1 0} V}
INPUT OBJ->
-> MXN <<
```

```
1 MXN FOR PL
  1 MXN FOR QL
```

```
PL      QL      TESTPQ
PL      QL NEG TESTPQ
PL NEG QL      TESTPQ
PL NEG QL NEG TESTPQ
```

```
      NEXT
NEXT
>>
```

```
1000 .5 BEEP
>>
```

```
var: TESTPQ
```

```
<< 'Q' STO 'P' STO
    1 0 P Q 4 ->ARRAY
    PROOT -> ROOTS <<
    1 3 FOR J
        ROOTS J GET TESTX
    NEXT
>>
>>
```

```
var: TESTX
```

```
<< -> X <<
    'X' VTYPE
    -> VT <<
    IF VT 0 == THEN
        IF X FP ABS EPS <= THEN

            IF 1 FS? THEN
                P Q X 3 ->ARRAY
                -> PQX << RSLT ARRAY->
                OBJ-> DROP DROP 1 +
                RSLT SWAP
                PQX SWAP ROW+ >>
            ELSE
                1 SF
```

```
      P Q X 1 3 2 ->LIST
      ->ARRY
END
```

```
'RSLT' STO
```

```
"P=" P +
"Q=" Q +
"X=" X +
CLLCD
3 DISP
2 DISP
1 DISP
3 FREEZE
```

```
END
```

```
END
```

```
>>
```

```
>>
```

```
>>
```

Results are stored in the matrix RSLT.
Here is some results:

RSLT:

P Q X

```
-2 1 1
-2 -1 -1
-3 2 1
-3 2 -2
-3 -2 -1
-3 -2 2
-4 3 1
-4 -3 -1
-5 2 2
-5 -2 -2
-5 4 1
-5 -4 -1
-6 4 2
-6 -4 -2
-6 5 1
-6 -5 -1
-7 6 1
-7 6 2
```

-7 6 -3
-7 -6 -1
-7 -6 -2
-7 -6 3
-8 3 -3
-8 -3 3
-8 7 1
-8 -7 -1
-8 8 2
-8 -8 -2
-9 8 1
-9 -8 -1
-9 10 2
-9 -10 -2
-10 3 3
-10 -3 -3
-10 9 1
-10 -9 -1

Some couples P and Q are stored more than one time because they generate more than one real integer root.

Well, time out for me now. I'll just be watching for other solutions.

--

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HP28S dead: see picture

Message #1 Posted by [Thierry](#) on 30 June 2002, 1:08 p.m.

Hi everybody,

I already posted this request on comp.sys.hp48, but I'd like to get an answer to my problem.

When I turn the power on, the screen becomes black on one side (see picture: <http://www.pbase.com/image/2784768/medium>)

I tried memory reset function (ON+INS+Right Arrow), and the machine does two beeps, then turns off.

Is this machine dead or is there still some hope ?

Thierry

Re: HP28S dead: see picture

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 1 July 2002, 12:27 a.m.,
in response to message #1 by Thierry

Hi;

I have seen one HP27 with this same behavior. After being opened, a severe leakage from the batteries was observed.

A cleaning procedure and ready to run!

Take a care look inside the batteries compartment. The turning-off after MEMORY CLEAR procedure is my major concern for now. If there is a battery leakage, the machine's case must be opened (there is an article about it at the Articles Forum). If the display drivers are damaged for any reason, nothing can be done. They are part of the PCB itself.

Success.

HP28S: I saw the picture, and...

*Message #3 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 1 July 2002, 7:36 a.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)*

...I am curious about it. There is a shadow and some light spots in the right side of the LCD.
What happened? Maybe it can help defining a solution.

Success.

Re: HP28S: I saw the picture, and...

*Message #4 Posted by [Thierry](#) on 1 July 2002, 2:45 p.m.,
in response to message #3 by Vieira, Luiz C. (Brazil)*

Thanks for the hint. Battery leak is indeed a possibility. I think that it happened, as the battery cover is oxydized.

About the shadow you see, I think it's just the reflection of my digicam.

I'll look for how to clean my HP28S in the archives

Thanks,

Thierry

Don't find how to clean it !

*Message #5 Posted by [Thierry](#) on 1 July 2002, 3:41 p.m.,
in response to message #4 by Thierry*

Hi,

I have not found how to clean it. Is there any spray for electrical contacts that I could use ?

If I need to open my 28S, I think that I'll give up. It's crazy; I need to see it I've seen.

So, any help on how to clean the contacts from the outside ?

Replacement is not that difficult...

Message #6 Posted by [thibaut.be](#) on 3 July 2002, 12:19 p.m.,
in response to message #5 by Thierry

... There are plenty of 28S for sale on ebay, and price is quite affordable. \$/€ 60 is a good estimate.

You're right, opening them is possible but is quite difficul, and leaves some unrecoverable marks...

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programming a piecewise function on the 48 G

Message #1 Posted by [Fernando Leyton](#) on 30 June 2002, 8:19 a.m.

I'm taking a first calculus course at Paris VI and i want to programm a piecewise function on the HP 48 calculator. The function is :

$$F(x) = 3x \text{ if } x \leq -5 = x/2 - 5 \text{ if } -5 < x < 0 = \exp(x) \text{ if } x > 0$$

I programmed: << ---> X << CASE ' x<-5' THEN ' 3x' END ' -5< x < 0 ' THEN ' x/2 -5 ' END ' x > 0' THEN ' exp(x)' END END >> >>

But i don't get the numeric result, only the algebraic expression corresponding to the input domain?

Re: programming a piecewise function on the 48 G

Message #2 Posted by [Ellis Easley](#) on 30 June 2002, 11:45 a.m.,
in response to message #1 by Fernando Leyton

Maybe you need to press "-> NUM"?

Re: programming a piecewise function on the 48 G

Message #3 Posted by [Rupert \(Northern Italy, EU\)](#) on 30 June 2002, 12:27 p.m.,
in response to message #1 by Fernando Leyton

> But i don't get the numeric result, only the algebraic expression > corresponding to the input domain?

Just add EVAL after any algebraic expression you need to evaluate. It looks like there is a test who needs to be re-written, too:

```
<< ---> X << CASE 'X < -5' THEN '3*X' EVAL END 'X > -5 AND X < 0' THEN 'X/2-5'
EVAL END 'X > 0' THEN 'EXP(X)' EVAL END END >> >>
```


Re: programming a piecewise function on the 48 G

Message #4 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 30 June 2002, 11:44 p.m.,
in response to message #1 by Fernando Leyton

Hi;

Just to know: does the final expression, when evaluated, return the expected result? If so, a single $\rightarrow \text{NUM}$ after the last END is enough, because all possible CASEs return an algebraic expression. Say, you could try:

```
« -> X
  « CASE
    'X<-5' THEN '3*X' END
    'X>-5 AND X<0' THEN 'X/2-5' END
    'X>0' THEN 'EXP(X)' END
  END ->NUM
»
»
```

(the $\rightarrow \text{NUM}$ can also come between both » and »). If you wanna try an RPL solution (no need of a $\rightarrow \text{NUM}$ adding):

```
« -> X
  « CASE
    X -5 < THEN X 3 * END
    X -5 > X 0 < AND THEN X 2 / 5 - END
    X 0 > THEN X EXP END
  END
»
»
```

(I know you did not ask for it, but I am a compulsive RPL programmer... my shrink said so.)

Hope you have success.

Re: programming a piecewise function on the 48 G

Message #5 Posted by [Arnold Steekelenburg](#) on 1 July 2002, 9:29 a.m.,
in response to message #1 by Fernando Leyton

Hi Fernando,

Another way is this:

Type in:

```
'F(X)=IFTE(X<-5,3*X,IFTE(X>-5 AND X<0,X/2-5,EXP(X)))'
```

Then press left-shift STO (= Define) Press VAR and you'll see the variable (function) F.

Type a value and press the softkey for F and this will be evaluated immediately.

Right-shift F will give you the program the HP48 has created as a result of the DEFinition.

IFTE = short IF THEN ELSE

Using this construction you can plot piecewise functions too. Arnold

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HP 32 sii on ebay -- said "old model"

Message #1 Posted by [Trisnadi](#) on 29 June 2002, 9:27 p.m.

Jusr noticed an HP 32sii on ebay (#1363266157), the seller said "old model". But looking at the keys, I bet it is 1997 or later model, most likely already made in Indonesia. It is not so old I guess.

Trisnadi

Re: HP 32 sii on ebay -- said "old model"

Message #2 Posted by [Randy Sloyer](#) on 29 June 2002, 10:56 p.m.,
in response to message #1 by Trisnadi

I think the seller believes that "old" colors = "old" calculator.

I'm not the most knowledgeable on the 32Sii's, but were they not made here in the US starting in 1991? These would have had the same gold/blue shift keys but with double shot molded keytops. I know my "old" colors 32Sii made in 1999 in Indonesia has printed keytops.

When in doubt, ask for the serial number, if you dare. See what I mean here (just the first message):

<http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/forum.cgi?read=19340>

Re: HP 32 sii on ebay -- said "old model"

*Message #3 Posted by [Trisnadi](#) on 30 June 2002, 2:50 a.m.,
in response to message #2 by Randy Sloyer*

I had an early version of 32sii before I lost it when I was in a construction work (Aaaargh!!). I think 32sii calcs were made in Singapore or Malaysia since 1991, and in 1997 HP moved the manufacturing to Indonesia. I remember very well the early model has unique 'y' letter in the y^x key.

Trisnadi

Re: HP 32 sii on ebay -- said "old model"

*Message #4 Posted by [Randy Sloyer](#) on 30 June 2002, 9:13 a.m.,
in response to message #3 by Trisnadi*

Just from a durability and or collectability standpoint, I would be interested to know if the early 32Sii's had double molded keytops. Perhaps all the 32Sii models have printed keys as part of the shift to the "ii" model. My original 32S made in Indonesia in 1989 has double shot keys and my 32Sii from Indonesia 1999 has printed keys.

Just curious.

Re: HP 32 sii on ebay -- said "old model"

*Message #5 Posted by [Steve Leong](#) on 30 June 2002, 10:15 a.m.,
in response to message #4 by Randy Sloyer*

How can you tell the difference in double shot keys and printed keys. I have a 41cv serial# 2237s, two old color 32sII, and a fairly new 12c? The only difference I can see is that on the 41cv they seem to have a shinny appearance. Is there any way to tell?

Thank you

Re: HP 32 sii on ebay -- said "old model"

*Message #6 Posted by [Randy Sloyer](#) on 30 June 2002, 11:23 a.m.,
in response to message #5 by Steve Leong*

I use a 5X jewelers loupe. You can see on the double shot keys a faint line around the white of the keys legend insert. I believe this is due to the white insert being colder when the brown flows in around it.

On newer machines with double shot keys you can see faint horizontal lines that look like very small uniform scratches in the keytop. They will reflect light and appear shiny. I suspect this is from the de-flashing process of the molding operation. My new 42S service replacement has this "feature". I have not seen this on older, non Indonesia calculators (Singapore). Some folks had speculated here that the newer 42S machines had printed keys, and therefore not as desirable as older units, but it's not the case. Perhaps this is where the OLD vs. NEW thing has started?

The printed keytops usually have matte finish which I think is applied after the printing operation. You should be able to see some ragged edges of white where the ink bleeds on the non-porous keytop. There seems to be a difference in printing quality as well, with the 10,20 and 30 Pioneer series machines being just okay and the 48's being a bit better. Probably due to different production lines.

Re: HP 32 sii on ebay -- said "old model"

*Message #7 Posted by [Trisnadi Sutrisno](#) on 1 July 2002, 10:14 p.m.,
in response to message #4 by Randy Sloyer*

My first HP calculator, the 1993 32sii has the same keys as my current 32S. It was made either in Singapore or Malaysia.

Trisnadi

Re: HP 32 sii on ebay -- said "old model"

*Message #8 Posted by [Paul Brogger](#) on 1 July 2002, 9:48 a.m.,
in response to message #2 by Randy Sloyer*

I have two "old colors" 32sii's; serial # 3343S84806 with double-shot keys, and a newer one with painted keys, (I don't know the serial # of the latter -- its back has apparently been switched with that of some other Pioneer I took apart 'way back when.)

The injected keys have much larger, more readable legends than do the painted ones.

Re: HP 32 sii on ebay -- said "old model"

*Message #9 Posted by [Randy Sloyer](#) on 1 July 2002, 8:06 p.m.,
in response to message #8 by Paul Brogger*

Thanks Paul!

I've been wondering if the 32Sii was ever made with non-printed keytops. I assume the 1993 model was made in Singapore?

Does anyone know when this product was moved to Indonesia and went low budget?
With the Corvallis to ACO move?

Re: HP 32 sii on ebay -- said "old model"

*Message #10 Posted by [Trisnadi Sutrisno](#) on 1 July 2002, 10:08 p.m.,
in response to message #9 by Randy Sloyer*

Take a look at <http://www.area48.com/history.html> It says Dec 97 HP started production in Indonesia.

Trisnadi

Re: HP 32 sii on ebay -- said "old model"

Message #11 Posted by [steve leong](#) on 2 July 2002, 6:04 p.m.,
in response to message #10 by Trisnadi Sutrisno

I have a 32sII with the serial number ID71802229 incicating it was made in indonesia in the 18th week of 1997. So they must have started earlier than December.

Re: Strange you should ask

Message #12 Posted by [Mike](#) on 1 July 2002, 11:45 p.m.,
in response to message #1 by Trisnadi

I was just going to ask this question. The calc. is mine.

BTW, when I said "old model" I meant the old color style not the chronological age. I thought I made that clear but guess not.

However, I have many of these and I just grabbed one at random. This is the only one with the "=" key. Someone asked me about this.

My other ones are a combination of Singapore, Malasia and Indonesia. This is the only one with this key. Seems odd that it would have an = key.

Anyway, I think I will pull the add simply because of the "=" key thing and the fact that since this is one of the newer old style, it does not have the quality of the "real" old style. Since it is the only one with an = key, I think I'll just keep it for myself.

Mike

Re: Strange you should ask

Message #13 Posted by [Trisnadi](#) on 2 July 2002, 1:44 a.m.,
in response to message #12 by Mike

Mike, the "=" key is even more strange to me. RPN calcs such as HP-32sII does not have "=" key. Probably you're talking about HP-20s?

Trisnadi

Re: Strange you should ask

*Message #14 Posted by [Randy Sloyer](#) on 2 July 2002, 6:37 a.m.,
in response to message #12 by Mike*

Wow, I just looked at the photos and dang! you've got yourself the calculator equivalent of the upside down airplane postage stamp! What I think happened there was a 20S keyboard was used, but they forgot to reprint the "=" key with "R/S". I suspect that if you look closely at the "ENTER" key, you may see black/brown paint covering the original logo of "INPUT" that has been overprinted.

Re: Strange you should ask

*Message #15 Posted by [Trisnadi](#) on 2 July 2002, 7:00 a.m.,
in response to message #14 by Randy Sloyer*

Why is HP so sloppy on this thing? Poor Mike he will not be able to sell the calcs unless he replaces the '=' key with 'R/S' key.

Trisnadi

Are you kidding?

*Message #16 Posted by [Mike](#) on 2 July 2002, 7:27 a.m.,
in response to message #15 by Trisnadi*

This is definitely not a 20s.

This is simply a misprint by HP. I have had people already contact me about buying it for more than it was selling for on eBay.

However, I am keeping this for now. At least until I can get some more information on this.

The interesting thing is that this does not even look like a repainted 20s keyboard. I have inspected very carefully the other keys and they don't look like they have been painted over.

It just looks like a misprint. I wonder how common that is?

Need a microscope

Message #17 Posted by [Mike](#) on 2 July 2002, 7:38 a.m.,
in response to message #14 by Randy Sloyer

I don't think it has been repainted. I have looked very closely at the Enter key, Roll down, sin, cos, tan, +/-, etc and don't see that any keys have been repainted.

It just looks like a mistake.

I'm going to put this under a magnifying glass or loupe to see if I can see. I can easily see repainted keys on some of the 15cs but this one I can't see any repainting. It may be that it's much harder to detect.

Interesting...

Re: Need a microscope

Message #18 Posted by [Randy Sloyer](#) on 2 July 2002, 7:14 p.m.,
in response to message #17 by Mike

Mike, I didn't mean to imply that the unit was a 20S. All keyboards on the Pioneer series have the same physical layout. Only the legends are different. There are five keys that are different between a 20S and a 32Sii.

On a 20s, third row down:

INPUT +/- () <-

On a 32Sii they are:

ENTER X<>Y +/- E <-

For a difference of 4 keys. And then of course the "=" key on your curiosity that should be an R/S key. Since I would think all keys would be printed in one operation, those five should be blacked out and over-printed with the correct legend, if it had started life as a 20S cover.

No confusion on my part

*Message #19 Posted by [Mike](#) on 2 July 2002, 9:27 p.m.,
in response to message #18 by Randy Sloyer*

I realize the keyboards are the same matrix and only some are different. That's why I said I checked those other keys and found that they were not overpainted.

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HP98xx Emulators?

Message #1 Posted by [HPhreaker\(POA, Brazil\)](#) on 29 June 2002, 7:41 p.m.

Are there any HP98xx calculator emulators? Why not to code one? The calculators seem to be very nice, but I don't want to spend my (limited) money on a international auction; and I am just a 15 year old hobbyist and HP calculator lover.

HP calculator rulez! Regards. HPhreaker - BRAZIL [<O&P>] www.hp48.tk - My site about the HP48.

Re: HP98xx Emulators?

Message #2 Posted by [Ellis Easley](#) on 30 June 2002, 4:30 a.m.,
in response to message #1 by HPhreaker(POA, Brazil)

I have heard (here!) that with regard to the 9825 - 35 - 45 models in particular, very little documentation concerning internal operation has leaked out of HP. It is kind of surprising since I think these models were made in very large numbers. Just recently someone was asking here for information to convert an industrial application from a 9825 to a PC. As I understand it, one thing that contributed greatly to emulators for the handhelds is that HP disclosed large portions of the HP45 ROM in a patent, which becomes public information.

Re: HP98xx Emulators?

Message #3 Posted by [Tony Duell \(UK\)](#) on 30 June 2002, 2:37 p.m.,
in response to message #2 by Ellis Easley

The HP9815 patent is a mine of information -- it included partial schematics and 5/7ths of the ROM source code (6800 assembler). The 2/7ths that are missing are the floating point routines, etc, but you do get the I/O drivers, and so on. There's even the format of the expansion ROMs! I am told the HP9825 patent at least includes the CPU instruction set and partial ROM listings. So some information is out there...

Re: HP98xx Emulators?

Message #4 Posted by [Holger Veit \(DE\)](#) on 1 July 2002, 4:03 a.m.,
in response to message #3 by Tony Duell (UK)

By chance, you don't have the patent numbers for the HP9815, do you?

Regards Holger

Re: HP98xx Emulators - BASIC

Message #5 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 30 June 2002, 9:43 a.m.,
in response to message #1 by HPhreaker(POA, Brazil)

For the BASIC part, I think I have seen advertisements about a software product called HT BASIC, which allowed HP BASIC programs to be run in a PC. The company name was TransEra. All this is just from my memory, I just remember the ads. Perhaps the HP9835 - 9845 are supported.

BTW, congratulations for the FIFA Cup Brazil just won!

Re: HP98xx Emulators - BASIC

Message #6 Posted by [HPhreaker\(POA, Brazil\)](#) on 30 June 2002, 11:05 a.m.,
in response to message #5 by Andrés C. Rodríguez (Argentina)

Thank you. I will search for it... BTW, Brazil == 5x Champion ;-) -- HPhreaker - ICQ 151782344 - hphreaker irc.dal.net #brasil coerce irc.brasnet.org @#op @#ti_cas - www.hphreaker.hpg.com.br

giant password added.

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converting HP41 cx IR data to 8 bit serial

Message #1 Posted by [Ron Meek](#) on 29 June 2002, 3:24 p.m.

I am trying to construct a stepper motor driver for a rotary table. I have a HP 41cx with an 82242A infrared converter. I want to convert the output of the infrared converter to serial ascii at 2400 baud, 1 start bit, 8 data bits, 1 stop bit, no parity. I want to do this in hardware, as a PC will be too bulky for the job. Unfortunately, I sold my HPIL serial interface, and only have a parallel and a HPIB interface left. The output of the hardware will be fed to a Ferret Tronics stepper driver chip (FT609) that will drive the stepper. Can anyone help?

Re: converting HP41 cx IR data to 8 bit serial

Message #2 Posted by [Tony Duell \(UK\)](#) on 29 June 2002, 4:05 p.m.,
in response to message #1 by Ron Meek

Without really thinking about it, it would appear to be easier to convert the output of the GPIO parallel box to serial than to use the IR printer output. Converting (essentially) Centronics parallel to serial is a problem for which there are many solutions.... Years ago I did make a parallel/serial coverter for the IR printer interface. I have no idea where I put the schematics (but I will still have them somewhere), but I remember it as being about 20 TTL chips and a UART. It was not simple. These days I'd probably program a microcontroller to do it. Any of the modern single-chip microcontrollers should be able to do it, I think.

Re: converting HP41 cx IR data to 8 bit serial

Message #3 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 29 June 2002, 4:36 p.m.,
in response to message #1 by Ron Meek

The main issue here is that the IR protocol used by the calculators has very little similarity with a UART or serial port (I mean the RS 232 kind). On equipment designed after 1990, the IRDA "standard" provided functionality very similar to the serial ports, making adapters relatively easy to build. Since the calculator IR that HP designed was pre-IRDA, it lacks such virtue. There was an article in the Hewlett Packard Journal around mid-1987 which described the timing and "parities" used by the IR port of the HP 28, 42, etc. The start and stop signalling and other features were not directly mapable to the typical asynchronous signalling of a serial port.

If you look in the Museum Archived Forum Messages, and look for some messages from Steve (Australia), he explained how to decode the IR signals using not a serial port, but the audio input of a PC sound board.

Re: converting HP41 cx IR data to 8 bit serial

*Message #4 Posted by [Ellis Easley](#) on 29 June 2002, 6:32 p.m.,
in response to message #3 by Andrés C. Rodríguez (Argentina)*

While I don't know whether the 41C IR module or any of the calculators used the same method, I do know that IRDA used as its physical layer an HP standard (I think it was called "HP-SIR") which was implemented in some HP palmtop or notebook computers (HP100/200LX? OmniBook?). The main thing IRDA added was a network-style protocol for reliable transmission.

Re: converting HP41 cx IR data to 8 bit serial

*Message #5 Posted by [Ellis Easley](#) on 29 June 2002, 6:49 p.m.,
in response to message #3 by Andrés C. Rodríguez (Argentina)*

I searched as you suggested, this thread: <http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/archv006.cgi?read=9827> discusses the protocol in much detail. It sure is "something else".

Re: converting HP41 cx IR data to 8 bit serial

*Message #6 Posted by [Ellis Easley](#) on 29 June 2002, 5:43 p.m.,
in response to message #1 by Ron Meek*

I think the HP41 IR module lets the 41 print to the 82240A/B printers (what else?). I also think the other calculators with IR, including the 48, 38, and 39 will also print to the 82240. Since those graphing calculators can communicate with each other through either the IR or the cable, and since the cable connection also connects to a standard RS-232 port (three wire, anyway), it seems logical to assume that the IR interface of the 82240 (and the 41 IR module) is a similar protocol to RS-232.

There is a standard called IRDA used by laptops and now incorporated into the multi-I/O chips in PCs as an optional mode of operation of the serial ports. IRDA was based on a protocol HP developed for their first palmtop PCs (or was there another level between "laptop" and "palmtop"?) like the 100 and 200 IIRC, small clam-shell units with full keyboards - the first things I saw with PCMCIA hard drives.

Anyway, IRDA physically is basically RS-232 modulating a narrow pulse at the beginning of the bit cell. It seems like one objective was to save power in a battery powered device. Where

the RS-232 bit stream has a "one" (or whatever a start bit is), the narrow pulse is transmitted by an IR LED. Where the bitstream has the opposite sense, no IR is transmitted. I think the original name of HP's standard was "HPIR" or "HPSIR".

If this is correct, and the 41C IR module is based on something like HP-SIR or IRDA, you will need to receive the IR signal, translate it to RS-232 by stretching the pulses, then feed them into a UART. There used to be UARTs that could be completely programmed through pins, I don't know if you will find anything other than an 8250 or 16450 derivative today, and they need a microprocessor to program them. The main thing a UART does for you (on the receive side) is detecting the start bit including distinguishing a false start bit. If you are able to use a slow enough rate of sending bytes (allowing more than a full byte time between bytes) and don't have to worry about noise (stray IR pulses in this case), you could just use a one-shot as a start bit detector to start your receive clock (by RS-232 rules, you latch the data in the middle of the bit cell), then shift the data into a shift register. When the start bit gets to bit 9 or 10 or 11 (depending on whether the protocol has 7 or 8 data bits and 1 or 2 stop bits), it can enable the shift register contents to be transferred to another latch to be the next phase for the stepper motor (I don't know if the chip you name is a driver or an intelligent controller), this accomplishes the same purpose as the double buffering done in a UART. After the data is transferred you could clear the shift register to prepare it for the next byte's start bit to trigger the latching of the data. With the crude one-shot start bit detector, which will time out more than one byte time after the last data bit which has the same sense as the start bit, you can use its trailing edge to re-arm the data transfer circuit as well as the receive clock synchronizer.

Come to think of it, if you don't have to worry about noise, why bother stretching the IR pulses? You will still need to synchronize your receive clock and you will have to do it with more precision with a narrow data pulse.

Also, if you make the one-shot non-retriggerable (gate the trigger with the inverted output) you can set it to time out just after the last stop bit.

You could even use the trailing edge of the start bit detector, or perhaps more properly the "byte gate", to transfer the data from the shift register to the storage register, meaning you could forget about "arming" the shift register and detecting the arrival of the start bit in the last cell of the shift register. This would be trading some noise immunity for a simplification of the circuit.

Of course, all this assumes that what comes out of the 41 IR module is something like IRDA. You need to start by building a simple IR receiver and using an oscilloscope to see what the output looks like. A photodiode alone is sufficient for this. Applying some reverse bias to the photodiode speeds up its response by reducing its capacitance. There are two general wavelengths of IR LEDs and some photodiodes are built with filters to make them respond better to one or the other. Some of these come in opaque (to visible light) packages. I think the photodiodes in clear packages will respond to either IR wavelength as well as to visible light.

Another possible issue is whether the protocol of the 41 IR module contains any overhead bytes around the data bytes. If this is the case you will need to filter them out. If you didn't want to use a microprocessor to do this, you could use a longer shift register and then transfer just those bits you want to the storage latch.

In this same vein, is it possible to send just one character from the 41 to the printer? I assume to control a stepper motor, you want to send a series of phases at a variable rate. The 41 might not be able to send characters - or blocks containing one relevant character - fast enough to allow you to drive the motor as fast as you are hoping to.

Also, the signalling rate you want - 2400 baud - might not be what the 41 IR module is doing. It seems like the default rate for the graphing calculators is 9600 baud (on the cable, anyway).

If your chip is intelligent, it might be able to buffer data and work with higher level commands than just individual motor phases. If this is the case, and if it will only work at 2400 baud, and if the 41 IR module sends more than just your data, you should consider using a microprocessor to receive the IR data, filter out the overhead, and retransmit the data bytes at 2400 baud to your chip. If the microprocessor only had one UART, I would use the UART to receive and use a general purpose output pin to "bit-bang" the 2400 baud output.

If any of this works, it will mean that there has been an HP41C RS-232 interface around all this time (even if it is transmit-only). On the other hand, it might be that none of this will work, in which case you will have to become expert in HP41C machine language to do what you want to do. Either that or figure out just what the IR module's protocol is and use a microprocessor to translate it.

BTW, there is the UART (Universal Asynchronous Receiver - Transmitter) and the USART (Universal Synchronous / Asynchronous Receiver - Transmitter) but did you know that in the National Semiconductor 1981 CMOS catalog they list a Universal Fully Asynchronous Receiver Transmitter?

Re: converting HP41 cx IR data to 8 bit serial

Message #7 Posted by [Ellis Easley](#) on 30 June 2002, 6:14 a.m.,
in response to message #6 by Ellis Easley

After reading Tony Duell's description (<http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/archv006.cgi?read=9870>) of the IR printer protocol in the Archives thread I see that the printer protocol isn't like IRDA - if I am remembering IRDA correctly regarding the modulation - and I'm sure IRDA doesn't have the four additional bits because it can be implemented with a standard UART. IRDA is inherently two way and reliability was implemented in the upper layers through re-transmission. The printer protocol is one way, and I guess they wanted to give the printer its best shot at getting the data right the first time. However, I think my earlier ideas could be adapted to the actual printer protocol and improved with the new information. While the protocol is somewhat complicated by 4 bits per character of error checking/error correction information, as Tony points out, if you are trying to receive the data, you can ignore those bits if you're not worried about noise. You can always add support for them to make the system better.

The biggest difference from my earlier post is that instead of a narrow IR pulse at the beginning of only the "one" bits (or whichever have the same sense as the start bit), there is a 1/4 bit time IR pulse starting at the beginning of the bit cell for a "one", and a 1/4 bit time pulse starting at the middle of the bit cell for a "zero". You could still just look for a pulse at the beginning of the bit cell and if you find one, call it a "one", if you don't find one, call it a "zero". But clearly, you would be throwing away some reliability so it would be better to definitively identify a "zero" - although if you aren't going to implement the error checking and correction, I don't know what you would do with a bit that was neither "one" nor "zero", or one that was both!

The other difference has to do with the start bit. I thought it was a regular bit that happened to be of the polarity that required an IR pulse, to allow you to synchronize your receive clock to the beginning of a character. RS-232 asynchronous communication always depends on a certain amount of "dead time" (at least the 1 or 2 stop bits time) between characters to make sure you are receiving on a character boundary. The IR printer protocol uses a unique "code violation" - IR pulses in three consecutive 1/2 bit times - to identify the start of the character. It could be detected very nicely with a three bit shift register and an "and" gate. Detection of a valid start-of-character could trigger a state machine to clock another shift register for just the next 8 (or 12) bits. Or you could have just one shift register of $[8 \text{ (or } 12)] \times 2 + 3$ (+ 3 more for the three stop 1/2 bits, if you want to be very sure!) bits, clocked every 1/2 bit time, re-synchronizing the receive clock every time there is an IR pulse. Then every time three "IR pulse" bits arrive in the three cells at the far end of the shift register, transfer the bits you want to the storage register.

The signaling rate is $32768/28$ or about 1170 bits per second. If you do need to re-transmit

the data to your chip at 2400 baud, at least you don't need to worry about an overrun!

Re: converting HP41 cx IR data to 8 bit serial

Message #8 Posted by [James M. Prange](#) on 30 June 2002, 1:02 a.m.,
in response to message #1 by Ron Meek

For information on the format used by the HP 82240B printer, see www.hpcalc.org/details.php?id=4742; I suppose that the format would be basically the same for the 82240A. I don't know whether it was possible to transmit in "Serial InfraRed" ("SIR") mode with your combination of hardware, but if so, then I imagine it would be similar to the 48 series; see www.hpcalc.org/details.php?id=1722 or www.hpcalc.org/details.php?id=4741.

Regards,
James

When there is no light, sound still remains...

Message #9 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 30 June 2002, 9:26 a.m.,
in response to message #1 by Ron Meek

I suppose the bit rate will not be enough for your purposes, but a nice way to output information from an HP41 calculator is by counting the pulses going to the buzzer, and varying the number of pulses by means of TONE instructions. Synthetic programming will give you a larger set of tones, and you can easily opto-couple the pulses if that is required for your project. Of course, your data rate will be only some tens of bits per second, but in some cases it may be enough.

The electronics to make this "interface" are very straightforward.

Some photos about this matter illustrate my article "Computer Memories from Argentina" here at the MoHPC, in the Memories Forum

Re: When there is no light, sound still remains...

Message #10 Posted by [Tony Duell \(UK\)](#) on 30 June 2002, 2:32 p.m.,
in response to message #9 by Andrés C. Rodríguez (Argentina)

I've seen mention of a device called a 'bender coupler' in old PPC journals and/or the PPC ROM manual. It appears this was a device that (capacitively?) coupled to the HP41's speaker ('bender') and let you feed the signal to something else. Now, I certainly don't need one (I have a fairly complete HPIL system), but I would be interested in seeing what it consisted of. Does anyone know where I might find the schematic?

Rush Systems converter

Message #11 Posted by [Ron Meek](#) on 16 July 2002, 2:00 p.m.,
in response to message #1 by Ron Meek

I understand that a company called Rush Systems of P.O. Box 723, Bethel, CT made a converter, and was advertised in Educalc's catalog. I wrote to them, but the letter was returned "not known". Does anyone know where I can get one of these converters?

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HP-25: battery problems

Message #1 Posted by [Juergen Rodenkirchen](#) on 29 June 2002, 1:18 p.m.

It seems I've another problem with one of my Woodstocks: I've got 2 HP-25s but just one battery pack. One of the machines works without problem with the battery, the other though sometimes shows an "unstable display", i.e. the display goes off and on or shows the low bat indicator (decimal points) even if the pack is fully loaded. However, the machine works perfectly well with the battery when connected to AC power. Does anyone have an idea what's wrong with the machine? Thanks for helping!

Re: HP-25: battery problems

Message #2 Posted by [thibaut.be](#) on 29 June 2002, 2:06 p.m.,
in response to message #1 by Juergen Rodenkirchen

Well, first of all, clean you battery contacts... before having a look at the electronics...

Re: HP-25: battery problems

Message #3 Posted by [David Smith](#) on 29 June 2002, 2:42 p.m.,
in response to message #1 by Juergen Rodenkirchen

It sounds like the battery contacts in the calculator are slightly corroded. Try cleaning them with some very fine sandpaper (but be careful to not wear them away). Also an HP service person recommended placing a small wad of aluminum foil between each battery contact and the battery because the battery conatacts may not be even and the two cells in the battery pack (depending on how it was built) may not move independently.

Re: HP-25: battery problems

Message #4 Posted by [Juergen Rodenkirchen](#) on 29 June 2002, 4:36 p.m.,
in response to message #1 by Juergen Rodenkirchen

Thibaut, David, you both were right! Thanks a lot for the good hint! I cleaned the contacts using a ballpoint-pen eraser (one of those that are available in form of a pencil) and afterwards the calc passed a 1h+ test without any failure :-) Thanks again!

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Replacement battery for HP-41C rechargeable pack

Message #1 Posted by [Dave Mabry](#) on 29 June 2002, 6:17 a.m.

I know this has been discussed before and is in the archives, but I'm hoping there is some new information. Can someone point me to a good replacement battery for the rechargeable pack from HP for the 41C? It seems the exact replacement is no longer made and some recommend a 1/3 AAA. The capacity is pretty low on that cell and it seems there is a reasonable chance of overcharging it.

Can anyone suggest a good replacement cell and a source to buy that cell? Thanks for any help.

Re: Replacement battery for HP-41C rechargeable pack

Message #2 Posted by [Ron Meek](#) on 11 July 2002, 1:29 p.m.,

in response to message #1 by Dave Mabry

I have been using "N" rechargeable batteries in my calculator since it was new. I recharge them with an old Motorola pager that had been run over, but still had the charger and the cradle. You could probably use almost any charger, provided the charge current didn't exceed 10% of the rated capacity of one of the batteries. Voltage is not too important, current (milliamps) is.

Rechargers...

Message #3 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 11 July 2002, 4:59 p.m.,

in response to message #2 by Ron Meek

Well, voltage and current are usually related (the simpler case is Ohm's Law, where $V = I * R$); even in a charger there is a relationship, but depending on the design the relation may be not so simple.

Simple chargers apply a current which usually is 10% of the rated capacity of the cell, so a 500 mAh cell receive 50 mA. Usually it takes some 14 hours to charge a fully discharged cell, and about 8 hours to replenish a partially discharged one.

Intelligent chargers allow for shorter charging times, but to avoid overcharging, overheating, venting or even explosion of the cell, they monitor internal resistance, charge

level, temperature, or other condition of the charging cell, and adjust the current as a function of such.

As different cell chemistries (NiCd, NiMH) have different behavior about charging times, current profiles, temperature increases during charging, etc; it is advisable to use an external charger for the specific kind of batteries you are working with.

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Does the death of the lead storage battery mean the whole death of 9114B 3-1/2 Disc Drive?

Message #1 Posted by [Hiroshi Ito](#) on 29 June 2002, 1:24 a.m.

I am one of the lucky users who have 9114B. Though everyone thinks that it is known, too, 9114B is equipped with the special lead storage battery. The lead storage battery of 9114B which I have works completely at the time of the present. But, it knows that performance deteriorates at several years with this lead storage battery. This special lead storage battery isn't manufactured any more.

I want to know what kind of condition 9114B becomes after several years. I am a little relieved if it knows that 9114B is continued by connecting always an AC adapter and it can be used after a lead storage battery deteriorates. But, a dead problem is more serious with 9114B as well with a lead storage battery's dying.

Re: Does the death of the lead storage battery mean the whole death of 9114B 3-1/2 Disc Drive?

Message #2 Posted by [Vassilis Prevelakis](#) on 29 June 2002, 2:10 a.m.,
in response to message #1 by Hiroshi Ito

Inside the HP power pack is a lead acid battery and a board that charges the battery. The original PANASONIC lead-acid battery (LCR-226P) is no longer manufactured. However, there are other suppliers that offer plug-compatible versions of this part. Check the HP Forum archives.

If the lead acid battery dies, then the 9114B will no longer operate. The battery is an integral part of the power supply; you CANNOT run the 9114A or 9114B with a dead battery.

**vp

Re: Does the death of the lead storage battery mean the whole death of 9114B 3-1/2 Disc Drive?

Message #3 Posted by [Tony Duell \(UK\)](#) on 29 June 2002, 4:00 p.m.,
in response to message #1 by Hiroshi Ito

You have to have a working battery fitted if you want to use the HP charger/battery pack unit -- the mains adapter on its own can't supply anything like enough current to run the 9114. There are basically 2 things you can do when the original lead acid battery fails. The first is to replace the battery. Yes, the original (Panasonic?) battery is unobtainable, but you can get some Cyclon cells. These are cylindrical lead acid cells (2V each), and the 2.5Ah size (which is about the size of a D cell) is ideal for the 9114. 3 of them (giving the required 6V) are a perfect fit in the HP housing. Just wire them in series and connect the ends to the original battery wires. Incidentally, the same cells work in the HP110 and Portable+... The other option is to remove the HP battery pack completely and run the drive off a specially-made mains supply. If you take out the complete battery module you'll see a 2 pin mini-Jones plug inside the drive. I can't remember the polarity, but if you take the top casing off the 9114 then you can see the wiring at the back of the plug. The red wire is the +ve one. Connect an (unregulated is fine) PSU giving about 6V at up to 2A (!) to this connector. The drive will run fine (in fact, it'll run 'for ever', unlike running it from the HP battery which is being discharged if the drive is in use, even if the charger is connected !). I've made a PSU for a fellow HPCC member to do this -- most of the work was drilling the box. But IMHO if you really can't design one you probably shouldn't be working with mains.... Of course if you have a lab bench power supply, then that's ideal too (I have one for testing my homebrew projects, so it was easy to make up a cable to link it to the 9114...) Oh yes, I have got (somewhere) the remains of a commercial mains PSU for the 9114 -- I think I was told it had come from Educalc originally. It was a little square metal box with a fuse and neon lamp on the front. Well, when I looked inside I was _appalled!_. That thing violated just about every safety standard I could think of (components, including the transformer, held down by silicone rubber goo, not fixed firmly, no earth ground to the box, and so on). If anyone has one of these, I suggest they do something about it now before it kills them (or worse, kills their HP handhelds)

Re: Does the death of the lead storage battery mean the whole death of 9114B 3-1/2 Disc Drive?

Message #4 Posted by [Hiroshi Ito](#) on 3 July 2002, 11:21 a.m.,
in response to message #3 by Tony Duell (UK)

I felt to be difficult if the repair of 9114B was not a specialist. A peripheral device manufactured by HP is compared with a calculator, and I feel completion to be low.

Thank You.

Certainly not

Message #5 Posted by [Mike](#) on 29 June 2002, 9:16 p.m.,
in response to message #1 by Hiroshi Ito

The original battery is not made any longer however there are replacement lead acid that work equally well.

Just do a search for Lead Acid Battery on the internet.

Then contact the distributors and ask them for the replacement for that cell.

I have replaced many and they are as good as new. Same voltage, virtually the same size and takes only about 10 minutes to repair one, once you get the battery.

The tools to open the battery pack will cost more than the replacement cell, though. Uses a TORX driver.

Re: Certainly not

Message #6 Posted by [Ellis Easley](#) on 30 June 2002, 6:22 a.m.,
in response to message #5 by Mike

Small (<10) Torx drivers are getting easier to find. I've seen several inexpensive sets that include them lately.

Replacement type is 'Panasonic LCR 6V2.4P'

Message #7 Posted by [Raymond Hellstern \(Germany\)](#) on 30 June 2002, 7:06 p.m.,
in response to message #1 by Hiroshi Ito

Hi,

the original replacement type for the LCR-226P is 'Panasonic LCR 6V2.4P', available at e.g. <http://www.battery-kutter.de> .

It fits exactly in place of the old battery.

I replaced the batts of my 9114B some time ago with this type, and it works very well.

Raymond

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9826 hard disc

Message #1 Posted by [Vassilis Prevelakis](#) on 28 June 2002, 8:43 p.m.

Hi,

I have recently purchased an HP 9135A hard disc for use with my HP-87 computer. When I received it I connected it up and did a CAT to see if it could read the disc. I got the following listing which makes me believe that the disc drive was last connected to an HP 9826. I will eventually format the disc, but before I destroy the contents I would like to know if anybody recognizes anything and wants it strongly enough to be worth the trouble of retrieving it.

I'll be away until July 21st, so until that date the disc is guarantied to be safe. If I haven't received any email by then, I'll assume that the disc contains no useful information.

**vp

[Volume]: B9826

Name	Type	Bytes	Recs
	`e ^	256	21
	`e ^	256	3
	`e ^	256	3
CHEKSITE	^ e	256	36
MAINMENU	^ e	256	49
PLOTPRNT	^ e	256	143
FORMAT	^ e	256	140
RACKSUBS	^ e	256	114
V	^ e	256	51
SYSSUBS	^ e	256	90

COMS	^ e	256	97
SONDEFLT	^ e	256	238
Z	^ e	256	97
UTILNEW	^ e	256	105
PPNEW	^ e	256	131
CHEKNEW	^ e	256	95
MAINNEW	^ e	256	49
UTIL_HP	^ e	256	106
SF11	^ e	256	1739
CC	^ e	256	66
SUBSLODR	^ e	256	73
	NULL	256	112
UTIL	^ e	256	115
SPECANAL	^ e	256	113
	NULL	256	237

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HP-48GX of black character.

Message #1 Posted by [Hiroshi Ito](#) on 28 June 2002, 1:25 p.m.

I got the information that the liquid crystal of black character was being used with HP-48GX manufactured recently from the acquaintance. But, HP-48GX of the blue character has never seen me so far. I didn't purchase HP-48GX because I disliked the liquid crystal indication of the blue character. I want to know whether friend's assertion is right. Let me know whether HP-48GX of black character really exists. I really want to purchase it if HP-48GX of black character really exists.

<http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/adforum.cgi?read=7697>

Re: HP-48GX of black character.

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 28 June 2002, 2:53 p.m.,
in response to message #1 by Hiroshi Ito

Hi;

I have an HP48G (not GX) with the same LCD that comes with the HP49G. This LCD has only the status indicators (upper symbols in the display) in blue. The dot-matrix itself is in black.

In fact, HP48 and HP49 have the same information in their LCD. The color itself is black in the 49's LCD, and it is a lot better to read. Nothing wrong using 49's LCD in a 48.

Hope it helps.

Re: HP-48GX of black character.

Message #3 Posted by [Jonathan Busby](#) on 28 June 2002, 3:10 p.m.,
in response to message #1 by Hiroshi Ito

Hiroshi Ito said :

"Let me know whether HP-48GX of black character really exists."

Yes they exist. In fact, I believe all HP calcs currently being manufactured use the new display found in the Chinese 49's. See : <http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/archv007.cgi?read=14858> for more information.

According to their web site Samson Cables carries the new models : http://www.samsoncables.com/catalog/prodDetail.cfm?Prod_ID=186&Sku=48GXABA

Jonathan

Remove the random permutation of "NOSPAM" from my e-mail address before replying.

Re: HP-48GX of black character.

Message #4 Posted by [Jonathan Busby](#) on 28 June 2002, 3:13 p.m.,
in response to message #3 by Jonathan Busby

I said :

"I believe all HP calcs currently being manufactured use the new display found in the Chinese 49's"

All HP graphing calcs or at least 48's that is. ;)

Jonathan

Remove the random permutation of "NOSPAM" from my e-mail address before replying.

Re: HP-48GX of black character.

Message #5 Posted by [David H Thompson](#) on 28 June 2002, 4:11 p.m.,
in response to message #4 by Jonathan Busby

Does this also mean the end of the green/gold "wash" problem on the 48GX?

Re: HP-48GX of black character.

Message #6 Posted by [Jonathan Busby](#) on 28 June 2002, 4:22 p.m.,
in response to message #5 by David H Thompson

David H Thompson said:

"Does this also mean the end of the green/gold "wash" problem on the 48GX? "

If you are referring to

"a slight reddish-brown discoloration near the lower left hand corner and a slight green discoloration near the lower right hand corner"

that the indonesian models made in mid to late 2001 suffered from, then yes I think so. I also believe the overall tone of the screen has changed from a pale tan/grey to a light grey.

Jonathan

Remove the random permutation of "NOSPAM" from my e-mail address before replying.

Re: HP-48GX of black character.

Message #7 Posted by [Hiroshi Ito](#) on 3 July 2002, 11:24 a.m.,
in response to message #6 by Jonathan Busby

I specified the goods which arrived in the dealer at the end most, and ordered it. I am expecting that HP-48GX of the black character reaches.

Thank You.

Re: HP-48GX of black character.

Message #8 Posted by [emartin](#) on 4 July 2002, 12:25 p.m.,
in response to message #7 by Hiroshi Ito

I think you'll be happy. I just received my 48GX from Samson Cables (ordered new unit, not used) and it has the black (high contrast) LCD. The keys are painted, and the green & lilac colors don't line up very well, but I guess that is characteristic of the "new" HP. The unit I have was made in the 45th week of 2001.

- Ed

Re: HP-48GX with black character LCD.

Message #9 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 4 July 2002, 5:29 p.m.,
in response to message #8 by emartin

Is it from China? Say, serial # is ?

Re: HP-48GX with black character LCD.

Message #10 Posted by [emartin](#) on 4 July 2002, 11:23 p.m.,
in response to message #9 by Vieira, Luiz C. (Brazil)

No, it is from Indonesia Serial # ID14501091.

Re: HP-48GX with black character LCD.

Message #11 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 5 July 2002, 12:18 a.m.,
in response to message #10 by emartin

I suspectedt that; both of mine HP48G - blue- and black-LCD - are also Indonesian, as it is the HP49G. I have not seen the Chinese HP48 so far, and I have seen some among students.

Just curiosity.

Thanks, edmartin.

Re: HP-48GX with black character LCD.

Message #12 Posted by [Jonathan Busby](#) on 7 July 2002, 3:09 a.m.,
in response to message #11 by Vieira, Luiz C. (Brazil)

Vieira, Luiz C. wrote :

"I suspectedt that; both of mine HP48G - blue- and black-LCD - are also Indonesian, as it is the HP49G. I have not seen the Chinese HP48 so far, and I have seen some among students.

Just curiosity.

Thanks, edmartin. "

Interesting. I just e-mailed Samson Cables and apparently they've never stocked or even seen the fabled Chinese 48's. Also, they've never received any complaints from customers about Indonesian 48's with screen discolorations in the bottom corners. This is strange since the unit I have (serial# ID12200572 - 22nd week of 2001) has this defect as well as all the other new 48's produced around that time that I saw. (where "saw" constitutes me looking at all the blister packed 48's on the shelf at a local Fry's Electronics ;) Can anyone else vouch for the existence of 2001 Indonesian models with the same problem or was mine just a fluke? Perhaps later models have switched to a different screen?

Jonathan

Remove the random permutation of "NOSPAM" from my e-mail address before replying.

Re: HP-48GX with black character LCD.

Message #13 Posted by [Ed Martin](#) on 8 July 2002, 9:13 p.m.,
in response to message #12 by Jonathan Busby

I can't vouch for anything with certainty, but my Indonesian made 48GX (week 45 of 2001 - that would be early November) definitely has the black LCD with no discoloration. I don't know anything about Chinese 48's.

Ed

Re: HP-48GX with black character LCD.

Message #14 Posted by [CJ](#) on 8 July 2002, 10:33 p.m.,
in response to message #12 by Jonathan Busby

Jonathan,

Can anyone else vouch for the existence of 2001 Indonesian models with the same problem or was mine just a fluke? Perhaps later models have switched to a different screen?

For the life of me I can not remember where I got my 48GX from but it has this problem. I didn't notice it right away. Actually I just thought it was the way the light reflected from the display. But then someone mentioned it on this site. Mine is Indonesian.

ID12200475

It is not that bad so I kept it. I don't want a collectors piece, just a HP that I can use.

Christopher

Re: HP-48GX of black character.

Message #15 Posted by [Hiroshi Ito](#) on 9 July 2002, 12:32 p.m.,
in response to message #1 by Hiroshi Ito

48GX reached from Samsoncable today. I asked to elect as new a product as possible salesclerk in the E-mail. Salesclerk's correspondence chose the thing that it was polite and which arrived newly for me. Black character liquid crystal satisfies it because it was easy to see beyond the expectation.

black-dot LCD

Message #16 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 9 July 2002, 7:21 p.m.,
in response to message #15 by Hiroshi Ito

HI;

just to (continuously) add that indeed, black-dots' HP48 is a lot easier to read.

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ZenRom for \$396.00 !

Message #1 Posted by [andy](#) on 28 June 2002, 9:27 a.m.

Did anyone notice the Zenrom module on ebay yesterday that ended at \$396.00?

<http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?MfcISAPICommand=ViewItem&item=2033600854>

Extraordinary.

Re: ZenRom for \$396.00 !

Message #2 Posted by [John Smith](#) on 28 June 2002, 9:43 a.m.,
in response to message #1 by andy

Andy posted: [Did anyone notice the Zenrom module on ebay yesterday that ended at \$396.00?

<http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?MfcISAPICommand=ViewItem&item=2033600854>

Extraordinary.]

Not at all. Specially since it also included the manual, etc. I would have paid that much myself if only I had noticed the auction before it was over. Other ROMs prone to reach such heights include the PPC-ROM + manual combination and the HP-71B's Math, Forth/Assembler and 41C translator ROMs, among others. See any being auctioned recently ?

Re: ZenRom for \$396.00 !

Message #3 Posted by [Chris Catotti \(Florida\)](#) on 28 June 2002, 11:30 a.m.,
in response to message #2 by John Smith

I sold my extra one on ebay three years ago for \$127. Lets see ... \$127 -> \$396 ... that's an annual appreciation of 46.1% per year. Wow!

Re: \$400 for a 41 Translator/FORTH?

*Message #4 Posted by [Mike](#) on 2 July 2002, 12:15 a.m.,
in response to message #2 by John Smith*

ZenROM yes, PPC with manual no, Forth/Translator no.

Far too high for the latter two. Top prices should be around \$200 for these latter two. Just my opinion.

Those special ROMs for HP41 ...

*Message #5 Posted by [Fred](#) on 2 July 2002, 4:52 a.m.,
in response to message #4 by Mike*

Would it be possible to have an exhausted list of the "woe no more available" ROMs developed by other companies than HP for the HP41 system.

I heard about PPC-Rom, ZenROM , ...

Is there other ??? With which functionalities ??? For what to do ???

It may be interesting to have these informations in the HPMuseum

Fred

PS: I'm only the owner of an old HP41C (in which i have solder the internal chip of a quad module to change it in a HP41CV [is it a collectable ???], a card reader (who needs maybe a repair), an X-function and two x-memories modules and the famous book of Wickes about synthetic programming

Re: \$400 for a 41 Translator/FORTH?

*Message #6 Posted by [John Smith](#) on 2 July 2002, 4:59 a.m.,
in response to message #4 by Mike*

Mike posted: "ZenROM yes, PPC with manual no, Forth/Translator no. Far too high for the latter two. Top prices should be around \$200 for these latter two. Just my opinion."

That's the kind of money that doesn't come your way for not taking Paypal ... :-)

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HP 85 drive belts

Message #1 Posted by [Larry Atherton](#) on 28 June 2002, 6:59 a.m.

Does anyone know where I can purchase the two drive belts used on the thermal printer. One (the longer one) has the part number Chemi Flex 175T80, the other shorter belt does not have a distinguishable part number.

Any help in locating these belts would be appreciated.

Larry Atherton

Re: HP 85 drive belts

Message #2 Posted by [ronnie driggers](#) on 28 June 2002, 7:43 a.m.,
in response to message #1 by Larry Atherton

Search the old listings of this site, there is a post with this info, I also need a set of belts but have not taken the time to order them.

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Another MoHP pic in eBay, with a twist !!

Message #1 Posted by [Ex-PPC member](#) on 27 June 2002, 7:42 p.m.

This time it's an HP32S, at this URL: <http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1363013507>

The twists are:

- - the auction only lasts two more days, so it will be over before Dave contacts the seller and ask for removal
- - the seller includes the following text in "Payment Instructions":

"Photo taken 6/27/2002"

I guess he/she should say: "Photo stolen 6/27/2002"

Dave, in my very humble opinion, either you really make them regret stoling your images on the first place, or else this will get more unmanageable in the near future. It's not only that they are using your images without permission, there's also the fact that the bidder is made to believe it's an actual pic of the actual item being sold, which it is not.

Re: Another MoHP pic in eBay, with a twist !!

Message #2 Posted by [CJ](#) on 28 June 2002, 12:11 a.m.,
in response to message #1 by Ex-PPC member

It looks like they even tried some touch up(wipe out) work of the MoHPC mark in the bottom left corner also.

Re: Another MoHP pic in eBay, with a twist !!

Message #3 Posted by [Ellis Easley](#) on 29 June 2002, 1:08 p.m.,
in response to message #1 by Ex-PPC member

When I looked at the auction just now, he had added a line with a link to a picture of the "actual item" "taken 6-27-2002" and there is another picture there, not as sharp and the unit is somewhat dusty looking. He says the picture in the auction listing itself is a "stock photo" representing the condition of the "actual item".

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HP 110 System

Message #1 Posted by [Daniel Diggelmann](#) on 27 June 2002, 6:46 p.m.

I just got a HP110 portable computer with thinkjet and diskdrive. I'd actually like to use it with my HP3421A datalogger. Does anybody know of a programming software (HP BASIC) for the HP 110? I don't see any means using it as a HPIL controller without any additional software.

Thanks for helping Daniel

Re: HP 110 System

Message #2 Posted by [Ellis Easley](#) on 29 June 2002, 2:49 p.m.,
in response to message #1 by Daniel Diggelmann

My 1986 HP catalog has an index entry for 110 but the target pages never mention the model number but only refer to the unit as the Portable PLUS. Then in that text there is a reference to "Software Choices" a couple of pages ahead. Ironically, that page has been torn out of the catalog! And I think I know why, the pages in between are for the HP85 and 86. One of my first forays into HP collecting was trying to identify an adapter that came connected to an HP plotter. It turned out to be an HP85 interface, and that led me to search for an 85. I know I got this catalog at work and back then I guess I didn't think of it as a valuable resource. Luckily, since I never throw anything away, that page is around here somewhere!

The description of the Portable PLUS doesn't mention an HP Basic for the unit, just GW-Basic and Lattice C that can be loaded from diskette. It says it has 192K of ROM: I take it that MS-DOS 2.11 is in the ROM along with the following which are described as "bundled": "PAM - Personal Applications Manager", "HPLINK - For the Portable-Desktop Link", "TERM - Terminal link for HP 2622 emulation", "SECURE - Password protection utility", "EDLIN - Low-level MS-DOS text editor" and "self-diagnostics utility". In the overview list of features it says "HP Link and Portable-Desktop Link for data and peripheral sharing" which sounds like those are two separate programs.

"HP Link" sounds like the name of the program that comes with the HPIL card for the PC. That loads device drivers that provide general HPIL communications. Those can be called from

assembly language programs and probably from "USR" routines or whatever GW-Basic calls embedded machine language programs. I just looked at the documentation for the 82973A HPIL Interface card for the IBM PC/XT on the MOHPC CD-ROM #3. HPLINK is a program that turns the PC into an HPIL device so that another computer can use the PC's printer and disk drives. The 110 is used as the example HPIL controller in this case. There is another program, HPIL.SYS, that makes the PC an HPIL controller and provides device drivers to control external HPIL disk drives, tape drives, and printers. They mention that if the 110 is to be used as a device, it must be running software to make it do so - that might be what "HP Link" on the Portable PLUS is for.

I know I've got some documentation that tells how to call the 82973A HPIL.SYS drivers directly. When I find them, I'll email you. I imagine the 110 always loads something like it with MS-DOS to be ready to use the HPIL. See if there is a default CONFIG.SYS on the ROM Disk.

Applications software was also available on ROMs which plugged into a ROM drawer, they mention Lotus 123 and Microsoft Word. Apparently there are two slots which can contain either RAM or ROM drawers. With two ROM drawers you can add up to 24 32K or 128K ROMs, or 32K EPROMs. The software that manages the ROMs is called a ROM Disk, there is also RAM Disk software. It doesn't say, but I imagine you partition RAM between system memory and RAM Disk.

The neatest thing about that unit is that it has from 128K to 896K of continuous user RAM. Battery life is 20 hours which HP calls two weeks average computing time. Battery service life 5 years. It says the battery is "Three permanently installed lead acid gel D cell batteries" which sounds like the 2.5 A-H Gates Cyclon cells which are pretty readily available.

Other features: Microprocessor is Intel 80C86 at 5.33 MHz. Graphics resolution is "200 X 480" pixels - I think they have swapped X and Y (I hope!)

For peripherals and accessories the catalog refers you to the Peripherals section; on that page there is a column for "the Portable" which lists as compatible devices the 9114A and the 9122D/S and other HPIB hard disk/floppy disk units. I wonder if there was an original "Portable" that had HPIB and HPIL?

Re: HP 110 System

Message #3 Posted by [John Kercheval](#) on 30 June 2002, 11:48 a.m.,
in response to message #1 by Daniel Diggelmann

Hello:

I am a 110+ power user. BASIC was not available. Only GW-Basic and that was on disc, not plug in ROM.

Do you have a 110, or 110+ or a GLOWORM?

John

Re: HP 110 System

Message #4 Posted by [Daniel Diggelmann](#) on 30 June 2002, 2:24 p.m.,
in response to message #3 by John Kercheval

Many thanks for the response so far. The machine is a 110 (no plus). I'm wondering if it's possible to control HPIL as it is possible from eg. the HP71B. Does GW Basic support HPIL? I'd find it a neat machine to control all my measurement apparatus.

Cheers Daniel

Re: HP 110 System

Message #5 Posted by [Raymond Hellstern \(Germany\)](#) on 30 June 2002, 7:20 p.m.,
in response to message #4 by Daniel Diggelmann

Hi Daniel,

isn't there a menu point in PAM for BASIC ?

At least in my Integral-PC the BASIC/UX is built-in.

Hmmm. I just looked into my HP-110 Owner's Manual. Nothing about *using* HP-IL, only some notes about connecting... And PAM doesn't seem to have a 'BASIC' menu point.

Cheers,

Raymond

Re: HP 110 System

Message #6 Posted by [Vassilis Prevelakis](#) on 30 June 2002, 10:32 p.m.,
in response to message #5 by Raymond Hellstern (Germany)

> At least in my Integral-PC the BASIC/UX is built-in.

Yes but even for the IPC the Basic ROM was optional. Consider yourself lucky.

**vp

Re: HP 110 System

Message #7 Posted by [John Kercheval](#) on 2 July 2002, 10:14 p.m.,
in response to message #5 by Raymond Hellstern (Germany)

Nope. BASIC is not built into any 110- the 110, the 110+ or the Gloworm. None of the three has it, it must be added.

FYI, I used the HP150 and portable plus combo as late as 1997!

I love those machines!

John Kercheval

Re: HP 110 System

Message #8 Posted by [John Kercheval](#) on 2 July 2002, 10:10 p.m.,
in response to message #4 by Daniel Diggelmann

GW Basic does not support HPIL as far as I know. I looked through the manuals to find a keyword for that without luck.

You may be able to control the IL by finding a Serial to IL converter- plug the serial side into the serial port on the 110, then use BASIC or other commands to drive the serial side with the converter box swiutching the code to IL automatically.

The converter may be hard to find. But they made them!

john Kercheval

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HP Jornada 540 battery

Message #1 Posted by [Joe Voigt](#) on 27 June 2002, 12:21 p.m.

Does anyone know where I could find a replacement built-in Lithium-Ion rechargeable battery for the HP Jornada 540? HP says it cannot be removed yet it has a plug-in connector. I have unplugged the battery and all I need is a replacement?

Thanks in advance.....

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HP 32S Manual

Message #1 Posted by [Trisnadi Sutrisno](#) on 26 June 2002, 11:46 p.m.

I received a HP32s 50th Anniversary Edition from a friend. What is the best way to get the printed version of the manual?

Regards, Trisnadi

Re: HP 32S Manual

Message #2 Posted by [Tom \(UK\)](#) on 27 June 2002, 8:03 a.m.,
in response to message #1 by Trisnadi Sutrisno

Sleazebay?

Re: HP 32S Manual

Message #3 Posted by [Christof \(Davis, CA\)](#) on 27 June 2002, 1:31 p.m.,
in response to message #2 by Tom (UK)

Well, I've been doing okay printing manuals from the CD onto 3 hole punched paper.

I haven't found a printing shop that can print double sided in the smaller format so I can do my own spiral binding. Affordably, that is- kinko's will do it for 15 cents per side, but that's 30 USD for a 200 page manual sans the binding.

The 3 ring binder method works okay, since I use a zippered binder with a "pda pocket" for my 42s.

Re: HP 32S Manual

*Message #4 Posted by [Trisnadi](#) on 27 June 2002, 8:11 p.m.,
in response to message #3 by Christof (Davis, CA)*

Well, I guess I need to order the CD then...

Thanks, Trisnadi

Re: HP 32S Manual

*Message #5 Posted by [r. d. bärtschiger](#) on 27 June 2002, 8:23 p.m.,
in response to message #4 by Trisnadi*

You may be able to obtain a manual from calcpro.

rdb.

Re: HP 32S Manual

*Message #6 Posted by [nick](#) on 27 June 2002, 9:07 p.m.,
in response to message #5 by r. d. bärtschiger.*

I just looked into getting a manual from HP. They are selling them for \$44 dollars. Ouch!

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The perils of asking questions on ebay

Message #1 Posted by [Tom \(UK\)](#) on 26 June 2002, 7:44 a.m.

Some time ago I took the advice of many and asked a series of questions on a HP38 (I think) for sale on the UK ebay site.

The item was reasonably described but a bit breif. The photo's showed a half lit display. So I asked the questions like 'If you put new batteries in does the display improve and show "all 8's", do all the buttons work, what does the calc come with...'

The seller answered with all the right answers so I thought this would be the one to go for. However the seller posted a new photo with the display corectly lit, added text saying that all the buttons worked etc. This atracted many more buyers and the price went way above what I was expecting. I can't blame the seller for doing this, he got a good price.

So the moral of the story is: If the calc looks good enough, the seller looks honest and the price is low it may be better NOT to ask too many detailed questions... or ask them late in the auction so the listing is not updated. I hope peole don't think I'm being deceptive with this advice, after all any buyer can ask questions and with an auction it is supposed to be a buyers market (if the seller is honest and does not bid on his own items).

PS If the price is high already then you MUST ask questions.

Re: The perils of asking questions on ebay

Message #2 Posted by [David H Thompson](#) on 26 June 2002, 2:53 p.m.,
in response to message #1 by Tom (UK)

I think it's too late for those sort of concerns. The genie really is out of the bottle with regard to HP calculator prices. The fortunate people are really the ones who own something they enjoy, and don't get too worked up about what they don't own. Who among us wouldn't have been delighted with an HP 49G or Ti 92 at the start of our calculating careers, yet these calculators don't seem to be respected at all!

I often wonder: Is collecting good for one?

Thanks, David

Re: The perils of asking questions on ebay

Message #3 Posted by [John Ioannidis](#) on 26 June 2002, 3:33 p.m.,
in response to message #2 by David H Thompson

If the HP49 had been available twentyfive years ago, yes, I would have been very excited to own one. Today, I can't see anyone get *excited* over a calculator when real computers with much more computing power can be had for almost as much money. It is an artifact of a broken educational system that these things are still being sold. Certainly no engineer needs one.

Re: The perils of asking questions on ebay

Message #4 Posted by [David H Thompson](#) on 26 June 2002, 3:51 p.m.,
in response to message #3 by John Ioannidis

John I can't agree that one shouldn't get excited over a calculator: A small, low-power, fast-boot device with no Windows or Linux overhead and which can perform symbolic manipulations - that still sounds exciting to me!

When a calculator "fits" the task at hand, then a nice experience results.

Thanks, David

Re: The perils of asking questions on ebay

Message #5 Posted by [db\(martinez,california\)](#) on 27 June 2002, 12:00 a.m.,
in response to message #3 by John Ioannidis

john; please do not take this as a personal attack, i don't even know what branch of engineering you are talking about, but i disagree with you about your computers vs calculators statement.

i am constantly, as in every week, finding large expensive errors in things i am supposed to build that were made "by or under the direction of" registered professionals using the latest computers and software. most of these would not be made by someone doing the calcs on a handheld. by far the most common reason stuff gets designed wrong seems to be that it is so easy to make a pretty picture in autocad type programs that no one bothers to check if it can be constructed in three dimensional space or not. other reasons like the structural engineer and architect not communicating or the survey field crew doing layout for a wall that does not exist because someone in the office grabbed the wrong line on the screen would also be caught more often if someone who could do more than play etch-a sketch was looking at the product.

yes i agree that those fancy computers can do a lot - and do it fast. but they can sure print up garbage too, faster and i believe more often than the ways we learned first. - d

Re: The perils of asking questions on ebay

Message #6 Posted by [Juergen Rodenkirchen](#) on 27 June 2002, 5:28 a.m.,
in response to message #5 by db(martinez,california)

Besides of all that has been said on the computers vs calculators debate in this thread: For me it's just a great joy to create intelligent, sophisticated solutions on a limited machine with a limited operating system and limited programming language. Besides, I'm not at all talking about those powerful, unbelievable versatile machines like a 48G or 49G, but I'm talking about a 41C or even a 25! Passionate programming machines like the 41 indeed might turn into beautiful art: just think of Synthetic Programming! However, to my opinion the calculator still has a serious meaning in the field of science (and business, just remind the 12C). Just imagine a situation where you have the need for a quick programmed math application. As for me, I'd truly prefer my calc solution over a big C++ fuss on a PC which most probably even took significantly more time ... but also much less fun :-)

Re: The perils of asking questions on ebay

Message #7 Posted by [Richard Garner](#) on 27 June 2002, 6:56 p.m.,
in response to message #6 by Juergen Rodenkirchen

I understand exactly what Juergen is saying. I have been active in the comp.sys.hp48 newsgroup for awhile, but all they want when they talk about dream calcs, are sput up Gameboys. I very much like the people and information in this forum over the newsgroup.

I started out with the 41cx and moved up from there through the different models to the 48gx. But when I want to do some quick and dirty number crunching I revert to the 41cx or 42s. I don't know what others use as CAD programs, but I use AutoCAD Map, and I have to reach for a calculator to do some calculation the the CAD program does not do or I have to do a conversion that it does not do. Besides its easier to carry a 4oz. calc out in the field than it is to carry a 5lb. computer and it is up to speed and ready for work as soon as you hit the on key. No waiting for the OS to find itself before you can do anything.

Re: The perils of asking questions on ebay

Message #8 Posted by [Tony Duell \(UK\)](#) on 27 June 2002, 2:33 p.m.,
in response to message #5 by db(martinez,california)

CAD systems (I've only used electronic-CAD systems, but I guess the same applies to mechanical ones) are undoubtedly useful tools. But like all tools, they need to be used correctly. A CAD system will not turn an unknowledgable person into a good engineer, no matter what the marketing types will tell you and what many managers seem to believe. I've got countless examples of circuits that a CAD system will tell you will 'work', but which could never work in practice, or they'd be too sensitive to component value changes, or... Conversely, I've got circuits that _no_ CAD system (that I've tried) gets 'right' (I mean that the predicted behaviour is totally different from the observed behaviour). What this means (at least to me) is that the results of CAD systems need to be checked carefully, by somebody who actually knows what they are doing. Most of the time it doesn't take too long to spot gross errors.... But for a lot of tasks the CAD system is overkill. I have found I can design with pen and paper and solder up the prototype in less time than it takes most people to use the CAD system. I will use a computer when it truly _AIDs_ me. Until then, I'll stick with the pen, paper, and HP...

Re: The perils of asking questions on ebay

Message #9 Posted by [Tony Duell \(UK\)](#) on 27 June 2002, 2:24 p.m.,
in response to message #3 by John Ioannidis

Clearly I am not an engineer, because I most definitely do need a handheld calculator. And I use it for something that would generally be called 'engineering'. I guess if you're the sort of engineer who designs things on a CAD system and gets somebody else to make one then you don't need a calculator. But I design with pen and paper (it's quicker, and I understand what is going on). I build the device myself (solder up the circuit boards, program the microcontrollers/ROMs, machine the mechanical parts, etc). A PC is totally useless for that sort of thing. I need a calculator that can sit on my workbench next to the 'scope and DVM one minute (it's even better if it can connect to the test instruments, as the HP41 can), and on the lathe bed the next. Yes, I do use my HPs for something other than just playing with calculators!

Re: The perils of asking questions on ebay

Message #10 Posted by [Tom \(UK\)](#) on 27 June 2002, 7:07 a.m.,
in response to message #2 by David H Thompson

The UK HP market is small and fairly quiet. The bargain days have gone but there are some good buys especially those that look as though they don't work very well or have minor damage.

I'd guess both the US and UK buyers have difficulty buying from each others markets because of postal and exchange costs.

Re: The perils of asking questions on ebay

Message #11 Posted by [Patrick Houle](#) on 8 July 2002, 2:45 p.m.,
in response to message #10 by Tom (UK)

Hi there, my first entry to this site...

I am about to list an HP calculator on e-bay, and thought I'd chime in. It's an HP-27S.

I looked at the most recent calculators that sold that were the same as mine...

\$255 - mint condition, includes manual \$157.50 - mind condition, includes manual and destroyed original box \$46.02 - battered calculator, no battery case or manual, listed only for parts

Now, my calculator isn't mint, but it's in EXCELLENT shape, considering it was born

(according to the serial number and the guide to using it on this site) in the 28th week of 1988. I have the protective case, and I'm 90% certain that I have the manual. I sure as heck don't have the box.

My conundrum is just what the heck I should be expecting for this calculator. E-bay can hyper-inflate the price of a lot of things, but the difference between \$255 and \$157.50 is staggering...it is either TIMING (a bunch of people who desperately want it at the same time) or, as referenced on this site, shills and thieves are at work.

Either way, I just wanted to say that as a seller, it can also be confusing.

Patrick

Re: The perils of asking questions on ebay

*Message #12 Posted by [David Smith](#) on 8 July 2002, 6:23 p.m.,
in response to message #11 by Patrick Houle*

Ahh, the subtle wonders of Ebay. I have paid from \$25 to \$250 for PPC ROM modules there. Same thing, same condition. You get whatever the market will give at the time. Frankly, nothing could be fairer... illogical, puzzling, just plain stupid... but basic supply and demand economics at its finest.

List it with a low starting bid (reserves are just plain stupid), spin the wheel, and see what the ebay roulette wheel will cough up. Almost all HP calculator items have enough bidders where you (probably) won't be taken.

As far as the difference between \$250 and \$150 for a mint item versus nice item is concerned, you are in the realm of collectibles. A microscopic (literally) nick on a rare coin can mean the difference between a piece of pocket change and something that will bring thousands of dollars. A MINT-in-box HP65 can bring over \$2000, a REALLY nice one a few hundred.

Re: eBay Timing

*Message #13 Posted by [Paul Brogger](#) on 8 July 2002, 7:15 p.m.,
in response to message #11 by Patrick Houle*

I just listed two HP-14B calculators, mint in plastic, one right after the other.

The first went for \$52.00 . (Obviously there's not much market for a low-end financial, even in mint condition.)

The second went for \$20.00 . (?)

One difference: the second auction ended on the afternoon of July 4th. (And was bought by someone in Australia!)

So, I suspect you want your auction to end late afternoon or evening on a non-holiday weekend.

Re: eBay Timing

*Message #14 Posted by [David Smith](#) on 8 July 2002, 11:26 p.m.,
in response to message #13 by Paul Brogger*

Apparently the best results on Ebay occur when the auction ends around 9 on Sunday evenings EST..

Re: The perils of asking questions on ebay

*Message #15 Posted by [katie](#) on 8 July 2002, 10:58 p.m.,
in response to message #11 by Patrick Houle*

I was the seller of that \$157.50 MIB one. The problem was as someone else mentioned here, I mistakenly ended the auction on July 4. Big mistake, because it certainly should have gone for at least \$200, maybe a lot more -- it was perfect! But that's what auctions are all about; sometimes you do better than expected other times worse. You could use a reserve price to protect yourself against selling too low, but I think that limits the number of bidders and hence the momentum and besides it's not very sporting!

Re: The perils of asking questions on ebay

Message #16 Posted by [David Smith](#) on 8 July 2002, 11:27 p.m.,
in response to message #15 by katie

And one can pick up a nice, boxed HP21 for less than 50 bucks... ;)

moral for savvy buyers:? & boxes.

Message #17 Posted by [glynn](#) on 9 July 2002, 8:35 p.m.,
in response to message #16 by David Smith

Wait for auctions that end on Christmas morning...

Some months ago I bought a piece of ancient gear on eBay... was the only bidder, but thought that (as usual) more bidders would jump in at the last seconds. Little did I know how cheaply I was to pick up that piece of equipment, the morning of Sept 11, 2001...

I even emailed the seller to say he could relist under the circumstances and I would not mind. He would have none of that: he said I was probably the only one who really wanted it anyway-- and that those who wait, lose. I appreciated that!

Nowadays when you can bid with a "bot" at the last seconds or have outbid alerts sent to your cellphone, I wonder if sellers really have to worry so much about whether to schedule around such things as sporting events and holidays, or maybe the REAL bugaboo is selling an HP65 on the same week as two others are being marketed.

On occasions, I have seen people interested in one auction transfer their attentions to a later auction when the first item reaches a certain price barrier-- and other times I have seen some things virtually ignored in favor of others, because one says mint IN BOX and mentions no batteries or power adapter, and the other has both but no box.

Collectors are obviously driving the market in those cases-- for users need no box, but collectors know the box is worth more than a power-brick. (If I had a time-machine, I'd go back and ask new buyers just to let me have their packaging!!)

Won't future collectors be the poorer over the introduction of the "blister pack", which you can't open without destroying? ;-)

Re: moral for savvy buyers:? & boxes.

*Message #18 Posted by [David Smith](#) on 10 July 2002, 9:32 a.m.,
in response to message #17 by glynn*

As any Star Wars collector will tell you, one NEVER opens the package... there was even a Simpsons cartoon on the subject.

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HP41 Card Reader problem

Message #1 Posted by [John Robinson](#) on 26 June 2002, 6:42 a.m.

I have a 41 card reader (Rev 1G) that displays "Malfunction" when reading a card. The problem is definately in the electronics, as I have substituted the "mechanics" (motor/head/switches) from a good working reader, and it still "malfunction"s. Any clues ? - Thanks, John

Re: HP41 Card Reader problem

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 26 June 2002, 4:47 p.m.,
in response to message #1 by John Robinson

Hi;

maybe you should try demagnetising (degaussing) the head.

Also, try recording a card and reading it back in one of the nonworking readers and in another, good one. Maybe they can write but read cards.

Also check if the cards are good...

Success.

Re: HP41 Card Reader problem

Message #3 Posted by [Ellis Easley](#) on 27 June 2002, 5:38 a.m.,
in response to message #1 by John Robinson

I wonder how similar the electronics in the 41 card reader are to the 65/67/97? [David Smith describes a tantalum capacitor](#) in those card readers that often causes the unit to write but not read successfully.

I wonder if "malfunction" is the normal message for a bad read, such as of a blank or damaged card? I'm thinking of the sequence of the switches as a card is inserted. If one of the switches had a high resistance, the sequence of switch closures might be illogical and might lead to that message. My 97 card reader wouldn't even turn on the motor at first until I cleaned the PCD pads and the gold plated spring metal part (make sure you don't bend it) that make up the switches.

Re: HP41 Card Reader problem - Right!

Message #4 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 27 June 2002, 11:57 a.m.,
in response to message #3 by Ellis Easley

Hi;

you're right. Ellis. In fact, blank or damaged cards lead to CRD ERR message. I also have two working 41's card readers and when I left the newest one (G-version) stocked for some days (about two months), I tried plugging it in and using it. Any sort of operation involving cards led to MALFUNCTION message. I realized that a tiny high-frequency sound was getting from inside the reader. I plugged the 41's battery pack off, removed the reader, plugged it back in and then the batteries. MEMORY LOST got to the display.

I wonder about the tantalum capacitors till today... and where was that sound coming from. The reader? The 41?

Who knows!

Re: HP41 Card Reader problem

Message #5 Posted by [Tony Duell \(UK\)](#) on 27 June 2002, 2:39 p.m.,
in response to message #3 by Ellis Easley

One of the switches on the HP41 card reader is actually a power switch to the DC-DC converter on the main PCB, so if that's dirty, the reader certainly won't work. The other contact is the conventional card-on-head contact, the optical sensor is for write protect. IIRC, you do get a 'MALFUNCTION' if the switches don't close properly. Certainly that's a common cause of 'MALFUNCTION' when writing a card. But the original poster says he's swapped out the mechanism with no change. I have a few questions : (1) What did you swap out? Did you swap out the PCB on top of the mechanism with the switch contact traces? What about the little PCB at the back containing the sense amplifier chip? (2) Does the card go through the reader at about the right speed? (3) Do you get 'MALFUNCTION' if you try to write on a (blank, unclipped) card? If not, is the card readable on another 41?

Re: HP41 Card Reader problem

Message #6 Posted by [John Robinson](#) on 28 June 2002, 3:52 a.m.,
in response to message #5 by Tony Duell (UK)

Thanks for the postings guys. To answer Tony's questions 1) I swapped the whole reader slot/switches/motor assembly, i.e. by pulling out the two motor wires, and five head wires. 2) Card seems to go through at about the right speed (can it be adjusted anyway ?). 3) I haven't tried writing a card with it only reading. I can try this and get back. I could also try some swapping of the various pcb boards, but I can't figure out how you get the whole electronics bundle out. How does the cardreader case come apart around the contacts with the calc ???. Thanks - John

Re: HP41 Card Reader problem

Message #7 Posted by [Tony Duell \(UK\)](#) on 28 June 2002, 3:22 p.m.,
in response to message #6 by John Robinson

Firstly, yes the motor speed can be adjusted, but it's not really like a 67 or 97. The HP41 reader does not use the motor control circuit in the sense amplifier chip to control the motor (it uses it for the write-protect LED IIRC). The motor control is based around one of the 8 pin chips on the mainboard -- the one that's not the NUT-bus ROM. It's actually.... wait for it ... a 555 timer (!). Anyway, there's a little preset on that board that sets the motor speed. To get the unit out of the case, take off the top cover and the latches (you've done this -- you must have). The top part of the HP41 plug unclips from the base (it's not glued on, but it is a tight fit). Then remove the screws holding the mechanism down and pull the whole lot out (mechanism and boards). The sense amplifier chip (same chip as in a 67 or 97) is on the little PCB at

the back. There are 3 chips (IIRC) on the main board. The NUT-bus ROM, the 555 used for motor control, and the card reader interface chip (about 20 pins). The 2 boards can be separated by pulling the sense amplifier board upwards, out of the contact clips, but make sure you line the contacts up with the pads when reassembling. Do try writing -- if it manages to do that without a MALFUNCTION then the card reader swtiches are working. If the card is readable on another machine then the head wiring, etc, is also right.

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Bearing to sunrise & sunset.

Message #1 Posted by [r. d. bärtschiger](#) on 26 June 2002, 12:14 a.m.

Does anyone know of a program for the hp-48gx or hp-49, or alternately just an equation, which will allow the followinmg to be calculated?

Given a location on earth in degrees lat. & long. & the date, calculate the true bearing to where the sun will rise & set on that date. If the times of sunrise & sunset are also calculated, that would be even better.

I have checked the selection of programs available on hpcalc.org but did not find anything similar.

Thank you for any information you can offer.

rdb.

Re: Bearing to sunrise & sunset.

Message #2 Posted by [John Ioannidis](#) on 26 June 2002, 1:11 a.m.,
in response to message #1 by r. d. bärtschiger.

A simple google search yields lots of results. This looked appropriate: <http://personal.inet.fi/cool/jjlammi/stuff.html>

Re: Bearing to sunrise & sunset.

Message #3 Posted by [andy d](#) on 27 June 2002, 12:37 p.m.,
in response to message #1 by r. d. bärtschiger.

there's a basic program on Sky and Telescopes web page that does but you'd have to translate it.

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HP KeyWand HBKW-1220?

Message #1 Posted by [John Ioannidis](#) on 25 June 2002, 5:44 p.m.

I found an HBWK-1220 wand in the garbage (one of the labs here at work was being cleaned up). I can't find any documentation for it on HP's web site or the web in general. Does anyone know how to drive it? It has a keyboard bump-in-the-cord interface; if I plug it in my keyboard, it lights up, but nothing happens when I scan various kinds of bar codes. before I break out the logic analyzer, can someone give me any information about it?

Cheers

/ji

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HP-25: More common problems?

Message #1 Posted by [Juergen Rodenkirchen](#) on 25 June 2002, 3:24 a.m.

Having read the messages suggesting a "warm up phase" for certain HP-25 machines in order to make them work, I've encountered another problem with my machine: When switching on the machine, the display is sort of flickering (the display appears somehow like during running a program, that is). Sometimes, it even seems to be dead. A "warm up phase" doesn't help at all. But after awitching the machine on and off repeatedly a few times makes it finally work. I'm not sure whether this is sort of an electronic problem as discussed in the article by Katie (I think) or if it's just a mechanical problem concerning the on/off switch. Does anybody have encountered similar problems and/or has advice on how to fix it? Thanks for your time!

Re: HP-25: More common problems?

Message #2 Posted by [thibaut.be](#) on 25 June 2002, 9:02 a.m.,
in response to message #1 by Juergen Rodenkirchen

How fresh are your batteries ?

Re: HP-25: More common problems?

Message #3 Posted by [Juergen Rodenkirchen](#) on 25 June 2002, 9:56 a.m.,
in response to message #2 by thibaut.be

Well, I actually encountered the problem when operating the machine with the charger plugged in. The batteries were completely discharged and I gave it only a few minutes (5 or so) to recharge, though. Do you think that a longer recharging period is supposed for the machine to work properly (even if the the charger is connected)? However, I'm going to charge the batteries for a longer period tonight and try again ... Thanks for your input!

Re: HP-25: More common problems?

Message #4 Posted by [David Smith](#) on 25 June 2002, 1:09 p.m.,
in response to message #3 by Juergen Rodenkirchen

This is THE symptom of a bad or missing battery pack. NEVER EVER operate a Woodstock machine (especially a 25C or 29C) in this condition. On the "C" series machines they do not even need to be turned on to cause problems. The internal voltage rises above the destruct level of some of the internal chips... hence my pile of over two dozen bad ACT chips that I have accumulated over the years.

If at all possible charge your Woodstock batteries in the external charger or an already blown machine.

Re: HP-25: More common problems?

Message #5 Posted by [Juergen Rodenkirchen](#) on 25 June 2002, 2:30 p.m.,
in response to message #4 by David Smith

Dave, thanks a LOT for your warning! I immediately unplugged the machine (which is an ordinary one, i.e. not a "C")! Fortunately, the machine seems to be intact as a test showed. However, I will follow your advice and charge the pack inside a different machine which is already broken (the memory chip doesn't work any more). Guess what? The "rebuilt" battery pack comes from the broken machine, so I guess you are absolutely right. Many thanks for your advice again!

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Re: 42S display background matrix - Can it be "deleted"?

Message #1 Posted by [hargrade67](#) on 24 June 2002, 3:28 a.m.

Took a long hard look at my 42S display today--ran the contrast up and down, tilted the screen away and toward me, etc. Results: 1) With fresh batteries, you can move from one contrast extreme to the other in 2 seconds by holding down EXIT and the + or - key. In a well-lit workspace, my personal preference was about 3/4 sec. darker than the minimum--i.e. about a third of the way up. 2) The angle at which you view the display can have a dramatic effect on what you see. a) At 90°, directly above the display, I could barely see the entries at the minimum contrast setting. They were easily visible, however, when viewing from 30°-45° even at minimum contrast, and the dark part of the background had virtually disappeared. b) At maximum contrast, viewing from 90° reveals that the layer of the display with the data on it actually casts a shadow on the dark background, which is made up of pixels. Viewed from <75° or so, the numbers appear lighter than the background--like a negative image, floating above the pixels. Maybe it's this separation or the shadows it causes that bother Dave Shaffer more than the background. You tend to get a double image until you learn to ignore it. 3) As for color, my entries read as deep greenish blue--like "Prussian Blue." I checked my 41CX and the numbers are the same color, though the background is lighter. There is a trade-off between the 41CX's superior contrast, and the more even and precise look of the 42S's typography, whose taller and narrower entries are easier to read: they allow more lateral display (12 vs 10 digits), cleaner separation between entries, and more room for punctuation.

Re: 42S display background matrix - Can it be "deleted"?

Message #2 Posted by [Ellis Easley](#) on 24 June 2002, 4:55 p.m.,
in response to message #1 by hargrade67

I don't know about the 42S but other HP calculators with adjustable contrast have a finite number of levels. You might be able to hold "exit" down and then tap "+" and "-", counting the number of times to achieve different visual levels. Then you can relate them to something more precise than time.

Re: 42S display background matrix - Can it be "deleted"?

Message #3 Posted by [Christoph Giesselink](#) on 26 June 2002, 2:23 p.m.,
in response to message #2 by Ellis Easley

The LCD contrast depends on a 5 bit value with can be modified by ON +/- in the range of #F - #1F.

The contrast register is located at

#40301 [CONT3 CONT2 CONT1 CONT0]

#40303 [DON SDAT CONT4 BIN]

Becareful with Bit 3 of #40303 (DON = Display ON) this should be 1, SDAT and BIN must be 0! So only load #A or #8 into #40303. You can use the build in memory scanner to modify these values. A short description of the memory scanner could be found here <http://www.finseth.com/~fin/hpdata/hp42s.html>.

Re: 42S display background matrix - Can it be "deleted"?

Message #4 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 26 June 2002, 6:16 p.m.,
in response to message #3 by Christoph Giesselink

Please confirm: Do you mean that the range goes from 0F to 1F, so there are 16 valid values? The coding and bit layout doesn't seem very intuitive...

Re: 42S display background matrix - Can it be "deleted"?

Message #5 Posted by [Christoph Giesselink](#) on 26 June 2002, 7:05 p.m.,
in response to message #4 by Andrés C. Rodríguez (Argentina)

The possible range over the keyboard with ON +/- is from 0F-1F, the hardware supports the full range from 00-1F.

About the layout, the 5th bit for the MSB (CONT4) has to be placed somewhere, so Bit 1 in register #40303 was used.

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HP 27 manual

Message #1 Posted by [hargrade67](#) on 23 June 2002, 7:04 p.m.

The description of the HP27 Manual on this site states that it contains 230 pages. The original manual that came with my HP27 has only 216 pages. Serial No. 1611AO8597, printed January 1976 in the U.S.A. Either the Museum has made a minor error, or HP changed the format of the Manual in later years. No big deal--just thought you might like to know. hargrade67

Re: HP 27 manual

Message #2 Posted by [Ellis Easley](#) on 24 June 2002, 12:15 p.m.,
in response to message #1 by hargrade67

I'm not sure this is the reason but when using the manual scans on the Museum CD's, there are usually more "PDF" pages than the nominal manual pages due to inclusion of the cover and the introduction pages before nominal page 1. I always "synchronize my watch" by going to any page in the body of the manual and noting the printed page number vs. the "PDF" page number. Then I calculate a correction factor to use when following index references.

I looked up the manual on the CD. It is 00027-90001 printed Feb. 1976. The file has 234 "PDF" pages. The last page of the index is printed with page number 216. The last page with a printed page number is the end of the list of service locations, printed with page number 227. (The last entry is "SOCIALIST COUNTRIES, CONTACT" the Vienna office. It was always exciting to know that HP had customers behind the "iron curtain".)

There is also a "27ADD" file which has 8 pages, P/N 00027-90022, which is an addendum to P/N 00027-90001 printed Jan. 1976 (printing date of the manual to be corrected, not of the addendum). The last reference in the addendum is to "Page 208, Depreciation". The complete Feb. 1976 manual has a section on Depreciation on page 208, which happens to be "PDF" page 208, this one came back in synchrony. The cover is "PDF" page 1, page 14 is "PDF" page 15.

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32SII

Message #1 Posted by [Steve Wilks](#) on 23 June 2002, 5:15 p.m.

Anyone know where I can get a manual for my recently aquired hp 32SII. I bought it for £5 in a car boot sale here South of London UK.

Re: 32SII

Message #2 Posted by [Kelvin Hunter](#) on 23 June 2002, 6:56 p.m.,
in response to message #1 by Steve Wilks

There's a company in the city called WF Sleath:

<http://www.wfsleath.co.uk/d-commerce/hpscientific.html>

manual at £23.27

I just bought an HP32SII new - and I live in South London. Which car boot sale did you get yours from?

Re: 32SII

Message #3 Posted by [Andy Henstridge](#) on 24 June 2002, 8:19 a.m.,
in response to message #1 by Steve Wilks

For approx. the same cost as the manual in England you could buy the full set of CDs from this Museum. Then should you find another HP calculator without manual you will not be faced with the same problem. Regards Andy

Re: 32SII

*Message #4 Posted by [Christof \(Davis, CA\)](#) on 24 June 2002, 12:45 p.m.,
in response to message #3 by Andy Henstridge*

Except, of course, that the full set of CDs from the museum won't include the 32sii manual.
Nor the 20s, 12c, 48g series.

Mind- I have the CD set and it's a wonderful thing. Just know what you are getting and
which current issues it is and is not addressing.

-Christof

Re: 32SII

*Message #5 Posted by [Andy Henstridge](#) on 26 June 2002, 8:21 a.m.,
in response to message #4 by Christof (Davis, CA)*

Sorry, should have checked that first.

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HP-25 display weirdness

Message #1 Posted by [Jonas Otter](#) on 23 June 2002, 7:37 a.m.

Hello,

I have revived my old 1976-vintage HP-25 from my university days. I have replaced the NiCads with new ones, connected by short wires soldered to the PCB so as to avoid contact problems.

It seems to work fine, except that the decimal points in the display light up as if the low battery warning has come on, even though the batteries are fully charged. Also if I press e.g. 2222 Enter, the last 2 in the display has the bottom right-hand segment faintly lit.

Any idea what causes this? Also, what is the little trimpot on the mainboard just beneath the display for? Turning it doesn't appear to do anything.

Thanks for any suggestions.

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Is there an excellent compiler for HP-71B?

Message #1 Posted by [Hiroshi Ito](#) on 22 June 2002, 8:56 p.m.

I want to increase the calculation speed of HP-71B. But, it can't hope for much so far as a BASIC interpreter is being used. I know that "FORTH/ASSEMBLER ROM" exists. Are there any choices which are worthy of examination except for this? Are there an excellent C compiler for example and a BASIC compiler?

Re: Is there an excellent compiler for HP-71B?

Message #2 Posted by [CJ](#) on 22 June 2002, 9:21 p.m.,

in response to message #1 by Hiroshi Ito

There are saturn assemblers for DOS and UNIX here.

<ftp://ftp.hp.com/pub/calculators/>

I can't say if there excellent or not though.

Christopher

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broken 'speaker' HP41C

Message #1 Posted by [Peter Vanderpoorten](#) on 22 June 2002, 4:46 p.m.

The speaker of my 'old' HP41C has broken... Where can I find such a speaker or what type could I buy in an electro-shop? Maybe that's the reason why I lose all my battery-power in about two weeks.

Re: broken 'speaker' HP41C

Message #2 Posted by [Hans Brueggemann \[GER\]](#) on 23 June 2002, 1:34 a.m.,
in response to message #1 by Peter Vanderpoorten

peter, the broken speaker is called a 'piezo-element'. you can find these in electronic stores and online-shops (for example www.conrad.de). the price is something between 50c and 1 eur.

cheers, hans

Re: broken 'speaker' HP41C

Message #3 Posted by [Ellis Easley](#) on 23 June 2002, 2:45 a.m.,
in response to message #2 by Hans Brueggemann [GER]

There are at least two types: two wire and three wire. The third wire is for feedback, so the element can be used at its resonant frequency (the response is quite sharp). The 41 only needs the two wire.

Re: broken 'speaker' HP41C

Message #4 Posted by [David Smith](#) on 23 June 2002, 3:46 p.m.,
in response to message #1 by Peter Vanderpoorten

Your battery life problem is almost certainly NOT related to your beeper problem.

Most likely cause of short battery life is a leaky main power supply capacitor (one of the two big electrolytic units near the upper left hand side of the fullnut CPU card).

Re: broken 'speaker' HP41C

Message #5 Posted by [John Robinson](#) on 25 June 2002, 2:28 a.m.,
in response to message #1 by Peter Vanderpoorten

What about trying the speaker in one of those annoying musical greeting cards. They look the same, therefore it must be the same !. At least it will kill one of those lame cards.

Re: broken 'speaker' HP41C

Message #6 Posted by [David Smith](#) on 25 June 2002, 1:14 p.m.,
in response to message #5 by John Robinson

It is certainly worth a try. You might also try Radio Shack. I think they have small piezo beeps enclosed in plastic. Most modern piezo elements have a feedback (third) connection that the HP units do not have. The mounted ones also include a transistor and some associated drive circuitry. I don't know how well they would work in the HP machine though.

But on over 100 '41 sereis machines I have found never found a bad beeper. They are very rugged. About the only way to kill them is with a too hot soldering iron. Speaking of which, did you inspect the leads to the piezo element? They are very thin and fragile (especially in the halfnut machines) and like to break at the solder joints.

Re: broken 'speaker' HP41C

Message #7 Posted by [Peter Vanderpoorten \[BEL\]](#) on 29 June 2002, 6:25 p.m.,
in response to message #6 by David Smith

Thanks everyone for the tips. (The element itself is broken due to a dropdown, the toplayer is fallen into pieces)

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Programming trouble

Message #1 Posted by [ResO](#) on 22 June 2002, 7:36 a.m.

hello can t save any programmed program. simple example: << -> A B 'A-B'>> STO TEST error message: "A" Invalid Syntax

why doesnt work that? i hope anybody can help me

Re: Programming trouble

Message #2 Posted by [Christof \(Davis, CA\)](#) on 22 June 2002, 2:03 p.m.,
in response to message #1 by ResO

If I'm reading you properly, you are pressing buttons in the wrong order.

<<

->

a

b

(<<operation of some sort>>)

ENTER

TEST

STO

>>

-Christof

Re: Programming trouble

Message #3 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 22 June 2002, 8:46 p.m.,
in response to message #1 by ResO

Hi;

Try this sequence:

<< -> A B 'A-B' >>

[ENTER] 'TEST' [STO]

If you want, try also this:

<< -> A B << A B - >> >>

[ENTER] 'TEST' [STO]

Both should work.

I believe you forgot a 'TEST' in your typing, between >> and [STO]. Anyway, before executing your program (TEST) you should supply A and B values: say, 2 [ENTER] 3 [TEST].

One point I did not get: the "A" Invalid Syntax message. Does it appear when you try to store the program or when you execute it? If you store it successfully, there are no syntax errors. If the message appears when you try using it, the only reasonable explanation is the previous existence of an A-variable with some object already stored in it. And it must be in the "working" directory OR IN ANY UPPER (FATHER) ONE. Check for its existence!

Hope it helps.

Cheers.

Re: Programming trouble

Message #4 Posted by [ResO](#) on 23 June 2002, 5:15 a.m.,
in response to message #3 by Vieira, Luiz C. (Brazil)

thanx for answering my question.

i ve found the problem. if i programm it in the RPN Mode, it will work... but why doesnt work it on algebraic mode???

Re: Programming trouble

Message #5 Posted by [Ellis Easley](#) on 23 June 2002, 7:51 a.m.,
in response to message #4 by ResO

I just happened to stumble on the answer to your question - shows how to do it in RPN and algebraic. [Here is the link to hp.com - HP 48G Series and HP 49G Calculators - Storing and Recalling an Equation](#). The HP website has a few things in FAQs for each calculator, but if you use the search with a model (like "hp49g") and a keyword (I used "solver" to get this one) there are more articles.

Re: Programming trouble - the other half

Message #6 Posted by [Ellis Easley](#) on 25 June 2002, 12:58 p.m.,
in response to message #5 by Ellis Easley

I'm just learning to use my new 49G and I see that the info I pointed to on the HP website only tells how to save something in RPN or algebraic mode. Even though the article is written for an equation the instructions for saving apply to a program as well. To figure out how to execute the program in either RPN or algebraic mode, I had to resort to reading the manual. It is very brief but if I keep in mind what the manual says it is at the beginning - a wide ranging INTRODUCTION to features and functions - it's pretty good. Anyway, section 10 - Programming tells in the first few pages how to write, save, and run a program, but only in algebraic mode. Since Christof and Luiz showed how to do it in RPN mode (the manual tells you to look on the internet for RPN instructions!), now I think I have a good start. It seems peculiar compared to RPN but to run a program in algebraic mode you have to treat it like a Basic function - put the parameters in parentheses separated by commas. Undoubtedly the algebraic interpreter is pushing the parameters on the stack "for you". So to run the example in algebraic mode:

TEST(x,y)[enter]

in RPN mode:

x [enter] y [enter] TEST [enter]

or, if "TEST" is in the menu line:

x [enter] y [TEST]

Algebraic is more work especially because parentheses and comma are shifted keys.

I think the reason I never made any progress with the 28 or the 48 is I never got straight in my mind what type of object each of the different delimiters is for. I'm going to make myself a 3X5 card spelling it out and then see how I do with the 49G. (Now that I think of it, the 28 might have had that printed on the left keyboard - but writing it is a good way to impress it on the memory.)

Re: Programming trouble - the other half

Message #7 Posted by [Ellis Easley](#) on 25 June 2002, 1:14 p.m.,
in response to message #6 by Ellis Easley

I used "x" and "y" out of habit in my examples but now I wonder: assuming that in algebraic mode, the 49g is pushing the parameters on the stack, does it start with the parameter on the left or the right? And how does that relate to the list of local variables in the program? That doesn't seem to be spelled out in the first few pages of section 10 of the manual, although page 10-5 does tell the difference in how you run a program in RPN vs. algebraic mode.

Re: Programming trouble - the other half

Message #8 Posted by [Christof \(Davis, CA\)](#) on 25 June 2002, 1:31 p.m.,
in response to message #7 by Ellis Easley

I haven't gotten into the 49g much yet- I'm sort of going in a combination of history and power as I sit through a mostly boring summer term.

(I'm about done playing with the 20s, it's programmable, but limited almost painfully. The 32sii will be put on the shelf as a backup in about another week and I'll just use a 42s for pocket. for RPL I'm mostly using the 28s right now instead of the 48sx. I suppose I'll move on to the 49g for actual carrying around sooner or later- it runs emacs, after all)

Delimiters I somehow just used until I knew them internally- I guess this is what me constantly writing dozens of "useless" little programs is for :)

There may be some info on area48.com, though I think the best bet would be to put the questions on the newsgroup. I'll keep an eye out as I haven't looked at the algebraic programming at all.

-C

Algebraic, RPN... Pick one.

Message #9 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 25 June 2002, 10:25 p.m.,
in response to message #8 by Christof (Davis, CA)

Hi;

may I point some things out?

Since the very appearance of the HP28 (C, remember?), the algebraic X RPN/RPL quiz became one of my personal battles. Which one to use? (a bit off topic, but more than that, defining our own unit as a new algebraic object amused me, too)

When I write programs for any RPL calc I use as much algebraic as comprehension is required, so I myself am able to understand my own programs later. Using algebraic expressions as program resource is, sometimes, a must. I completely agree with many contributors in here that state that extensive use of RPL, mostly stack manipulations, will cause a program to be unreadable and hard to understand. I have programs written some years ago I cannot easily change or add features, because I simply do not remember what the h... that ROLL or PICK use as parameter, so I must step through almost all the program to get to the point and find out the parameter

value. Gee!

And when previous stack contents are needed and the programmer (me) did not use local variables? Who in Heaven can tell? If a simple

```
<< -> A B C << . . . . >> >>
```

is there, no matter at all! In this case, using

```
value [ENTER] value [ENTER] value [ALPHA] [ALPHA] program_name [ENTER]
```

is easy. Also, using algebraic feature (since the HP28), we have:

```
[ALPHA] [ALPHA] program_name[ ( ] value [SPC] value [SPC] value [ALPHA] [ENTER]
```

. Both will work fine. What matters is, for me, how to handle them inside the inner << and >>.

When only 4-plus-1 level RPN calcs were available, anything should "chronometrically" fit in the stack. Debugging was easier, mostly because T-values were simply lost OR duplicated (how I miss this duplication sometimes...). Some new RPL features for handling objects in the stack are very important tools, but also more data to process (in our brain).

Wanna know? The fact is that programming them all is still funny. After all.

Comments? Corrections? All wellcome.

Cheers.

(Hey, Mr. Belillo; proud of me?)

Re: Algebraic, RPN... Pick one.

Message #10 Posted by [Ellis Easley](#) on 26 June 2002, 12:54 p.m.,
in response to message #9 by Vieira, Luiz C. (Brazil)

I am a little confused because the manual says it only covers algebraic mode usage but (thankfully!) throws in a little RPN mode.

I followed your suggestions and experimented with simple programs that do the same thing in RPN or algebraic. I see that the syntax of elementary operations as well as functions like SIN depend on whether they are inside ' ' or << >>. I also see that I can run either type of program with the calculator in algebraic or RPN mode, as long as I pass the parameters correctly. Is it correct to think that while a program is running, the calculator essentially switches to algebraic mode when it encounters the ' ' delimiters, and switches to RPN mode for << >> delimiters?

Re: Algebraic, RPN... Pick one.

Message #11 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 26 June 2002, 4:44 p.m.,
in response to message #10 by Ellis Easley

Hi;

I work with computer architecture (no deep knowledge, only enough to teach elementary structure) and I know Von Newman's based machines essentially work in a RPN-fashion arithmetic, say, operands first, operation last (even if the mnemonics predicts ADD A,#200 the addition is the last thing to be performed). I read here, at this very Forum and more than once, that even Algebraic-only calculators (Casio, TI, and others) must stack algebraic tokens first (Katie mentioned this technique in previous recent threads), so error checking and performing operations take place.

The HP49 is not an exception, mostly because it uses both operative paradigms. Dealing with operands and

operations in RPN fashion is natural for the processor. I would go farther (but I am not completely confident) if telling you that the O.S. disassembles algebraic objects into RPN procedures, and never switches to an algebraic internal mode. But I'll wait for the guys who can tell it better.

Hope it helps.

(Suggestions, comments, always welcome)

Re: Programming trouble - the other half

Message #12 Posted by [Ellis Easley](#) on 26 June 2002, 12:15 p.m.,
in response to message #8 by Christof (Davis, CA)

Christof wrote:

"I guess this is what me constantly writing dozens of "useless" little programs is for :)"

I know that's what it takes - practice makes perfect - and the Forum provides plenty of examples to try.

Re: Programming- the other half

Message #13 Posted by [Christof \(Davis, CA\)](#) on 27 June 2002, 12:43 p.m.,
in response to message #12 by Ellis Easley

And I've gone insane!

Some parts of my current classes are just boring enough that I've written a working low grade (*extremely* low grade, like late 19th century) crypto handler for the 20S, as well as a decently useful multi-sided die roller.

I'd almost be embarrassed to post them, it's such simple stuff.

-C

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Flag -102 on HP-49G.

Message #1 Posted by [r. d. bärtschiger](#) on 21 June 2002, 9:24 p.m.

Does anyone know what flag -102, minus 102, does on the HP-49g? It is not listed in any reference material which I have. For some reason it is being set, this then causes a problem with a running program. Thank you for any help.

rdb.

Re: Flag -102 on HP-49G.

Message #2 Posted by [James M. Prange](#) on 22 June 2002, 6:07 a.m.,
in response to message #1 by r. d. bärtschiger.

Flag: -102

Set: No GCD computations.

Clear: GCD computations allowed.

Visit www.hpcalc.org/details.php?id=4884 for the most complete, accurate 49G flag list that I know of.

The CAS on the 49G has the extremely rude habit of changing various flags (sometimes it asks first) and never restoring them to whichever state it found them in.

Regards,
James

Re: Flag -102 on HP-49G.

*Message #3 Posted by [r. d. bärtschiger](#) on 22 June 2002, 1:10 p.m.,
in response to message #2 by James M. Prange*

Mr. Prange:

Thanks for the information.

rdb.

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Re: "99 digits of Pi"; BONUS: A 32sII, HP, Carly rant

Message #1 Posted by [Katie](#) on 21 June 2002, 1:22 p.m.

Initially (1995) the N'th digit of Pi calculation was given as a linear time hexadecimal algorithm. It has since been extended to any base, but not in linear time. Here's a site describing the algorithm and the history of its improvements:

<http://www.mathsoft.com/asolve/plouffe/plouffe.html>

"A History of Pi" was written by Petr Beckmann and first published in 1971. It's in its 2nd or 3rd printing (I think) and Amazon has it for around \$10.

Decimal digits of PI---anyone going to try on an HP?

Message #2 Posted by [W. Bruce Maquire II](#) on 22 June 2002, 4:28 p.m.,
in response to message #1 by Katie

Hello all:

Given this interesting development in the world of Pi, and given that I, personally, am only interested in DECIMAL digits of Pi, I wonder if it could be done on an HP-97?

Would that be cool, or what? Having a printing calculator like the 97 just chugging along and occasionally spitting out the next decimal digit of Pi!

Has anyone (here) done enough investigation of this new decimal-digit approach to know if we could do this on an HP? Katie?

Bruce.

Re: Decimal digits of PI---anyone going to try on an HP?

Message #3 Posted by [Katie](#) on 23 June 2002, 9:03 p.m.,
in response to message #2 by W. Bruce Maguire II

It would be "cool", but I don't know of a simple enough direct-digit, decimal algorithm that would fit on a 97. And even if one could be found, so far the best decimal solutions to this problem are at least $O(n^3)$. The 97 would likely turn to dust before you got 1000 digits printed.

However 100 digits (or so) of pi printed on a 97 using a simple $O(N^2)$ algorithm that stores all decimal digits is quite possible. In fact I started writing that on a 97 before switching to a 32SII. Maybe I should get back to it.

"A History of Pi"

Message #4 Posted by [Karl Schneider](#) on 24 June 2002, 2:54 a.m.,
in response to message #1 by Katie

Barnes & Noble produced their printing of "A History of Pi" in 1993 (ISBN 0-88029-418-3). I bought a clearance copy for \$7 within the past year. Its back pages include Pi to the first 10,000 digits, from a computation to 100,265 digits on an IBM 704 mainframe in July 1961.

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HP-IL/RS232 made by "Firmware Specialists"

Message #1 Posted by [andy](#) on 21 June 2002, 9:26 a.m.

I recently bought what I thought was going to be an HP82164a hpil-rs232 unit.

It actually turned out to be a similar device but made by a company called "firmware specialists".

I'm looking for a manual or any information at all for that matter.

Thanks,

Andy

Re: HP-IL/RS232 made by "Firmware Specialists"

Message #2 Posted by [Steve Borowsky](#) on 25 June 2002, 11:34 p.m.,
in response to message #1 by andy

I have one called 'Maxum HP-IL converter' made by Federal Products corp., a measurement instruments company which is a division of Esterline, which is an aerospace company. I also can't find any specific information on it. What does yours look like? Mine is enclosed in a heavy gauge steel box measuring 3 1/8" X 6 5/8" X 1 3/16"(8cm X 17cm X 3cm) with a baked on two tone gray finish and a 6 pin data cable, a three pin 'remote switch' connector and a 4 pin power connector. there are four screw-mounted rubber feet on the bottom and a single red LED on the top. My theory is that these were made by several companies in the 1980's either as 'in-house second sources' to the HP product or as 'ruggedized' versions for the industrial market. Either way, it was never a mainstream product and it is now a technological artifact so digging up specifics will probably be difficult. I think the best way to proceed is to get the documentation for the HP product and try to derive the rest from there.

Re: HP-IL/RS232 made by "Firmware Specialists"

Message #3 Posted by [Ellis Easley](#) on 26 June 2002, 1:14 p.m.,
in response to message #2 by Steve Borowsky

"I think the best way to proceed is to get the documentation for the HP product and try to derive the rest from there."

I was going to suggest that. I am familiar with the HP HPIL/HPIB interface and because both sides are addressable, the protocol is a little complicated. Since RS-232 is not addressable, it should be a little easier to do on the HP model and hopefully to figure out on another model. I have an old non-HP HPIB/RS-232 interface I want to figure out someday. I suspect mine might be a one-way convertor to allow a computer with only a serial port to control an HPIB printer or plotter in "listen only" mode, or to input data from an HPIB instrument in "talk only" mode. I have a non-HP multimeter like this - the mode and range have to be set manually, the HPIB only sends readings.

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hp9121 3 1/2 inch dual floppy drive

Message #1 Posted by [Fred Ellers](#) on 20 June 2002, 7:03 p.m.

I am trying to recover some programs written on the HP87XM computer and stored on 5 1/4 inch discs. My hope is to bring these 1982 old programs into the HP87XM and then load them into a newly purchased HP9121 3 1/2 inch dual drive. The HP9121 drive appears to be operating OK and is cabled to the HP87XM with the cable used on the HP 5 1/4 inch floppy drive.

Unfortunately there seems to be no documentation for the HP9121 drive which was, as I understand it, the first 3 1/2 inch drive ever made for this size disc and was designed for single sided single density (or double density?) discs.

Would be grateful for any information or data on this drive.

Re: hp9121 3 1/2 inch dual floppy drive

Message #2 Posted by [Vassilis Prevelakis](#) on 21 June 2002, 5:11 a.m.,
in response to message #1 by Fred Ellers

Didn't you ask the same question a couple of months ago?

I remember giving you the obvious info, i.e. format (single sided - double density), sample commands for copying stuff from one drive to another, etc.

If you can tell us what else you want maybe we can help you.

I have the 9121 manual but it contains no real info (just that the TEST switch in the back should be in the UP position and that the other 3 switches are used to define the HP-IB address of the drive).

To test the drive, switch it off, put the three address switches DOWN (address 0), make sure that the 9121 is the only device connected to the HP-87XM. Power up the 9121, and then the HP-87XM. Insert a double density floppy in the left hand drive, and enter the command:

```
INITIALIZE "FRED", ":D700"
```

If you are lucky, the floppy will be formatted and assigned the volume label FRED.

If you want to use a PC floppy (quad density) you have to place some adhesive tape over the rectangular hole across from the WRITE-PROTECT hole. The use of quad density floppies is not recommended though.

Try it and let us know what happened. Hint look through the front vents (near the ON/OFF switch) to see if you can see a red LED. Tell us what's happening to this LED when you power up the two machines and then when you send the INIT command.

Hint2: Power up the 9121 BEFORE the HP-87XM

**vp

Re: hp9121 3 1/2 inch dual floppy drive

Message #3 Posted by [Vassilis Prevelakis](#) on 21 June 2002, 5:16 a.m.,
in response to message #1 by Fred Ellers

Actually the manual has some other important info, namely the test sequence.

Power off the drive
Disconnect it from the mains
Insert a writable double density disk in the left hand drive
Power up the machine

Hopefully the 9121 will format the floppy and do a number of read-write tests.

If all the tests are successful, the LED I mentioned in my previous post will flash 10 times, if any test fails, no flashing occurs.

After the test, make sure that you move the TEST switch to its normal position and power cycle the drive.

**vp

Re: hp9121 3 1/2 inch dual floppy drive

Message #4 Posted by [Fred Ellers](#) on 21 June 2002, 3:05 p.m.,
in response to message #3 by Vassilis Prevelakis

Many thanks for your help. Yes, I did make an earlier request to which you responded but at the time I had not found any single sided 3 1/2 inch floppies. I now have some coming in by mail. Earlier attempts to convert double sided discs were unsuccessful.

As soon as I get the single sided discs I will follow your instructions and see if I can get the HP9121 working with the HP87XM.

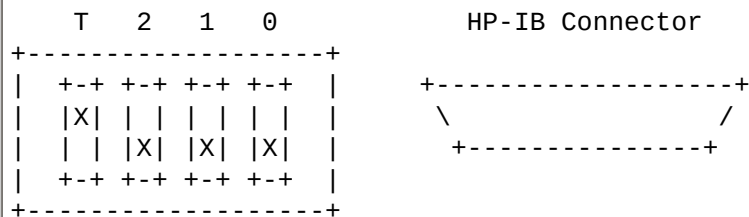
At present all four switches in the back are in the down position and none are marked "Test". When the HP9121 is first turned on the red LED flashes 4 times. When the HP87XM is turned on and given the CAT comand, that LED flashes once with no disc in the left drive. Will report later when I try the single sided floppy.

Best regards, Fred

Re: hp9121 3 1/2 inch dual floppy drive

Message #5 Posted by [Vassilis Prevelakis](#) on 21 June 2002, 9:21 p.m.,
in response to message #4 by Fred Ellers

So the switches are not marked at all? On my two 9121 and the manual the positions are as follows (looking at the back of the 9121):



The above settings configure the drive for normal operation with HP-IB address 0.

Re: hp9121 3 1/2 inch dual floppy drive

Message #6 Posted by [Fred Ellers](#) on 22 June 2002, 12:34 a.m.,
in response to message #5 by Vassilis Prevelakis

After your last message I looked again and found faint markings for the four switches from left to right from the back: Test 4 2 1. As the drive came to me all switches were in the up position and I thought that was OK since these settings seemed to reflect Time Out and Disc error messages with a two sided high density disc in the left hand drive. I did set them as you suggested ie Test Up, 4 down, 2 down and 1 down. This gave a Time Out error message on any attempt to INITIALIZE or CAT.

The serial number on my drive is 2341A72949 and it may be different from your machines. I still have not received the single sided disks and will go thru everything you have suggested when I get them.

Thanks for your guidance; it is really appreciated.

Regards, Fred

Re: hp9121 3 1/2 inch dual floppy drive

Message #7 Posted by [Fred Ellers](#) on 23 June 2002, 7:18 p.m.,
in response to message #6 by Fred Ellers

I now have single sided HP discs, stock 92191A and have tried different combinations of the four back switches. The closest I can come to initializing is to get an Error 60 ; Write Protect. This is with all four back switches in the up position.

It seems to me that somehow I do not understand some element of this 9121 drive. The different numbering of the back four switches plus the fact that your manual for this drive says all except the test switch should be in the down position indicates that my drive must use a different manual.

Again, many thanks for your help.

Regards, Fred

Re: hp9121 3 1/2 inch dual floppy drive

Message #8 Posted by [Vassilis Prevelakis](#) on 23 June 2002, 11:19 p.m.,
in response to message #7 by Fred Ellers

> your manual for this drive says all except the test switch should be in the down position ...

Actually, this layout is for normal operation using HP-IB address 0. If 1 is UP and 0 is DOWN the following table gives the available addresses:

T	2	1	0	HP-IB address
1	0	0	0	0
1	0	0	1	1
1	0	1	0	2
1	0	1	1	3
1	1	0	0	4
1	1	0	1	5
1	1	1	0	6
1	1	1	1	7

That is why I suggested assigning address 0 to the 9121 and having the 9121 as the only device connected to the HP-87XM.

By power cycling the HP-87XM the 9121 should have been detected as configured as the primary mass storage device.

Then simply typing the command CAT, you should hear the drive trying to check whether a floppy is inserted. The red LED INSIDE the drive should flicker while this activity is taking place.

If the drive is not behaving like this then something is definately wrong. Are you sure its a 9121? The 9122 looks almost

identical to the 9121 but does not work with the Series 80 machines.

Finally what you can do is to try the standalone test.

1. Switch off the 9121 and disconnect it from the HP-IB bus.
2. Insert an unprotected double density floppy into the left hand drive.
3. Set the test switch to the down position
4. Power up the 9121.

If the drive accesses the diskette then at least the control logic works. If the LED inside the drive flashes 10 times after the test is complete then the left hand floppy disk drive works. At this stage you know the drive works and that the problem lies in the HP-IB interface.

If the test fails then the problem is likely to be with the drive electronics.

One last word of caution. The diagnostic LED inside the drive is visible through the ventilation slits next to the blue power switch. Do not open the drive cabinet to see the LED. The power supply in these drives is exposed and you should not operate the drive with the cover removed.

Also getting the cover back on without breaking the power switch is a bit tricky.

**vp

Re: hp9121 3 1/2 inch dual floppy drive

Message #9 Posted by [Fred Ellers](#) on 24 June 2002, 3:52 p.m.,
in response to message #8 by Vassilis Prevelakis

The name plate is clear and my unit definitely is an HP9121.

On the standalone test the LED flashed only 4 times so I guess the problem is that the drive is defective. On that basis I will quit trying to use it.

Sorry to have been so much trouble. You have really gone the extra mile to help and it certainly is appreciated.

Best regards, Fred

Re: hp9121 3 1/2 inch dual floppy drive

Message #10 Posted by [Ellis Easley](#) on 24 June 2002, 4:44 p.m.,
in response to message #7 by Fred Ellers

Here is something that might apply, I found it in my 9121 manual: "Write Protect Error on Initialization - A motor speed check is performed when a disc is inserted to be initialized. If the motor speed is on either side of the tolerance allowed, a Write Protect Error is generated and the disc is not initialized. If your drive is operating properly, this indication is one of a defective disc. Discard the disc."

Another possible reason for getting a "Write Protect" error: are you sure your diskette is not write protected? 3.5" disks are protected when the write protect hole is open, opposite from 5.25" disks (although I believe 8" disks were write protected when their notch was open.) If you found new HP single sided diskettes, they come with a molded-in cover over the write protect hole which you have to snap off to write protect the diskette. After you snap it off you can snap it back into the channel to write enable the diskette later. If your diskettes are used, and the write protect cover is missing, you can put a piece of opaque tape over the hole to write enable the diskette.

At this point my father might have accused me of "trying to teach my grandmother to suck eggs" but you never know - I actually use floppies on my PC so seldom anymore, I have to check to make sure which is write protected and which is write enabled!

Another possibility is that the read/write head is dirty. The 9121 is built with a cooling fan that draws some air in through the disk drive opening where it goes right past the head. This can cause a build up on the head, especially if the drive is operated around cigarette smoke. Radio Shack used to sell head cleaning diskettes for 3.5" drives that came ready for a single sided drive - they had plastic over the top of the media for the head load pad to slide on (you could pull out the

perforated plastic piece for a double sided drive). They came with a little bottle of alcohol that you apply to the media (a fibrous, non-woven material) then you put it in the drive and tell the system to try to read the diskette, which would cause the drive to spin the disk and maybe move the head a little. Don't try a cleaner for double sided drives, the head load pad might be damaged! Although you can (I have) put some plastic over the hole (top side) to use a double sided cleaner in a single sided drive.

In another message Fred wrote: "After your last message I looked again and found faint markings for the four switches from left to right from the back: Test 4 2 1."

My 9121D has S/N 2229A and it is also marked "Test 4 2 1". This just reflects the weight of the bits as they contribute to the HPIB address of the 9121. I have two different manuals. One is just for the 9121D/S and the other covers 9121D/S and 9122D/S. The 9121 manual is dated Jan. 1984 and shows the switches marked "Test 2 1 0". The 9121/9122 manual is dated June 1984 and calls the switches "Left Middle Left Middle Right Right"! HP must have changed the marking along the way and left it to the publications department to solve the problem. The switch settings are the same in both manuals.

The 9121/9122 manual says to always leave the test switch up and only describes the successful result of the normal power on self test: 5 flashes for the 9121, while on the 9122 the LED should stay on for less than a minute then go out - if it stays on for more than a minute, the test failed.

The 9121 manual says there are four different self test modes: power-on, user confidence, remote, and service. Only the first two are described, the other two are documented in the service manual. The power-on self test is the one that runs every time the power is turned on with the "test" switch up and five flashes is the successful result. The user confidence test "is initiated by toggling the selftest switch on the back panel from up to down to up. DO NOT LEAVE THIS SWITCH IN THE DOWN POSITION." I have verified this behavior on my 9121. If I set the test switch to down and then power up the drive, it performs the regular power on self test and stops. If I power up the drive (no HPIB cable) with the test switch up, wait for it to finish the power-on test, and then move the test switch to down, it starts the user confidence test. It doesn't wait for you to move the switch back to up but I do it anyway. This test stops if there aren't write enabled diskettes in both drives (I have a 9121D). If the diskettes are present, it appears to format them one at a time and then it comes back and manipulates them again one at a time. At the end it flashes the LED 10 times.

I've tried different combinations to get the different error messages Fred has reported. If I try to read a blank diskette with either plain "CAT" or "CAT" with a correct MSUS, I get "error 130 - disc". If I try "CAT" with an incorrect MSUS I get "error 131 - time-out". This is on an HP87XM with a 9121D.

In his latest message, Fred says: "The closest I can come to initializing is to get an Error 60 ; Write Protect. This is with all four back switches in the up position."

This corresponds to address 7. If I specify ":D700" in an Initialize command with my 9121 set to address 7, I get a timeout error. I have to specify ":D770". On the other hand, if I don't specify the "MSUS" (the ":D700") at all, the system initializes my left hand drive (only peripheral on the HPIB). If I can assume Fred is not specifying the MSUS, then it shouldn't matter what address his drive is set to (if it is the only HPIB device attached) so the results he is getting indicate an intermittent condition. If the same diskette was used each time "Initialize" was issued (alone - no MSUS) with the drive set to different addresses, and it only gave the write protect error at address 7, it could be a coincidence and the write protect error might be due to the motor speed being out of tolerance at the time the address was set to 7. If the other attempts resulted in a "error 130 - disc" without the write protect error, it could mean that the motor speed was OK, the drive attempted to write the format on a track, and then the following read to verify the format failed. This could be because the drive didn't actually write anything but it could also be because the head is too dirty to read anything, or it could be that the motor speed was OK at the moment it was measured prior to the write operation but in fact the motor speed is not under good control and is now too far off to successfully read the data that was written. The individual diskette can be the cause of the motor speed problem because the friction between the media and the liner is the main load on the spindle motor.

I would definitely try cleaning the head. I've had cases where just cleaning the head made a system go from not working to working. Also, I think the drive should be able to work somewhat with ordinary (high density - that being the most common available these days) diskettes. I just tried one to be sure - didn't even cover the "Density" hole, although I have heard that some low density drives just happen to have a microswitch in that location to sense when a diskette is inserted. You should be able to get it working with High Density media - think of it as a margin test - and save your hard-to-find double density media for reliable use.

BTW, there's no reason you can't use double sided/double density diskettes with the 9121. My 9121/9122 manual has an addendum page to make that clear. The only disqualification is "Double-sided HP media in double-sided format" which won't work in the 9121 for obvious reasons. "Double-sided HP media in single-sided format" is OK as is "HP software -- single-sided or double-sided media", this must mean that HP distributed all their software on a single sided format - no

wonder they fill up so many diskettes!

The only media disqualification I am aware of - disregarding the IBM PC/AT "360K media in a 1.2M drive" dilemma - is that you should never use single sided media on a double sided drive because the "other" side of single sided media has not been burnished and so is too abrasive for the head. On this addendum, regarding single sided HP media (which may be burnished on both sides, for all I know) in a 9122 (double sided drives), HP says "exchange only", which HP doesn't spell out but I imagine they mean it is OK to do it to load a file into the computer but not for regular read/write use.

Vassilis: Fred wrote in one of his messages: "At present all four switches in the back are in the down position and none are marked "Test". When the HP9121 is first turned on the red LED flashes 4 times."

Since his 9121 may be in test mode, do you know what 4 flashes means?

One encouraging note for Fred: my 9121/9122 manual says if you are using a 9121 with Series 200 Basic 3.0, "the device type is HP8290X or HP9121." Also my 9121 manual says "The 9121D/S drive emulates the 82901 drive." This indicates that the 9121 was designed to be functionally equivalent to the 8290X which were the 5.25" HPiB drives, so moving files from those diskettes to the 9121 should be no problem (once the hardware cooperates!)

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Re: 42S display background matrix - Can it be "deleted"?

Message #1 Posted by [Dave Shaffer](#) on 20 June 2002, 3:06 p.m.

Warren,

It seems that you are right about the non-disappearing grid, as others have mentioned, too. Apparently, these last ones are the worst. You win some, you lose some!

As you said, "I'm sure that you can find a good home for yours if it bothers you too much..... " I haven't quite decided that yet, but my '41 and '11C remain my favorites for everyday use. The feel (keyboard tactile feedback) and display of the '41 is the best of all that I've used, and the size of the 11C allows for convenient travel in my briefcase. (and it means my astronomy and physics lab students won't want to borrow it - they barely understand their TI 8x's.)

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using an 82164 to transfer data between a 41 and a PC

Message #1 Posted by [andy](#) on 20 June 2002, 2:47 p.m.

I want to transfer data (files) between a 41 and a PC using hp-il and the hp82164a (hpil-serial). Anyone have any advice for me?

Thanks,

Andy

Re: using an 82164 to transfer data between a 41 and a PC

Message #2 Posted by [John Ioannidis](#) on 20 June 2002, 3:19 p.m.,
in response to message #1 by andy

Read the manual! It's available in the Museum CDs. If you have an 82183 Extended I/O module, your life will be a lot easier, too.

Re: using an 82164 to transfer data between a 41 and a PC

Message #3 Posted by [Hans Brueggemann \[GER\]](#) on 22 June 2002, 7:15 a.m.,
in response to message #1 by andy

andy, some time ago i wrote a little program to do just that:

1)saving [PRP][alpha]"name"[alpha] as txt-files (i.e., program listings) 2)acting as a "program storage" that can be controlled via [OUTP] and [INP]. 3)acting as a time server to set the HP41-CX clock.

unfortunately, to read programs back from the PC, you will need the X-I/O module. if you dont have that one, it might be possible to emulate the [INP] function with the HP-IL DEVEL module (i didn't try that).

because i did this program primarily to "learn some delphi", the program is strictly "alpha", with most of its planned features not working yet. if you are anyway interested in it, just drop

me a line and i'll be sending it to you for testing.

cheers, hans (remove .nospam from mail adress)

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A big capacity extended memory for HP-71B

Message #1 Posted by [Hiroshi Ito](#) on 20 June 2002, 11:41 a.m.

I add a module, and think that the main memories of HP-71B will be increased drastically. I knew that there were 4KB and a module of 32KB from former times. It knew that "128KB module" but, that it was inserted in the magnetic card leader port now and which was used existed. Can this "128KB module" do the way of using it "32KB module"? What kind of expansion module was in the market for HP-71B? And, was the expansion module whose capacity was much bigger than 128KB in the market, too? Do those expansion modules have what kind of strong point and a fault?

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HP 91

Message #1 Posted by [Taylor Robertson](#) on 20 June 2002, 8:05 a.m.

My HP 91 just quit on me after 25 years of service. Can a bad battery cause such a shut down? If so, does anyone know where to obtain a new battery pack? If not, does anyone know who might repair such a machine?

Re: HP 91

Message #2 Posted by [DaveJ](#) on 20 June 2002, 9:02 a.m.,
in response to message #1 by Taylor Robertson

Battery Packs can be rebuilt at batteries Plus or other battery stores for not too much money. Do not operate the calc without the batteries in place (the printer will break).

Dave

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AWESOME new pictures, Dave!

Message #1 Posted by [Gil Petri](#) on 20 June 2002, 3:04 a.m.

May I ask what camera and what lens were used?

Gil Petri.

Re: AWESOME new pictures, Dave!

Message #2 Posted by [Johnny Bjoern Rasmussen](#) on 20 June 2002, 6:29 a.m.,
in response to message #1 by Gil Petri

Really amazed too... This is what I want to do on my own web pages. But how do you do it?

Johnny

Re: AWESOME new pictures, Dave!

Message #3 Posted by [Tom \(UK\)](#) on 20 June 2002, 7:08 a.m.,
in response to message #1 by Gil Petri

Yes they are very well done - up to studio quality I'd say.

(How long before these appear on ebay? 8^)

Re: AWESOME new pictures, Dave!

*Message #4 Posted by [OJM](#) on 1 July 2002, 12:26 p.m.,
in response to message #3 by Tom (UK)*

One side benefit of Mr. Hicks' beautiful three-quarter view pictures: they are so good, and of such professional quality, that e-bay copycats might actually be discouraged from claiming them as their own.....

e-bay seller: "Yeah, honest - that's an actual picture of the calc I'm selling!"

e-bay buyer: "That catalog picture? I don't think so...."

Thanks Everyone!

*Message #5 Posted by [Dave Hicks](#) on 20 June 2002, 12:25 p.m.,
in response to message #1 by Gil Petri*

The camera is an old Canon SLR (T90) with either a Canon 50mm f3.5 Macro or 85mm f1.2 Lens. Both were bought used after the "obsolescence" of Canon's old manual-focus line made them affordable. The 85mm in particular is a really satisfying big chunk of glass.

The negatives were scanned with an early-generation Nikon film scanner.

Maybe I should start a museum of manual focus cameras ;-)

Re: Obsolescence can be a wonderful thing!

*Message #6 Posted by [Paul Brogger](#) on 20 June 2002, 1:01 p.m.,
in response to message #5 by Dave Hicks*

I just found a GAF manual-focus camera (a Chinon relabel) with a 50mm f2.0 and three screw-on close-up lenses, all in mint condition, for \$10.00 at the local thrift shop.

(Now to locate a film scanner . . .)

I hope to re-take the Pioneer circuit board images, and to do some illustrations of disassembly, etc.

By the way, Dave, how did you get the soft shadows? A flash reflector of some sort? How many flash units are you using? (Would you mind posting a shot of your set-up?)

Your latest shots do look absolutely *beautiful*! (And such handsome subjects!)

Re: Thanks Everyone!

*Message #7 Posted by [John Ioannidis](#) on 20 June 2002, 1:35 p.m.,
in response to message #5 by Dave Hicks*

The amazing part is the huge depth of field. What did you do, step down to f/22? The lighting is also excellent!

Details

*Message #8 Posted by [Dave Hicks](#) on 20 June 2002, 1:59 p.m.,
in response to message #5 by Dave Hicks*

No flashes – just a rare Oregon commodity called sunlight. We see it almost every summer :-)

Surrounding the calculators on all sides by translucent white material created the soft shadows. Part of this was a big piece of lighting panel plastic (a ceiling panel) and the rest was a bed sheet. All of this was set on a big cardboard box in my driveway so my neighbors could glance over and do their "what the heck is that?" looks :-). It's disassembled right now but I'll try to remember to take a picture of it next time I use it.

The camera was on a tripod (really a clamp) so the exposures could be long and the apertures small.

A future project is to try this with some flashes so I can shoot all year but I don't know if they'll be able to match sunlight.

I also need to work on the desktop pictures. Hauling each of those out into the driveway is not appealing so I may try multiple flashes, reflectors etc.

Flash

*Message #9 Posted by [thibaut.be](#) on 21 June 2002, 4:51 a.m.,
in response to message #8 by Dave Hicks*

Of course I was also amazed by the tremendous quality of your pictures. You really did a great job, and I doubt many professionals are able to reach his quality.

I've been a long time passionate image hunter, since I am 18 actually. My very first job was school photographer. I enjoyed that while I was waiting to be free of legal military service.

Sunlight is not to be compared with any flashlight. You can get very good results with flashes, but the sunlight give you much more advantages. You perfectly did attenuate the shadows with a translucent lighting panel, and you were right to get as much white around you as you could. One of the main advantages of sunlight is that you get a pretty idea of what you will get, which is more difficult with flashlights. Finally the colour temperature is somehow better and give more warmth, instead of insipid studio light that has to be lowered (in terms of temperature) to get a more attractive picture.

Should you want to use flashlights, I would say to keep your original configuration and put high level flashlights such as Metz mecablits 45 or 60 behind the lighting panels. Maybe you could find some second hand studio flashes but then again a lighting box or umbrella reflectors are much needed, as well as a flashmeter to get a good balance...

Anyway my congratulations to the best HP pictures ever seen on the net !

Re: Flash

*Message #10 Posted by [Dave Hicks](#) on 21 June 2002, 2:02 p.m.,
in response to message #9 by thibaut.be*

Thanks for the compliment and the information. I had completely forgotten about flash meters. I've seen them but never used one. That beats my plan which was to guess!

Re: Flash

Message #11 Posted by [Ex-PPC member](#) on 21 June 2002, 7:04 p.m.,
in response to message #10 by Dave Hicks

Hi Dave, I also think that the new pictures are incredibly high-quality and are a great new addition to the museum, but I would like to make a couple of suggestions. Please don't take them as criticism of any sort at all, they're only well-meant suggestions that would enhance the pics, of course IMHO:

1) I really liked the original blue background of the old, front images. I think it made a particularly good contrast with the calculators' colors (most of them grey or metallic) and it made their shape even more outstanding. The new pics mostly white background tends to merge with the silvery metallic finish of some models (i.e: Voyagers and HP-71B, for instance), so that the boundary line between the calculator itself and the cler backgroud isn't as well defined as it was with the blue background.

2) I think it would be proper to show something on the LCD display, as it would serve several useful purposes: first, to see how numbers, texts, etc, do look on the display, their 'font', boldness, segmented or dot matrix nature, etc. It would really add useful information on that important aspect at a glance. Second, showing something like "www.hpmuseum.org" on the alpha-capable displays would make it much harder for some eBay sellers to use your images for their auctions. Perhaps even "www.hpmuseum.org NOT FOR SALE" would be better, if at all possible.

Perhaps you can take into account those suggestions in a future re-shot of your magnificent photographs.

Thanks for them and for your awesome site and hard work.

Re: Flash

*Message #12 Posted by [Dave Hicks](#) on 22 June 2002, 12:02 p.m.,
in response to message #11 by Ex-PPC member*

Thanks for the suggestions!

1) I used white this time because I wanted the option of making thumbnails that would nicely blend into the page background. I agree that another color might be better on the voyagers however. I can see a separation on my monitor but one of the difficulties on the web is that everyone else's monitor is different.

2) I'll try some numbers in the display next time. I avoided it this time because I knew the LEDs wouldn't compete well with sunlight and I wasn't sure if the LCDs would look good at these angles. (Shadows under the digits.) I would probably only use realistic displays though. I don't want to have the pictures displaying something like "not for sale" because that looks a little curious in the normal museum context. I did make the watermarks a little more blatant than they were in the past in the hope that that would help with the ebay situation.

Re: Flash

*Message #13 Posted by [thibaut.be](#) on 22 June 2002, 12:38 p.m.,
in response to message #12 by Dave Hicks*

Just a few humble hints :

- if you use a coloured background, don't choose it too coloured as this might influence by reflection the lightning of the calc - you could try a polarizing filter on both light source and lens to attenuate reflections on the display. Some ciruclar models that fit on the lens are available, but they are not that efficient. You loose at least 2 stops, often 3 or 4, so take into account exposure time and Schwarzschild effect. I rather prefer large polarizing panels that you put on front of the light source(s) and a simple polarizer in front of the lens. Don't forget to orientate them at +90° or - 90° of each other to get the maximum polarizing effect.

BTW, if you put a single flash in replacement of the sunlight light source, you won't need a flashmeter : the T90 is fitted with a good TTL flash cell as far as I can recall.

I also liked the numbers you displayed on the 1st pictures series. To show all digits on a 15C for example, you could display 15151,51515-15 (don't press ENTER, but sure you know that) ;-)

Finally, if sometimes your pictures are copied and used in the internet, isn't it because they are the best to find on the web ?

Good luck !

Re: Flash

*Message #14 Posted by [Dave Hicks](#) on 23 June 2002, 7:44 p.m.,
in response to message #13 by thibaut.be*

I tried looking at several LCD displays through a polarizer and each one was different. One turned black, the next turned blue, the third turned into a rainbow, and the last looked relatively unchanged - like a "normal" object seen through a polarizer. I suppose these were interactions between the filter, the polarizers in the LCDs, and plastic layers.

Re: Flash

*Message #15 Posted by [thibaut.be](#) on 24 June 2002, 3:18 a.m.,
in response to message #14 by Dave Hicks*

Well, if I recall correctly, the LCD screen is a polarizer. In this case, the orientation of the polarizing filter should be the same as the LCD screen. A trial and error method consisting in turning the filter up to when the digits are legible is most appropriate.

This might explain why you had different results.

This also means that the screen should be as straight in front of the lens as possible.

Re: Flash

*Message #16 Posted by [Dave Hicks](#) on 24 June 2002, 11:16 a.m.,
in response to message #15 by thibaut.be*

I did try rotating the filter. It was my expectation that the digits would appear/disappear depending on rotation but that wasn't (generally) what I saw. I was using a circular polarizer but I don't think that that's significant.

I think LCDs have generally two polarizers but I can't remember if they are parallel or perpendicular. Perhaps what I'm seeing shows that even that varies.

I think the rainbow effect was plastic stress like [this](#).

Re: LCD's

*Message #17 Posted by [Paul Brogger](#) on 24 June 2002, 9:12 a.m.,
in response to message #14 by Dave Hicks*

I had a Sharp "horizontal" (or "ruler") format calculator, and while experimenting with LCD's, I noticed that if I took the polarizing plastic overlay out and flipped it over, the display went from black digits on a silver background to silver digits on black. Pretty cool!

Then I noticed the silver background was a piece of reflective tape on the back of the LCD, and that only the thin aluminum case was behind that. So, I cut a window in the back case and took off the silver tape. (At least, this is how I remember it -- there may have been more details of a non-electronic nature . . .)

The result was a black display field with see-through digits. Really spacey, but I had to supply an external backlight to read the darned thing.

The whole experiment ended when I sat down at a coffee shop with the suddenly eponymous Sharp in my back pocket. (Ouch!)

Re: LCD's - see-through by Casio

*Message #18 Posted by [Dave Shaffer](#) on 24 June 2002, 11:44 a.m.,
in response to message #17 by Paul Brogger*

I saw two Casio calcs the other day that carried Paul's idea to the limit: it was totally see-through - display as well as the keys. The intent is for a (math/physics/chemistry/engineering) teacher to put it on an overhead projector to display results as well as intermediate steps. Rather nifty for those of us who teach technical stuff.

Only problem: they're not RPN :(

Re: LCD's

*Message #19 Posted by [db\(martinez,california\)](#) on 24 June 2002, 10:56 p.m.,
in response to message #17 by Paul Brogger*

paul; your creation sounds like the display on the sharp el-808 from 1974. it was a black background that had white numbers if it was backlit properly but nothing if it wasn't. kind of pretty but not rpn.

Re: LCD's - First data show were like this

*Message #20 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 28 June 2002, 8:32 a.m.,
in response to message #19 by db(martinez,california)*

Just to add data.

The first data show that used overhead projects were built like these: LCD with no back reflectors, or "see through". Inverting the polarizers creates the funny, fancy shadow background.

Doing this in such a small space as in a pocket calculator is brainy activity. The good one.

Re: LCD's - First data show were like this

Message #21 Posted by [Ellis Easley](#) on 29 June 2002, 3:39 p.m.,

in response to message #20 by Vieira, Luiz C. (Brazil)

I have studied back lit LCDs and have a pretty good understanding of how they work. It is the nature of the liquid crystal to twist light 90 degrees when there is no voltage applied. There is a polarizer between the light source and the liquid crystal and another polarizer between the liquid crystal and the viewer. The two polarizers are oriented 90 degrees apart. Because of the 90 degree twist provided by the un-energized liquid crystal, most of the light that passes through the first polarizer also passes through the second. The pixels are the volume of liquid crystal between similar conductive patterns printed on both internal sides of the glass plates that enclose the liquid crystal. When an AC signal is applied across the two electrodes of a pixel, that portion of the liquid crystal twists light to a different degree (depending on the amplitude of the voltage) so the light that reaches the second polarizer is out of phase and less passes through. The viewer sees darkness there compared to the light passing through other parts of the panel.

I haven't read about front lit LCDs and this thread has me wondering again just how they work. All the light is passing through the panel, including whatever polarizers are there, then bouncing off the reflector and from that point it would appear to be the same as a back lit LCD except the light is already polarized. I think an important clue is the shadow of a dark pixel that appears on the reflector. I've noticed that if I rotate a calculator (one with 7 segment display is better for this experiment) from left to right in front of my eyes, there is a point where the shadow and the pixel have equal darkness. Then as I continue to rotate the calculator the shadow becomes darker and the pixel becomes lighter. This is with a light source over my shoulder. I'm going to fit a camera lens polarizer onto a flashlight so I can experiment further.

It has just occurred to me that if my understanding of back lit LCDs is correct, then the process should work just as well in either direction. In this case, the shadow is just the reversed image that one would see if viewing from the other side, reversed again by the reflector. In the un-energized portions of the panel, the light is polarized by the front polarizer, twisted by the liquid crystal, passes through the back polarizer, bounces off (and is diffused by) the reflector. Since it is still oriented in the same direction as the back polarizer, it passes through, gets twisted, and passes through the front polarizer.

Re: Flash

Message #22 Posted by [Christof \(Davis, CA\)](#) on 23 June 2002, 3:37 p.m., in response to message #12 by Dave Hicks

Well, now I know what to practice on :)

I just picked up a complete set of camera hardware based on the praktika superTL3. with 4 lenses from rock basic to 300mm 5 dials I can't figure out :) Light meter, flashgun (markked of to 1.4 mile range!?!?) riflestock, remotes, and other bits.

This is way beyond my previous experience with a maxum 7000i. I think I'm going to have to schedule a class to learn how to use this- I've never managed a picture as pretty as the new ones on the website.

-C

Congratulations to you, Dave!

Message #23 Posted by [Luis](#) on 28 June 2002, 6:08 a.m., in response to message #5 by Dave Hicks

Dave, besides your wonderful museum, I just would like to say CONGRATULATIONS for your PERFECT photos from your "AS NEW" calculators! Every time when I look to your machines, I try to find out any crisps or detracton (even very small ones) but unsuccessfully. Definitely you have factory brand new ones. ...Some day I will ask you how you could have so nice calculators... Cheers, Luis

I'll use them as wallpaper! (May I, Dave?)

*Message #24 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 28 June 2002, 8:21 a.m.,
in response to message #23 by Luis*

They look great as Windows, Linux, BeOS or the like. I had a previous 16C's front-style as wallpaper, but the others are a must.

You should try... if Dave complies, of course.

Cheers.

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High-end HP calcs discontinued?

Message #1 Posted by [David H Thompson](#) on 19 June 2002, 8:51 p.m.

Hello,

I've just read on the Samson Cables site that all HP calculators have been discontinued with the exception of the HP10BII, HP12C, and the HP30S. Is their information definitive?

Thanks, David

Re: High-end HP calcs discontinued?

Message #2 Posted by [John K. \(US\)](#) on 19 June 2002, 10:49 p.m.,
in response to message #1 by David H Thompson

There doesn't seem to be anything about that on the HP site, and all of their current machines are available through their on-line store except the 17BII, 38G, and 48G+.

It would be a tragedy, if true... But not entirely surprising.

Re: High-end HP calcs discontinued?

Message #3 Posted by [Ron Ross](#) on 19 June 2002, 11:00 p.m.,
in response to message #2 by John K. (US)

If you go to Hp's web site, you will see the Hp19, Hp39G and the Hp20s on clearance (at tremendous savings, not really). Clearance means that Hp is not going to continue manufacturing those items (according to Hp PR something better is in the pipeline, but more likely we'll just get the Pipe).

Anyone hear any different???

Re: High-end HP calcs discontinued?

Message #4 Posted by [John K. \(US\)](#) on 19 June 2002, 11:16 p.m.,
in response to message #3 by Ron Ross

Sure enough, they're listed on the close-out page. Hmmm.

according to Hp PR something better is in the pipeline

Hopefully not "better" in the same way that the HP 30S is "better" than the 32SII... :^/

Re: High-end HP calcs discontinued?

Message #5 Posted by [Christof \(Davis, CA\)](#) on 20 June 2002, 1:56 a.m.,
in response to message #4 by John K. (US)

And the last ever non graphing, pocket sized, <\$100 calculator bites the dust.

Feh.

Even if it isn't RPN, I'll mourn the 20s

Re: High-end HP calcs discontinued?

Message #6 Posted by [anonymous](#) on 20 June 2002, 2:44 a.m.,
in response to message #4 by John K. (US)

I can see it now ... "we consulted with educators and our new calculators conform with the latest NCTM standards"

Re: High-end HP calcs discontinued?

Message #7 Posted by [Karl Schneider](#) on 21 June 2002, 3:48 a.m.,
in response to message #6 by anonymous

NCTM = "National Council of Teachers of Mathematics" (just learned that on AltaVista).

FWIW, the used-electronics reseller from whom I bought a 34C and 41CV has told me how some unnamed high school math teacher's methods. (S)he instructs about graphing by listing the sequence of keystrokes to obtain specified plots, specific to a given type of graphing calculator (probably a TI). The proprietor wonders aloud what is being taught in today's schools. Is this an isolated example, or standard practice?

-- Karl

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Katie: Questions Re. your "99 digits of Pi" article

Message #1 Posted by [W. Bruce Maquire II](#) on 19 June 2002, 7:33 p.m.

Katie (or whoever may provide some answers):

Could you please elucidate on a few points for me?

In your "99 digits of Pi" article, there are a few points in the program that I don't follow. I have not invested a *lot* of time trying to figure it out, so please excuse me if the questions are dumb.

First, I don't understand your series expansion for ArcTan. What is the "y" in the formula; where did it come from?

Second, how are the "starting values" of 280,000,000 and 30,336,000 computed (I *think* I understand the method of numeric storage). Are these first-term values for the ArcTan(1/7) and ArcTan(3/79)?

Third, where does the "divide by 50" come from in Subroutine 'X'?

Fourth, where does the "multiply by 9 and divide by 125" come from in Subroutine 'R'?

I have not carefully re-enacted the register manipulations in the routines, but I think that your documentation will be quite sufficient for me to understand all the data manipulation. But after my cursory examination, I was confused on the four points listed above. Thanks in advance for any help!

Bruce.

Re: Katie: Questions Re. your "99 digits of Pi" article

Message #2 Posted by [katie](#) on 19 June 2002, 11:12 p.m.,
in response to message #1 by W. Bruce Maguire II

Hi Bruce,

All good questions because I left out some of crucial mathematics on this. I've corrected the article and reposted it -- it should answer all your questions.

-Katie

Re: "99 digits of Pi"; BONUS: A 32sII, HP, Carly rant

Message #3 Posted by [W. Bruce Maguire II](#) on 20 June 2002, 2:20 p.m.,
in response to message #2 by katie

Katie:

Thanks! I'm glad to know that the answer wasn't obvious to the **ENTIRE** world outside me!

; -)

Bruce.

p.s. Are the math manipulation routines and numerical storage method of your invention? It appears to be a very efficient use of the 32sII's space! Personally, I can't stand programming the 32sII. I think it is the **WORST** programming experience HP **EVER** offered! I still can't believe that there is no editing capability... "Oh, I made a mistake...I guess I get to reenter the **whole program** again..."

>: -p

Gee...I get to name my program **anything** I want---as long as it is *ONE SINGLE LETTER!*

>: -p

Programming *any* HP *classic* is a breath of fresh air after looking at the 32sII! And what about that memory limitation?!? Sheesh... The one thing the 32sII *does* have going for it is that it is a real RPN machine; HP sure fixed that, though, didn't they?!

All my HP calculator ranting is a moot point now anyway, considering that it appears that HP is dropping calculators faster than Carly dropped Walter Hewlett! (No more of those

pesky founders around to muck-up Carly's \$50 million payday for the merger! Gee, I wonder if that money was a conflict of interest? I'm *sure* it had *NO* influence whatsoever--- she was *ALWAYS* acting in the best interest of the share holders...Right?...Right?...Anyone? *[a cricket chirps]*)

Re: "99 digits of Pi"; BONUS: A 32sII, HP, Carly rant

Message #4 Posted by [Michael \(SoTX\)](#) on 20 June 2002, 2:36 p.m.,
in response to message #3 by W. Bruce Maguire II

Relatively scathing article about Carly in this month's (or maybe last month's) Vanity Fair. Basically billed her as a prima donna and made pretty detailed references to HP's culture pre and post the new regime. Also very sympathetic to Walter Hewlett. Recommended read.

Re: "99 digits of Pi"; BONUS: A 32sII, HP, Carly rant

Message #5 Posted by [Christof \(Davis, CA\)](#) on 20 June 2002, 3:05 p.m.,
in response to message #4 by Michael (SoTX)

I though I could delete and insert individual lines within a program on my 32sii. SO I'm not sure what you mean-

As for Carly. A friend of mine up in OR retired recently (last year). he had managed to collect a few tens of thousands of shares of hp stock over the course of his 20+ years at HP. Even if you ignore the "bubble" of the late 90's, Carly has plan managed to single handedly devastate his reitement plan faster than he could sell stock.

Sad.

Re: "99 digits of Pi"; BONUS: A 32sII, HP, Carly rant

Message #6 Posted by [Katie](#) on 20 June 2002, 11:19 p.m.,
in response to message #3 by W. Bruce Maguire II

You can insert and delete steps on the HP32SII in edit mode. Actually, I like programming on this machine, it's got a few nice features: memory used since the last LBL, store/recall indirect math functions and 1.5 byte functions instead of using up 2 bytes. It's a simple language to learn and pretty easy to enter, it's not meant to be a full blown programmable calculator in the sense of the 41C, 42S, 48, 49. And I like programming in highly constrained memory spaces.

The arctan expansion and term₁/term₂ composition are well known, and very old

ways of calculating Pi. Modern ways to compute it converge much, much faster but are much, much more involved to implement -- not at all appropriate for a programmable calculator. [Just an aside here -- did you know that there's an algorithm to compute the n'th digit of Pi directly, without computing the n-1 preceding digits?] Anyway, take a look in "A History of Pi" for more methods of how to calculate it.

Aside from the arctan formula and 2-term decomposition idea all the rest of the stuff is my own.

Re: "99 digits of Pi"; BONUS: A 32sII, HP, Carly rant

Message #7 Posted by [Ex-PPC member](#) on 21 June 2002, 7:55 a.m.,
in response to message #6 by Katie

Katie wrote:

"Just an aside here -- did you know that there's an algorithm to compute the n'th digit of Pi directly, without computing the n-1 preceding digits?"

Corret me if I'm wrong, but I think it can only compute the n-th *hexadecimal* digit, not *decimal* digit, i.e.: you can compute the 1,000,000,000th digit of Pi assuming Pi is expressed in base 16, (digit from 0 to F). There seems to be no equivalent algorithm for directly finding the n-th digit in the usual, common base 10 ...

Re: "99 digits of Pi"; BONUS: A 32sII, HP, Carly rant

Message #8 Posted by [W. Bruce Maguire II](#) on 21 June 2002, 11:59 a.m.,
in response to message #6 by Katie

Regarding editing in the 32sII: it appears that I have misled myself. I admit that I have only performed the most cursory programming on the 32sII, but I remember---vividly---that I could NOT see how to move around the code and insert/delete lines. I guess I'll have to look in the manual again. For some reason, though, I seem to remember that I explicitly LOOKED for this feature in the manual, and never found any information about editing code in any way... Maybe I dreamt the whole thing! ;-)

Thanks for the correction. I'll have to give (one of) my 32sII(s) another chance! (Especially now that they're worth >\$120 each on eBay! ;-)

Bruce.

Re: 32s(ii) Prgm Editing

Message #9 Posted by [Paul Brogger](#) on 21 June 2002, 4:50 p.m.,
in response to message #8 by W. Bruce Maguire II

I have only my 32s, (not sII) with me, but it lets you walk up & down in the code with the up & down arrows, and to delete individual lines with the delete (left arrow) key. New lines insert "after" the line you're on.

I assume the sII is the same.

The memory size is the most frustrating aspect, and one-character names are a real problem. The 32s/sII is (I think) a pretty cool device, but one with unnecessarily severe limitations.

Re: 32s(ii) Prgm Editing

Message #10 Posted by [Christof \(Davis, CA\)](#) on 21 June 2002, 5:10 p.m.,
in response to message #9 by Paul Brogger

Yep- the 32sii is the same method.

even just a 2 char namespace (676 unique vars and unique labels) would make a big difference- But realistically, I can't see that it would matter much without at least 1KB of memory.

For my most recent uses of the 32sii, I'd want 2k. I have reason to want to store an awful lot more formulas than I can right now and still have any useful programming space.

Of course, I'll be using a 32k 42s soon enough. but I like the 32sii for some things.

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Bode Plot

Message #1 Posted by [Dennis Dueck](#) on 19 June 2002, 6:41 p.m.

Sirs, I am currently enrolled in an electronics class, and the subject came up about Bode Plot and I have not been able to find much about it. Is it a test machine, if so how do you connect it? Where can I see one, as this was a test question. I will appreciate whatever you can help.

Re: Bode Plot

Message #2 Posted by [W. Bruce Maguire II](#) on 19 June 2002, 7:17 p.m.,
in response to message #1 by Dennis Dueck

Dennis wrote:

Sirs, I am currently enrolled in an electronics class, and the subject came up about Bode Plot and I have not been able to find much about it. Is it a test machine, if so how do you connect it? Where can I see one, as this was a test question. I will appreciate whatever you can help.

Dennis:

A Bode plot is just a name for a type of plot, specifically, a plot showing gain (usually in dB, of a filter for example) as a function of frequency. The X-axis of the plot---frequency---is a logarithmic scale (e.g. the plot may have equally-spaced X-axis intervals with "tick" values of: 1Hz, 10Hz, 100Hz, 1kHz, 10kHz,...). That is about all I can remember. I'm sure if you do a web search you can find out more information about Bode plots. BTW, Bode is a name: the name of the guy who popularized this method of visualizing filter response.

Bruce.

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To revive a HP-97

Message #1 Posted by [jose ernesto](#) on 19 June 2002, 5:32 p.m.

I'm trying to revive a HP-97 I got from a friend. I bought the cells to assemble a new pack, but I couldn't find a suitable power source. What I have is an 6 V AC x 3 watts power source, but all I can get is a big red dot on the display. I understand that this means that power is low, even if the source is connected to the unit. I wonder if 6 V is too few, maybe the 97 demands a little more. Does anyone have an idea of these power levels? I couldn't even begin to test the rest of the calculator, but I've noticed that the card reader needs repair and I was unable to check the printer. Thanks

Re: To revive a HP-97

Message #2 Posted by [David Smith](#) on 20 June 2002, 5:41 p.m.,
in response to message #1 by jose ernesto

The HP97 power plug is rated around 9VAC at around 300mA. The actual volatge seems to be around 12V under light loads. The plug transformer has a fairly high output impedance that helps serve as a current limit function. You can find the plugs (82059 series) very regularly on Ebay. They are the same ones used by most of the HP41 printers and accessories.

The HP9x machines do not work properly without a good battery pack installed.

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Repair of a HP-97 printer

Message #1 Posted by [Mark Spaur](#) on 19 June 2002, 5:08 p.m.

I need directions to repair the thermal printer on my HP 97. It prints fine but doesn't advance the paper well. the paper only goes up one-half of a line, so that the print from the next line crowds the previous entry.

Thanks for your help

Re: Repair of a HP-97 printer

Message #2 Posted by [David Smith](#) on 20 June 2002, 5:37 p.m.,
in response to message #1 by Mark Spaur

This is a very common problem. The rubber roller rings at the ends of the paper feed cam harden, decompose, or develop flat spots.

You can try opening up the machine, removing the printer mechanism (or the whole inner backbone assembly), and cleaning the small yellowish white rubber ends of the feed cam where they contact the paper. I have had some success using a rubber drive wheel/drive belt restorer compound. It is available at electronic supply stores. MG Chemicals or Projector Recorder Belt Company supply it. MG's smells slightly minty (methyl salicylate) and PRB's smells like finger nail polish remover.

The problem is that the fix sometimes does not last. You may need to reapply it several times over a several weeks.

Basically you wet a small brush and apply it to the roller, pull up the paper a line or two, and keep going until you have coated the whole roller a couple of times around. Then you wait a few minutes and wipe it off. Keep it off of the plastic feed cam, etc. It softens and dissolves plastic.

The only sure fire fix is to replace the whole feed cam assembly with a known good one. The feed cam from an HP41 82143A printer works well and tend to be less likely to be bad than an

HP91/92/97 cam. Removing and replacing the cam assembly is a REAL pain. Lots of fiddly small parts and the chance of cracking the print head await.

Re: Repair of a HP-97 printer

*Message #3 Posted by [Katie](#) on 20 June 2002, 10:56 p.m.,
in response to message #2 by David Smith*

You can also try using isopropyl alcohol on the end of a Q-tip, it does a really good job in most cases. The other common problem is a worn idler gear (the whitish one) on the side of the printer. If some of the teeth are missing from it, you'll get an inconsistent feed. This gear can be replaced by a commercially available one (see my article on this in the articles forum).

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shorting HP-41 cont. memory capacitor

Message #1 Posted by [Todd Koumrian](#) on 19 June 2002, 2:29 p.m.

How risky is it to open 'er up and short this cap? The fuzzy service manual pics on the web make it look as though all I have to do is remove the bottom case and I should have immediate access to the cap.

How would this go? I should use a very tiny test jumper to connect both leads to the capacitor together? How long would it take to discharge using this method?

Thanks!

Re: shorting HP-41 cont. memory capacitor

Message #2 Posted by [Ellis Easley](#) on 19 June 2002, 4:00 p.m.,
in response to message #1 by Todd Koumrian

I opened up my 41C, which already has the feet off, and compared it to the service manual on the CDs, it is the same. I guess it is a "fullnut". If yours has a black border with rounded corners around the LCD, you have a "halfnut" (isn't it a CV? some are fullnut, some are halfnut). Someone will be by shortly to give you a better answer!

Section 2-33 (on page 10 of the PDF) says C1 is the storage cap, figure 4-6 (page 35) is an outline drawing of the PCB showing C1 is the largest cylindrical cap near the upper left corner, almost under the edge of the beeper, and table 4-5 (page 37) says C1 is 470 microfarad, 6 volt.

To open the unit, peel up the rubber feet to expose the screws. The two screws in front are close to the inside, the rear feet are about in the middle, slightly closer to the outside, under the feet. Note that the feet are actually two layers, the rubber is stuck to a thin vinyl layer which is stuck to the case (I know this is the case with Voyagers). Remove the four screws and the bottom comes off with the I/O and Battery block, giving you access to the PCB.

With direct access to the cap (without the diode in the circuit), the cap will pretty much completely discharge as soon as you connect the two leads with a piece of wire. Spend a few

moments making sure you are making good contact to both leads AT THE SAME TIME! If you use a test lead with little clips, you can be pretty sure you have made contact. If you have a voltmeter, measure the voltage across the cap before and after. Observe anti-static precautions!

Re: shorting HP-41 cont. memory capacitor

Message #3 Posted by [David Smith](#) on 19 June 2002, 6:00 p.m.,
in response to message #1 by Todd Koumrian

You should also short out the smaller power cap next to the larger one. Also while the unit is apart clean all the internal pressure contacts (battery assembly and the zebra connector beneath the fullnut CPU card). Also clean the mating contacts on the keyboard assembly. I use 91% isopropyl alcohol. I also treat them with a corrosion inhibitor such as the CAIG ProGold pen. Available at Fry's for the princely sum of around 15 bucks.

If you have a half nut machine be VERY careful of the beeper wires. The wires have become very brittle at the solder joints. It is VERY easy to break them. Hopefully you have some experience with a soldering iron.

Re: shorting HP-41 cont. memory capacitor

Message #4 Posted by [Todd Koumrian](#) on 19 June 2002, 7:26 p.m.,
in response to message #3 by David Smith

Thanks for the tips!

I found similar cleaners in our electronic shop at work. 99% isopropyl and Gold Plus gold contact cleaner/inhibitor. Sounds like it'll work. I might try it tomorrow.

Can the black feet be reused or are they trashed by taking them off?

I have a 41CV, and it does not have the rounded black corners in the display.

Re: shorting HP-41 cont. memory capacitor

Message #5 Posted by [David Smith](#) on 20 June 2002, 5:24 p.m.,
in response to message #4 by Todd Koumrian

The feet can definitely be reused. They are held on by a double sided stick rubber tape. I remove any sticky items using a product called "UnDu". It is available at Home Depot, most hardware stores, office supply stores, etc. It is just the solvent heptane in a cute (and way overpriced) little bottle. It causes any adhesive to temporarily loose its stick. Some types of rubber cement thinner are also heptane (some are hexane). A quart can costs about what an ounce of UnDu sells for.

To remove feet I place a drop on the small blade of a Swiss Army knife and slide it under the foot. Hopefully you get under the tape and not between the tape and the foot. Place the removed feet on a piece of peel off label backing (i.e. post office labels).

If you loose your sticky stuff, you can use double sided scotch tape.

Re: shorting HP-41 cont. memory capacitor

Message #6 Posted by [Todd Koumrian](#) on 20 June 2002, 7:25 p.m.,
in response to message #5 by David Smith

I got it open, and tried shorting the caps. The first time it took a while to get to 0 V. I reassembled and still got MEMORY LOST as soon as I slip in the batteries. Maybe this time a little different in that I can barely see a flash about once a second or so.

I took it apart again, cleaned all contacts and have shorted both caps. I notice that if I take off my leads and measure, a tiny reading (0.003 V) starts to build after a while. I put my wires back on and am just going to leave it for a few days.

I don't have any conductive foam I've heard about, but maybe it would help to drain the residual charge off the calculator.

Would it be more effective to ground the cap rather than just connect it's leads together?

Re: shorting HP-41 cont. memory capacitor

Message #7 Posted by [Ellis Easley](#) on 21 June 2002, 7:45 a.m.,
in response to message #6 by Todd Koumrian

The (-) end of the big cap is shown connected to ground on the schematic, and so is the (-) end of the battery. The way the voltage starts rising again after you remove the short suggests that another cap has retained some charge and it is leaking back through a diode. Here's a suggestion: put shorting jumpers on both caps at the same time. And leave them there for a little while. (I just re-read your post and I see you are doing that.)

In theory, a capacitor is never completely discharged because no wire has zero resistance (just as there is never a perfect vacuum). Also, I have read about a property of dielectrics (the non-conductive stuff between the plates of a capacitor) that cause them to be "twisted" or (something like that) by the presence of a voltage. This is probably just the fundamental property that causes capacitance (and which is taken advantage of in LCD's). But I seem to recall that dielectrics return to their "non-twisted" state at different rates - some kind of memory effect. Consider that the caps in HP41's have been holding a charge for at least 15 years!

Re: shorting HP-41 cont. memory capacitor

Message #8 Posted by [Todd Koumrian](#) on 21 June 2002, 3:26 p.m.,
in response to message #7 by Ellis Easley

It didn't work. I shorted both caps and left it overnight. It was 0V when I came in this morning, and still gives MEMORY LOST as soon as the batteries hit the contacts.

Something is really screwed up. Can anyone fix my 41CV?

Re: shorting HP-41 cont. memory capacitor

*Message #9 Posted by [Ellis Easley](#) on 23 June 2002, 3:03 a.m.,
in response to message #8 by Todd Koumrian*

I don't have enough experience but I know there are others here who do, also there is some information on the other Museum pages about people who do repairs.

I had a thought - is there any chance that the computer is OK and the keyboard is not? Is the "<-" key the only one that will clear a "memory lost"?

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42S display background matrix - Can it be "deleted"?

Message #1 Posted by [Dave Shaffer](#) on 19 June 2002, 11:17 a.m.

I was one of the lucky purchasers of the HP service 42S calcs.

I am still getting used to seeing both X and Y values (after 30 years of keeping Y in my head).

On my model, the values are displayed against a matrix or grid (for want of better words) of LCD dots. If I adjust the contrast of the display, the relative intensity of the background versus the numbers does not change much. I find this background rather annoying, and don't see any logical reason for its presence.

Is there some way to get rid of this background? (The service calcs did not come with any manual (s).)

Re: 42S display background matrix - Can it be "deleted"?

Message #2 Posted by [Tom \(UK\)](#) on 19 June 2002, 12:31 p.m.,
in response to message #1 by Dave Shaffer

My (old) HP42 has a similar 'problem'.

Does the HP17Bii (old and new) use the same display and, if so, have the same 'problem'?

Re: 42S display background matrix - Can it be "deleted"?

Message #3 Posted by [John K. \(US\)](#) on 19 June 2002, 8:52 p.m.,
in response to message #2 by Tom (UK)

The HP 27S, 42S, and 17BII (and presumably the 17B) all use the same display.

Re: 42S display background matrix - Can it be "deleted"?

Message #4 Posted by [emartin](#) on 19 June 2002, 10:41 p.m.,
in response to message #3 by John K. (US)

I think HP changed the display in recent years. I have an older 17B-II that has better display contrast (at least, it can be "turned down" so that the matrix dots aren't visible). My new 17B-II that I recently purchased as a backup has a display that (1) has a noticeably blue-green cast and (2) can't be turned down far enough to eliminate the dots.

Unfortunately, I missed the 42S service clearance by a day (Rats!), but I presume they were recent builds with the newer (worse) displays. This is purely conjecture on my part.

Re: 42S display background matrix - Can it be "deleted"?

Message #5 Posted by [John K. \(US\)](#) on 19 June 2002, 11:05 p.m.,
in response to message #4 by emartin

I'd have to double check, but I believe that the 42 I got from the late 2001 Indonesian batch didn't exhibit that behavior. Given the odd color you describe, it's possible that the current displays have polarization filters of inconsistent quality.

Re: 42S display background matrix - Can it be "deleted"?

Message #6 Posted by [thibaut.be](#) on 20 June 2002, 8:22 a.m.,
in response to message #5 by John K. (US)

the contrast can be adjusted in keying simultaneously ON/+ for darker background and ON/- for lighter background.

this feature exist on all pioneer and clamshell models, as well as charlemagne.

Re: 42S display background matrix - Can it be "deleted"?

*Message #7 Posted by [Dave Shaffer](#) on 20 June 2002, 1:27 p.m.,
in response to message #6 by thibaut.be*

Thibaut,

The problem is that the contrast of the X and Y values AND the background change together. Doing the ON/+/- trick does very little to enhance the readability of the register contents. My 32SII looks much better.

I guess, as we used to say about malfunctioning software: "this is a feature, not a bug." (?!!??)

Dave

Re: 42S display background matrix - Can it be "deleted"?

*Message #8 Posted by [James M. Prange](#) on 21 June 2002, 6:20 a.m.,
in response to message #7 by Dave Shaffer*

Unfortunately, it seems that the "contrast" adjustment in these calculators (and many other LCD devices) is really a "brightness" ("darkness"?) adjustment. Or, in other words, "level adjustment" instead of "gain adjustment". I wish that separate brightness and contrast controls were available, but have learned to put up with what's available.

Re: 42S display background matrix - Can it be "deleted"?

*Message #9 Posted by [Karl Schneider](#) on 21 June 2002, 3:32 a.m.,
in response to message #6 by thibaut.be*

Well, I'll be gol-durned! I've had my 42S for only several months, and I never knew about the contrast-adjustment feature (hadn't yet gotten through the manual). The black-matrix really bugged me and others when viewed from an angle.

There are 5 people in my office with 42S's (personal and employer-purchased). I'll tell 'em!

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possible online source of HP calculators

Message #1 Posted by [Ellis Easley](#) on 19 June 2002, 10:38 a.m.

I happened on this site, internationalcalculator.com, while searching the Forum Archives for MLDL. [This page](#) lists several recent models for sale. Another page offers HP41C, CV, and CX.

Re: possible online source of HP calculators

Message #2 Posted by [Ellis Easley](#) on 19 June 2002, 11:35 a.m.,
in response to message #1 by Ellis Easley

As I did more searching, I realized this site belongs to John Ioannidis, I hope you don't mind me bringing it up here.

oops!

Message #3 Posted by [Ellis Easley](#) on 19 June 2002, 3:03 p.m.,
in response to message #2 by Ellis Easley

I don't know how I jumped to that conclusion! John just had a link to the calculator dealer on his HP41 page, indicating they have thermal paper. Sorry!

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Lubing slide switches on LED models? (Spice, Woodstock, Classic, etc.)

Message #1 Posted by [Karl Schneider](#) on 19 June 2002, 3:15 a.m.

LED-model gurus --

I have three HP-34C's upon which I am doing some minor repairs, including lubricating the ON/OFF and PRGM/RUN slide switches. The switches carry metal spring jumpers that span two broken parallel circuit "tracks" (for want of the proper term) when the switches are moved to the right. I noticed a pasty yellow(ed) residue of the original lubricant on one unit, but often there is little lube left, and the switches slide roughly. (Good thing the HP-41C and Voayger models did away with them for good!)

What would be good lubricant for these switches? I have bought a thick, clear "Lube Gel" from Radio Shack (p/n 64-2326) which is conductive enough to work just fine on the sliding ring connection for my car's horn. Does anyone have a better idea?

Thanks,

-- Karl

Re: Lubing slide switches on LED models? (Spice, Woodstock, Classic, etc.)

Message #2 Posted by [Tom \(UK\)](#) on 19 June 2002, 7:18 a.m.,

in response to message #1 by Karl Schneider

I don't think you would want anything that conducts because it may get into places you don't want and short tracks that you don't want connected. This would drain the batteries or stop the calculator working. I think the idea of the lubricant is to stop the contacts and tracks wearing - you still need good metal to metal contact.

At work we once had an outside service 'engineer' come in to fit a new PC processor. He got the heat sink grease (which also conducts electricity) onto, and into, the ZIF socket. The PC would not work after this and because the heat conduting grease could not be cleaned out of the ZIF socket the whole PC mother board had to be replaced - luckily not at our expense.

Re: Lubing slide switches on LED models? (Spice, Woodstock, Classic, etc.)

*Message #3 Posted by [Larry](#) on 19 June 2002, 8:38 a.m.,
in response to message #2 by Tom (UK)*

For what it's worth, in June of 2000 I lubricated the switches on my HP-67 with a small amount of Permatex Silicone Dielectric Grease, purchased at an auto supply store. As you know, a dielectric is an insulator. Everything still works fine.

Re: Lubing slide switches on LED models? (Spice, Woodstock, Classic, etc.)

*Message #4 Posted by [katie](#) on 19 June 2002, 10:43 a.m.,
in response to message #3 by Larry*

For those contacts, I use a "Lubriplate" by GC Electronics (you can get it from MCM and lots more places, I'm sure). It's specifically made for lubricating switches, motor bearings, etc..

Re: Lubing slide switches on LED models? (Spice, Woodstock, Classic, etc.)

*Message #5 Posted by [David Smith](#) on 19 June 2002, 6:04 p.m.,
in response to message #1 by Karl Schneider*

Radio Shack Lube Gel is surprisingly good stuff. Also Permatex SuperLube or Dow Corning 111.

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a lot more on handheld case screws

Message #1 Posted by [Ellis Easley](#) on 18 June 2002, 9:17 p.m.

My new order of screws arrived today and the results are mixed. The #2 Plastites won't fit in the calculators for a reason that I came to understand last week before the supplier received his shipment. I called him right away with my concerns and told him I would buy what I had promised anyway. This weekend I learned more and emailed him to ask that he look into one more possibility.

The #3 X 5/16" "B" thread sheet metal screws have 28 threads per inch but they are noticeably larger than the calculator screws. I'm going to follow my own advice and try them in some scrap material threaded by the calculator screws.

The good news is that I have learned more about screws for plastic and found two types that might be what HP used. One is obsolete and the other is a variation on the Plastite screw that is still available although it will be up to a distributor to order a minimum quantity if they are not in stock at the manufacturer.

First, the reason the #2 Plastites won't work is that they have two intertwined threads which is called a "double lead" or a "twin helix". I mentioned "high-low" screws before which also have two intertwined threads but they have different radius (radii?). The two threads on the Plastite screws have the same radius at a given angle of rotation (they are tri-lobed) but they are 180 degrees apart.

Here is some background information: a sheet metal screw has a circular cross section (viewed from the end) and the profile of the thread itself is 60 degrees. When threaded into a resilient material, it cuts a broad groove, compressing more material to cut to a certain depth, and being circular, it presses out on the material equally in all directions (this is called "hoop stress"). A #2 sheet metal screw has 32 threads per inch.

A company called Research Engineering & Manufacturing Inc. (REMINC) developed a screw for plastic called "Plastite 60-1" which kept the 60 degree thread profile but had a "Trilobular" cross section and "... a pitch that is generally twice that of a comparable size machine screw". Since a #2 machine screw has 56 threads per inch, a #2 "Plastite 60-1" would presumably have 28 threads per inch (it is obsolete and I didn't find any data tables). Right now I think this might be what HP used on the Classics, Woodstock, and Spice and also the Voyagers, I recently found. The tri-lobed cross

section allows the resilient material to flow back into the hollow spaces, reducing "hoop stress" and also providing a lock that prevents the screw from loosening due to vibration. This is why they do the "start-stop" when you turn them. Reducing the number of threads per inch (from 32 to 28 in the case of #2) increases the amount of material anchoring each turn of the thread, increasing the amount of force required to strip the thread.

REMINC later developed a screw for soft plastics called "Plastite 48-2" with the tri-lobed cross section and the thread profile reduced to 48 degrees which compresses the material less, like a sharper knife. It also has the "twin helix" which is basically two threads with twice the thread pitch, intertwined. It goes in twice as fast and so takes more torque to turn, so it takes more torque to strip (important for soft materials). Plastite 48-2 is in common use and the thread pitch for #2 is 28 per inch (counting all the peaks in a line, so it has two 14 per inch threads intertwined). This is what the Plastite screws I just received are. I recently discovered that the screws in my 41C are probably #2 Plastite 48-2. They definitely have the "twin helix".

Still later, REMINC developed a "Plastite 45-1" with the tri-lobed cross section, a more acute thread profile of 45 degrees, and a single thread with wider spacing - #2 is 19 threads per inch. I don't know if this was a real improvement or just a new proprietary product for REMINC after their "Plastite 48-2" patent expired.

I know I have glossed over the fact that the Plastite 60-1, which I think might be what we need, is no longer made. But the good news is that at least one manufacturer, Camcar Textron, lists in their catalog "Plastite 48" screws available with either a double or a single helix. Only one thread pitch is given per screw size (#2 is 28 per inch). They say the single helix is for thermoplastics with a higher "flexural modulus" (twin helix, up to 850,000 p.s.i. - single helix, 850,000 to 1,400,000 p.s.i.) whatever that means! (It must relate to the hardness or stiffness.) I asked the supplier to look into the Plastite 48 with single helix.

[This link is for a Camcar Textron page](#) where you can download PDFs with data on Plastite 48 and Plastite 45. [This link is for a REMINC page that has an overview including the obsolete "Plastite 60-1"](#). If you click on the link that says "Download Pushtite PDF" what you will really get is "TAPTITEII.pdf" which has data on all their current "Trilobular" products.

Here are some measurements of various screws I have which all have 28 threads per inch (largest diameter of the thread - diameter of the head) [inches]:

Classic, Woodstock, Spice: (.088 - .162) "single helix"

Voyager: (.090 - .162) "single helix"

My new #2X3/16" Plastite 48-2: (.086 - .164) "twin helix"

HP 41C, long screw: (.089 - .166) "twin helix"

My new #3X5/16" sheet metal: (.100 - .190) "single helix"

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Capacitor lifetimes

Message #1 Posted by [David H Thompson](#) on 18 June 2002, 12:37 p.m.

Hello, Does anyone know if HP utilised discrete capacitors with known lifetime issues?

Thanks, David

Re: Capacitor lifetimes

Message #2 Posted by [David Smith](#) on 18 June 2002, 6:55 p.m.,
in response to message #1 by David H Thompson

The one capacitor that almost always causes problems is the small blue dipped tantalum bypass capacitor in HP67 card readers (also some '65 readers). If your reader writes but won't read, this beastie is the problem. It will look and test good, but it develops a high internal ESR (equivalent series resistance) and stops doing its thing. When rebuilding a reader in these machines, I always replace this cap even if it seems OK. Eventually it won't be.

I have also seen bad tantalum power supply filter caps in Woodstock series machine power supplies (particularly HP29C units).

Very occasionally the main power cap in an HP41 will develop a leak and drain your batteries quickly.

Re: Capacitor lifetimes

*Message #3 Posted by [Larry](#) on 18 June 2002, 10:33 p.m.,
in response to message #2 by David Smith*

David Smith:

Regarding the HP-67: Are you referring to the small capacitor which is attached to the terminals on the motor itself? Thanks.

Larry

Re: Capacitor lifetimes

*Message #4 Posted by [David Smith](#) on 19 June 2002, 6:10 p.m.,
in response to message #3 by Larry*

No, the problem bugger is on the little reader circuit board. There are three tantalum caps there. Two are used in connection with the head windings and the other is the failing power cap. Also the HP97 reader can have the same problem (but not nearly as often as the '67)

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HP28S hardware hacking help?

Message #1 Posted by [Christof \(Davis, CA\)](#) on 18 June 2002, 2:27 a.m.

Well, I've managed to get a small pile of used and damaged hp28s calculators (okay, small pile == 2, plus a marked up but really clean one).

SO now is time to start the hacking-

Battery compartments (I'll try this first on the 19bii that is similarly damaged). I am thinking of taking material off the LEFT casing to cover the battery port cover area- careful cutting and gluing and it should still close in the proper fashion. Any other ideas on that? These damaged battery cover areas are sucky.

The rs232 serial port hack and software... anyone have any idea at all where to get the information on this? I've read reviews, but can't find any plans or code anywhere....

thanks, Christof

Re: HP28S hardware hacking help?

Message #2 Posted by [Christof \(Davis, CA\)](#) on 18 June 2002, 9:23 p.m.,
in response to message #1 by Christof (Davis, CA)

Well, I might have found something, if I can decipher the french it's written in. It appears to describe external power, ir I/O, and serial hacks.

I was unaware of the possibility of ram upgrades in hp28 calcs. Anyone know about this?

-Christof

Re: HP28S hardware hacking help?

Message #3 Posted by [Ellis Easley](#) on 18 June 2002, 9:35 p.m.,
in response to message #2 by Christof (Davis, CA)

Didn't the 28C have less RAM than the 28S? Maybe the 28C could have its RAM upgraded.

Re: HP28S hardware hacking help?

Message #4 Posted by [christof \(davis, ca\)](#) on 19 June 2002, 3:12 a.m.,
in response to message #3 by Ellis Easley

Well, the manual looks like it might be referring to 28c exclusive ram upgrades, but it's also talking about 64k upgrades! (this would be cool)

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HP-41 Module Museum (I am working on it)

Message #1 Posted by [Chris Catotti \(Florida\)](#) on 18 June 2002, 1:14 a.m.

I finally have some web space that I understand

I am beginning a page that I will call the [HP-41 Module Museum](#). Generally speaking, I am collecting one of each module, and making distinctions for different software versions. I am also collecting all of the HP-41 documentation in all languages available (English, German, French, Spanish, ...).

Drop me a note.

Re: HP-41 Module Museum (I am working on it)

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 18 June 2002, 5:45 p.m.,
in response to message #1 by Chris Catotti (Florida)

Portuguese...????

Re: HP-41 Module Museum (I am working on it)

Message #3 Posted by [Chris Catotti \(Florida\)](#) on 18 June 2002, 11:38 p.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)

Yes Portuguese is hard for me to find. I would be happy to trade or buy them. Are they easy to acquire in Brazil?

Re: HP-41 Module Museum (I am working on it)

Message #4 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 19 June 2002, 7:41 a.m.,
in response to message #3 by Chris Catotti (Florida)

Hi;

there is some Portuguese (Brazil) printed related material about the HP41, but the most specialized docs were not delivered in this language. Some stuff does not really exist in Portuguese. e.g.: 41CX manuals and HP16C, because they were not sold by Hewlett Packard here (all models were brought from USA or Europe), many 41's ROM modules, say, X-Functions, X-I/O, among others. I have some Portuguese docs, no duplicates. I believe that exist some HewPack calc's related stuff in here, but finding them is another story. If I know something, I'll keep in touch.

Cheers.

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Unable to clear HP-41cv MEMORY LOST error

Message #1 Posted by [Todd Koumrian](#) on 18 June 2002, 12:32 a.m.

Can't seem to clear the MEMORY LOST message despite doing what the manual says....

I just bought an HP-41cv, since I liked it many years ago. There were batteries installed, but incorrectly, and some were starting to leak just a bit. No damage, no acid on the terminals or springs.

However, when I put new batteries the display immediately shows MEMORY LOST without even pressing ON. Further, I cannot clear the error no matter what. I've tried pressing CLX and ON while inserting the batteries, but no luck. Occasionally when I put the batteries in, the display is very faded, but immediately becomes crisp MEMORY LOST when I press a key (keypad is working then??).

Can anyone advise? I have only a couple days to determine if it'll work or I should return it for a refund.

Thanks!

Re: Unable to clear HP-41cv MEMORY LOST error

Message #2 Posted by [Ellis Easley](#) on 18 June 2002, 7:03 a.m.,
in response to message #1 by Todd Koumrian

Search the Forum (don't forget the archives!) for Memory Lost and other 41C hangups, there are a lot of threads on the general subject. Solutions include various keyboard resets and completely discharging the internal storage capacitor (the one that allows you to change batteries without losing memory). My experience is very limited but I recently got a 41CX with quite dead batteries that wouldn't do or say anything with fresh batteries. After reading about discharging the capacitor, I used an ammeter to short the two outermost battery terminals (so I could see if any discharging was taking place). I had measured about a volt there with a high impedance voltmeter. With the ammeter I measured a current in the .1 to 1 milliamp range that dropped very slowly for a few minutes then stopped dropping at about 20 to 100 microamps (I forget exactly). Then after about 10 or 15 minutes, the current started dropping again and in a

few minutes it was too low to measure, so I stopped. (I was hoping to avoid having to open the case and short out the capacitor directly, as there are some (or a) diode(s) between the battery terminals and the capacitor - some people report leaving the battery terminals shorted for ages before the calculator will respond.) In any case, I was lucky and after what I have described, the calculator started up correctly and continues to work fine. I know yours is stuck saying "MEMORY LOST" but it could still be because some illogical information is in the RAM - partially good information that is corrupted from an extremely low (but non-zero) supply voltage.

Good luck!

It's unlike most problems I've read about

Message #3 Posted by [Todd Koumrian](#) on 18 June 2002, 12:35 p.m.,
in response to message #1 by Todd Koumrian

With mine, it says MEMORY LOST the moment the batteries hit the terminals. Mostly I've read about resetting the calculator when it refuses to turn on. With mine, I've lost control immediately.

I've tried leaving the batteries out for a long period of time. I will try shorting the terminals next. Just doing it for a minute didn't change anything.

Does anyone know if this indicates a memory defect? I have to decide in the next couple of days whether this calc is going to work before my return window disappears.

Re: Unable to clear HP-41cv MEMORY LOST error

Message #4 Posted by [David Smith](#) on 18 June 2002, 6:48 p.m.,
in response to message #1 by Todd Koumrian

HP41 manuals actually say to put the batteries in backwards for a while to hasten the discharge. There is a protection diode that keeps the full reverse voltage out of the machine, and the 0.7 volt reverse drop will not hurt anything. I have HP41 machines (especially CV and CX) that will retain their memory for over a month without batteries.

Another very likely cause of your problem is dirty internal contacts. The zebra connector between the CPU and keyboard in fullnut machines is particularly prone to cause this problem. Also the battery contact assembly. Also caused by spilled gunk on the keyboard traces.

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despite the likelihood of more squishy keys

Message #1 Posted by [Christof \(Davis, CA\)](#) on 17 June 2002, 4:53 p.m.

Or squishy keyed calculators, I still am not holding out any hope that I'll be finding affordable rpn (or even algebraic) programmable pocket sized models anytime soon.

So- has anyone examined the 20S? I seriously doubt there are any upgrade options there, but if anyone has looked....

an extra 128steps that wouldn't clear when you used a built in would make that little inexpensive calculator a really nice thing- even if it isn't rpn.

On the other side- is this a model where the rom instructions are seperated? could something new be burned and used?

-Christof

Re: despite the likelihood of more squishy keys

Message #2 Posted by [Tom \(UK\)](#) on 18 June 2002, 7:07 a.m.,
in response to message #1 by Christof (Davis, CA)

Is this in the hope of using the HP20S as a basis for an RPN hack? Once the HP20S goes you might as well look round for a used 32 or 42...

I can't see the future of the HP20S being very good. All it's elder brothers and sisters have been withdrawn so the chances of HP producing this one for much longer are slim. (OK the 12C has been going for decades but I don't think the 20S has the same niche market).

Sorry if I've got the wrong end of the stick.

Re: despite the likelihood of more squishy keys

*Message #3 Posted by [Christof \(Davis, CA\)](#) on 18 June 2002, 12:38 p.m.,
in response to message #2 by Tom (UK)*

Well, it's not so much specifically about an rpn hack to the 20s (though a \$30 rpn programmable would just be nice)- it's more about the idea of something maybe being hackable that is available for less than \$200 on the used market :)

Granted- the 32sii is there. But the it's not upgradable in ram- which is the only thing I'd really be concerned with in it. It's also running closer to the \$100 mark now than it is to the \$30- or even \$50 mark.

I suspect you are right, and the 20s won't be available in production for that much longer. But we've all got ample opportunity to grab a couple, and if there is some basis for hacking... well, it'd be nicer than not, I suppose.

-Christof

Re: despite the likelihood of more squishy keys

*Message #4 Posted by [Paul Brogger](#) on 18 June 2002, 3:37 p.m.,
in response to message #2 by Tom (UK)*

I doubt very much that a 20s can be hacked at all. I haven't taken one apart, but all of the other "later" Pioneer models are single-chip designs, with single-sided exposed copper (not multi-level gold-plated) circuit boards. (The 32SII PCB is a one-component design: the surface-mount chip, with connections to the keyboard, display and battery.)

Just because we can upgrade the RAM on the 42s, don't get your hopes up for any similar 20s modifications. In fact, the 42s has two sets of surface-mount pads etched onto the PCB: the RAM set and one for an alternate ROM. The lower-end and later models have no such avenues of extensibility built in. (Unless I'm missing something REALLY subtle!) Even the 32sII's precursor, the old 32s, which shares the 42s' technology (gold-plated PCB and chip "riding in a hammock" of micro-fine connections) has no external memory pads or other obvious means of expansion.

I bought a TI-83+ Silver recently, but haven't started messing with it yet. (Now that I've bought it, I'm not sure I'll ever have time . . .) It's a Z-80 based unit in a pretty solid package, with a graphic matrix screen and something like 1.5 Mb of Flash ROM. A Zilog assembler and SDK, a Windows emulator, and (literally) hundreds of pages of TI documentation are available for free. It ought to be available for a while, and it may indeed

be amenable to fundamental redesign. (Though there are now only two limited modes offered for software enhancement, and documentation of the calculator OS "kernal" is apparently still proprietary.)

Also available is the TI-89, which is 68000-based, with similar support tools and documentation available. (And both have available PC connectivity, too.)

I think it would be fun to get an interested group cooperating on a next-generation RPN device by all agreeing to work through some available, promising technology with adequate developer support . . .

Re: despite the likelihood of more squishy keys

*Message #5 Posted by [Christof \(davis, CA\)](#) on 18 June 2002, 5:12 p.m.,
in response to message #4 by Paul Brogger*

Well- The ideo of hacking a ti89 isn't bad. I still don't like the keys much, and I HATE with a PASSION the XYZT idiocy in the keyboard layout.

I guess I'll have to open a 20s and find out- it may very well be unhackable, but I'm not sure- it's hard to be positive with some of the stunts that got pulled in later generations. This is why I'm asking if anyone has pulle done apart and looked.

This does not preclude other efforts involving rewriting the ti89 or something. There is room for more than one thing at a time in larger groups :)

-C

The 20S is unhackable (at least by me)

*Message #6 Posted by [Randy Sloyer](#) on 18 June 2002, 5:51 p.m.,
in response to message #5 by Christof (davis, CA)*

There is absolutely nothing that can be done with a 20S, from a hack standpoint. It is a single IC chip on a PCB with no chance of doing anything to it.

I have pictures and can post if anyone is interested.

Re: The 20S is unhackable (at least by me)

Message #7 Posted by [Christof \(davis, CA\)](#) on 18 June 2002, 9:05 p.m.,
in response to message #6 by Randy Sloyer

Ah well, it was a forlorn hope- I just didn't want to take one apart to see.

I wonder if they are really going (gone?) out of production (samson cables seems to think so).

Re: The 20S is unhackable (are we SURE?)

Message #8 Posted by [Paul Brogger](#) on 19 June 2002, 10:52 a.m.,
in response to message #6 by Randy Sloyer

The single-chip-on-a-circuit-board implementation of the 20s is what I suspected (having seen the 32sII), and apparently what it is.

That doesn't mean it's *absolutely* unhackable -- just that there's more involved in the hack . . .

The tolerances on that circuit board can't be impossibly precise, and the electrical characteristics of the other system components (LCD, keyboard, and batteries) are probably knowable. The task is to come up with a ~4.5 Volt circuit which scans a Pioneer keyboard and generates a readable 20s display. (Some kind of PC interface would be almost essential as well, if it's being programmed from the ground up.)

Now, if a low-power, supported microprocessor with some RAM and Flash ROM could be put on a ~2.5" x 4.5" circuit board and interface to the 20s (or other calculator) infrastructure, you just might have something one could work with . . .

Re: The 20S is unhackable (are we SURE?)

*Message #9 Posted by [Randy Sloyer](#) on 19 June 2002, 7:11 p.m.,
in response to message #8 by Paul Brogger*

Well, duh, yeah, I didn't think that all the way through. Paul is absolutely right. The board dimensions can be measured and we know there is a lot of available space for a new PCB (alla a 42 or 17). The keyboard is easily decoded as it appears to be a straight 7x6 matrix.

The only issue for me would be the suitability of the 7 segment LCD. I think this might be the limiting factor.

Re: The 20S is unhackable (and do we WANT to?)

*Message #10 Posted by [Paul Brogger](#) on 19 June 2002, 7:21 p.m.,
in response to message #6 by Randy Sloyer*

. . . and as we've been reminded (I think by Tony Duell, if I remember correctly) we should keep in mind that there already exists, in very good quantity and quite good quality, an extensible RPN calculator with a PC connection available and a wide body of pertinent expertise, information, and support . . .

The HP-48G/GX.

Really, what would we be buying for all the effort? The difference in form factor (length, thickness) between a 48G and a 42S. Just how much time and effort is that actually worth?

Re: The 20S is unhackable (and do we WANT to?)

*Message #11 Posted by [Christof \(Davis, CA\)](#) on 20 June 2002, 1:53 a.m.,
in response to message #10 by Paul Brogger*

Well, "because it's there"

Alternatively- there are a lot of applications for which I *enjoy* the small, easy, basic, keycode programming of the 20s- I just want it to be RPN and have a big non-overwriteable space on top of the 99 lines where software "loads".

It's beyond my skill level for sure- but the amount I could learn helping- even just tracking the process would be worth donating several calcs. :)

Alternatively- this could be the hardware answer for the perennial "homemade rpn" subject. More than a 4 banger, but not so much more that it becomes impossible.

Keep everything in there, make $|<-| |x^2|$ into the the roll key, and it go with it.

Re: The 20S is unhackable (a part of me does!)

*Message #12 Posted by [Paul Brogger](#) on 20 June 2002, 10:44 a.m.,
in response to message #11 by Christof (Davis, CA)*

I like "Because it's there" as an answer.

I started programming on my HP 29c and on small systems, and have always longed for a general-purpose computer in a Pioneer-sized package.

After half a career of mainframe programming, I still enjoy using my 32s and 42s models. (In fact, I enjoy the thought of using them far more often than in actual practice!) I've used the 28s and 48g some, but there's something compelling about the minimal, and perfectly-realized 42s that strikes a responsive chord with me.

However, my "rational side" keeps nagging, "What, *really* is all the fuss about? Use what works and get on with life!"

I used to note with chagrin that, on my death bed, I wouldn't be terribly concerned with (for example) how our company database encoded "institution type" values in the high-order four bits of a halfword binary value . . . Am I only lately getting around to accepting and acting upon the implications of that realization?

And yet, I don't think I've ever been so alive as when I've been in hot pursuit of a gnarly technical problem, while trusting I possessed the knowlege, skill and tenacity to (real soon now!) arrive at a diagnosis and suggest a cure . . .

Re: The 20S is hackable. Where to?

*Message #13 Posted by [Christof \(Davis, CA\)](#) on 20 June 2002, 1:23 p.m.,
in response to message #12 by Paul Brogger*

I have similar feelings- when I'm building a desk, fixing the VW, hacking some broken config on my mail server. The whole reason I do so much of this myself when there's perfectly good other ways to go about it is that feeling :)

I've sort of flirted with the rpn 4 banger thing- I haven't done a lot of electronics work (especially compared to some of the people here)- but I've built a set of test equipment from kits, some radios from kits, and then more radios from plans.

Seems to me that the 7seg display and relatively uncramped keyboard are advantages in this case, rather than disadvantages.

I suppose I should start looking for display models or abused 20S calcs to take apart. Or, if the clearance prices are good enough....

-Christof

Re: despite the likelihood of more squishy keys

*Message #14 Posted by [Ren](#) on 18 June 2002, 5:36 p.m.,
in response to message #1 by Christof (Davis, CA)*

(Flight of Fancy) The new cell phones that flip open to a PDA with a keyboard...Maybe those will have potential for someone to write an RPN calculator program. The models I've seen pictures of have a distinct keyboard...

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connecting an hp41 to an hp75 with hp-il

Message #1 Posted by [Andy](#) on 17 June 2002, 11:48 a.m.

Is it possible to send a file from an hp41 to an hp75 via hp-il?

From my initial attempts, it looks like both machines want to be the primary controller and they don't recognize each other on the loop.

Thanks,

Andy

Re: connecting an hp41 to an hp75 with hp-il

Message #2 Posted by [John Ioannidis](#) on 17 June 2002, 2:43 p.m.,
in response to message #1 by Andy

There isn't much you can do with a vanilla 41. See if you can get hold of either the HP-IL Development ROM or (preferably) the Extended I/O (82183) ROM. These are very rare - you may have to find a rom emulator and the rom images.

Read the book "Controlling the world with HPIL" (or something like that) available on the HP Museum CDRoms. It's for connecting the 41 to the 71, but much of it should be applicable to the 75 as well. The HP-IL technical reference manual is in there somewhere, too.

Re: connecting an hp41 to an hp75 with hp-il

Message #3 Posted by [Vassilis Prevelakis](#) on 18 June 2002, 5:38 a.m.,
in response to message #2 by John Ioannidis

ji is right as far as the HP-41 is concerned, so it may be easier to attack the problem from the HP-75 side. However, unlike the HP-71B (which has probably the best implementation of HP-IL) the HP-75 has very basic support for HP-IL in its ROM. In order to be able to get anything done you need a library file called HPILCMDS.

Unfortunately I do not have this file, but if someone else can make it available, it will make life much easier for everybody.

You may also want to check the swap file repository in the HPmuseum site. There are numerous programs for the HP-75 there and you may be able to find what you are looking for there.

**vp

Re: connecting an hp41 to an hp75 with hp-il

Message #4 Posted by [Ellis Easley](#) on 18 June 2002, 8:13 a.m.,
in response to message #3 by Vassilis Prevelakis

I have the HPILCMDS lex file for the 75. It came to me on a copy of Swapdisk 12. I don't know if it started out there or not. The fellow who sent it to me said that among the Swapdisks, pretty much all the HP lex files were available. He also sent me the documentation for it (just a few pages) and the documentation (two pages) for, and a copy of, the 75 lex file RIOWIO, which he pointed out was on Swapdisk 2 or 3, one of the four original Swapdisks I had ordered from EduCalc years ago. I just looked on the Museum FTP site collection of separate LIF files and I've already forgotten exactly which Swapdisk but RIOWIO is there. RIOWIO provides low level access to the HPIL chip. It has one function - RIO(n) where n is the HPIL chip register (0 - 7), it returns the register contents as an integer from 0 - 255; and one statement - WIO n,x - where x is an integer from 0 to 255 to be written to register n. You'd have to know all about HPIL to get anywhere with those alone. The HPILCMDS (apparently that's not its official name: according to the documentation, it was provided on a 75 magnetic strip "card" and you are instructed to give it a name when you load it) lex file provides one instruction statement, SENDIO <device code>,<command list>,<data list> and one function, ENTIO\$(<device code>,<command list>) which returns data received from the HPIL as a character string. These are high level programs that take care of all the HPIL overhead. You see examples of their use here and there, such as in the 9114B addendum that tells how to do a single sided format with different machines including the 75.

(I'm giving the Boy Scout salute now...) I promise to do my best to make LIF files from HPILCMDS and RIOWIO, and to scan the few pages of documentation, and to zip the files up in a convenient package. However, I can't promise exactly when I will be finished.

Re: connecting an hp41 to an hp75 with hp-il

*Message #5 Posted by [Vassilis Prevelakis](#) on 19 June 2002, 3:19 a.m.,
in response to message #3 by Vassilis Prevelakis*

I forgot!

Have a look at the "HP-71B Development Utility" manual in the HP Museum CD ROM (4th CD - Manuals). This manual contains programs for exchanging data between the HP 71 and the HP 85. While it may not be exactly what you want, at least it provides some info.

Also the PPC Calc Journal (V10N2, p 20) has a package to exchange data between an HP-85 and an HP-41

****vp**

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Memory Upgrades:42s &48G

Message #1 Posted by [Ron Ross](#) on 17 June 2002, 8:24 a.m.

I am considering doing upgrades for the following two calculators. The 42s would be a simple 32 K RAM upgrade and the Hp48g would be either a 256K or a 512K RAM replacement upgrade. The 48G is fairly easy to Upgrade to 128K but since an Hp48G+ is readily available, it is not feasible to compete. (I would rather have a new calc with an Hp warranty, myself).

I do plan to provide a 30 warranty for the modification and either replace with another or restore with equalivent.

What do you guys think? Will it be worth it? I had a much easier time opening the 48G than I expected and does not show any mangleing that I have seen with other upgrades. However, whether I can do a 512K with a single chip or have to use two 128K chips will determine how worth while the project is.

To get to 128K is pretty straight forward (but as I said, not really worth it when you can get a 48G+). To get to 256K you have to piggy back another SRAM (not fun, and I would rather just land a 512 K RAM onto the pad instead of a 128K). But I am waiting on my 512K ram chip.

Any feedback?? I am listening.

Re: Memory Upgrades:42s &48G

Message #2 Posted by [Paul Brogger](#) on 17 June 2002, 11:26 a.m.,
in response to message #1 by Ron Ross

I did two 256K upgrades to my 48G's. I piggy-backed one 128K chip on top of the other. (Most of the corresponding pins need to be connected above & below, with just a few unique chip-select signals.)

It worked O.K., until the piggy-backed chips started coming loose. As it turned out, simply bending the pins of the upper surface-mount chip down and soldering them to those below didn't last -- there was a slight gap, and a simple solder joint didn't seem to hold up very long.

(And soldering individual tiny wires to connect each pin pair is for me nearly impossible to accomplish.)

I ended up backing 'em each down to 128K.

If I were to try again, I'd try some very fine bare copper wire, and "lash" the chips together, with figure-eight connections pin-for-pin, using one continuous strand (only for those pins that need to be connected, of course). Then, soldering the wire to the pins should be easy, and I would finish by cutting the crossover wires running over the top of the upper chip. (I haven't done this yet, but that's the idea.)

If I remember right, chip-select for 128K or 256K is fairly straightforward, but beyond that, there is extra logic required to generate the signals needed. Pay attention to chip-select logic, and look up all the references you can find. For my purposes, I decided 256K was as complicated as I wanted to go.

Re: Memory Upgrades:42s &48G

*Message #3 Posted by [Ron Ross](#) on 17 June 2002, 12:38 p.m.,
in response to message #2 by Paul Brogger*

I suspected the 256K option is not pretty. I do not plan to use it since I feel the only way to get is to piggy back as you mentioned and then tie each leg individually, and I DONT have any plans to do so. This has been used to get to 640K on a 48GX and I didn't feel that was all that great considering, on a GX non Hp cards can be bought fairly reasonably (ie. a 1 Meg card from Klotz is about \$60 vs a two 512K Ram chips are \$36).

I am planning to make a single 512K RAM chip work, and realize I am going to have to use both inverter pads and probably run extra traces to chip from the inverter for bank selection.

Ideally, I will have 4 banks of 128K each, then merge 0 and 1 to form a 256K main memory, and two 128K banks of 3 & 4.

Re: Memory Upgrades:42s &48G

Message #4 Posted by [Christof \(Davis, CA\)](#) on 17 June 2002, 4:26 p.m.,
in response to message #3 by Ron Ross

Sounds interesting- I've got a couple 48g's. I'd be really interested in banking and battery backup- the idea of a good on board backup for 256k is appealing.

Keep talking about this and I'll finally get around to cracking the 48s....

-Christof

Re: Memory Upgrades: 48G

Message #5 Posted by [Paul Brogger](#) on 17 June 2002, 1:40 p.m.,
in response to message #1 by Ron Ross

I just did a Google search on "hp 48g 512k upgrade" and found all kinds of stuff on this topic -- there's lots of good information available. (One article carries the upgrade to 4Mb!)

Do your research -- the chip select will have to be right for the thing to work, and most of the articles I've seen start from the already-upgraded 256K point and go on from there . . .

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HP-41 Card Redera ROM Versions

Message #1 Posted by [Chris Catotti \(Florida\)](#) on 17 June 2002, 7:42 a.m.

Would everyone plug their card readers in, and check for other ROM versions besides:

CARD RDR 1G

S/N 2542S80536

CARD RDR 1E

S/N 1947A01384

Re: HP-41 Card Redera ROM Versions

Message #2 Posted by [David Smith](#) on 17 June 2002, 11:01 a.m.,
in response to message #1 by Chris Catotti (Florida)

The first card readers were just "CARD READER" with no rev.

Re: HP-41 Card Redera ROM Versions

Message #3 Posted by [Ty Rogers](#) on 17 June 2002, 10:16 p.m.,
in response to message #1 by Chris Catotti (Florida)

CARD RDR 1G s/n 2645S80201

CARD RDR 1E s/n 2051S45841

I think i have seen some:

CARD RDR 1F CARD READER

Re: HP-41 Card Redera ROM Versions

Message #4 Posted by [David Smith](#) on 18 June 2002, 6:37 p.m.,
in response to message #1 by Chris Catotti (Florida)

From my records of around 40 readers about 50% of all readers are "CARD READER". The other 50% are equally split among "1E", "1F", and "1G" versions. I have never seen or heard of a any B,C,D, or H+ versions.

Re: HP-41 Card Redera ROM Versions

Message #5 Posted by [Poul Kaarup \(Denmark\)](#) on 19 June 2002, 10:20 a.m.,
in response to message #1 by Chris Catotti (Florida)

Mine is rev. 1D , but only says CARD READER in CAT2 sn : 2046S45384

Re: HP-41 Card Redera ROM Versions

Message #6 Posted by [David Smith](#) on 19 June 2002, 6:13 p.m.,
in response to message #5 by Poul Kaarup (Denmark)

I am going by what CAT2 reports. Where did you find the 1D info on your unit?

Re: HP-41 Card Redera ROM Versions

Message #7 Posted by [Poul Kaarup \(Denmark\)](#) on 20 June 2002, 12:10 p.m.,
in response to message #6 by David Smith

If you read (I used my HEPAX-module) the last 5 words of a ROM-image, they hold the revision number, ID and the checksum.

My Card reader :

EFFB 004 = D EFFC 031 = 1 EFFD 012 = R EFFE 003 = C EFFF 03D = checksum

that is : CR 1D

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Modules for HP41

Message #1 Posted by [Luis Sisamon](#) on 17 June 2002, 12:29 a.m.

Hi, I hope this is not a very obvious and dumb question. I was wondering if it is possible to dump the HP41 modules into a hex file and download it to the HP41 using any method (optic wand, serial transfer...) More generally, would it be possible to manufacture the modules as they seem to be scarcer than the calculators themselves. Given that HP is no longer active in this field, it should be reasonably easy to reach some form of agreement to solve the intellectual property aspect. Any views?

Re: Modules for HP41

Message #2 Posted by [Chris Catotti \(Florida\)](#) on 17 June 2002, 7:33 a.m.,
in response to message #1 by Luis Sisamon

The HP-41 HEPAX Module by VM Electronics had ROM and a RAM (Maximum 16 K RAM) that allowed you to copy ROM's to mass storage (tape, disk) or to HEPAX RAM from a module or from mass storage. This could then be run as a pseudo-ROM. So yes it can be done as was circa 1985.

Re: Modules for HP41

Message #3 Posted by [Vassilis Prevelakis](#) on 18 June 2002, 5:48 a.m.,
in response to message #2 by Chris Catotti (Florida)

Chris Catotti (Florida) wrote:

> So yes it can be done as was circa 1985.

and in 1969 we could send men to the moon. Can we do it now? NO.

So the question is not what could be done 17 years ago, but what can be done now. From pictures of the device it looks like there are two chips mounted on the module carrier, one that contained the EPROM and another that handled the communications between the EPROM and the HP-41 bus.

Doing the same thing today will probably be so expensive so as to be impractical. That's why HEPAX modules sell for hundreds of dollars.

However, if portability is not a consideration, there are low cost solutions available today (e.g. the MLDL project described elsewhere in the archives) that allow you to download ROMs and run them as if they were modules.

**vp

Re: Modules for HP41

*Message #4 Posted by [Ellis Easley](#) on 18 June 2002, 8:57 a.m.,
in response to message #3 by Vassilis Prevelakis*

The new MLDL project is based on a microcomputer that handles the HP41 serial memory interface and has RAM connected to its parallel bus, IIRC. If you could find a micro with fewer pins (no parallel memory expansion bus - I know they make them) and so a smaller package, and which has a large enough internal (EP- or EEP-)ROM to contain the serial interface and housekeeping code as well as the HP code, you might be able to fit it on a small PCB that would fit inside a 41 module or inside the 41.

A micro running fast enough to emulate the 41 serial memory interface might draw a lot of current, and it would have to stay powered up whenever the 41 is on, to monitor the interface so as to recognize when it is being addressed.

An FPGA could monitor the interface with less power, and its gates could be used to make a ROM, but I've never heard of a PLD with lots of gates that didn't have a proportionally large number of I/O pins (and a big package).

Maybe a small PLD could be used to monitor the 41 interface and then address an 8 pin serial EEPROM. Such a PLD would have to have a relatively large number of "buried registers" - flip-flops whose outputs don't have I/O lines dedicated to them - to keep the pin count low, because you need a number of flip-flops to build a shift register to hold the address for comparison, and some more flip-flops to build a counter or state machine to control the EEPROM.

Re: Modules for HP41

*Message #5 Posted by [Meindert Kuipers](#) on 19 June 2002, 7:57 a.m.,
in response to message #4 by Ellis Easley*

I am working on an FPGA based MLDL. The current specs are available my own site at www.kuipers.to/hp41. I just haven't found the time to complete the project, not to publish the VHDL descriptions that I have as of now. Doing a very basic MLDL in FPGA is not very difficult, but some of the functionality the I want to add is a bit more tricky. Power consumption is a potential issue. I would suggest to take Warren Furlow's excellent V41 emulator as a start. I does work as an MLDL (although it is not mentioned in any of the docs as far as I know, the WROM, hex 040 is implemented), with the right module. I managed to have the David Assembler working on it. Now just wait for the real thing. VHDL specialists are welcome to take part in the project.

BTW, I have just found some old docs (including the David Assem manual) that I intend to scan and put online.

Meindert

Re: Modules for HP41

*Message #6 Posted by [Ellis Easley](#) on 19 June 2002, 12:30 p.m.,
in response to message #5 by Meindert Kuipers*

I have been searching the Forum Archives this morning and I realize I have mixed up bits and pieces of earlier discussions, including your project and John Ioannidis's project using a PIC. Off the top of your head, is there a small package PLD (maybe 28 pins or less) that has enough internal registers to do the 41C interface and address a serial EEPROM for a ROM only implimentation (EEPROM programmed externally)? This addresses the idea of producing new modules (assuming one has the rights to the code inside!)

Re: Modules for HP41

*Message #7 Posted by [Meindert Kuipers](#) on 19 June 2002, 2:59 p.m.,
in response to message #6 by Ellis Easley*

The serial EEPROM is something that will probably work with a small PLD or FPGA. It is just that the decoding needs quite a few registers. I will look into this. The next thing is how to get the code into the EEPROM. Most obvious is through a PC interface, but that is complicated enough with my FPGA. I am open to further ideas ...

Meindert

Re: Modules for HP41

*Message #8 Posted by [Ellis Easley](#) on 19 June 2002, 5:02 p.m.,
in response to message #7 by Meindert Kuipers*

I haven't actually done it, but I have read data sheets for serial EEPROMS and I have seen circuits incorporating them. As I understand it, they have a clock line, a data in line and a data out line. You clock commands into the data in line, then either clock data in or out through the appropriate line. As I recall, the only critical timing on write is that you have to make sure power doesn't go away for a few milliseconds. This idea of building new ROM modules would allow programming to be done only once, maybe through another connector.

I'm sure there are complications. I just looked on the Microchip website and downloaded some app notes and data sheets. I saw parts up to 512K bits. Ideally, they would contain 10 bit words and each word would be individually addressable. In reality they are available with 8 or 16 bit words. While the small ones (1K bit) might be word-addressable, it looks like the bigger ones are organized in pages. Does the 41C have a Ready line? It might be that the address isn't available early enough to clock it in, along with the command info, so the output data is available when it needs to be.

I'll do some reading and let you know what I find. I'll study the EEPROM timing and get more familiar with the 41C timing.

Re: Modules for HP41

Message #9 Posted by [David Smith](#) on 18 June 2002, 6:35 p.m.,
in response to message #1 by Luis Sisamon

From my records of around 40 readers about 50% of all readers are "CARD READER". The other 50% are equally split among "1E", "1F", and "1G" versions. I have never seen or heard of a any B,C,D, or H+ versions.

Re: Modules for HP41

Message #10 Posted by [John Ioannidis](#) on 20 June 2002, 1:28 p.m.,
in response to message #1 by Luis Sisamon

Even though I have built my own ROM emulator ((still) preliminary web page at <http://www.tla.org/hp41/>), the only pleasure I derived from it was actually building it!

I wonder what other people here would actually do with the ability to download arbitrary code into a module-sized unit. Is anyone here really using their HP41 for anything other than sentimental reasons? I hope the answer is "yes", but I can't think of one.

Re: Modules for HP41

Message #11 Posted by [Ellis Easley](#) on 21 June 2002, 8:31 a.m.,
in response to message #10 by John Ioannidis

I think the beginning of this thread was the somewhat mercenary idea of producing new copies of rare modules. The question of rights has been set aside for the moment! But if such a programmable module was available, it could also be used for new programs. Also, can't user code be stored in ROM modules? People could put their important programs in modules for safekeeping. (Of course, a popular topic here is how to make 41's forget!) Or if not for safekeeping, then for installing new programs more quickly (and easily, in the field) than from card, tape, or disk - even if it is just for sentimental purposes!

For my part, I always prefer broken things to brand-new working ones because (1) I love having an excuse to open things up and (2) I get a lot more enjoyment from trying to fix things, or figure out how they work, than I do from using them.

Re: Modules for HP41

Message #12 Posted by [Luis Sisamon](#) on 2 July 2002, 11:24 a.m.,
in response to message #11 by Ellis Easley

First, thank for all the answers. I think now I have a better understanding of what I do not know 8-)

Maybe my first question should be if there is any difference between the contents of a module and a user program. If not it should be possible to load the module contents (card reader, serial-HP-IL, wand,...) in the RAM memory. Or, if there is any reasonable possibility of manufacturing modules, you could use them to store libraries of routines. I think, this in fact should have been my first question.

Regarding property issues, I thought HP has donated this ROM contents some time after discontinuing the HP41 series, maybe I am wrong (correct me if this is the case).

Finally, regarding the mercenary idea, I do not think this would be very profitable. High prices are commanded by collectors and I do not believe people would pay "collector" prices for items that can be produced today... maybe I am wrong people can be weird sometimes.

Certainly there could be a certain market for producing modules for some of the hobbyists here. I would be happy to be able use a customised module service if available, and probably there is more people like me who would enjoy their machines more if they had this option.

I think this could somehow compensate the people who are working on this; the money they could make would certainly not compensate their skills, time and effort but could be certainly a sweetener (this would depend on the incremental cost of producing a module being not so high).

Re: Modules for HP41

*Message #13 Posted by [Bill Smith](#) on 21 June 2002, 1:31 p.m.,
in response to message #10 by John Ioannidis*

actually, i still use my HP41 to run a couple of lengthy Users Library programs that i'm too busy/lazy to adapt to a faster platform.

i have successfully run one of the ~1000 line programs using the Calc41 software emulator on the HP200LX. someday, i'll figure out why the other won't. until then, it's not a museum piece.

/bs

Re: Modules for HP41

*Message #14 Posted by [Mike \(Stgt\)](#) on 2 July 2002, 12:19 p.m.,
in response to message #13 by Bill Smith*

There are 3 (me and 2 others) I know who run HP-41 code on the 200LX using JF Ganiers emu41. But what is Calc41? Could you pls show an URL?

TIA

Ciao.....Mike

Re: Modules for HP41

*Message #15 Posted by [Bill Smith](#) on 3 July 2002, 6:50 p.m.,
in response to message #14 by Mike (Stgt)*

Calc41 was produced by Tacit Logic Systems, of Beaverton?? Oregon. They also produced Trans41 for file transfers and translations (see the Articles on Leo Duran User Code and related issues).

I think TLS is out of business. I bought a copy from EduCalc about 1986, and it may be V2 or 3. It runs on DOS, and in general does very well on the 200LX. Most programs copied using Trans41 run flawlessly. One nice feature is the PC can simulate a printer. I never had one until a couple years ago when i bought a used 2225B along with the 82973A PC adapter. There were several User's Library programs I remember having to modify extensively to run without a printer.

I have my 100LX here at work, but don't have Calc41 on it, so don't know off the top of my head that it works; but it should. I'll check over the weekend.

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Short & Sweet Math Challenges for HP fans #4 [LONG!]

Message #1 Posted by [Ex-PPC member](#) on 16 June 2002, 9:35 p.m.

Welcome to Short & Sweet Math Challenges for HP fans #4. Not so "short" this time, but rather interesting, I hope ...

Foreword

Last week we were searching for integer numbers having some interesting property. This time, we depart from the integer realm and dive deep into the real numbers realm. As you know, many amazing things lurk in the depths, be it marine depths, interstellar space depths, whatever. Same thing for mathematics, once you stop scratching the surface and really go down, you may find lots of unexpected wonders waiting to be found. This week I'm challenging you to leave the comfortable built-in precision of your HP calculator, be it 10, 12, or 20 digits, and really go for multiprecision calculations, I'm talking 50 decimal digits ...

Sounds frightening ? Too difficult ? It shouldn't be. Back in the good old times of PPC, people were overcoming the built-in accuracy limitations of their HP-65s, HP-67s, and HP-41s, and writing wonderfully clever programs to perform computations to high-precision. Perhaps some of you will remember programs to compute the constant Pi to 1000+ digits and more on a 41C. Outside of PPC, you could find programs to compute multi-precision square roots and other functions in the HP User's Library. If people could do that with their 65s, 67s, and 41Cs back in the early eighties, there's no reason why you shouldn't try now, specially using the newer HP models, which boast much faster CPUs and much larger RAM.

So, I'm proposing you a challenge, were I will ask you to perform several computations to a prescribed high precision, then explain the amazing results you'll get. That will be the second half of the challenge. The first is you'll need to develop a multiprecision program, library or package to be able to perform said computations on your HP.

You may beg, steal or borrow such a program, library or package, or you can write one yourself. For those of you wanting to try, I'll give some guidelines at the bottom of this posting. Be assured that this challenge is perfectly feasible, and even easy ! But you'll need a high performance HP calc. I think the barest minimum would be an HP-41CV, and you'll be much advised to use instead an HP-42S, HP-71B, or HP-48/49 for this task. For ease of presentation and explanation, all guidelines, examples and snippets of code will be given for an HP-71B's native BASIC language. They can be easily adapted/converted to RPN or RPL.

The Challenge (#4):

1. If you compute the square root of 308600 and 308699 to 41 decimal places, you'll get:

```
sqrt(308600) = 555.51777649324598368631537686142297732063495
sqrt(308699) = 555.60687540742330162311819242204090515640356
```

which look as expected, long sequences of random-looking decimal digits, with no periodicity or pattern at all.

But now compute the square root of 308642 to that same precision, 41 decimal places. Explain the amazing result. Can you find other numbers which behave like this ?

2. Compute $987654321/123456789$ to 25 decimal places. Explain the result. In particular, is it just sheer coincidence that 729 ($=9^3$) which appears isolated at the 8th decimal position ?
3. Compute $E^{(\text{PI} \cdot \text{Sqrt}(163))}$ to 12 decimal places (i.e: to 12 digits after the decimal point), where $E = 2.718...$, $\text{PI} = 3.14159...$, and Sqrt is the square root function. Explain the amazing result. Can you find any other values (instead of 163) behaving like this ?
4. This doesn't really require high precision, but it's funny: compute a real root for the following equation between 6 and 8 [Note: Log

(x) is base-10 logarithm, not $\text{Ln}(x)$]. Give the root accurate to 12 decimal places:

$$\text{Log}(x) - x - \text{Sqrt}(x-2) + \text{Sqrt}(19*x) = \text{PI}$$

Optional: Guidelines for writing a multiprecision program/library/package for your HP calculator:

There are many ways to do it, but you can follow these simple guidelines. They aren't optimal, but will get the job done easily:

1. Chose a fixed-format representation for your multiprecision numbers, for instance

`(sign)50digits.50digits`

i.e: 50 digits for the integer part, 50 digits for the decimal part, plus sign.

2. Store those digits internally in blocks of, say, 5 digits, in an array or consecutive storage registers. Such a number will occupy 20 elements, the position of the decimal point is implicitly assumed to be between blocks 10th and 11th.
3. Write a procedure to allow the user to input such a number, converting the user's input to the internal representation. Along the same line, write a procedure to convert a normal, 10- or 12-digit number as used in your HP calculator, to the internal representation for multiprecision.
4. Write a procedure to output a number in internal representation to a user-readable format. Similarly, write a procedure to convert a multiprecision value to the 10- or 12-digit format used natively by your calculator.
5. Write a procedure to change the sign of a multiprecision value
6. Write a procedure to add two multiprecision values and give the result as another multiprecision value. You just need to:
 - establish a loop which will sum all corresponding blocks (taking into account the numbers' signs). As you are using 5-digit blocks, they will never overflow, as adding up two 5-digits numbers will only result in a 6-digit number at most.
 - establish a second loop which will normalize all blocks to be 5-digits again, propagating carries from one block to the previous if its size was 6 digits.
7. Write a procedure to subtract two multiprecision values. You just need to call the procedure for changing the sign of the second one, then call the add procedure.
8. Write a procedure to multiply two multiprecision values. You just need to perform the multiplication as you would by hand, but using blocks of 5 digits at a time, and taking proper care of the carries, and of the final result. No intermediate overflows are possible, because multiplying two 5-digit numbers together will give a 10-digit result at most. Assuming your elements can hold 10 to 12 digits, there's no problem.
9. Write a procedure to divide one multiprecision number (A) by another (B). Here you can reduce the problem to multiplication, by using Newton's method to compute the reciprocal of the second number (B): assuming x_0 to be a good approximation to $1/B$ then a better approximation is x_1 , computed as

$$x_1 = x_0 * (2 - B * x_0)$$

which means we can compute reciprocals without division, just using multiplication. For instance, if $x_0=0.3$ is an approximation to the reciprocal of $B=3.7$, then

$$x_1 = 0.3 * (2 - 3.7 * 0.3) = 0.267$$

$$x_2 = 0.267 * (2 - 3.7 * 0.267) = 0.2702307$$

$$x_3 = 0.2702307 * (2 - 3.7 * 0.2702307) = 0.27027026$$

are better approximations. The iterations converge quadratically, i.e: you get double the number of exact digits after each. As your

initial approximation, you can use 1/B, which you can get to 10 or 12 digits by using the 1/X function of your HP calc ! Write a procedure to convert that value to the internal representation of multiprecision numbers, then compute 1/B using the iterative method above. As your initial 1/B is already accurate to 10 or 12 digits, just 2 or 3 iterations will give you 1/B accurate to in excess of 50 digits !

Once you've got 1/B to 50-digit precision, then A/B reduces to A*(1/B), which you can compute with just one extra multiprecision multiplication.

10. Write a procedure to compute the square root of a multiprecision value (A). Just use Newton's method once again:

$$x1 = (x0 + A/x0) / 2$$

As your initial approximation, just use the value of SQRT(A) given by the square root built-in function. This will give you a value accurate to 10 digits, and then just 2 or 3 iterations of the procedure above will give you a square root accurate to in excess of 50 digits.

11. Include in your program the constant PI accurate to 50 decimal places. You can use this value:

$$PI = 3.14159265358979323846264338327950288419716939937511$$

12. Finally, write a procedure to compute E^X where X is a multiprecision value. One possible way is to use its Taylor's Series Expansion, like this:

$$E^X = 1 + X + X^2/2! + X^3/3! + X^4/4! + \dots + X^n/n! + \dots$$

where you should stop when the next term to add would be smaller than 1E-50. Of course, n! is the factorial function = 1*2*3*4*...*n

There are a number of tricks you could try to accelerate convergence. For instance, you could use the identity:

$$E^X = (E^{(X/2)})^2$$

i.e., you can first divide X by 2, then compute E^(X/2) and square the result. As the argument X is smaller, convergence of the Taylor Series will be faster. Similarly, you could divide X by 8, then square the result three times in a row, etc.

Re: Short & Sweet Math Challenges for HP fans #4 [LONG!]

Message #2 Posted by [katie](#) on 17 June 2002, 12:29 a.m.,

in response to message #1 by Ex-PPC member

FYI,

I posted a program that I wrote (see the articles forum) some time ago to compute Pi to 99 digits on a 32SII. It uses many of the techniques that you mention for long precision arithmetic. Since it's only 99 digits the convergence time is pretty short (11 minutes), but the algorithm isn't particularly efficient just very compact (it needs to be given the severe memory limitation of the 32SII.)

-Katie

Begin of solution question #1

Message #3 Posted by [thibaut.be](#) on 18 June 2002, 10:38 a.m.,
in response to message #1 by Ex-PPC member

The inverse of 9, 90, 909009 and such numbers give interesting results : .11111, .011111, .000001100, ...

So a value of 555.5555578 is *almost* like 555.55555555, hence $5/9 * 1000$ or $5000/9$

If you square this value, you get $25\,000\,000 / 81$ which is according to my CV 308 641.9753, or a very close value to 308 642.

Re: Begin of solution question #1

Message #4 Posted by [Fernando del Rey](#) on 26 June 2002, 5:59 p.m.,
in response to message #3 by thibaut.be

The square root of 308642 is:

555.5555777777777333333511111102222227199999 ...

But I can't figure out why such a curious pattern of digits.

Any ideas from the clever members of this forum?

Re: Short & Sweet Math Challenges for HP fans #4 [LONG!]

Message #5 Posted by [Fernando del Rey](#) on 26 June 2002, 2:56 a.m.,
in response to message #1 by Ex-PPC member

I obtained the solution to Question #4 on my 42S and the result is:

$x = 7.00000001061$

Real close to 7!

The solver converged very quickly given the interval 6 to 8 to start the search.

Why this interesting result? I have no clue. I guess it's just a numerical curiosity, but perhaps Mr. Ex-PPC Member will give us an explanation.

Still no answers have been given to questions 2 and 3. Anyone still working on it?

Re: S&SMC #4: Final Remarks [LONG!]

Message #6 Posted by [Ex-PPC member](#) on 29 June 2002, 10:26 p.m.,
in response to message #1 by Ex-PPC member

Foreword

Well, it seems S&SMC #4 didn't catch the fancy of HP lovers this time, perhaps the subject matter wasn't interesting enough, or it was deemed too difficult or time-consuming for a casual approach. Certainly, most of us are always too busy to be able to commit scarce free time to everything we would like to, so I'm particularly grateful to **Mr. Thibaut** and **Mr. Del Ray** for their kind contributions.

That said, here are some answers to the questions raised in S&SMC #4:

Question 1.

If you compute the square root of 308600 and 308699 to 41 decimal places, you'll get:

$$\begin{aligned}\text{sqrt}(308600) &= 555.51777649324598368631537686142297732063495 \\ \text{sqrt}(308699) &= 555.60687540742330162311819242204090515640356\end{aligned}$$

which look as expected, long sequences of random-looking decimal digits, with no periodicity or pattern at all.

But now compute the square root of 308642 to that same precision, 41 decimal places. Explain the amazing result. Can you find other numbers which behave like this ?

- **The raw facts:**

Using your HP-41C and your multiprecision program, you first determine that, to 41 decimal places :

$$\text{sqrt}(308642) = 555.5555777777773333333511111102222227199999$$

which indeed shows some *remarkable pattern*, unlike the other square roots above.

- **The explanation:**

From the square root decimal expansion, it's clear that $\text{sqrt}(308642)$ is very close to $555.5555\dots = 5000/9$. So, with d being some small value, we have:

$$308642 = (5000/9)^2 + d$$

where $d = 308642 - (5000/9)^2 = 2/81$, small as expected. Thus, we have:

$$308642 = (5000/9)^2 + 2/81$$

and factoring $(5000/9)^2$ out from the right side, we have:

$$308642 = (5000/9)^2 * (1 + (2/81)/(5000/9)^2) = (5000/9)^2 * (1 + 1/12500000)$$

now, taking square roots in both sides:

$$\text{sqrt}(308642) = \text{sqrt}[(5000/9)^2 * (1 + 1/12500000)] = (5000/9) * \text{sqrt}(1 + 1/12500000)$$

Finally, our CAS-capable HP calc will give us the Taylor Series Expansion for $\text{sqrt}(1+x)$:

$$\text{sqrt}(1 + x) = 1 + x/2 - x^2/8 + x^3/16 + \dots$$

which for $x = 1/12500000$ yields:

$$\begin{aligned}\text{sqrt}(1 + 1/12500000) &= 1 + 1/25000000 - 1/1250000000000000 + \dots \\ &= 1.00000003999999920000003199999840000008959999\dots\end{aligned}$$

and thus we have:

$$\begin{aligned}\text{sqrt}(308642) &= (5000/9) * \text{sqrt}(1 + 1/12500000) \\ &= 555.5555555555\dots * \\ &1.00000003999999920000003199999840000008959999\dots\end{aligned}$$

and as we are multiplying together two heavily patterned numbers, it is only to be expected that their product will feature some pattern too, at least initially:

$$= 555.555577777777733333351111102222227199999 \dots$$

- **Finding more:**

This will be left as an (easy) exercise. Just a hint: inspired by this particular example, write a short program for your HP to try and find periodic fractions $n/9$ such that $(n/9)^2$ comes as close to being an integer as possible. The square root of that integer will probably be an interestingly patterned number.

Question 2.

Compute $987654321/123456789$ to 25 decimal places. Explain the result. In particular, is it just sheer coincidence that 729 ($=9^3$) which appears isolated at the 8th decimal position ?

- **The raw facts:**

Using your HP42S and your multiprecision program, you find that:

$$987654321/123456789 = 8.0000000729000006633900060368490 \dots$$

which is *very nearly* 8, except for the isolated 729, 66339, 6036849 ... Now, $729 = 9^3$. This isn't a coincidence, as we will see.

- **Explanation:**

Using our prime factor finder program or built-in function, we find that:

$$\begin{array}{rcl} 729 & = & 9^3 \\ 66339 & = & 9^3 * 91 \\ 6036849 & = & 9^3 * 91^2 \end{array} \quad \begin{array}{rcl} & = & 9^3 * 91^0 \\ & = & 9^3 * 91^1 \\ & = & 9^3 * 91^2 \end{array}$$

so we can *conjecture* that:

$$987654321/123456789 = 8 + 9^3 * 10^{-10} * \text{SUM}[N=0, N=\text{INFINITE}, (91 * 10^{-10})^N]$$

where the sum goes from $N=0$ to $N=\text{infinite}$. This can be proved very easily using the well-known summation formula for geometric progressions, as this happens to be one.

Question 3.

Compute $E^{(PI * \text{Sqrt}(163))}$ to 12 decimal places (i.e: to 12 digits after the decimal point), where $E = 2.718\dots$, $PI = 3.14159\dots$, and Sqrt is the square root function. Explain the amazing result. Can you find any other values (instead of 163) behaving like this ?

- **The raw facts:**

Using your HP-71B and your multiprecision program, you first find that, to 12 decimal places:

$$E^{(PI * \text{Sqrt}(163))} = 262537412640768743.999999999999 \dots$$

which comes *extremely close* to being an integer.

- **The explanation:**

This time the explanation is more involved, has to do with the theory of modular functions, and can't be given here in full without making this already long post much longer. Interested people can have a look at this very interesting URL:

It's in French, but never mind, the numbers and formulas speak for themselves.

- **Finding more:**

It's quite easy to write a program on your HP calc to test if $Z = e^{(\pi \sqrt{N})}$ is nearly an integer for various values of N. If you do write and run it, it should find these values:

N =	25	-> Z =	6635623.9993+
=	37	-> Z =	199148647.99997+
=	43	-> Z =	884736743.9997+
=	58	-> Z =	24591257751.9999998+
=	67	-> Z =	147197952743.999998+
=	74	-> Z =	545518122089.9991+
=	148	-> Z =	39660184000219160.0009+
=	163	-> Z =	262537412640768743.9999999999992+

Other such values include also 232, 268, 522, 652, and 719, among infinitely many others, but 163 is still the most amazing of them all.

As for question 4, the solution was already given by Mr. Del Rey. It was a simple curiosity, a coincidence, no explanation necessary or possible, and it didn't require multiprecision at all, anyone could have solved it using any HP model with a solver or a very simple root finding program. I was somewhat surprised that nobody posted the solution much sooner.

Conclusion

Well, it's a pity that no one produced any code to do even basic multiprecision arithmetic in their favorite HP calc, despite the simple guidelines I offered. Anyway, just to show that it isn't as difficult or time-consuming as it seems, I'm including here a short snippet of sample code I wrote for this section. The code is intended to be used as a basis for your own ideas and it isn't optimized at all.

Sample Code

- This sample code is written in the native HP-71B BASIC language and implements a user-defined string function, FNM\$, which accepts as input two strings representing multiprecision integer values and returns a string result representing the integer value of their product.

- **Listing:**

```
10 DEF FNM$[200](A$,B$) @ OPTION BASE 1 @ DIM M,N,L,P,I,J,N1,N2,N3 @ N1=LEN(A$)
20 N2=LEN(B$) @ N3=N1+N2 @ DIM A(N1),B(N2),C(N3),C$(N3)
30 FOR I=1 TO N1 @ A(N1+1-I)=VAL(A$[I,I]) @ NEXT I
40 FOR I=1 TO N2 @ B(N2+1-I)=VAL(B$[I,I]) @ NEXT I
50 FOR I=1 TO N2 @ M=B(I) @ IF NOT RES THEN 100
60 L=I @ FOR J=1 TO N1 @ N=A(J) @ IF NOT RES THEN 90
70 P=M*N @ C(L)=C(L)+RES @ P=RES
80 IF RES>9 THEN C(L)=RMD(P,10) @ C(L+1)=C(L+1)+P DIV 10
90 L=L+1 @ NEXT J
100 NEXT I
110 FOR I=N3 TO 1 STEP -1 @ IF C(I) THEN 130
120 NEXT I
130 C$="" @ FOR I=I TO 1 STEP -1 @ C$=C$&STR$(C(I)) @ NEXT I @ IF C$="" THEN C
$="0"
140 FNM$=C$ @ END DEF
```

- **Examples:**

Given: A\$="31415926535897932384"
 B\$="2236067977499"

We find:

FNM\$(A\$,B\$) = "70248147310382454885786735427616"
FNM\$(A\$,A\$) = "986960440108935861844089101446235923456"
FNM\$(B\$,B\$) = "4999999999996468370295001"

and to top it all:

FNM\$(FNM\$(A\$,B\$),FNM\$(A\$,B\$)) =
=
"4934802200541193730412497902865991365066527558841386130375443456"

• **Some notes:**

1. We are representing multiprecision numbers as strings (instead of arrays) and multiprecision operations as user-defined functions. This makes it much more easy for the user to use them interactively, from the command line, no need to write a small BASIC program to execute them.
2. Line 10 defines FNM\$ as a user-defined string function that can return a string up to 200 characters in length. So the maximum result is limited to 200 digits.
3. The string parameters are meant to represent multiprecision integer values only, not floating point ones. The result will be an integer as well.
4. The multiprecision integers represented as strings are stored internally in full-precision numeric arrays, one single digit per array element. Then, pairs of single digits are multiplied at a time in a doubly nested loop. This is *extremely* inefficient: the HP-71B can hold integers up to 12 digits long on an array element, so your improved version should store and multiply pairs of 5 or 6 digits at a time. This would increase speed by a factor of 20 or more
5. Lines 30 and 40 store each digit in their own numeric array element
6. The commands "IF NOT RES" in lines 50 and 60 skip digits equal to 0. By the way, RES returns the "LASTX" value, i.e.: the last result in a calculation. It's faster than using a variable, and saves memory as well.
7. Lines 70 and 80 multiply each pair of single digits and take care of the carry if the result exceeds one digit.
8. Lines 110 and 120 avoid outputting leading zeroes
9. Line 130 reassembles the result back to a string

Re: S&SMC #4 & #3 Final Remarks...

Message #7 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 30 June 2002, 9:06 a.m.,
in response to message #6 by Ex-PPC member

Thank you again for an interesting challenge and for the enlightning final remarks. While this time I have had not enough time or interest to participate trying to solve the questions, I think the two-week period is more appropriate for the S&SMCs. Let us hope that the reduced participation in the last episode will not induce Mr. Ex-PPC Member to quit challenging us. It remains to be proved that the participation is larger in odd-numbered S&SMCs than in even-numbered cases. :-)

BTM, Mr. Ex-PPC, while I am fully aware I was late with my final response to S&SMC #3, and also do know that the examples you give in your final remarks were not optimized (so no comparisons are to be made), still I would had liked some comments about my answer (of course, you are not obliged at all to provide such); since I think the program I submitted have a couple of interesting features to discuss. Of course, this could be done by email, but not having your name or email address only left this option for me to voice this.

Of course, I mean no critique or complaint, and please disregard any idiomatic expression which may suggest that.

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HP 10, 11, 12, etc. C series.

Message #1 Posted by [Fred Rumak](#) on 16 June 2002, 9:33 p.m.

You know those neat little sticky rubber "feet" on the bottom of the above mentioned calculators. I would like to get a new set of four. Does any body know where I might find them? Hope to hear from you.

Regards,

Fred

d.i.y. feet

Message #2 Posted by [db\(martinez,california\)](#) on 16 June 2002, 9:50 p.m.,
in response to message #1 by Fred Rumak

a \$2 bicycle tube patch kit (the old fashioned cheap kind) will have enough rubber sheet of about the right thickness to do all five of your 10 series units. it comes with a peel-n-stick backing too, but that might not be strong enough alone without a bit of glue on the calc.

Re: d.i.y. feet

Message #3 Posted by [David Smith](#) on 17 June 2002, 10:59 a.m.,
in response to message #2 by db(martinez,california)

Almost all tire patches are too thin. The rubber feet on the HP41 and Spice series are around .065 thick. A piece of heavy inner tube works better. Use double sided sticky Scotch tape to attach.

Re: d.i.y. feet

*Message #4 Posted by [Nick](#) on 17 June 2002, 4:49 p.m.,
in response to message #3 by David Smith*

You can buy rubber sheets from Hydraulic stores, or some auto parts stores that offer material for rubber gaskets. A square foot is probably a lifetime supply of feet for HP calculators. I noticed that HP-41 and HP-30 models use them also.

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"chinese made"

Message #1 Posted by [steve leong](#) on 15 June 2002, 6:00 p.m.

whene people refer to chinese made are these the malasian or indonesion made calc's?

Re: "chinese made"

Message #2 Posted by [Mike Sebastian \(Texas\)](#) on 15 June 2002, 11:53 p.m.,
in response to message #1 by steve leong

When we refer to a Chinese made calculator, it is actually made in China and will say "Made in China" on the packaging and on the back of the calculator. Further, the serial number will begin with "CN." If the calculator is made in Malasia or Indonesia it will be labeled with the appropriate country of origin.

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HP 19B II

Message #1 Posted by [Cesar A. Comerlato](#) on 15 June 2002, 4:41 p.m.

Hello,

How do I run the self tests of the HP 19B Business Consultant calculator?

Thanks in advance, Cesar

Re: HP 19B II

Message #2 Posted by [thibaut.be](#) on 15 June 2002, 6:27 p.m.,
in response to message #1 by Cesar A. Comerlato

Well, ON + the function keys (=top line keys) should perform the different self tests.

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hp 32sII

Message #1 Posted by [steve leong](#) on 15 June 2002, 3:27 p.m.

i have seen some 32sII's with a silver border around the display are these the ones with the blue lilac color scheme? mine has a brown border and orange/light blue color scheme

please advise

Thank you

Re: hp 32sII

Message #2 Posted by [Randy Sloyer](#) on 15 June 2002, 4:11 p.m.,
in response to message #1 by steve leong

Yes, the silver border has the green/lilac color keys.

FWIW, I have both and prefer the older scheme, personally.

The only issue I can see with respect to quality is that I know the keys on the newer (silver) units are printed keytops. I don't have my older 32sii here to check, but I suspect pre Indonesia units probably have double-shot tops (where the number/symbol is molded in). This was one of the HP calculator hallmarks of quality which disappeared with the move.

I saw on your earlier post the question:

BTW = By The Way FWIW = For What Its Worth

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HP-67 battery pack

Message #1 Posted by [Jack Warner](#) on 15 June 2002, 3:12 p.m.

Does anyone know where I could get a battery pack for my HP-67? Perhaps an old one (which I don't have) could be rigged with new cells?

Re: HP-67 battery pack

Message #2 Posted by [Juergen Rodenkirchen](#) on 15 June 2002, 5:32 p.m.,
in response to message #1 by Jack Warner

Freshly rebuild battery packs for the hp-67 are frequently offered at e-bay. Also, look at the "Repairs & Batteries" site here at MoHPC to find some useful addresses of people selling/repairing them. Hope you'll find what you're looking for! Good luck :-)

Re: HP-67 battery pack

Message #3 Posted by [Jack Warner](#) on 16 June 2002, 6:42 p.m.,
in response to message #2 by Juergen Rodenkirchen

Thanks... I had tried e-bay, but must have timed it wrong. But thanks to some new leads, I found an auction that had just closed, but now have someone to at least contact who appears make replacement battery packs.

Thanks for the help and advice.

Re: HP-67 battery pack

Message #4 Posted by [Larry](#) on 15 June 2002, 5:33 p.m.,
in response to message #1 by Jack Warner

See:

<http://www.hpmuseum.org/repair.htm>

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hp 32sII

Message #1 Posted by [steve leong](#) on 15 June 2002, 11:22 a.m.

I was curious if the 32sII was made anywhere else beside Indonesia?

Re: hp 32sII

Message #2 Posted by [emartin](#) on 15 June 2002, 11:29 a.m.,
in response to message #1 by steve leong

Earlier versions were also made in Singapore, up until the mid-90's. The Singapore versions are all the original blue/orange color scheme. Early Indonesia models (until ~ 2000) were also blue/orange, until ACO redesigned them and introduced the newer green/lilac models.

BTW, the build quality appears to be significantly worse on the newer models with the green/lilac scheme. They are probably just as durable, but little things such as the fit of the metal cover/bezel, registration of different print colors, etc. are sloppy and definitely not up to the "Old HP" standards.

Re: hp 32sII

Message #3 Posted by [steve leong](#) on 15 June 2002, 3:29 p.m.,
in response to message #2 by emartin

what does BTW stand for?

also i have seen some 32sII's with a silver border around the display are these the ones with the new color scheme that are not as well made?

Re: hp 32sII

Message #4 Posted by [Karl Schneider](#) on 15 June 2002, 5:21 p.m.,
in response to message #3 by steve leong

Steve --

BTW "By The Way" -- standard abbreviation for electronic correspondence.

Yes, the green/lilac colors are the ones with the very light grey bezel around the display. Numbers on the keys seem to be sprayed on, not always straight and centered. I've seen this on the Chinese-made 12C's. I hope the paint doesn't wear off...

-- Karl

Re: hp 32sII

Message #5 Posted by [Christof \(Davis, CA\)](#) on 15 June 2002, 10:03 p.m.,
in response to message #4 by Karl Schneider

Hi, steve- I'm going to just reply to everything in one thread- keeps the display neater on my end :)

Chinese made calculators are made in china, as opposed to the indonesian made ones (which are not made in china, and have different country codes). If you look through some of the information on this website, there's a good section on decoding serial numbers- it doesn't seem to include the more recent china serial numbers, but it does explain the indonesian serial numbers.

More information on the chinese serial numbers (and related information like the bugs in some indonesian hp49g calculators) is available in the hp48 newsgroup (comp.sys.hp48) where the topic has come up on a few recent occasions.

The difference in colors (blue and orange versus the newer green and lilac) seems to reflect a change in major production. Not all of these elements have occurred at the same time, but more recent calculators (since the 48g) seem to have a new color scheme. (I prefer the old one, myself). When they changed the 32sii to that new color scheme, along with the 20s, it seems to have been right around the time they also cheapened the production process and got rid of much of the real quality elements of hp design. The 12c also changed- the internals are now different (and presumably of lower quality, though I never use 12c calcs).

-Christof

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Does the memory of my HP-41CV break?

Message #1 Posted by [Hiroshi Ito](#) on 14 June 2002, 10:59 p.m.

Teach, please. Does the memory of my HP-41CV break? I have HP-41CV and HP-41CX. #1 I push a "[<-] + [on]" key at the same time. #2 A calculator indicates "MEMORY LOST". #3 I push a [PROG] key. #4 "HP-41CX" is indicated with "00 REG 219". #5 "HP-41CV" is indicated with "00 REG 46". I don't know why the indication of "HP-41CX" and "HP-41CV" is different. Does the memory of "HP-41CV" break? Or, is the default value of "HP-41CX" and "HP-41CV" only just different, and may I be relieved?

Re: Does the memory of my HP-41CV break?

Message #2 Posted by [db\(martinez,california\)](#) on 15 June 2002, 12:46 a.m.,
in response to message #1 by Hiroshi Ito

kom bam wa.

46 is what the cv is supposed to say upon waking up from a memory lost. it's because of the default "size". the cx has a default size of 100. so i guess the default size of the cv is about 272? your cx has a "size?" function but the cv doesn't.

o ya so me (sorry about the spelling)

Re: Does the memory of my HP-41CV break?

*Message #3 Posted by [thibaut.be](#) on 15 June 2002, 4:16 a.m.,
in response to message #2 by db(martinez,california)*

Actually the "size" function exists on the C, CV and CX series. This function allows a manual repartition between program lines and registers, and this is needed even on the C.

The default size of the CX is different than on the CV (don't remember by heart, I'll have a look at the manual), but the total memory size is exactly the same. Additional memory can be added to the CX with the X-Memory module, but this is another story. The result shown by Hiroshi are therefore absolutely normal.

Re: Does the memory of my HP-41CV break?

*Message #4 Posted by [Hiroshi Ito](#) on 15 June 2002, 10:37 a.m.,
in response to message #2 by db(martinez,california)*

understood it. It was a cause that default value with CV and CX was different. Thank you. #
HP-41CV OWNERS MANUAL p34 default:R0-R273 + 46 common pool # HP-41CX
OWNERS MANUAL p36 default:R0-R99 + 219 common pool

Re: Does the memory of my HP-41CV break?

*Message #5 Posted by [Ellis Easley](#) on 15 June 2002, 7:28 a.m.,
in response to message #1 by Hiroshi Ito*

Both CV and CX have function "SIZE" to set memory partition but only CX has function "SIZE?" to get current memory partition. Execute "SIZE" on CV, then enter 100, and it will have the same partition as the CX default partition.

Re: Does the memory of my HP-41CV break?

Message #6 Posted by [CJ](#) on 15 June 2002, 2:39 p.m.,
in response to message #5 by Ellis Easley

only CX has function "SIZE?" to get current memory partition.

"You are correct sir". That command is part of the X-Functions. So.... if you have a 82180A module, your C or CV will have that function, also the PPC Rom has a routine for that function.

Christopher

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Calculator run to Thunderbird Fry's (Phoenix)

Message #1 Posted by [Dave Shaffer](#) on 14 June 2002, 11:28 a.m.

Under current plans, in a bit more than a week (June 24), I will be passing directly by the Fry's electronics store at the intersection of I-17 and Thunderbird Road in Phoenix (Arizona) as I travel from Flagstaff to the PHX airport.

According to several posts, HP calculators have recently been spotted in this location.

I bought a 32SII there this past March. At that time, they had several other '32s as well as some '48s or '49s. (I didn't pay much attention to the exact models since I was not looking for one.) There may have been some '12s and '17s as well, although these seem to be much easier to find elsewhere.

If anybody is interested (and there seems to be some interest), I will be glad to stop in and gather up whatever is left that anybody wants. I'll do this at my cost (including postage and packing supplies - probably a bubble wrap envelope). I DO NOT know in advance what these units will cost - you can "place an order" with a do-not-exceed price if that will make you comfortable. Please, also be as specific as possible as to which model(s) you want, such as the various '48 versions.

This will be first-come, first-served, if the number of requests exceeds the number of available calculators! It seems fair to limit this to one calculator (of each model) per person (unless there are very few responses; if you want more than one, please say so to establish priority in case there are more than enough).

Please regard your request(s) as a contract. I don't want to be stuck with several hundred dollars of surplus calculating power!

I think I will limit this to US residents (or at least those who can provide a US address - I don't care who your "agent" might be!), although I would make an exception for Brazil: I would like a few of an everyday, cheap item which is readily available in any Brazilian drugstore/supermarket but is not available here in the US (!). It will be early July (a week or so after my visit to Fry's) before I return to Phoenix and can send calculators onward.

For questions or to place a request send me an e-mail (shaffer@nevada.edu). (It seems reasonable not to clog up the Forum with such requests.)

Dave

Re: Calculator run to Thunderbird Fry's (Phoenix)

Message #2 Posted by [GE \(France\)](#) on 14 June 2002, 11:46 a.m.,
in response to message #1 by Dave Shaffer

Nice offer, can be of help to many. My turn to try to please : HP32SII available (the last batch) at my favorite store in Paris ("Maubert Electronique"). I can purchase for you - just let me know. There are certainly various HP48 types available also. This offer is limited to French people.

On a lighter tone, go and check a funny posting in the comp.benchmarks newsgroup, dated 11th of June, by the title "HP Chief Competitive Officer".

Re: Calculator run to Thunderbird Fry's (Phoenix)

Message #3 Posted by [Christof \(Davis, CA\)](#) on 14 June 2002, 2:30 p.m.,
in response to message #2 by GE (France)

No luck in sacramento finding anything, I'm contemplating wandering the various fry's locations in the Bay if need be.

-C

Re: Calculator run to Thunderbird Fry's (Phoenix)

Message #4 Posted by [db\(martinez,california\)](#) on 14 June 2002, 10:19 p.m.,
in response to message #1 by Dave Shaffer

dave; i already have two 32's but i wanted to thank you for your kind offer. that kind of thing is what i've come to expect of the people who visit this site. - d

HP Calcs at Fry's in Portland, OR (Wilsonville)

Message #5 Posted by [Karl Schneider](#) on 15 June 2002, 4:24 a.m.,
in response to message #1 by Dave Shaffer

All --

Based on this thread, I decided to get a 32SII, even though I already have a 42S and 15C. The Fry's Electronics store in Wilsonville, OR (suburban Portland) had three 32SII's on the shelves as of Thursday evening, 13 Jun 02 after I bought mine. All are Indonesian-made, with a whitish metal bezel and green/blue lettering on black face. Price was \$59.99.

They also had multiple 49G, 48GX, 39G, 30 or 38, 20S, 19BII, 17BII, and 12C.

I didn't ask if they would ship orders. The store is about 35 miles from my place.

My initial impression is that the 32SII is a reasonable substitute/backup for a 15C. It does a few things better, is faster, and has a few additional features, but completely lacks matrix functions and is not as good with complex numbers and functions. Also, it surprisingly has less RAM (384 bytes vs. 448 for the 15C).

Re: Calculator run to Thunderbird Fry's (Phoenix)

Message #6 Posted by [rsenzer](#) on 16 June 2002, 1:44 p.m.,
in response to message #1 by Dave Shaffer

Hi Dave,

Yesterday, I was at Fry's [Phoenix Thunderbird & I-17] and there were only 3 32SIIs on display. When you go there make sure you ask them about what's in stock. They are constantly moving things around and the quantity on display seems to bounce around like a random number. Also have them check the glass cabinet beside the display. You never know what's inside the cabinet.

BTW, there are 12Cs, 17BIIs, 19BIIs, 20Ss, 48GXs, and 49Gs [but these may be the Indonesian ones with the bug]. I did not count the number of these as this fluctuates as well. They do have a number of the 20Ss in the old fashioned boxes with the older color design as well as the new design.

BTW, from what I can tell on the 20Ss, there have been at least 3 designs - the original design with the molded keys and yellow and blue shift keys, painted keys with "safety yellow" and blue shift keys, and the new lavender and olive motif.

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HP-41 Systems

Message #1 Posted by [Matthias Wehrli](#) on 14 June 2002, 6:46 a.m.

I'm looking for the exact content list of the HP-41 System I and for the System II (hardware, manuals, module, ...)

Thanks for all

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HP-42s keyboard error

Message #1 Posted by [SV](#) on 13 June 2002, 8:09 p.m.

Hello:

I have an HP-42s that gives the following keyboard error in the self test: "KBD 02501", and then it says "FAIL 00020". The keys are very sticky due to something being spilled on it. (I am not the original owner). Can something be done about this? Is there a way to take apart the calculator to service the keyboard and clean it up of the dried up soda that probably caused all this?!?!?

Re: HP-42s keyboard error

Message #2 Posted by [Randy Sloyer](#) on 13 June 2002, 8:52 p.m.,
in response to message #1 by SV

I would agree that the spill is most likely the problem. A "stuck" key would cause that error.

While you could disassemble the unit, I don't think that would be the best first course of action. I have read here several times (not personal experience) that you can clean the unit in a ultrasonic cleaner with distilled water (more than one cycle) then dry completely at 120 degrees F max for several days. Do this WITHOUT the batteries in place. This should remove the residual sugar and sticky residue. You must completely dry the unit before re-installing the batterys and powering on.

There are several threads here and the forum archives on trying to repair the keyboards on the pioneers and none of them have had good results.

Don't consider it dead yet.... and don't do anything drastic.... yet.

Re: HP-42s keyboard error

*Message #3 Posted by [Ron Ross](#) on 13 June 2002, 9:11 p.m.,
in response to message #2 by Randy Sloyer*

If it is a total loss, sell it (and I would want to buy it!!), to try a ROM switch with a 17B to make a 17B into a 42s sans keyboard.

That is probably your best course of action since the keypad is the most delicate and hard to replace part.

Re: HP-42s keyboard error

*Message #4 Posted by [David Smith](#) on 14 June 2002, 4:37 p.m.,
in response to message #3 by Ron Ross*

Unless you have some VERY specialized equipment you cannot change the "ROM" in these machines. It is all located on the CPU chip which is a "TAB" package - Tape Automated Bonding - Basically a bare silicon chip attached to a small flex circuit. Consider it utterly impossible to remove and reattach.

Re: HP-42s keyboard error

*Message #5 Posted by [Randy Sloyer](#) on 14 June 2002, 10:00 p.m.,
in response to message #4 by David Smith*

Dave:

Were you able to tell from the error message that the ROM is bad? I looked thru all my 42S stuff and came up empty.

Just curious.

Re: HP-42s keyboard error -- Fixes?

Message #6 Posted by [Paul Brogger](#) on 14 June 2002, 5:19 p.m.,
in response to message #3 by Ron Ross

I've done this twice, but it's not a ROM switch, per se -- it's a PCB switch.

To take a Pioneer apart, see & read all at:

MoHPC – Repairs & Batteries – [Pioneer Repairs](#)

MoHPC – Articles Forum -- [#199: Increasing HP-42s Memory to 32K](#)

(No guarantees, of course . . .) Be careful, good luck, and email or post any questions or concerns you have.

To take apart and rebuild a keyboard sandwich, see [another message](#) in this Forum.

Again, good luck!

Re: HP-42s keyboard error - my mistake!

Message #7 Posted by [SV](#) on 14 June 2002, 10:10 p.m.,
in response to message #6 by Paul Brogger

Hello:

I've made a mistake in the self-test. After the screen says "KBD", I hit the "+" key mistakenly thinking that the 42 would run a keyboard test. That is when it gave me the error message. I did not realize that you had to push all the keys starting in the top left and proceeding to the bottom right. Once I did this, I got the "OK" message!

The keys are very sticky though, but at least this 42 is still functional, albeit a bit cumbersome! Now I need some documenatation (manuals) !!

Thanks again for your responses!

Re: HP-42s keyboard error - my mistake!

*Message #8 Posted by [Ellis Easley](#) on 15 June 2002, 7:38 a.m.,
in response to message #7 by SV*

The 42S users guide and an applications manual are on the MOHPC CD-ROMs. The applications manual was also still available as a reprint from HP (at least it was recently) for \$38 which is more than the CDs.

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HP-110+ HP-41CV

Message #1 Posted by [Daniel Sancho](#) on 13 June 2002, 3:50 p.m.

I buyed for a few days a HP-110 Portable Plus with no documentation.

I will develop a program, if possible, to upload and download programs to the HP-41CV, but I have some questions:

- Is possible load a program to the HP-110 without diskettes, via RS-232?

Thanks

Daniel

Re: HP-110+ HP-41CV

Message #2 Posted by [Raymond Hellstern \(Germany\)](#) on 13 June 2002, 8:56 p.m.,
in response to message #1 by Daniel Sancho

Hi,

if there's a terminal program in the Portable Plus, it should be possible to transfer software via RS232. If the machine has HP-IL, you could use the PP as a mass storage device for the HP-41;-)

To find out more about the machine, You could do a google search for the Portable Plus.

Raymond

Re: HP-110+ HP-41CV

*Message #3 Posted by [Daniel Sancho](#) on 15 June 2002, 4:27 p.m.,
in response to message #2 by Raymond Hellstern (Germany)*

Vielen Dank. Many Thanks.

I will try it

Daniel

Re: HP-110+ HP-41CV

*Message #4 Posted by [John Kercheval](#) on 30 June 2002, 11:52 a.m.,
in response to message #1 by Daniel Sancho*

You can use the 110+ as ANY mass storage device using HPIL.

The electronic disc on the 110 becomes a virtual HD for the 41.

John Kercheval

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Nasa material listings

Message #1 Posted by [Johnny Bjoern Rasmussen](#) on 13 June 2002, 7:18 a.m.

Have a look at Nasa material listings, including HP-48 and HP-75 keyboard overlays.

Not usefull reading, but interesting anyway...

http://map3.msfc.nasa.gov/mapweb/tr/tr1_manf_862_1.html

If anyone knows more about HP calculators used in Nasa projects, I would like to know more

Thanks

Johnny

Re: Nasa material listings

Message #2 Posted by [Ellis Easley](#) on 13 June 2002, 9:43 a.m.,
in response to message #1 by Johnny Bjoern Rasmussen

I guess "ISSA" means the Space Station. I wonder if "Russian" means Mir or a transport vehicle?

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Is the HP-97S tradeable?

Message #1 Posted by [Johnny Bjoern Rasmussen](#) on 13 June 2002, 5:03 a.m.

Hi

I have an HP-97S on the way to me. Being in the middle of a glass-face-cabinet-for-my-HP-pocket-calculators-but-not-desktops project (the HP-97S does not fit in the cabinet nor my _pocket_ collection), I was wondering if it is tradeable for more than one HP-pocket calculator.

Right now I'm looking for eg. HP-55, 65, -67, 75C, 75D in particular...

I hope that I will get the HP-97S soon, and then post a Classified add.

Regards

Johnny

Re: Is the HP-97S tradeable?

Message #2 Posted by [John K. \(US\)](#) on 13 June 2002, 5:21 a.m.,
in response to message #1 by Johnny Bjoern Rasmussen

Well, I just happen to have a couple of brand new HP 42S units... ;^)

(BTW, thanks again for that tip!)

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EOS, AOS, RPN/L and more algebra

Message #1 Posted by [Christof \(Davis, CA\)](#) on 13 June 2002, 2:03 a.m.

This whole -3^2 thing has brought out a lot of calculator issues that the prof (and apparently the geometry and beginning algebra profs) isn't addressing. (note: It's not that calculators are required for maths, but they are prevalent, recommended, and "supported" in textbooks.)

I'm not the **only** over 30 in the class, but I am the only one who is being made to retake the class due to length of time out of school instead of coming directly from beginning algebra. I've also got a decade and a half in computer fields and some hobbysit handheld/calc hacking in my book. All of which is simply to say that I got a lot of questions today and have been pushed into the role of calc dude.

Today- I brought my 70's era ti-30 (red led), a friend's modern ti30 variant, an hp48s, 28s, 19bii, and my recently acquired hp20s. Also in class were several other ti30 variants, a ti82 and a ti83+s.

I did go buy a casio fx-115ms because of this (any excuse to blow \$15 on a calculator, eh?).

Most people in the class, after spending half of it arguing about precedence, how to simplify equations for calculator input, the usefulness of parens- well, most people seemed to get it. Many of the members of the class are pissed at TI, though. Turns out the casio is an **extremely** approachable calculator with a good equation entering system and a decent solver. Not much memory space, but that's to be expected. It seems to be much more useful than anything else available for that price.

The hp20s gets similarly high marks, but it **might** be out of production and is hard to find anyway.

The RPN calcs were a bit of a difficult concept to explain, but once I got the stack explained adequately, the problem calculation of the day (what people were having trouble with) suddenly became very fun to solve and play with.

(3800ft / pi * 1.3miles)

(with the ti30 calcs, you seem to have to sto the result of

$\pi * 1.3 * 5280$ (converting to feet)

and then recall after entering

3800 / (except that on half the ti's you can't recall in any sane method anyone in class could figure)

RPN I won't even mention, it's a waste of space considering the audience here :)

The casio was: $3800 / (\pi * (1.3 * 5280))$ <enter> Which is remarkably easy. (I added the extra parens to illustrate the technique if you had other or more complex conversion operations in a similar EQ- such as C to F)

Makes me wonder why TI has such dominance in the market, when dollar for dollar, the casio is much better on the lower end, and the hp has so much more potential if carly will get a sanity pill. And considering just how basic the casio really is, I'm shocked even more that HP hasn't got a good calc with similar functionality updated, modernized, and available for <\$30

-Christof

Re: EOS, AOS, RPN/L and more algebra

Message #2 Posted by [John K. \(US\)](#) on 13 June 2002, 2:47 a.m.,
in response to message #1 by Christof (Davis, CA)

And considering just how basic the casio really is, I'm shocked even more that HP hasn't got a good calc with similar functionality updated, modernized, and available for <\$30

At the risk of blaspheming, I'd guess it has something to do with the fact that both TI and Casio are consumer product businesses and that HP isn't and really has no desire to be there with them, except at the high end (read: high-margin end) of the market. That, and the seemingly pathological loyalty shown by HP's calculator development group (well, when it existed) to the Saturn processor. It is obviously possible -- as demonstrated by TI -- to produce low-cost, feature-rich devices based on a general purpose chip such as a Z80 or 68K. Of course, that would mean HP would have had to start over from scratch. But hey, ya' gotta crack some eggs, right? :^)

Re: EOS, AOS, RPN/L and more algebra

Message #3 Posted by [Ellis Easley](#) on 13 June 2002, 12:00 p.m.,
in response to message #1 by Christof (Davis, CA)

Christof wrote: "(with the ti30 calcs, you seem to have to sto the result of

$\pi * 1.3 * 5280$ (converting to feet)

and then recall after entering

3800 / (except that on half the ti's you can't recall in any sane method anyone in class could figure)"

how about:

$\pi * 1.3 * 5280 = 1/x * 3800 =$

Even the first TI calculator would do 1/x (/ = =) using the "CONSTANT memory" (different from "constant MEMORY") although I got a better result in this case with:

$3800 / = = * \pi * 1.3 * 5280 = / = =$

(0.1762787 vs. 0.17594) (8 digit calculator without more internal digits) (with a slide rule you can read "0.176" and guess "0.1762")

or

$3800 / \pi / 1.3 / 5280 =$

(0.1762204)

I apologize if I'm missing the general point. This caught my attention because I've been remembering "dimensional analysis" which I learned in high school chemistry class (pre-calculator). I think it is a natural fit for RPN. Basically, it is a method for doing chain calculations and managing units as you go. Here's what you would do in this example:

$(3800 \text{ ft}/1) * (1/\pi) * (1/1.3 \text{ mi})$

This would have units of "feet/miles", a ratio of two distances, which is a number without units. To eliminate the units, multiply by something equal to 1 in the appropriate units:

$$(3800 \text{ ft}/1) * (1/\pi) * (1/1.3 \text{ mi}) * (1 \text{ mi}/5280 \text{ ft})$$

The first term has feet on the top and the fourth term has feet on the bottom, so those units cancel. Likewise miles in the fourth and third terms. So you eliminate them:

$$(3800/1) * (1/\pi) * (1/1.3) * (1/5280)$$

Now the result has the desired units - a unit-less ratio of two distances - and the numbers are all laid out to solve with a slide rule - or a calculator. In RPN, it's obvious:

$$3800 \text{ <enter> } \pi / 1.3 / 5280 /$$

but not that different with an algebraic calculator:

$$3800 / \pi (=) / 1.3 (=) / 5280 =$$

(= needed on some calculators)

Re: EOS, AOS, RPN/L and more algebra

Message #4 Posted by [rsenzer](#) on 13 June 2002, 12:11 p.m.,
in response to message #1 by Christof (Davis, CA)

Hi Christof,

If you get a chance, try the example calculation on a TI-82 vs. a TI-83 -- I'm sure somebody in the class is likely to have these models. The TI-83 has slightly different rules vs. the TI-82, concerning implicit multiplication. The TI-82 seems to treat implicit multiplication at a higher precedence level vs. multiplication with an explicit multiplication symbol "*".

Note that TI's model 30Xa and 36X have truly awful versions of the ln function which, of course, feed into the y^x function. Taking $\ln(1 + 1 * 10^{-9})$ yields ONLY 4 accurate decimal places on these models. TI latest scientific calculators, the TI-30XII and TI-34II don't have this problem. The CASIOs, which use a comparable chip to the HP-6S in terms of accuracy are accurate to about 8 decimal places for this ln calculation, if I recall. The HP-20S, on the other hand, returns full accuracy. As does the HP-30S. In fact the accuracy of the HP-30S is incredible.

Among the EOS scientific calculators, the HP-30S is my favorite. But you have to get the latest model -- the earlier model had some bugs -- needless to say this means don't buy this model at Fry's.

Needless to say, there are numerous calculations where the superiority of the HPs shows such as $\sin(1 * 10^8 \text{ radians})$. I just wish the 20S had a fraction capability like the 32SII. I also wish that CASIO hadn't made the STO a shifted key on the MS line. However, I do like the concept of making ANS a non-shifted key. Beware also on the CASIOs of the recompute of the previous expression with the STO key. CASIO users [for the MS versions] should get use to the sequence [ANS][STO] ...

Re: EOS, AOS, RPN/L and more algebra

Message #5 Posted by [Julián Miranda \(Spain\)](#) on 13 June 2002, 12:39 p.m.,
in response to message #4 by rsenzer

About the HP30S, besides the incredible accuracy, I think is directly comparable to the Casio FX 115 MS although I prefer the 30S keyboard.

Re: EOS, AOS, RPN/L and more algebra

Message #6 Posted by [Christof \(Davis, CA\)](#) on 14 June 2002, 2:16 a.m.,
in response to message #4 by rsenzer

Firstly- some versions of the TI30 have a really hosed approach to $1/x$ and memories. I mean, REALLY hosed.

Secondly- theln problem is amusing to a few of the students, the prof says "huh. never trust a calculator". Ignorance is bliss and all.....

I haven't used a 30s at all, in fact I haven't seen one. I might have to track one down now. I'm carrying to class my "work" 48sx, a 19bii, 20s, and the casio each day now with different people borrowing and asking as class goes. Kind of fun. I may have to add another bit of weight, then.

I've got pages of notes for a casio manual since that's got the most questions. People either seem to "get" RPN or not, and the 20s is fun, but I'm being cautious letting any pioneer leave my direct physical control nowadays.

-Christof

Re: EOS, AOS, RPN/L and more algebra

Message #7 Posted by [rsenzer](#) on 14 June 2002, 12:04 p.m.,
in response to message #6 by Christof (Davis, CA)

Hi Christof,

Suggestion --

refer prof and students to the Museum and [among other things] they could play with the various simulations. I think the HP-35 java simulator is awesome including the original HP bugs. The HP-45 simulator is also interesting. If you have an internet hookup in the classroom, the instructor could bring them up on the screen.

There are zillions [i guess you need a calculator with a three digit exponent to handle zillions :)] of calculators, some highly specialized to a particular field [frequently a financial field] on the web. There are numerous basic algebraic scientific calculators and of course there is the ***** windows calculator.

Re: EOS, AOS, RPN/L and more algebra

Message #8 Posted by [Christof \(Davis, CA\)](#) on 14 June 2002, 2:36 p.m.,
in response to message #7 by rsenzer

no luck on in the classroom- at least not this extension campus.

I have enough calculators to display most major differences (I've got 1970's era 4 bangers and sharp pocket pc type calcs, too. Oh- I even have a ti89 I never use) - I find it interesting that the prof isn't more interested in knowin g what goes on with them. She seems to get frustrated just with her ti30x on occasion.

I'm having fun encouraging people to buy non TI calcs and showing them *why* I think TI isn't worth getting below the 83+ level. I nabbed a hp30s this morning to play with- that or the casio wouldbe much more highly recommended than the ti30. I still like the 20s, but it doesn't have that easy to read 2 line system. Well- I prefer to use a 42S or 32SII for that level, but they are getting hard to come by...

C

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HP 41-CX Odd Behavior - Advice?

Message #1 Posted by [emartin](#) on 12 June 2002, 11:33 p.m.

I have a 41-CX that I recently put back into service after my 32S-II Enter key went out on me. The calculator works fine, but turns itself off after about 14 seconds instead of the normal 10 minutes.

I put in fresh batteries, took it apart & cleaned internal contacts, let the capacitors discharge for 5 days, and I still have a quick shut-off calculator.

The "low batt" flag is not set, and if I execute the "On" function, it will stay on indefinitely, just like it's supposed to.

I suppose I could run "On" every time I power up, but that is inconvenient to say the least.

Any advice?

P.S. I bought a replacement 32S-II a couple of months ago. Has anyone else noticed what junk the recent Pioneers out of Indonesia are?

- Ed

Re: HP 41-CX Odd Behavior - Advice?

Message #2 Posted by [John K. \(US\)](#) on 13 June 2002, 1:50 a.m.,
in response to message #1 by emartin

The [41CX] works fine, but turns itself off after about 14 seconds instead of the normal 10 minutes.

Out of curiosity, does your 41 have the clock speed-up modification? If so, that could be the problem. You can test for this by clearing the auto-shutoff flag (the number escapes me at the moment) and checking to see if the problem persists.

Re: HP 41-CX Odd Behavior - Advice?

Message #3 Posted by [emartin](#) on 13 June 2002, 10:01 p.m.,
in response to message #2 by John K. (US)

No, it's a standard-issue CX, no mods. When I clear the auto-shutoff flag, it stays on.

Does anyone know if the CX uses a digital timer for the shutoff, or is it some kind of analog timer that may be subject to drift (e.g., leaky capacitor)?

Re: HP 41-CX Odd Behavior - Advice?

Message #4 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 14 June 2002, 7:37 a.m.,
in response to message #3 by emartin

In the 41 C/CV the "off" timer was located in the display (the only part which is working in the meantime between keystrokes or running programs) , but I don't know if in the CX, due to the TIME functions, there are other considerations.

Re: HP 41-CX Odd Behavior - Advice?

Message #5 Posted by [emartin](#) on 14 June 2002, 10:02 p.m.,
in response to message #4 by Andrés C. Rodríguez (Argentina)

Thanks. This makes sense, since I also occasionally get some ghosted segments (always segments that shouldn't be on, but are - partially).

I wonder if I have a problem with the PCB, or worse, driver chip, on the display driver board. Or perhaps there is a "stay on" signal from the display driver to the main PCB that is broken.

Also, the calculator never turns itself off if I am running the stopwatch, a program, or I have recently pressed a key.

Does anyone know where I could get my hands on a schematic?????

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new HP user

Message #1 Posted by [FB](#) on 12 June 2002, 2:25 p.m.

I've just bought an HP 49G, and I don't understand how to draw lines with a program.

Ex. <<FOR(A,-6.5,6.5) LINE((A,-3.1),(A,3.1)) STEP(.1)>>

Could someone write an adaptation of that, but a working version ;-) ?

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HP site is back to life ?

Message #1 Posted by [Jose Goncalves](#) on 12 June 2002, 9:32 a.m.

I checked today and it seems that HP is bringing its site back to life again. You can try www.hp48.com and see that it will have some info about "calculators". Unfortunately, info will be about current models, only. Oops, current ? Let's check what are current models for HP.

Re: HP site is back to life ?

Message #2 Posted by [J.Manrique](#) on 12 June 2002, 1:57 p.m.,
in response to message #1 by Jose Goncalves

Well, www.hp48.com takes me to main HP site, nothing to do with "calculators"..

Thanks, J.Manrique

Re: HP site is back to life ?

Message #3 Posted by [jose goncalves](#) on 12 June 2002, 3:30 p.m.,
in response to message #2 by J.Manrique

Try "calculators" in the search engine. At least for me it went to handful of documents.

Re: HP site is back to life ?

Message #4 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 13 June 2002, 10:32 a.m.,
in response to message #3 by jose goncalves

Hi;

indeed, the search machine finds 2285 calculator-related docs. As an example, try [this one](#). It seems they've been reading our posts in here and found a way to show they also have their concerns about users. Interesting.

Any clue?

Re: HP site is back to life ?

*Message #5 Posted by [Ellis Easley](#) on 13 June 2002, 12:18 p.m.,
in response to message #4 by Vieira, Luiz C. (Brazil)*

That link had a SYSEVAL for the 38G to get the memory size, although it stated that SYSEVAL is not supported by HP. I thanked them and asked for more SYSEVALs for the 38G and 39G. Does anybody know if these are documented anywhere?

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fry's

Message #1 Posted by [rsenzer](#) on 11 June 2002, 7:53 p.m.

Well ... according to the Phoenix Frys ... no shipping period !!!

I called the 408 number and suggested they might want to modify their policy based on moving at least \$2,000 worth of merchandise ... not much chance I would imagine

Note that they do have an online website at outpost.com ... and they may have the hp-32sii there from what I can tell. Maybe they will move merchandise from their stores if there is enough demand

anyway that's the scoop so far

Re: fry's

Message #2 Posted by [Jim](#) on 11 June 2002, 10:48 p.m.,
in response to message #1 by rsenzer

I was in the Baseline Road & I-10 store on Saturday and could not find a single 32sii. All-in-all, their calculator isle was in complete disarray and had been reduced in size by about half since the last time I was in there a few months ago.

Re: fry's I-17 & Thunderbird Rd.

Message #3 Posted by [rsenzer](#) on 12 June 2002, 1:10 a.m.,
in response to message #2 by Jim

I-17 & Thunderbird Rd. NOT the Baseline Rd. Fry's

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Algebra operations

Message #1 Posted by [Christof\(Davis, CA\)](#) on 11 June 2002, 3:01 p.m.

I'm taking yet another remedial math class (it's a non-challengable requirement for older people going back to college in CA) and we've run into an interesting quirk:

-3^2

this is reported as reducing to 9 on my 28s and 48sx On the professor's TI-30x (recentish model) it's 9, on another student's ti-83 it's -9, and on my TI30 (1976 model), it's 9

She insists that it is properly -9 as written, and that to get an answer of 9, you have to do

$(-3)^2$

(fine, it's a convention of reading that I won't argue with)

So her question is why it happens. I know why it happens with an rpn calc, operation are done in order- but other scientifics?

-Christof

Re: Algebra operations

Message #2 Posted by [James M. Prange](#) on 11 June 2002, 4:04 p.m.,
in response to message #1 by Christof(Davis, CA)

On the 28 series, 48 series, or 49G, try ' -3^2 ' EVAL and '<< 3 2 ^ NEG >>' EVAL.

Regards, James

Re: Algebra operations

Message #3 Posted by [Christof \(Davis, CA\)](#) on 11 June 2002, 4:40 p.m.,
in response to message #2 by James M. Prange

I hadn't thought to do an eval on the hp, and yes, ' -3^2 ' does give the answer according to standard operation order.

I knew that -3 <enter> x^2 would give the answer as entered in rpn, so no worries there.

I think I find it more interesting that the various TI calcs give different answers when they are all billed as suitable for "natural" entry and education.

I'm going to go try this on various Casio models now.

The question for the future is whether or not I can explain to the professor how and why this happens in the calcs. (admirably, she only uses a basic ti30 for everything up to and including her calc series courses- the flip side is she

doesn't *understand* graphing calcs at all and is confused about the programming capabilities).

-C

Re: Algebra operations

Message #4 Posted by [aruid](#) on 11 June 2002, 4:35 p.m.,
in response to message #1 by Christof(Davis, CA)

On many TI's the "-" key simply multiplies by a -1 so it looks like you wrote $-1 \cdot 3^2$ instead of $(-3)^2$. I think many people would disagree with your math teacher.

ARUID

Re: Algebra operations

Message #5 Posted by [Christof \(Davis, CA\)](#) on 11 June 2002, 4:42 p.m.,
in response to message #4 by aruid

as for how to "read"

-3^2

- yah, some people will argue how you handle the - . I've found books that claim both methods.

-C

Re: Algebra operations

Message #6 Posted by [Chris Randle \(Lincoln - UK\)](#) on 11 June 2002, 5:04 p.m.,
in response to message #1 by Christof(Davis, CA)

Hi Christof,

An algebraic calculator will parse the expression entered to convert it to an internal stack-form - essentially RPN or similar.

Programming languages use a similar trick. The following is copied from my Borland Pascal language reference manual:

In complex expressions, rules of precedence determine the order in which operations are performed.

Operators

@, not

*, /, div, mod, and, shl, shr, as

+, -, or, xor

=, <>, <, >, <=, >=, in, is

Precedence

first (highest)

second

third

fourth (lowest)

An operator with higher precedence is evaluated before an operator with lower precedence, while operators of equal precedence associate to the left. Hence the expression

$X + Y * Z$

*multiplies Y times Z, then adds X to the result; * is performed first, because it has a higher precedence than +. But*

$X - Y + Z$

first subtracts Y from X, then adds Z to the result; - and + have the same precedence, so the operation on the left is performed first.

You can use parentheses to override these precedence rules. An expression within parentheses is evaluated first, then treated as a single operand. For example,

$(X + Y) * Z$

multiplies Z times the sum of X and Y.

Interestingly, in this Pascal implementation, there is no power operator. You have to choose $-3 * -3$ or else $-(3 * 3)$, thus forcing you to choose.

If, on the TI, "^" takes precedence over "-" then I would expect an answer of -9. If the reverse, then 9. If they are of equal precedence, then I would expect left-to-right evaluation and hence an answer of 9. As long as the TI is consistent in its treatment, then there is no right or wrong, IMO.

Derive, which is written by mathematicians, shows an entry of -3^2 as

$$\begin{array}{r} 2 \\ - 3 \end{array}$$

and evaluates it as -9.

Perhaps someone with a mathematics background could say if if "^" takes precedence over "-" by convention.

Re: Algebra operations

Message #7 Posted by [Les Bell \(Sydney\)](#) on 11 June 2002, 8:10 p.m.,
in response to message #1 by Christof(Davis, CA)

Simple: exponentiation takes a higher precedence than unary negation.

So, -3^2 is the same thing as $-(3^2)$, and not at all the same thing as $(-3)^2$

Best,

--- Les [<http://www.lesbell.com.au>]

Re: Algebra operations

Message #8 Posted by [rsenzer](#) on 11 June 2002, 9:16 p.m.,
in response to message #1 by Christof(Davis, CA)

Hi,

I have always made a different argument about this matter:

When you look at a textbook, it cannot distinguish between a dash corresponding to subtraction and a dash corresponding to negation.

So when you see an expression or subexpression in a text / textbook with a leading "-", I have always interpreted this as a minus with an implied preceding zero. So:

-3^2 is the same as $0-3^2$ or -9 $(-3)^2$ is the same as $+9$

That is the latter would be equivalent to:

$(0-3)^2$ or $(\text{Negative } 3)^2$

Now whether this is absolutely correct, I do not know, but it tends to make sense. I would also contend the expression display algebraic calculators have the wrong precedence rules, because for the most part, they can distinguish between these 2. Part of this is to make the pressing of the subtraction key automatically bring up "ANS -" if it is the first key pressed. Also it would confuse many students if they typed $[(-)]3^2$ and received the answer, 9 as I believe would be appropriate. That is, the answer would not be the same as the book, on the other hand I would contend that they didn't transcribe what was in the book. Note that I also tell my students that 2 operators should never be adjacent to each other, use common sense to figure out where that extra pair of parenthesis should be, correct the expression (perhaps in your head), and then carry out the calculation.

I also tell my students to always put parenthesis around negative numbers on these calculators to avoid any surprises. It is instructive to look at how Sharp calculators employ the $[(-)]$ keys. If hit before the number, they work just like HPs or TIs in algebraic mode, but when hit after the number, they automatically negate the number and wrap it in parenthesis. All of these calculators should work this way.

I have written about this matter in more detail in the scientific calculator forum on the TI website. I am doing this just before a class, so I may elaborate in another posting.

Re: Algebra operations

Message #9 Posted by [Christof \(Davis, CA\)](#) on 11 June 2002, 10:38 p.m.,
in response to message #8 by rsenzer

Well, after much explaining of code (I do enough lisp to make up for my lack of current rpl skills), the design of computer/calculator operating systems, and reference to a dozen algebra texts, My professor is firmly convinced that:

for -3^2

the "standard" "way to read it" in college algebra is $-(3^2)$. But some mathematicians read it $(-3)^2$.

Calculators do what you tell them, in order (meaning that if you enter -3, they assume you mean -3. and when you follow that by x^2 , you mean to square (-3).)

Some calculators (most programmables and "educationals") will allow you to enter an equation in "textbook language"

and then evaluate it- but *some*, like the ti83, the casio fx115, and the ti89, *assume* that you are *not* entering in order, and instead are entering an equation to be evaluated at the end of complete entry.

Personally, the fact that TI can't keep the same operation style in all of its educational calcs bothers me. The ti 30 series calcs don't act the same as the ti 80 series calcs, yet both series are marketed as stepladder rungs.

-C

Re: Algebra operations

*Message #10 Posted by [rsenzer](#) on 12 June 2002, 2:02 a.m.,
in response to message #9 by Christof (Davis, CA)*

I stand by my interpretation. My interpretation is also quite consistent and arrives at the right answer every time as far as I can tell [now I'm in trouble], provided you never allow an expression with contiguous operators such as $-2 * -3$. I feel that this should be interpreted as $(-2)*(-3)$ or $(-2)(-3)$ if using implicit multiplication. The expression $-2(-3)$ would get the same result, but that would not be my interpretation of the expression.

I have never seen -3^2 as written in a textbook with the appropriate superscripting interpreted to result in the value, +9. Now if the textbook had clearly different versions of the symbol "-", one version for negation and another for subtraction, and the "-" in the expression was clearly that which corresponded to negation, then, indeed, the answer would be +9. However as written in the book, I believe an interpretation that is CONSISTENT and achieves the right results is the presumption that an expression written as -3^2 in a textbook corresponds to $0 - 3^2$.

Consequently it doesn't matter whether you interpret the expression, say -5 as negative 5 or alternatively $0 - 5$, the result is the same. For practical purposes we can just accept that -5 is negative 5 and leave it at that.

The problem with the calculator algorithm is that the $[(-)]$ should bind to the following number before the exponentiation. This would be much the same as in AOS or RPN calculators. But calculators perform as they have been programmed to perform, and they can be programmed to have whatever precedence rules are chosen by the manufacturer.

I contend that the problem described pertaining to the TI calculators is NOT a matter of inconsistency as much as it is the fact that their AOS calculators handle this appropriately and their EOS calculators do not. Those HP calculators that handle EOS also have the same problem. I want to emphasize the fact that the problem is easily resolved with whatever interpretation you might have by enclosing negative numbers with parenthesis on EOS calculators.

BTW, I find this an interesting topic because of the ambiguity here. I don't believe there is a definite answer. I am an adjunct math instructor at a community college [among other things], and I have discussed this matter with other math instructors. We all get the correct results for such textbook calculations, but many of us have different explanations for this subtle matter. I, too, have a background and work experience in the computer field, including compiler testing, and that is probably one reason for my choice of explanation. It is essentially equivalent to zeroing a register prior to carrying out a calculation.

Re: Algebra operations

Message #11 Posted by [John K. \(US\)](#) on 12 June 2002, 2:03 a.m.,
in response to message #1 by Christof(Davis, CA)

I've always interpreted it based on context, rather than observing any hard and fast rules. For instance:

$$2x^3-3^2$$

would be:

$$2(x^3)-(3^2)$$

but:

$$-3^2 \text{ (i.e. by itself)}$$

would be:

$$(-3)^2$$

Just to complicate matters however, I seem to recall that:

$$-x^n$$

should almost always be interpreted:

$$-1(x^n)$$

Basically, algebraic notation is ambiguous in this instance. That's one of the reasons why prefix (and, by extension, postfix) notation was developed. Just another good argument for using RPN. Accept no substitutes! ;^)

Re: Algebra operations

Message #12 Posted by [rsenzer](#) on 12 June 2002, 2:55 a.m.,
in response to message #11 by John K. (US)

Hi John,

The "multiply by (-1) rule" as applied in an EOS calculator is ok IF you're willing to accept that the keystroke sequence:

`[(-)] 3 [^] 2 [ENTER]`

should return the result (-9) on an EOS calculator. I contend that it should return (+9) and that the negation should bind immediately, as on an RPN or AOS calculator.

On the other hand the keystroke sequence,

`0 [-] 3 [^] 2 [ENTER]`

is the correct transcription of the textbook expression " -3^2 " on an EOS calculator. See my preceding post. In many programming languages there is no equivalent to `[(-)]` and in such languages you would use the equivalent of:

[-] 3 [^] 2 [ENTER]

Unfortunately, most EOS calculators do not allow an expression with a leading minus. [I believe they should.] This would, then, be equivalent to " $0 - 3^2$ ".

[BTW, it is interesting to see how negative exponents are entered in RPN on an HP-19BII.]

Re: Algebra operations

Message #13 Posted by [John K. \(US\)](#) on 12 June 2002, 5:32 a.m.,
in response to message #12 by rsenzer

You bring up some interesting points (in both posts). It should be noted that I am most definitely **not** a mathematician. In fact, I never really liked math. Having said that, allow me to dive in over my head...

In general, I agree. Given the general form x^n , any notational ambiguity seems to be in whether to interpret the "-" as a property of the specific value of "x" as in the case $x = -3$ and $(-3)^2$, or as an operator (i.e. subtraction) as in $x = 3$ and $-(3^2)$. My point was that it is vital to look at the context of the example before trying to interpret the meaning.

In Christof's original post, the example was -3^2 . Is this in the form of x^n ? It seems to me (well, both of us, really -- and others to boot) that it is and that Christof's teacher (and the TI-83) was wro-- erm, confused. :^)

Now, if it had been a fragment of a larger equation (e.g. $84 - 3^2$) then the other interpretation would have been correct, since the "-" in that case is most definitely an operation involving the whole of x^n . I have noticed that, in most texts, this case is indicated by a space between the "-" and the x as I have done.

(BTW, I'm not sure what "EOS" refers to. Or "AOS" for that matter. "RPN" I do know. :^)

[I]t is interesting to see how negative exponents are entered in RPN on an HP-19BII.

I'm not sure what you mean. For 25^{-3} it would be:

25 [Enter] 3 [+/-] [y^x]

wouldn't it? Seems straight-forward enough. Or do you mean $-(25^3)$? That would be keyed:

25 [Enter] 3 [y^x] [+/-]

Just like you'd work it in your head. IIRC, in algebraic mode, it would be:

25 [y^x] 3 [+/-] [=]

or (assuming no pending operation):

25 [y^x] 3 [=] [+/-]

or even more confusingly (assuming a pending value):

[-] [([25 [y^x] 3 [])] [=]

(the last "[]]" is optional)

Doesn't RPN simply rock? ;^)

Re: Algebra operations

Message #14 Posted by [Christof \(Davis, CA\)](#) on 12 June 2002, 5:53 a.m.,
in response to message #13 by John K. (US)

AOS is Algebraic Operating System according to my old 1970's TI manuals. EOS I assume is "educational" or something. RPN we all know.

19BII serno: 3523s00779

RPN mode:

[3] [+/-] [shift] [x^2] gives 9

[3] [input] [3] [+/-] [shift] [^] gives 3.703703703...E-2

ALG mode gives the same answers.

-C

Re: Algebra operations

Message #15 Posted by [Massimo Gnerucci \(Italy\)](#) on 12 June 2002, 9:05 a.m.,
in response to message #14 by Christof (Davis, CA)

$-3^2 <> 3^{-3}$

;-)

Re: Algebra operations

Message #16 Posted by [rsenzer](#) on 12 June 2002, 9:19 a.m.,
in response to message #13 by John K. (US)

Hi John,

Clarifications on my posting:

About the 19BII, negative numbers are handled with the [+/-] key, whereas negative exponents are handled with the [-] key. This is not directly related to the general discussion, I just believe it is interesting.

AOS is TI's term for "traditional" algebraic calculators in which a number is displayed, the afore-mentioned TI-30, e.g., the TI-30Xa [NOT the TI-30XII, etc.]. Other examples are the HP-20S, CASIO fx-260 solar, HP-6S, etc. AOS stands for algebraic operating system.

EOS is TI's term for algebraic calculators that display the entire algebraic expression. This is, then, interpreted/evaluated when the [ENTER] key is selected. Common examples are the HP-30S, all TI graphing calculators, HP-49 in algebraic mode [oops :)], HP-48 with tick marks delimited expressions, etc. This is called DAL by Sharp, and VPAM or S-VPAM by CASIO. EOS stands for either equation operating system or expression operating system -- I don't recall which.

There seems to be a line of reasoning here that goes like this:

how do the calculators work? -- lets explain and/or justify this methodology rather than asking the question of how should calculators work based on the way textbooks display expressions and what, precisely, the "-" symbols in the textbook truly represent. I am simply contending that the calculator implementation in these EOS calculators is not quite correct.

I agree -- RPN calculators don't present this problem, and I prefer RPN calculators. Unfortunately, I cannot recommend these to my students for a variety of reasons including the current dependability of a continued supply of such calculators as well as the school's and students' embedded base of TI calculators. I can't teach algebra students how to use calculators that they don't have. On the other hand, I need a consistent way to explain EOS calculator results in the context of expressions displayed in a textbook.

Re: Algebra operations

Message #17 Posted by [John K. \(US\)](#) on 12 June 2002, 9:54 p.m.,
in response to message #16 by rsenzer

About the 19BII, negative numbers are handled with the [+/-] key, whereas negative exponents are handled with the [-] key.

Hmm. That is indeed interesting. For all of the other HP RPN machines I'm familiar with, the [+/-] is used. I've got a 19BII around somewhere. It's in pretty rough shape, but you've made me curious about that aspect of it.

I am simply contending that the calculator implementation in these EOS calculators is not quite correct.

Ah. Given your explanation of "AOS/EOS," I think I understand more clearly. To restate:

In the case of the older (AOS) machines, the operators are evaluated as they are entered. The only exception being that, if the [(] key is used, the immediately preceding operation is postponed until the enclosed sequence has been evaluated and terminated by a matching [)] or by the [=] operation.

On the newer (EOS) devices, however, the entire sequence is held without evaluation until complete. So, if I enter -3^2 , the operations are evaluated in strict precedence order (exponentiation, then subtraction in this case). But, since there is no value preceding the "-", subtraction from "0" is assumed.

I agree with you that is a dangerous -- and often incorrect -- assumption. On the other hand, I'm not sure how it could be implemented differently on an EOS machine. By the time the parser gets around to dealing with the "-" operation, it has already evaluated the exponent. I'm sure it is possible, if decidedly non-trivial, to create a parser that would take the existence of any preceding values or symbols into account before deciding on how to interpret the "-3". Much simpler -- though less graceful -- to simply use a different operation to represent negation (e.g. [+/-], [CHS], [(-)], etc.). Of course, that brings us right back to how the *user* interprets and keys in the expression... :^)

It's puzzling to me that the TI-83 doesn't have a "sign-swap" key. Still more puzzling is how Christof's teacher could possibly interpret -3^2 as $-(3^2)$, let alone that it should *always* be interpreted so.

Re: Algebra operations

Message #18 Posted by [rsenzer](#) on 18 June 2002, 12:02 a.m.,
in response to message #17 by John K. (US)

Hi John,

This is one of those "your mileage may be different" posts. Simply my opinions. Probably best read in context with my previous postings:

In the case of the older (AOS) machines, the operators are evaluated as they are entered. The only exception being that, if the [(] key is used, the immediately preceding operation is postponed until the enclosed sequence has been evaluated and terminated by a matching [)] or by the [=] operation.

yes

On the newer (EOS) devices, however, the entire sequence is held without evaluation until complete. So, if I enter -3^2 , the operations are evaluated in strict precedence order (exponentiation, then subtraction in this case). But, since there is no value preceding the "-", subtraction from "0" is assumed.[n;]

Not exactly -- There are 2 keys on these EOS that are pertinent on these calculators. Using the RPN terminology, they are [(-)] CHS, and [-] subtraction. I am contending that on these calculators:

[(-)] $3[x^2]$ should yield positive 9 because negation should precede exponentiation. Negation is not subtraction.

OTOH in the expression " -3^2 " as written in, for example, a textbook, the "-" represents subtraction and whenever it is the first character in an expression or subexpression in such text there is an implied preceding zero. So in the textbook:

" -3^2 " means the same thing as

" $0 - 3^2$ "

I agree with you that is a dangerous -- and often incorrect -- assumption. On the other hand, I'm not sure how it could be implemented differently on an EOS machine. By the time the parser gets around to dealing with the "-" operation, it has already evaluated the exponent. I'm sure it is possible, if decidedly non-trivial, to create a parser that would take the existence of any preceding values or symbols into account before deciding on how to interpret the " -3 ". Much simpler -- though less graceful -- to simply use a different operation to represent negation (e.g. [+/-], [CHS], [(-)], etc.). Of course, that brings us right back to how the user interprets and keys in the expression... :^)

They do have a negation key as well as a subtraction key. They both work as advertised. Unfortunately, in my opinion, the negation key has the wrong precedence. Negation should immediately bind to the following number, variable, function, and/or expression enclosed in parenthesis immediately following the negation operator. [I hope I've covered all the bases, but I've probably neglected something].

It's puzzling to me that the TI-83 doesn't have a "sign-swap" key.

Well in the form of [(-)], they do, but EOS would not allow it to act immediately, because the expression, as you stated, isn't evaluated until it is entered in its entirety.

Still more puzzling is how Christof's teacher could possibly interpret -3^2 as $-(3^2)$, let alone that it should always be interpreted so.

Well, in this case the result is the same, but I think the interpretation may not be correct. There may also be another issue here and it might be what you intended to write about above. The pertinent issue is whether

-3^2 yields the same value as $(-3)^2$

If these expressions emanate from a text, it is absolutely clear that they don't. If they are generated by any current EOS calculator and the "-" **is created by pressing the CHS key**, they still don't, but it is my contention that they should on such calculators.

In a **text** in the first expression above, the "-" would correspond to subtraction from an implicit zero, and in a **text** in the second case it really doesn't matter whether you consider the "-" to correspond to subtraction from an implicit zero or negation, but the implicit zero rule will always work provided you never allow contiguous operators.

It all relates to the precedence level of the negation operator on the calculator. It should also be noted that the "-" issued by the CHS key and the "-" issued by the subtraction produce distinct symbols on the display. Unfortunately, they are not sufficiently distinct in most cases.

There is another source of confusion. Christof's teacher uses an AOS calculator, the TI-30Xa. In terms of negation on this calculator, there is no ambiguity, because negation, the CHS key which appears as [+/-] [sort of] is a postfix operator and works just like the CHS key in RPN.

Re: Algebra operations

Message #19 Posted by [John K. \(US\)](#) on 19 June 2002, 10:31 p.m.,
in response to message #18 by rsenzer

I am contending that on these calculators[,] $[(-)]3[x^2]$ should yield positive 9 because negation should precede exponentiation. Negation is not subtraction.

Agreed.

OTOH in the expression -3^2 as written in, for example, a textbook, the "-" represents subtraction and whenever it is the first character in an expression or subexpression in such text there is an implied preceding zero. So in the textbook [...] -3^2 as $0 - 3^2$

This is the one that leaves me scratching my head. Seems very counter-intuitive and more than a little ambiguous. Oh well, I guess that's why my degree is in history, not math. :^)

It's interesting to note that, on the HP 27S, if you press the [-] (subtraction) key without a pending value or operation, the display will show "0 - ". Very cool. :^)

They do have a negation key as well as a subtraction key. They both work as advertised. Unfortunately, in my opinion, the negation key has the wrong precedence. Negation should immediately bind to the following number, variable, function, and/or expression enclosed in parenthesis immediately following the negation operator.

Once again, I agree. Unfortunately, however, the negation key ($[(-)]$, $[+/-]$, $[CHS]$, etc.) on most EOS machines -- including the HP 39G -- seems to be interpreted as "stick a minus sign in front of the current (or next, depending on entry logic for the key) value, which then get parsed as "subtract from

previous value or zero (if no previous value)." Very frustrating.

The pertinent issue is whether -3^2 yields the same value as $(-3)^2$ [.] If these expressions emanate from a text, it is absolutely clear that they don't. If they are generated by any current EOS calculator and the "-" is created by pressing the CHS key, they still don't, but it is my contention that they should on such calculators.

Yes, but only if the calculator supplies (and displays) the parens around, in this case, the "-3" as on the Sharp which you previously mentioned. If it doesn't, then the current approach seems to be the "safer" one, since it tends to eliminate any potential ambiguity in the user's interpretation of the displayed formula, prior to evaluation.

Of course, the unfortunate sided effect is that mathematically inept people like myself, laboring under the mistaken assumption that the "-" in "-3" serves to indicate some intrinsic property of the value in question, rather than an operation to be performed on the value "3", will misinterpret it anyway, thus producing long, esoteric, and tedious message threads on discussion boards. :^)

It should also be noted that the "-" issued by the CHS key and the "-" issued by the subtraction produce distinct symbols on the display. Unfortunately, they are not sufficiently distinct in most cases.

Hmm. I don't think I've ever really noticed any difference in the symbols. (Guess that's a pretty good argument for "not sufficiently distinct," huh? ;^) I'll have to remember to look more closely at the displays next time.

Re: Algebra operations - VPAM=Visually Perfect Algebraic Method

Message #20 Posted by [Ellis Easley](#) on 17 June 2002, 4:57 p.m.,
in response to message #16 by rsenzer

After searching the Casio website, I found this out. I still don't know what "S-VPAM" means, though.

Re: Algebra operations

Message #21 Posted by [Christof \(Davis, CA\)](#) on 12 June 2002, 5:39 a.m.,
in response to message #12 by rsenzer

My professor's contention is that all calculators *should* accept [-] [3] [x^2] [=] == $1(3^2)$ (where [-] represents a change sign key)

Note again- the Casio makes the most sense of currently marketed educational (assuming rumors of the hp20s demise)- the chsgn key is actually a (-) which is explained by casio as multiplying by negative 1.

I think the main issue that came up here is that the *way* calculators work isn't addressed in classes and this particular prof wants something that follows her shortcuts and standards.

My problem is that I *think* math uncommon lisp, elisp, or RPL and don't get the same intuitive answer for this. yes, the rules of precedence say that exp functions before multiplication; so assuming '-' to always mean '-1 times' works fine. I tend to add that when rewriting EQs for entry into emacs or rpn- but it doesn't seem to come natural to many people.

Maybe I should use some of the info in these posts to write an operation faq for the class.

-C

Re: Algebra operations

Message #22 Posted by [John K. \(US\)](#) on 12 June 2002, 10:37 p.m.,
in response to message #21 by Christof (Davis, CA)

My professor's contention is that all calculators **should** accept `[-] [3] [x^2] [=] == 1(3^2)` (where `[-]` represents a change sign key)

Okay, now I'm confused again. This seems contrary to your earlier statement. Do you mean that `[-] [3] [x^2] [=]` should evaluate to 9 or to -9? (Above, you seem to be indicating the first case.) If the latter, it would really be interesting if your professor could be convinced to write up a short explanation of her(?) position.

As rsenzer indicated elsewhere, the sign-swap operation modifies the internal representation of a value (e.g. 3 `[+/-]` or `[+/-]3`, depending on how the individual device works, becomes -3), whereas the `[-]` implies a pending subtraction operation and will, on those EOS machines mentioned, be evaluated -- however wrongly -- as $0 - (3^2)$ (or, alternately, as $-1(3^2)$). The situation doesn't exist in AOS calculators (or RPN, for that matter) because operations are generally performed immediately (see my earlier [post](#)), thus neatly side-stepping the entire issue of operational precedence.

I guess we can distill this entire thread down to the maxim: *Know Thy Calculator*.

Or, better still, simply use RPN... ;^)

Re: Algebra operations

Message #23 Posted by [Christof \(Davis, CA\)](#) on 13 June 2002, 1:42 a.m.,
in response to message #22 by John K. (US)

Oops!

That was supposed to read:

My professor's contention is that all calculators **should** accept

`[-] [3] [x^2] [=] == -1(3^2)`

(where `[-]` represents a change sign key)

Sorry about that.

-C

Re: Algebra operations

Message #24 Posted by [John K. \(US\)](#) on 13 June 2002, 2:25 a.m.,
in response to message #23 by Christof (Davis, CA)

Mm. That's what I thought you meant. :^)

I would have to take issue with your professor's position. The sign-swap operation should *only* affect the value immediately following (or preceding, for postfix logic machines) the operator. In this case, that would be the "3" not "3²".

If you are a daring fellow and are willing to risk your future grade and educational opportunities, you might try the following argument:

Given that the sign of a value is an intrinsic property of that value and that the sign-swap operator serves to allow that property to be set, if we assume that the sign-swap operation is unary and that unary operators have a higher priority than other, binary, operators (such as exponentiation), why shouldn't we be forced to enclose the $3^{^2}$ in parens? Anything else would seem to be inconsistent with other unary operators such as $[n!]$.

If, on the other hand, we don't wish to stipulate that the sign-swap operator is unary, why shouldn't we consider it to be so? After all, isn't it simply used to set an intrinsic property of a value?

Use it with caution. As always, YMMV, of course. :^)

Re: Algebra operations

Message #25 Posted by [mapet](#) on 12 June 2002, 6:27 a.m.,
in response to message #1 by Christof(Davis, CA)

$-3^2 = -9$ on 39G and 40G

Re: Algebra operations

Message #26 Posted by [Chris Randle \(Lincoln - UK\)](#) on 12 June 2002, 10:08 p.m.,
in response to message #1 by Christof(Davis, CA)

I intended my other reply to your thread to be "opinion neutral". Just a statement of facts. However, since reading all the arguments I have changed my mind.

At first, I thought that -3^2 ought to be 9, but now I think it should be -9. Indeed, ' -3^2 ' EVAL on my 28S and 48SX yields -9. I'm not sure how you reached 9 unless you used RPN, which relies on your interpretation of the expression.

To my mind, the most compelling argument is that $89-3^2 = 80$, therefore -3^2 by itself ought to be -9.

Re: Algebra operations

Message #27 Posted by [John K. \(US\)](#) on 12 June 2002, 10:55 p.m.,
in response to message #26 by Chris Randle (Lincoln - UK)

To my mind, the most compelling argument is that $89-3^2 = 80$, therefore -3^2 by itself ought to be -9.

Ah, but isn't it really just an specific example of the more general x^n , where $x = -3$ and $n = 2$? Surely that would be written as -3^2 (I can't recall ever seeing otherwise) and interpreted as $(-3)^2$, not $-(3^2)$?

Re: Algebra operations

Message #28 Posted by [James M. Prange](#) on 13 June 2002, 3:15 a.m.,
in response to message #27 by John K. (US)

If we consider the "-" sign to mean "multiply by negative one", let $a=-1$, $b=3$, and $n=2$. Consider the expression ab^n .

Should this mean $(ab)^n$ or should it mean $a(b^n)$?

Re: Algebra operations

Message #29 Posted by [John K. \(US\)](#) on 13 June 2002, 5:08 a.m.,
in response to message #28 by James M. Prange

Consider the expression ab^n . Should this mean $(ab)^n$ or should it mean $a(b^n)$?

I may be wrong, but isn't ab^n always read as $a(b^n)$? After all $3x^3$ isn't interpreted as $(3x)^3$ -- unless I've forgotten more algebra than I thought. :^)

Besides, while it is true $-3 = -1 \cdot 3$, that doesn't mean that I should always represent a negative number in that form any more than I should always represent 6 as $2 \cdot 3$. In fact, whenever a number is replaced by its factors, it is usual to enclose them in parens. For example, given that $n = 6$:

$n! \rightarrow 6! \rightarrow (2 \cdot 3)! = 720$ (correct)

not

$n! \rightarrow 6! \rightarrow 2 \cdot 3! = 12$ (incorrect)

nor

$n! \rightarrow 6! \rightarrow (2! \cdot 3!) = 12$ (also incorrect)

Therefore, since pulling out -1 is simply the factoring of -3...

Re: Algebra operations

Message #30 Posted by [James M. Prange](#) on 13 June 2002, 5:45 a.m.,
in response to message #29 by John K. (US)

I see your point, but the convention is that exponentiation has a higher precedence than negation, so $-a^n$ means $-(a^n)$, not $(-a)^n$. Maybe there isn't any good reason for the convention other than that that's the way that mathematicians have agreed to interpret expressions.

Regards,
James

Re: Algebra operations

Message #31 Posted by [John K. \(US\)](#) on 13 June 2002, 7:42 p.m.,
in response to message #30 by James M. Prange

[B]ut the convention is that exponentiation has a higher precedence than negation, so $-a^n$ means $-(a^n)$, not $(-a)^n$.

I must admit, I'm not familiar with that convention. It seems rather counter-intuitive. How can an operation have a higher precedence than an intrinsic property of a value?

Re: Algebra operations

Message #32 Posted by [James M. Prange](#) on 15 June 2002, 4:42 a.m.,
in response to message #31 by John K. (US)

I must admit, I'm not familiar with that convention.

What can I say? I learned that convention, I suppose, sometime back in the early 1960s. My grandniece learned it a couple of years ago in pre-algebra.

It seems rather counter-intuitive.

Now that I think about it, it would probably seem strange to me if I weren't accustomed to it.

How can an operation have a higher precedence than an intrinsic property of a value?

Good question; I don't know. My guess is that when the convention came into use perhaps negative numbers weren't considered to be properly "natural" values. After all, can you hold -3 of anything in your hand?

Regards,
James

Re: Algebra operations

Message #33 Posted by [John K. \(US\)](#) on 19 June 2002, 10:39 p.m.,
in response to message #32 by James M. Prange

After all, can you hold -3 of anything in your hand?

I don't know about that. I've got a stack of bills here that I can (barely) hold in my hand that would seem to argue differently... :^)

Kidding aside, you're probably right. I do seem to recall reading somewhere that "natural numbers" are only positive integers. In that light, I suppose, the interpretation makes sense.

I always knew there was something decidedly "un-natural" about creditors... ;^)

Re: Algebra operations

Message #34 Posted by [Les Bell \(Sydney\)](#) on 13 June 2002, 7:46 p.m.,
in response to message #30 by James M. Prange

Actually, precedence (and associativity) is a thorny issue. In the world of mathematics in general, I've always understood exponentiation to have a higher precedence than negation. However, wanting to check my facts, my first reaction was to pull my ancient copy of Harbison & Steele's "C: A Reference Manual" off the shelf - completely forgetting that C, of course, does not even have an exponentiation operator.

However, I infer from the standard C table of precedence and associativity that **if** C did support exponentiation, the unary minus operator would be of higher precedence than exponentiation. This is because in C, the unary operators as a group all have higher precedence than the binary operators.

Unfortunately, I no longer have reference manuals for languages like FORTRAN or PL/I (?) which ISTR support exponentiation. (I'm guessing, in the case of PL/I, but it seems like that language had operators for **everything** <g>).

Best,

--- Les [<http://www.lesbell.com.au>]

Re: Algebra operations

Message #35 Posted by [rsenzer](#) on 13 June 2002, 8:46 p.m.,
in response to message #34 by Les Bell (Sydney)

Hi Les,

Some of the more recent programming languages might have negation operators per se, but most of these "older" languages did not and the "-", essentially the subtraction operator was the means for entering a negative number. So you frequently had to wrap a parenthesis around the entity to be negated to assure the desired effect. Since they had no negation operator, they didn't explicitly have precedence rules for negation.

Nevertheless, a function or subroutine might encounter an parameter whose value was a negative number. The contents of a variable or data structure such as an array might contain a negative number as well or an expression or subexpression might evaluate to a negative number.

Clearly, early programming languages such as Fortran, PL/I, and Cobol had rules for handling such data. For example, "Y= 1.0 / X" where the content of X might be negative. They could also handle an expression like "N = -1". The Fortran 77 Standard and I presume the latest Fortran standards defined the rules for constants and -1 probably met the rules for a constant as opposed to treating it as "0 - 1". It would be interesting to see what the standards say about an expression like "N = -M". Needless to say, such expressions generally work with the expected results, so I'm not questioning that. [Although, I'm sure there is a gotcha in PL/I, there always is.]

I use to know this stuff for C and Fortran, but its been years since I was involved with compiler testing.

If I recall, C has some form of binary negation operator, "~" tilde, if I recall, but this may just be one's compliment [or is that complement ? :)]

Re: Algebra operations

Message #36 Posted by [Les Bell \(Sydney\)](#) on 15 June 2002, 6:45 a.m.,
in response to message #35 by rsenzer

>> If I recall, C has some form of binary negation operator, "~" tilde, if I recall, but this may just be one's compliment [or is that complement ? :)] <<

In C, "the prefix operator "-" computes arithmetic negation of its operand" (Harbison & Steele). But they then go on to say "A unary minus expression "-e" may be considered to be a shorthand notation for "0-(e)"; the two expressions in effect always perform the same computation". Which leaves us not much the wiser, I'm afraid.

For an integral type, "-" would give the two's complement. The "~" operator is bitwise negation (one's complement) and the "!" operator is logical negation.

It's nice that, at least in the world of programming languages, all this stuff is tightly specified, so that the programmer and the compiler or interpreter can be brought to some kind of agreement, and a shame that it's not so clear in the wider world of math. . .

Best,

--- Les [<http://www.lesbell.com.au>]

Re: Algebra operations

Message #37 Posted by [Andre' Wilhelmus](#) on 14 June 2002, 3:42 a.m.,
in response to message #34 by Les Bell (Sydney)

In Fortran-77, the operator precedence high to low is: exponentiation, multiplication and division, addition and unary plus and subtraction and unary minus.

Re: Algebra operations

Message #38 Posted by [Les Bell \(Sydney\)](#) on 15 June 2002, 6:51 a.m.,
in response to message #37 by Andre' Wilhelmus

Interesting. The language that I've been using most recently, Perl, is the same. See

http://tit.irk.ru/perl2/prog3/ch03_01.htm

for more info. I think that programming languages generally give exponentiation higher precedence than unary minus, and the HP48 agrees.

Best,

--- Les [<http://www.lesbell.com.au>]

Re: Algebra operations

Message #39 Posted by [Wayne Brown](#) on 14 June 2002, 9:11 a.m.,
in response to message #34 by Les Bell (Sydney)

"Ask Dr. Math" from the Math Forum at Drexel University gives two different explanations (from two different people) of the precedence rules. One says that exponentiation ALWAYS takes precedence over negation (<http://mathforum.org/library/drmath/view/53194.html>). The other says the same thing when working with variables, but that when working with numbers the precedence is unclear and should always be specified with parentheses (<http://mathforum.org/library/drmath/view/55713.html>). I tend to agree with the first interpretation.

Re: Algebra operations

Message #40 Posted by [thibaut.be](#) on 14 June 2002, 2:03 p.m.,
in response to message #39 by Wayne Brown

If I understood correctly the main problem is to know whether the - sign is equal to $0 - \text{abs}(x)$ or $-1 * \text{abs}(x)$.

If $-x^2$ is quite clear (ie $-(x^2)$), -3^2 is not as such. Therefore to avoid any doubt it is recommended to use parentheses in potentially dubious cases.

Re: Algebra operations

Message #41 Posted by [John K. \(US\)](#) on 14 June 2002, 7:20 p.m.,
in response to message #40 by thibaut.be

Therefore to avoid any doubt it is recommended to use parentheses in potentially dubious cases.

Sound advice.

Lukasiewicz, I feel your pain... ;^)

Re: Algebra operations

Message #42 Posted by [James M. Prange](#) on 15 June 2002, 6:58 a.m.,
in response to message #39 by Wayne Brown

I too agree with his first interpretation, but because not everyone does, perhaps it's best to use the parentheses when we're writing for someone other than ourselves and there's some chance of misunderstanding, and certainly when we're not sure of what the precedence rules of a particular calculator or programming language are.

By the way, on the 48 series and the 49G, setting flag -53 causes extra parentheses to be displayed when an algebraic expression is put on the stack, explicitly showing the order of operations. Makes for a rather cluttered looking expression, but perhaps easier than looking up the rules in the manual.

Regards,
James

Re: Algebra operations

Message #43 Posted by [James M. Prange](#) on 15 June 2002, 5:39 a.m.,
in response to message #34 by Les Bell (Sydney)

Of course the developers of a language can use any precedence rules that they choose to. Preferably they'd choose rules which seemed intuitive to the users, and one would hope for clear documentation of the rules. It seems to me that I've run across at least one that considered + and - to have the same precedence as * and /, using a strict left to right order so that $1 + 2 * 3$ equalled 9 instead of 7. Presumably this is for people who've never taken an algebra class. I suppose that you could set + and - to have a higher precedence than * and / if you really wanted to; you'd just have to place your parentheses differently.

Interestingly, on the 28 series and 48 series, a^b^c is treated as $(a^b)^c$, but on the 49G the same expression is treated as $a^{(b^c)}$. I've asked my sister and brother-in-law (both math teachers) which is correct, and they both said that parentheses were needed; without them they wouldn't know which way to interpret the expression.

I can't seem to find any "authoritative" (other than textbooks) document on the order of operations in algebra, it seems to be regarded as something that "everybody knows".

Regards,
James

Re: Algebra operations

Message #44 Posted by [Les Bell \(Sydney\)](#) on 15 June 2002, 6:36 a.m.,
in response to message #43 by James M. Prange

>> Interestingly, on the 28 series and 48 series, ' a^b^c ' is treated as ' $(a^b)^c$ ', but on the 49G the same expression is treated as ' $a^{(b^c)}$ '. I've asked my sister and brother-in-law (both math teachers) which is correct, and they both said that parentheses were needed; without them they wouldn't know which way to interpret the expression. <<

Interesting. . . This isn't a question of precedence, but rather of associativity - and I could swear that one of the math references I saw recently pointed out that exponentiation associates right to left, meaning that a^b^c should be interpreted as $a^{(b^c)}$ - which is certainly how I would have done it without stopping to think(!?!).

A quick Google search is returning me lots of pages that agree for computer languages such as Perl, but I'm pretty sure it is the case for paper-and-pencil math as well.

Best,

--- Les [<http://www.lesbell.com.au>]

Re: Algebra operations

Message #45 Posted by [James M. Prange](#) on 15 June 2002, 12:32 p.m.,
in response to message #44 by Les Bell (Sydney)

Yes, it is a matter of association rather than precedence, but I'd guess that it's still a matter of "order of operations". My intuition tells me to associate from right to left on a "tower of exponents" (that is, ' a^b^c '= $a^{(b^c)}$), and I was surprised when my calculator (48SX, IIRC) did the opposite, but I didn't recall ever seeing it without parentheses in a textbook, so I just figured that my intuition had led me astray. Dr. Math at <http://mathforum.org/library/drmath/view/54362.html> agrees that the (informal) convention is to work from right to left on this problem for a variety of reasons. For myself, perhaps the easiest explanation is that $(a^b)^c$ is equivalent to the simpler $a^{(b*c)}$, or, using superscripts and implied multiplication, a^{bc} , so why bother using a "tower of exponents" for it and requiring parentheses for $a^{(b^c)}$? I don't find Dr. Ian's final example at all convincing though.

Regards,
James

Re: Algebra operations

Message #46 Posted by [rsenzer](#) on 20 June 2002, 1:51 a.m.,
in response to message #43 by James M. Prange

Pure Speculation here:

I tend to believe that the issue of how to interpret consecutive exponentiation operators may have originated more as a computer science issue rather than a math issue. As alluded to in a number of the postings, when you don't have an operator, but instead use a "tower" for expressing exponentiation, there is no ambiguity.

I suspect when it became necessary, perhaps, for the first time in Fortran, to make a decision about the order of execution of

a^{b^c}

[** is the exponentiation operator in fortran]

that is when the "official" order of operations from right to left for exponentiation operators was established. This may have been based on the fact that it was easier to write the program this way on the particular hardware on which the initial fortran compiler was developed or something of that nature. [Due to the rule of exponentiation described below and elsewhere in another post, if you have just one set of sequential exponentiation operators, it is probably "cheaper/easier" to perform a product and an exponentiation, then to perform 2 exponentiations. Moreover, more than 2 sequential exponentiations probably didn't arise too often.] Before, Fortran, it may not have been necessary to formalize this, because there was little need to express an exponentiation operator to be used in a strictly left to right sequential expression, per se.

Alternatively, individuals just used parenthesis, or applied the rules of exponentiation as specified in another posting, i.e.,

$(a^b)^c$ is equivalent to

$a^{(b^c)}$

Because of the limitations of stack size [operation and/or operand stack] on an algebraic calculator, it would be advantageous to execute exponentiations in the order in which they are encountered. On an AOS calculator this, of course, corresponds to left to right order. On an EOS calculator, the same would be true. However, if stack size is not at a premium or is not an issue, then either order is feasible. That may explain why the 48 series performs the operations expressed in EOS in an order comparable to the original fortran specification whereas earlier calculators performed the operation from left to right. However, other than that original convention, I have no idea why HP decided this was the appropriate order.

Personally, I would prefer left to right evaluation. Needless to say, parenthesis should be employed liberally when programming such an expression in an EOS style language.

Re: Algebra operations

Message #47 Posted by [Christof \(Davis, CA\)](#) on 20 June 2002, 3:11 a.m.,
in response to message #46 by rsenzer

A lot of people- especially people in this math class of mine :) - tend to forget that math is not all 1-5k year old stuff writ in stone.

Since computers *are* a part of life now, and since at least some small percentage of algebra students may end up actually doing calculations in a programming language at some point. (well, okay, not many, but still...) -- I think it is an issue that should be addressed more, and maybe codified better.

Personally, I'd like a totally seperate negation character, so (neg)3 never can be confused for 0-3. Among other things, this style helps me a lot when reducing a lot of linears. no subtraction ever, just addition of (neg)x numbers. Or maybe that's just a personal hangup from learning programming before ever taking an algebra class. I learned to think of -255 as s single variable instead of an operator and variable- and I'm not thinking that's a bad thing.

-Christof

Re: Algebra operations

Message #48 Posted by [James M. Prange](#) on 21 June 2002, 7:04 a.m.,
in response to message #46 by rsenzer

Actually the 48 series does exponentiation left to right, so that $a^b^c = (a^b)^c$. It's the 49G that matches the fortran convention of working right to left so that $a^b^c = a^{(b^c)}$.

I can see some sense in working left to right (opposite of the fortran convention) when working with "single-line" notation like a^b^c , but with multiline notation like a^{b^c} , my intuition is to work top to bottom (right to left), so that $a^{b^c} = a^{(b^c)}$

But in the 48 series and 49G the same expression can be displayed in either single-line notation or multiline notation, so I guess that it's best to choose one convention for both styles of notation.

Re: Algebra operations

Message #49 Posted by [rsenzer](#) on 21 June 2002, 4:21 p.m.,
in response to message #48 by James M. Prange

Hi James,

Yes, I assumed that the 48 and 49G handled it the same way and I was thinking 48s and 49s when I said 48 series. But, I do seem to remember a posting here that said that the 49 behaved differently from the 48 series for sequential exponentiation.

I also stand corrected on the towering notation. Clearly, without parenthesis, the result is ambiguous. You have to decide whether to go from left to right or right to left if you don't use parenthesis. As usual, since there is ambiguity, it is best to use parenthesis, but that is not an answer to the question. I will defer to everybody else here and accept that there might be a number of reasons to go from right to left for sequential exponentiation.

Another mea culpa, the rule:

$$a^{b^c} = a^{bc}$$

works only for left to right interpretation, NOT for right to left interpretation. So my earlier posting on Fortran was incorrect on this matter. Which, of course, makes me wonder why they made the choice they made, since they wouldn't have been able to use the above rule in that case. On the other hand, perhaps, they are on "high moral grounds", in the choice they made rather than the most expedient choice.

Re: Algebra operations

Message #50 Posted by [Christof \(Davis, CA\)](#) on 21 June 2002, 5:29 p.m.,
in response to message #49 by rsenzer

I would intuitively assume that to solve

$$a \wedge b \wedge c$$

One would first have to solve b^c .

I would expect any AOS or EOS type system (including HP equation tools) to do it

what way. But I'd be wrong-

for that EQ 4^{3^2} :

solving 3^2 first, then 4^9 gives 262,144

and 4^3 followed by ^{2} gives 4096 (as does 4^6 , so that works)

Now, for the individual calculators:

if I type in

$4^{y^x 3 y^x 2}$

on a 20s, I get 4096. typing

$4^{y^x (3 y^x 2)}$

gives me 262,144

Now- if I enter this as an equation into the 32sii

$X = A^B^C$

and then solve for X (providing $a=4$, $b=3$, $c=2$) I get 4096 again.

Re: Algebra operations -- Sharp EL-5100S -- Result: 9

Message #51 Posted by [Paul Brogger](#) on 14 June 2002, 5:30 p.m.,
in response to message #1 by Christof(Davis, CA)

If you're interested, on the Sharp EL-5100S, pressing the keys:

$(-)\ 3\ x^2 =$

results in the answer "9".

Entering same as "formula 1" and "evaluating" it gives the same answer.

Re: Algebra operations -- Sharp EL-5100S -- Result: 9

Message #52 Posted by [Christof \(Davis, CA\)](#) on 15 June 2002, 3:36 a.m.,
in response to message #51 by Paul Brogger

Thanks- I don't have any modern sharp calculators.

On the good side, i've finally bothered to get and use the low end HPs- 20s and 30s. On the bad side, the final answer from the professor is that "in algebra, it's negative" -- meaning -9. I guess this is the kind of stuff that keeps me interested, not her *shrug*

I do wonder if there's room out there for more of the old style calculator books- "lay" manuals, I suppose. Seems that there's not much interest in anything below the 40g/82 level for that. The 30s, especially, could use something better to carry around than that flimsy paper thing. (Admittedly, there isn't much to the calc that needs a manual at all- but since

this is presumably for the non science major, some kind of "how to" book that includes refresher info on algebra, trig, stats, and personal business problems could be useful).

I will say, having used the 30s now, that I find it better than the casio- though the casio is easier to hold. I think I just expect thicker calculator bodies.

It's not about to make me give up a 32sii-42s. It's a bit of a toss up with the 20s, though.

-Christof

Re: Algebra operations -- Sharp EL-5100S -- Result: 9

Message #53 Posted by [rsenzer](#) on 16 June 2002, 2:57 p.m.,

in response to message #51 by Paul Brogger

Sharp has, presumably, changed its entry logic. On a Sharp EL-506L and a Sharp EL-531VB, they have [+/-] as both a prefix and postfix operator. Here's how they function:

Prefix:

[+/-]3[x²][ENTER]

produces the expression:

"-3²"

yielding -9

Postfix:

3[+/-][x²][ENTER]

produces the expression:

"(-3)²"

yielding 9

Both of these calculator purportedly use "ADVANCED D.A.L.". These are documented features and the [+/-] keys are clearly marked with "NEG (-)" and "(-)" on the face of the calculator underneath the keys.

OTOH, the Sharp EL-500L [ostensibly a calculator although I'm not entirely convinced] also employs Advanced DAL and uses a [(-)] key, but it does not allow the postfix operation.

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PPC ROM manual oddity

Message #1 Posted by [Juergen Rodenkirchen](#) on 11 June 2002, 11:10 a.m.

The PPC ROM manual that has been scanned by MoHPC has additional chapters called "Further Assistance" at the end of each routine description, listing the contributors (and related persons) names, addresses and phone numbers. I've got a manual lately (from an Australian source) which too does have these chapter headings, but it's missing the name, address and phone entries (these chapters appear blank, that means). Does anyone know why my edition of the manual is missing these informations?

Re: PPC ROM manual oddity

Message #2 Posted by [Ellis Easley](#) on 12 June 2002, 5:06 a.m.,
in response to message #1 by Juergen Rodenkirchen

Just a guess - maybe PPC published a version for non-members. I noticed on the Jake Schwartz PPC CD-ROMs, one of the early issues of the journal said it included a list of all members with contact info, but those pages were deleted from the CD-ROM - maybe a courtesy on Jake's part.

Re: PPC ROM manual oddity

Message #3 Posted by [Juergen Rodenkirchen](#) on 12 June 2002, 6:13 a.m.,
in response to message #2 by Ellis Easley

Yes, might well be; thanks for your response!

Re: PPC ROM manual oddity

Message #4 Posted by [Jake Schwartz](#) on 12 June 2002, 4:51 p.m.,
in response to message #1 by Juergen Rodenkirchen

On the original PPC ROM manual, all those "Further Assistance" entries were complete with names and phone numbers. On my scan of the book on PPC CD ROM #2, all that info is there.... it's from my original manual.

Re: PPC ROM manual oddity

*Message #5 Posted by [Juergen Rodenkirchen](#) on 13 June 2002, 2:56 a.m.,
in response to message #4 by Jake Schwartz*

I've got the MoHPC CD's with a manual scan containing the full "Further Assistance" information (is that identical with your scan?). As I felt that it's a nice idea to have it (although it's probably of no benefit any more today), I've been a little bit disappointed to realize that those information were omitted in my manual. B.t.w., my copy was printed in 1981; maybe some of the addresses have become invalid by that time so that the "assistance-entries" were omitted from later copies for the sake of preventing confusion? I don't know (but would like to :-). However, thanks a lot for your input, Jake!

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Re: 48s

Message #1 Posted by [Christof \(Davis, CA\)](#) on 11 June 2002, 2:05 a.m.

The 48s and sx both have 32k ram base, the sx has expansion slots while the s doesn't. the 48s in plain vanilla form is also a good inexpensive test bed for hardware hacks- or would be if I could find the s series memory hack info (all I can find right now is g series hacks, which sucks because i've got a 48s with a really loose case that is begging for hacking)

The 48sx manuals work fine on the 48s- they are basically the same calc except for the expansion slots.

I'm currently using the aforementioned loose case 48s with data backed up to a 48sx for a math class- but that' sbecause it's review math and I am spending class time learning more user rpl.

threading?

Message #2 Posted by [Christof \(Davis, CA\)](#) on 11 June 2002, 2:51 p.m.,
in response to message #1 by Christof (Davis, CA)

I apologize, the above post should have gone in the relevant thread- I don't know if it's OE or a bug (given that there's two cases evident)

-C

The original poster deleted his message

Message #3 Posted by [Dave Hicks](#) on 11 June 2002, 8:10 p.m.,
in response to message #2 by Christof (Davis, CA)

after you replied which leaves the responses free-floating. It's not pretty but I think it's better than deleting them.

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Contacting HP ...

Message #1 Posted by [rsenzer](#) on 11 June 2002, 1:14 a.m.

I hadn't noticed this before, but there are now forms for sending a message to HP in general and to Carly specifically on the contact pages at the HP website. So I sent a message via each of these forms. The form used to send messages to Carly acknowledges your message and states that Carly will not necessarily read every message, but someone at HP will.

I emphasized the importance of the HP-35 in making HP a household name. I emphasized the importance of RPN, my displeasure with the abandonment of the calculator market, the fact that a professional decision maker with an HP calculator is the best advertisement possible for HP, etc.

I also emphasized the fact that no PDA, PC, or computer software would ever be a suitable substitute for a calculator and the people who use HP calculators are likely to be involved in corporate purchase decisions in many cases.

I hope that more of us take the opportunity to contact HP. With enough of a response, perhaps HP will begin to focus on us and realize that HP calculator users HAVE been among the most loyal fans of HP and its products.

I am hoping that other HP calcula

Re: Contacting HP ...

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 11 June 2002, 7:05 a.m.,
in response to message #1 by rsenzer

Hi;

I agree. Mostly if we are concise and show them profitable possibilities. And if we are in great number.

(I'm curious about the rest of the post... Is it missing or you have finished in previous sentence?)

Re: Contacting HP ...

*Message #3 Posted by [rsenzer](#) on 11 June 2002, 12:02 p.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)*

Hi Luiz,

I'm not entirely sure, myself, what I was planning to add. I didn't realize that I had an extra fragment until after I had posted the message. It's probably more of an editing problem on my part.

Re: Contacting HP ...

*Message #4 Posted by [Scotty](#) on 11 June 2002, 10:12 a.m.,
in response to message #1 by rsenzer*

Good work Vieira I left a message there along the same lines yesterday. There's weight in numbers. Scotty

Re: Contacting HP with suggestions for calculator division

*Message #5 Posted by [Frank Travis](#) on 11 June 2002, 11:12 a.m.,
in response to message #1 by rsenzer*

About a month or so I e-mailed Carly Fiorina (which probably goes to someone on her staff, customer service, etc.). Here is my idea. Micron Electronics Corp. made MICRON PCs. They got very good reviews. But in the last couple of years the MICRON PC business was not doing well. Micron Electronics sold their MICRON PC business (with sales, manufacturing, and customer service intact) to Gores Technology Group. The website is www.micronpc.com. Now MICRON PCs still get good reviews. I was hoping HP could sell its HP Calculator Division intact to Gores Technology Group (or another interested company). HP Calculator could then flourish under the ownership of another company.

Re: Contacting HP with suggestions for calculator division

Message #6 Posted by [rsenzer](#) on 12 June 2002, 1:29 p.m.,
in response to message #5 by Frank Travis

Hi Frank,

I did get a response from Carly [or presumably the people who handle her e-mail]. The letter essentially said "Don't call us -- we'll call you if we need any more information." Whether in any sense it was sincere or just the "bug" letter -- who knows? Of course, I know where I would place my money.

On the other hand, all I care about is whether they produce high quality RPN calculators in the future.

Re: Contacting HP ...on Rebates

Message #7 Posted by [Frank](#) on 11 June 2002, 1:58 p.m.,
in response to message #1 by rsenzer

A bit off subject, but I finally got the last of the 3 \$50 HP Printer rebates owed me since Dec and Jan. Resubmittals were 2 and 3 times to the "rebate" supplier with no response or packages returned the first time and no response the second, though they did say they were perfect over the phone in between submittals, rebate packages were perfectly prepared and all printers bought from Dell, then the last 3 months were spent working with the HP "Presidents" office making 2 more "resubmittals (always keep copies!) to get them the last of which came in Saturday June 8th. Anyone else have a problem this year? Previous years rebates were flawless. One wonders if these rebate delays and non-payments help profit figures for the first couple of quarters! I estimate I spent one of the 50\$ in Phone Cost and Postage.

Re: Contacting HP ...on Rebates

Message #8 Posted by [Frank](#) on 11 June 2002, 2:03 p.m.,
in response to message #7 by Frank

Oh yes, and the last two Printers I bought this spring since this experience was a Lexmark x63 and a Cannon s750, and I always *used* to pay 2X for an HP since 1996 being a formerly loyal customer who was just conditioned otherwise.

Re: Contacting HP ...on Rebates

Message #9 Posted by [Ellis Easley](#) on 12 June 2002, 5:24 a.m.,
in response to message #8 by Frank

I always thought rebates were a way for a seller to move cash flow from one quarter to another. The people in stores who have expressed any opinion on the matter have assured me that the rebate is just another inducement to come in and buy something and enough people never send them in that it is not much of an expense. It seems obvious that the arcane rules are intended to discourage a person from bothering to send them in.

Speaking of arcane rules, you have magazine sweepstakes. They send out tens of millions of letters at a time. They must pay at least 5 or 10 cents postage plus the cost of the materials. So the prizes are a relatively small part of their expenses.

Whenever I'm trying to understand how sellers are making money, I remember what I read about Sears some years ago (I don't know if it is different now): 17% of their merchandise was lost to "shrinkage" which includes shoplifting, employee theft, and spoilage.

Re: Contacting HP ...

Message #10 Posted by [db\(martinez,california\)](#) on 11 June 2002, 8:11 p.m.,
in response to message #1 by rsenzer

can one of you post a link to the page or pages with the message forms?

Re: Contacting HP ...

Message #11 Posted by [steve](#) on 11 June 2002, 9:00 p.m.,
in response to message #1 by rsenzer

I have looked on hp's website but I could not find a link to contact Carly. I would like to leave her a message expressing the need for hp to support their long legacy in rpn calculators. Please advise me as to how to go about it

Re: Contacting HP ...

Message #12 Posted by [lokhin](#) on 11 June 2002, 11:48 p.m.,
in response to message #1 by rsenzer

does this form works? <http://www.hp.com/hpinfo/execteam/email/fiorina/index.htm>

yes

*Message #13 Posted by [rsenzer](#) on 12 June 2002, 2:57 a.m.,
in response to message #12 by lokhin*

Yes

Re: Contacting HP ...

*Message #14 Posted by [Chris Randle \(Lincoln - UK\)](#) on 15 June 2002, 6:09 p.m.,
in response to message #1 by rsenzer*

I sent an e-mail bemoaning HP's abandonment of their flagship calculator products, and I received a (non-automated) reply from Mr Lee-Khuan Goh, Worldwide Marketing Manager for Calculators.

Is anyone else interested in seeing a copy of the reply? I guess I ought to ask Mr Goh for his permission before I post his words to a public forum?

Re: Contacting HP ...

*Message #15 Posted by [J.Manrique](#) on 15 June 2002, 7:21 p.m.,
in response to message #14 by Chris Randle (Lincoln - UK)*

Hello,

I would like to read the answer, or at least knows its e-mail direction.

Thanks, J.Manrique jsmanrique_lopez@yahoo.es

Re: Contacting HP ...

*Message #16 Posted by [emartin](#) on 15 June 2002, 11:14 p.m.,
in response to message #14 by Chris Randle (Lincoln - UK)*

Yes, I would also be interested in knowing where HP is going. If it is possible to post his response, I believe a number of us would like to read it.

Re: Contacting HP ...

Message #17 Posted by [Christof \(Davis, CA\)](#) on 16 June 2002, 2:45 a.m.,
in response to message #16 by emartin

Yeah- I'd love to read the reply.

I've been crafting a large and long letter with plenty of examples and data (like amazon ratings for the 32sii and such) and should probably know if it's worth bothering to send it.

If the 20s- which may or may not be discontinued- is the one last programmable calculator, I'm going to be really sad. sadder when it goes away, too.

-C

Re: Contacting HP ...

Message #18 Posted by [Chris Randle \(Lincoln - UK\)](#) on 16 June 2002, 4:22 p.m.,
in response to message #14 by Chris Randle (Lincoln - UK)

Asked him to OK posting his words here. Will do so if I get the say so.

Re: Contacting HP ...

Message #19 Posted by [Chris Randle \(Lincoln - UK\)](#) on 17 June 2002, 1:58 p.m.,
in response to message #14 by Chris Randle (Lincoln - UK)

Well, red face here!

My reply e-mail was from *Ms* Goh Lee-Khuan not Mr Lee-Khuan Goh!!

She has asked me not to post her reply here. For your information, my original e-mail to Ms Fiorina is shown below. I hope Ms Lee-Khuan won't mind if I say that her reply made me feel optimistic about the future.

Dear Ms Fiorina,

I am a 37 year old IT company director. My comparatively recent introduction to HP was at the age of 25 with the HP-48SX calculator. Every subsequent HP purchase (and there have been many, both personal and corporate) has been as a result of that first, happy experience.

I would say that the benefit to HP of the calculator division must outweigh many times over

its bottom line value. Yet I see indications that HP has decided to abandon this world-class range of products.

If this is the case, I shall mourn their passing and I am sure I will not be alone. They are (were?) a shining beacon to the excellence of Hewlett Packard.

Re: Contacting HP ...

*Message #20 Posted by [John K. \(US\)](#) on 19 June 2002, 10:55 p.m.,
in response to message #19 by Chris Randle (Lincoln - UK)*

I hope Ms Lee-Khuan won't mind if I say that her reply made me feel optimistic about the future.

Perhaps a summary of her reply would be acceptable?

Re: Contacting HP ...

*Message #21 Posted by [emartin](#) on 19 June 2002, 11:06 p.m.,
in response to message #20 by John K. (US)*

Yes, even if you cannot provide a verbatim post, I'm sure most of us would want to have a clue, tease, whatever, as to what the future holds

Re: Contacting HP ...

*Message #22 Posted by [Chris Randle \(Lincoln - UK\)](#) on 21 June 2002, 7:26 p.m.,
in response to message #21 by emartin*

It was a short e-mail and realistically could not be abridged. I feel obliged to respect her wishes not to post her reply (and, by inference, its import). Sorry :-(

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Re: 48s

Message #1 Posted by [Jim L](#) on 11 June 2002, 1:14 a.m.

Volume 1 should be all you need. The full set is for people with several to many HPs.

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What do all the symbols mean?

Message #1 Posted by [Paul Brogger](#) on 11 June 2002, 1:06 a.m.

On the back of my new HP-42S, there are several logo-like symbols molded into the case. Can anyone tell me what they mean?

1. There's a "C E", in a stylized font built up from circular arcs;
2. There's an "NOM" with horizontal lines above and below;
3. There's an "NYCE" below a box with arrows pointing out from its middle, left, right and upward;
4. The previous two are separated by " . 1 . " (the dots are actually mid-level separators, not periods);
5. There's a symbol of a "check" mark in a circular field;
6. On lots of other electrical stuff I've seen what looks like "UR", but reversed, as if seen in a mirror;
7. I've also seen "SA" inscribed inside a circular "C".

Just curious . . .

Re: What do all the symbols mean?

Message #2 Posted by [John K. \(US\)](#) on 11 June 2002, 1:31 a.m.,
in response to message #1 by Paul Brogger

Most of them certify that the device complies with safety and EMI regulations in various parts of the world. I'm not exactly sure how they map, but I think "CE" is a European Community cert.

Re: What do all the symbols mean?

*Message #3 Posted by [thibaut.be](#) on 11 June 2002, 3:04 a.m.,
in response to message #2 by John K. (US)*

yes, CE is definitely the European Community (now called European Union, but the logo remained the same) certificatio.

Re: What do all the symbols mean?

*Message #4 Posted by [Ellis Easley](#) on 11 June 2002, 3:23 a.m.,
in response to message #2 by John K. (US)*

I think you're right about the "CE". The compliance guys I worked with had to deal with each European country separately and I understand the "CE" mark implies a set of standards that encompasses all of them. Look closely at a power line filter capacitor or an equipment AC receptacle of a few years ago and you will see all the different European marks crowded in. The mirror image looking "UR" is the newer official Underwriters Laboratories symbol and "CSA" is the Canadian Standards Association. UL and CSA work pretty closely to keep their standards compatible. I remember once a compliance engineer was trying to explain to me why it is impossible to make a fuse that meets both UL and the European standards (as they were then). I wonder if "CE" has solved this paradox?

UL and CSA usually only get involved with equipment that plugs into the mains because their primary interest is safety (they are called "Underwriters Labs" because they got started providing reliable information for insurance purposes). The FCC and a similar organization in Canada regulate RF emissions and calculators have been required to meet these ("FCC Class B"). The European countries had their own, separate emissions requirements. This is why so many computer equipment manuals have a page of German. The CE mark, as I understand it, covers safety and electromagnetic compatibility (EMC, essentially RF emissions and immunity to electrostatic discharge, as far as calculators are concerned) and possible other regulated matters.

Re: What do all the symbols mean?

Message #5 Posted by [Ellis Easley](#) on 11 June 2002, 6:13 a.m.,
in response to message #1 by Paul Brogger

I looked on a website called "How Stuff Works" and found [this link about the "CE" mark](#) - I learned that by law, it is called the "CE marking", perhaps to avoid an inferiority complex for the Euro - and [this link about UL](#). Nothing for "NOM" or "NYCE". At the NIST website I found [an enormous glossary of conformity-assessment-related acronyms](#), but no "NOM" or "NYCE". From there I did a general web search for "NOM" and found such things as an organization that promotes economic development in the northern Netherlands, an Italian website called "Never on Moon" (I think it's about conspiracy theories or the European space program, I can't tell), and a Japanese website with MIDI files of classical music. I was downloading some when my computer crashed.

Re: What do all the symbols mean?

Message #6 Posted by [Massimo Gnerucci \(Italy\)](#) on 11 June 2002, 6:34 a.m.,
in response to message #5 by Ellis Easley

an Italian website called "Never on Moon" (I think it's about conspiracy theories or the European space program, I can't tell)

Ellis, I checked, it's the usual bulls**t... The man never landed on the moon. Kinda like "Capricorn One" but with the Moon instead of Mars.

Massimo

Re: What do all the symbols mean?

Message #7 Posted by [JR\(Italy\)](#) on 11 June 2002, 6:42 a.m.,
in response to message #5 by Ellis Easley

NOM-1-NYCE is Mexico's equivalent to UR or CE.

Regards

Re: What do all the symbols mean?

Message #8 Posted by [Ellis Easley](#) on 11 June 2002, 6:45 a.m.,
in response to message #1 by Paul Brogger

I did a little more prowling on the NIST website. The following is from an NIST document which is a guide to the EU EMC directive which is one of the components of the CE marking program:

II. Essential Requirements

Following are the essential requirements of the EMC Directive, as taken directly from Article 4 of the Directive:

“The apparatus...shall be so constructed that:

(a) the electromagnetic disturbance it generates does not exceed a level allowing radio and telecommunications equipment and other apparatus to operate as intended;

(b) the apparatus has an adequate level of intrinsic immunity to electromagnetic disturbance to enable it to operate as intended.”

This is basically what the FCC requirements are about, you see almost this same thing printed in manuals for, and on equipment that meets FCC Class B.

There is also a "low voltage directive" which I thought might cover safety aspects of calculators, but it covers equipment operating from 50VAC or more, 75VDC or more.

Re: What do all the symbols mean? -- Thanks!

Message #9 Posted by [Paul Brogger](#) on 11 June 2002, 11:34 a.m.,
in response to message #1 by Paul Brogger

That covers 'em all but the "check mark in the circle" symbol. (It's a very minimalist and reassuring stamp of someone's approval of something, but I'm still curious!)

The "backwards UR" and "SA in C" are indeed both on the in-line power switch on the cord of my desk lamp -- but I'd seem 'em so many times before I thought I'd throw them in, too. (Thanks again for the answers.)

I notice that on two old TI LED calculators I have on my desk (TI-30 and -55) there are no such symbols -- just the TI logo and LOTS of patent numbers. (I don't have any LED HP's at hand just this moment -- do the patent numbers betray yet another difference in corporate culture, or

did HP do the same?)

On the back of a Sharp EL-5100S (landscape-layout LCD Scientific) there's a very curvy-looking "B" (or beta) "m" hybrid -- the middle leg of a round-topped lower-case "m" is curled back to the left twice to form a beta-looking character.

And, on the back of an American-made HP 32S (2817A00183) is a complex symbol -- several concentric circles with a "propeller blade" oriented vertically in the middle and the code "871 B".

All very weird and mysterious -- something for the archaeologists to puzzle over . . .

Re: What do all the symbols mean? -- Thanks!

*Message #10 Posted by [John K. \(US\)](#) on 11 June 2002, 7:31 p.m.,
in response to message #9 by Paul Brogger*

That covers 'em all but the "check mark in the circle" symbol.

Since it's part of the same panel as the "NOM-1-NYCE," perhaps it's related?

Re: What do all the symbols mean? -- Thanks!

*Message #11 Posted by [Ellis Easley](#) on 12 June 2002, 6:57 a.m.,
in response to message #9 by Paul Brogger*

Regarding patent numbers on TI calculators - I understand that after TI settled some patent lawsuits and started collecting royalties from some Japanese companies and others, TI was getting more income from royalties than from manufacturing. I don't think putting the numbers on items is necessary to protect the patents. Maybe it's just a matter of pride.

The check mark reminds me of "Quality Checked Milk". Could it have something to do with ISO 9000?

The circle and propeller symbol is on the back of some Voyagers too.

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Re: HP32SIIs at Fry's Electronics (was Re: Are we?)

Message #1 Posted by [rsenzer](#) on 11 June 2002, 1:03 a.m.

Hi Warren,

I appreciate your offer to be a middleman, but for a variety of reasons I will decline the offer. However, I would like to check on their shipping policies. I'm surprised that they wouldn't ship it provided that a customer were willing to pay for shipping and furnished them with a legitimate credit card number. I live right near them so I'll see if I can get some info on their policies. If I get useful information, I'll post it here.

Re: HP32SIIs at Fry's Electronics (was Re: Are we?)

Message #2 Posted by [Christof \(Davis, CA\)](#) on 11 June 2002, 2:55 p.m.,
in response to message #1 by rsenzer

Well, if anyone turns up- I'll pay for the shipping and a \$10 handling fee per unit. Put me down for 2.

I've tried 3 places to orderonline now and they've all come up "out of stock, order cancelled"

-Christof

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Re: HP32SIIs at Fry's Electronics (was Re: Are we?)

Message #1 Posted by [Bill Smith](#) on 10 June 2002, 10:16 p.m.

i'm sorry this post was not a couple days earlier, as i was at Fry's in Wilsonville, OR yesterday. they still had 5 or 6 32sii's on the rack...i was tempted to grab one, but didn't.

unfortunately, i live over a hundred miles from Fry's and won't get back there anytime soon. perhaps someone close to there will volunteer their effort and serve as a go-between?

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magnetic cards and different card readers

Message #1 Posted by [Alex Binca](#) on 10 June 2002, 7:16 p.m.

Can magnetic cards written by a card reader be read by a different card reader?

I'm assuming same kind of calculator (say 2 HP 67s or 2 HP-41s).

I know that in principle it should work, but I was wondering how *well* it works in practice.

Thanks!

Alex Binca

Re: magnetic cards and different card readers

Message #2 Posted by [katie](#) on 10 June 2002, 7:36 p.m.,

in response to message #1 by Alex Binca

It sure is suppose to work! In fact, that's the best way to test out repaired card readers. I first make sure that the reader can read its own writing (so to speak), then make sure that it can read the Standard Pac cards finally I make sure that it can read cards written by at least one other 67/97 (or 65 or 41) and can write cards that the other calcualtor can read. I do all these tests repeatedly and only accept a repair if there are no errors. (This means that I have to re-do a repair about 1 out of 3 times.)

Re: magnetic cards and different card readers

Message #3 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 10 June 2002, 8:02 p.m.,
in response to message #2 by katie

The magnetic cards have separate and parallel data and clock tracks, so there is enough information on the card to allow for synchronizing, even with mechanical variations and tolerances.

In fact, the same principle is used in the hand-pulled (!) card reader/writer of the HP75; so it accommodates differences between the pulling power of different people (or the same person over time)

Re: magnetic cards and different card readers

Message #4 Posted by [David Smith](#) on 11 June 2002, 5:24 p.m.,
in response to message #1 by Alex Binca

Also, the HP41 reader can read, translate, and execute almost all HP67/HP97 programs automatically.

Re: magnetic cards and different card readers

Message #5 Posted by [Paul Novaes](#) on 11 June 2002, 8:38 p.m.,
in response to message #4 by David Smith

Also, the TI-59 had a module ("RPN simulator") that would translate/interpret (most?) programs originally written for the HP-97.

I got such a module a while ago, but I haven't tried it yet. I believe that it is not really practical, but I always found the idea kind of whimsical,

-- Paul Novaes

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Re: 48s

Message #1 Posted by [Jim L](#) on 10 June 2002, 6:55 p.m.

It does graph but it's a little complicated to explain an entire 48S from scratch! I don't even know where to start. Do you know RPN?

You can get the manuals on CD [here](#).

What's on the CD set is a 48SX manual but I think that besides the expansion slots they're the same. Maybe the amount of memory is different too but that shouldn't be a problem.

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Re: 48s -- Maybe you DO mean "48s"!

Message #1 Posted by [Paul Brogger](#) on 10 June 2002, 6:51 p.m.

Sorry -- I guess there WAS a 48S. Shows you how much I know!

Try this download from www.hpcalc.org :

[Calculator Comparison Document](#)

-- it compares the 48 models (S, SX, G, G+ GX) and the 28C & S. Sounds like what you're looking for . . .

Re: 48s -- Maybe you DO mean "48s"!

Message #2 Posted by [thibaut.be](#) on 11 June 2002, 3:11 a.m.,
in response to message #1 by Paul Brogger

Well, I own a 48S, so I can definitely confirm it exists.

It's quite ugly though : the mixture of blue and orange (32S and 42s-like) on this grey is not very attractive, i understand why they changed the orange with the light green on the 48Gx models...

Re: 48s -- Maybe you DO mean "48s"!

Message #3 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 12 June 2002, 7:47 a.m.,
in response to message #2 by thibaut.be

Hi;

I lost the starting post (people are taking care removing posts more often), but I would just like to add that orange (gold) and blue have been used as reference colors a long time in HP calculators. Even black - [h] prefix key in the HP67 and HP34C, if I am not wrong - was used.

I remember that the HP28 was one of the first ones to propose a new color scheme: kind of a dark magenta prefix key. Later, in the HP48G, even the box came with a new, blue-fashion color (easy to see if you place the 48S/SX beside any G-series). In fact, the S/SX box looks more like a dark brown, for me. As many Pioneers.

Cheers.

Re: 48s -- Maybe you DO mean "48s"!

Message #4 Posted by [thibaut.be](#) on 14 June 2002, 11:23 a.m.,
in response to message #3 by Vieira, Luiz C. (Brazil)

Well, I agree with you thatt the "classic" colour scheme was blue and gold (and sometimes black !, HP 67, HP 34C, for the h key ...), but the 1st 48S and 32S used a mix of blue and orange, which was not very pleasant to look at, though providing high contrast qualities.

Re: 48s -- Maybe you DO mean "48s"!

Message #5 Posted by [Fred](#) on 12 June 2002, 10:01 a.m.,
in response to message #1 by Paul Brogger

Thanks for your chart.

I didn't know if the HP 48S had expansions slots or not.

again thanks.

Re: 48s -- Maybe you DO mean "48s"!

Message #6 Posted by [Christof \(Davis, CA\)](#) on 12 June 2002, 2:28 p.m.,
in response to message #5 by Fred

The SX has expansion slots, that's what the "x" means.

So the 48S is a model 48, scientific

The 48SX is a model 48, scientific, expandable

(humor below)

G stands for something like Goofy-

48G model 48, Goofy keyshift colors.

-Christof

Re: 48s -- Maybe you DO mean "48s"!

Message #7 Posted by [James M. Prange](#) on 13 June 2002, 2:38 a.m.,
in response to message #6 by Christof (Davis, CA)

I'm another who doesn't appreciate the color change, because I find the S series faceplates easier to read than the G series faceplates. Of course the G series LCD's are easier to read, which is more important.

I expect that the "G" was supposed to be for "Graphing". I've often wondered whether Intel's use of "SX" on the "low-cost" 80386SX and 80486SX processors had anything to do with the change.

The choose boxes and input forms are a nifty idea, but I still prefer the more traditional menu labels and top-row menu keys for most purposes.

But let's remember that the G series introduced several new commands and "parallel list processing" that sometimes makes things a bit easier.

Seems that HP couldn't resist taking some steps back when they should've been moving forward only.

James

Re: 48s -- Maybe you DO mean "48s"!

*Message #8 Posted by [Christof \(Davis, CA\)](#) on 15 June 2002, 10:06 p.m.,
in response to message #7 by James M. Prange*

It's a shame we can't pop new roms into the g series.....

though I'd still enjoy the keyboard of my sx better.

Hell, when it comes right down to it, give me the power of the 48gx in a 28s case-
I'll deal with the smaller screen. :)

-C

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Slow acting 48GX

Message #1 Posted by [Tze Siu](#) on 10 June 2002, 6:20 p.m.

I have a one year old 48GX. Even since it was new I've noticed that the response is quite slow. When I type in a number and then hit ENTER or one of the operating keys, sometimes it takes a few seconds to complete the operation. I've changed the batteries but I got the same result. Any suggestions? Thanks.

Re: Slow acting 48GX

Message #2 Posted by [Raymond Hellstern \(Germany\)](#) on 10 June 2002, 8:39 p.m.,
in response to message #1 by Tze Siu

Hi,

please take a look at www.hpcalc.org and search for FAQ. In general, the HP-48 is not too slow, but due to some housekeeping mechanisms (Garbage Collection) there are little pauses here and there.

Raymond

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48s I need a little help please

Message #1 Posted by [Dirk Scribner](#) on 10 June 2002, 6:02 p.m.

Can someone tell me a little about this calculator. I bought it at a church donation sale for \$2.00. I know it is pretty good and I think it does graphing. I have no manual. What can I find out? Pleas help me with this so I can use it, Thank you.

Re: 48s I need a little help please -- Do you mean 48G?

Message #2 Posted by [Paul Brogger](#) on 10 June 2002, 6:30 p.m.,
in response to message #1 by Dirk Scribner

I think the HP 48 models are 48G, 48GX and 48G+. Is it one of those? They're capable, high-end graphical models which differ only in the amount of memory installed, and whether they have connectors which can be used to install additional ROMs, etc.

You probably want to start at this museum's "[Links](#)" page, one of which is www.hpcalc.org . They have lots of information about the HP 48 and downloadable programs.

I don't think this site makes much directly available about the 48G series, but there is some to be found if you want to search through the [Forum Archives](#).

Maybe some other folks will chime in too?

Re: 48s I need a little help please -- Do you mean 48G?

Message #3 Posted by [John K. \(US\)](#) on 10 June 2002, 9:11 p.m.,
in response to message #2 by Paul Brogger

Actually, it's possible that he has the predecessor to the 48G/GX/G+ -- the 48S/SX. It looks pretty much the same as the Gs, except for cosmetic differences (plastic colors, label graphics, etc.).

Both lines are Saturn-based RPL machines, but the newer Gs are *much* simpler to use, generally faster, and have more memory.

There isn't much info on this site specifically about the early 48 series, but I seem to recall that the [HP Calc](#) site had quite a lot of info on -- and software for -- the 48.

Re: 48s I need a little help please -- Do you mean 48G?

Message #4 Posted by [Christof \(Davis, CA\)](#) on 11 June 2002, 2:00 a.m.,
in response to message #3 by John K. (US)

I find the 48s and 48sx interface to be much easier, but I am definitely **not** a "menu the world" person. I also prefer the older hp brown and black colors.

The cpu on the s series is slower, but overall- for many uses- it's a fine calculator. The 48sx is currently going for around \$50 used with manuals, and the 48s seems to be around \$15-\$25 without manuals, so you got a good enough buy.

The manuals are available on the museum cdrom set, or you may find some elsewhere- the 48g series manuals are different enough to be troublesome.

-Christof (a fan of the 28s, 48s, and then 48g series calcs in that order)

Re: 48s I need a little help please -- Do you mean 48G?

Message #5 Posted by [John K. \(US\)](#) on 11 June 2002, 3:52 a.m.,
in response to message #4 by Christof (Davis, CA)

*I find the 48s and 48sx interface to be much easier, but I am definitely *not* a "menu the world" person.*

I had originally intended to say "much easier to learn," with some additional stuff about the menus on the Gs. Unfortunately, I received a phone call, swapped out of MoHPC mode, and truncated the statement to its current form. Oh well. :^/

Re: 48s I need a little help please -- Do you mean 48G?

Message #6 Posted by [Christof \(Davis, CA\)](#) on 11 June 2002, 2:49 p.m.,
in response to message #5 by John K. (US)

Well, it's all cool. I can see an argument for both cases. The menu intensive thing may be easier for some people- in fact, I know a lot of students who claim they need it that way.

-C

Re: 48s I need a little help please -- Do you mean 48G?

Message #7 Posted by [John K. \(US\)](#) on 11 June 2002, 7:26 p.m.,
in response to message #6 by Christof (Davis, CA)

If nothing else, the menus make a great memory-jogger for those time when ya' just can't remember the command.

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programming HP 49G in RPN mode

Message #1 Posted by [Troy](#) on 10 June 2002, 4:03 p.m.

Anyone know a good reference for programming the hp 49gin RPN mode? I have tried the user's guide, advanced user's guide, and pocket reference and still cannot find much.

Thanks

Re: programming HP 49G in RPN mode

Message #2 Posted by [Arnold](#) on 10 June 2002, 6:04 p.m.,
in response to message #1 by Troy

Hi Troy,

Take a look at www.hpcalc.org. Lots of documentation and programs. They even have the HP48 AUR to download (16mb).

Another option is the books of Urroz (Science and Engineering Mathematics with the HP49G), see www.greatunpublished.com. Lots of practical programming examples.

Regards Arnold

Re: programming HP 49G in RPN mode

Message #3 Posted by [Tom \(UK\)](#) on 11 June 2002, 7:23 a.m.,
in response to message #1 by Troy

Some of the best books are the HP48 standard manual and the HP48 advanced user guide.

You can buy the standard manual on it's own but it's only a little more expensive if you buy it with an HP48G!

HP should do an offer for the standard and advance user guides for the HP48 for owners of the HP49G wanting to program in RPL.

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Memory Lost on HP-41CV

Message #1 Posted by [Pierre](#) on 10 June 2002, 2:00 p.m.

When I power on my hp, I have on the screen MEMORY LOST. When I press on any key the screen become blank for half a second and show again memory lost. I try to remove the battery for a short and for a long time, same problem.

Someone have a idea ?

Thks, Pierre

Re: Memory Lost on HP-41CV

Message #2 Posted by [thibaut.be](#) on 10 June 2002, 2:38 p.m.,
in response to message #1 by Pierre

Check your contacts between the port . See previous thread : the problem is not the same but the cure is similar.

Re: Memory Lost on HP-41CV

Message #3 Posted by [Pierre](#) on 10 June 2002, 3:20 p.m.,
in response to message #2 by thibaut.be

I have cleaning the contacts on the two type of connector. One with the battery power and the another with the green card. When I power up, I press the box and I still have the same problems :(

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candidate for the " All Time Crazy Bids" award...

Message #1 Posted by [Hans Brueggemann \[GER\]](#) on 10 June 2002, 10:59 a.m.

<http://cgi.ebay.de/ws/eBayISAPI.dll?ViewItem&item=2029223615>

(EUR 404 = USD 360)

cheers, hans

'though it seems to be madness, there is some method in it' (w. shakespeare, hopefully correctly quoted)

Re: candidate for the " All Time Crazy Bids" award...

Message #2 Posted by [John Smith](#) on 10 June 2002, 11:18 a.m.,
in response to message #1 by Hans Brueggemann [GER]

I don't think it's a particularly 'crazy' bid at all. If you have the money to spend and you want the item so much, there's nothing illogical in bidding such amounts of cash for it.

As an example, I'm sure you've read in the papers that such and such celebrities have spent an incredible amount of money buying this or that stupid thingy, an amount no one with less money would dare to consider. But if you are a really big spender and it catches your fancy, then why not ? It's just a matter of scale, not of logic.

Also, the item itself is very, very tempting to any HP collector or former synthetic or M-CODE programmer, don't you think ? The bottom line is, I think it's worth the final high bid, and just you wait and see how many simoleons will be paid for a much less rare PPC ROM module for the HP-41C/CV/CX in a year or two.

Re: candidate for the " All Time Crazy Bids" award...

Message #3 Posted by [Dave](#) on 10 June 2002, 2:07 p.m.,
in response to message #1 by Hans Brueggemann [GER]

If that one is crazy, then what would you consider this one???

<http://cgi.ebay.de/ws/eBayISAPI.dll?ViewItem&item=2029223615>

Re: candidate for the " All Time Crazy Bids" award...

Message #4 Posted by [Chris Catotti \(Florida\)](#) on 10 June 2002, 2:39 p.m.,
in response to message #3 by Dave

Crazy ... ?

I paid \$305 for my HEPAX with 16K RAM two years ago, and it did not come with manuals. That took hunting and searching ebay for a year.

By far, it is my most valuable (and I use it) HP-related item. It allows copying a ROM image, 4K at a time (I can do three 4K images) to RAM in the HEPAX, and run them as if they are installed. I have an original sales flyer from VM Electronics, and EduCALC catalogs. The catalogs have a list price higher than these bids.

Mine will never be for sale or trade, but I may list it specifically in my will.

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I found the command which was interesting to HP-15C.

Message #1 Posted by [Hiroshi Ito](#) on 10 June 2002, 10:24 a.m.

I found the command which was interesting to HP-15C. (HP-15C S/N 2417A 88311 made in U.S.A.)

Is even your HP-15C reproduced? Is the command which doesn't appear in the manual like this example and which moreover can be used found as to other models?

\$ 001- 44 36 STO ENTER \$ 002- 42 34 CLEAR REG \$ 003- 45 36 RCL ENTER \$ 004- 31 R/S

(I wrote this article in the bulletin board of SYC in Japan as well.)

Re: I found the command which was interesting to HP-15C.

Message #2 Posted by [thibaut.be](#) on 10 June 2002, 10:37 a.m.,

in response to message #1 by Hiroshi Ito

I suppose that you want to show that the "ENTER" reg is not "clearable", at least by f CLEAR REG.

Actually by doing this you are "feeding" the "seed" registry of the f RAN# function, to generate a pseudo-random number. The "seed" is automatically regenerated when you use the f RAN# function, but in order to avoid always the same sequence (beginning with 0.1018,... if I can recall), it is requested to key in an arbitrary value by doing STO ENTER.

I don't have the 15C manual here, but I guess it is correctly explained in the RAN# function section.

Best regards,

Thibaut

Re: I found the command which was interesting to HP-15C.

*Message #3 Posted by [Barry Schwartz](#) on 10 June 2002, 1:57 p.m.,
in response to message #2 by thibaut.be*

The previous response was correct. As explained in the HP15C manual on page 48, the sequence STO f RAN# stores the number in the X register as a new random number seed. A value outside of the range of 0 to 1 is converted to fit within that range. As also noted on page 49, the f keystroke may be omitted for this command in which case STO f RAN# is equivalent to STO ENTER since RAN# is a shift function of the ENTER key. Also the sequence RCL f RAN# recalls the last random number generated which becomes the new random number seed. As also noted in the manual, the f is also not required for this command so that this sequence is equivalent to RCL ENTER. Thus there is no mystery and no undocumented HP15C function. However careful reading of the manual is required sometimes to explain what may appear to be mysterious operations.

Re: I found the command which was interesting to HP-15C.

*Message #4 Posted by [Hiroshi Ito](#) on 11 June 2002, 11:59 a.m.,
in response to message #3 by Barry Schwartz*

I confirmed a manual. Your indication is right. I thought with the new discovery, and glad. But, it is disappointing because it was my mere misunderstanding.

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copyright

Message #1 Posted by [Jack Stafford](#) on 9 June 2002, 7:17 p.m.

I'm working on a web page for my collection of HP Calculators & Computers and I still need a couple of scans with permission to use. Specifically an HP-100LX and an HP-620LX.

I intend to credit the copyright owner(s) and will also include links to the Museum of HP Calculators as well as the provider's page if desired.

Thanks

Jack

Re: copyright

Message #2 Posted by [Jack Stafford](#) on 12 June 2002, 11:26 p.m.,
in response to message #1 by Jack Stafford

I see no one has responded, Maybe because I forgot to ask the question. I still need these two photographs can anyone advise me where I might find them?

Re: copyright

Message #3 Posted by [db\(martinez,california\)](#) on 14 June 2002, 10:22 p.m.,
in response to message #2 by Jack Stafford

can you use a photo of a 95 or 200 instead of a 100?

Re: copyright

*Message #4 Posted by [Jack Stafford](#) on 16 June 2002, 1:38 a.m.,
in response to message #3 by db(martinez,california)*

yes, although I'm trying to depict the HP models I've owned/used over the years. I skipped the 95 and before I could afford the 200 the HP-620LX was announced. as usual my plans changed. Anyway I think I could use the 200 photo to pose as a 100. It seems like there was very little external differences if I remember correctly.

Please advise

Thanks

Jack

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Help needed with my 41CX

Message #1 Posted by [Steve Dimond](#) on 9 June 2002, 10:44 a.m.

I haven't used my 41CX halfnut for a month or two and now it seems to have developed a rather strange fault. If I insert an IR printer module (82242A) or a terminated HP-IL module (82160A) (with printer enabled or disabled) in ports one or three I cannot get the calculator to turn on. I can insert the IR module and the HP-IL module in either of the other ports and there is no problem. Equally, I can insert any other module in my collection (eg Advantage, Extended I/O, Wand) in ports one or three without incident.

I have tried resetting the calculator (on-clx, on-clx-enter), replaced the batteries, replaced the battery holder, all to no effect. Oh, and to clarify, I never have more than one module inserted at the same time.

I am eager to get this problem fixed as I want to use these modules with a card reader installed. Any ideas appreciated.

Steve

Re: Help needed with my 41CX

Message #2 Posted by [Daniel Diggelmann](#) on 9 June 2002, 2:18 p.m.,
in response to message #1 by Steve Dimond

Hi Steve, Ports 1 and 3 work electrically in parallel. So I suspect that the I/O assembly doesn't make proper contact to the main board. I'd open the calc and clean the contacts between I/O assembly and board with isopropyl-alcohol. I once had the same problem when the calc wouldn't start but then it was only one port --> the port connectors were dirty. But in your case I think it's an internal contact problem. Good luck Daniel

Re: Help needed with my 41CX

*Message #3 Posted by [David Smith](#) on 9 June 2002, 4:19 p.m.,
in response to message #2 by Daniel Diggelmann*

While it's apart check edges of the port contacts where they wrap around the I/O block. Often times the flex circuit will tear and break one of the contacts taking out both ports.

Thanks, but I don't understand

*Message #4 Posted by [Steve Dimond](#) on 9 June 2002, 5:02 p.m.,
in response to message #3 by David Smith*

Many thanks for your advice. I will try taking the calculator apart.

The two things I don't understand are:

1. If the problem is the port contacts or the I/O connector, how come this has occurred while the calculator has been left untouched on a shelf for two months?
2. Why do the other modules work fine in ports one and three? And why does the calculator work fine with no modules inserted? Is there something special about the IR and HP-IL modules? An address line not used in the other modules perhaps?

Since my original post I have got the calculator to work for a short time by pressing on-clx-enter then on-clx three times (yes, always exactly three times). The calculator works fine, and recognises the IR or IL module. Once I switch it off, however, it won't turn on again unless I repeat the procedure. Normally I do not get MEMORY LOST with this procedure (strangely), but sometimes I do and then the message cannot be cleared unless I remove the batteries!

Any ideas?

Cheers, Steve

HP 41 troubleshooting (very elemental)

Message #5 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 9 June 2002, 6:01 p.m., in response to message #4 by Steve Dimond

Just a couple of comments to clarify some things:

a) In a sense, all ports are in parallel: most lines like VCC, VBat, GND, Clock, Data, Instructions and Address (ISA), and Flag Input (FI) go to all ports. There are a couple of contacts on each port which define the port address (each contact may or may not be connected, allowing for the four combinations 00, 01, 10, 11).

b) The backplane or Input/Output assembly, which is a plastic piece wrapped with a flexible printed circuit going to the ports and also to the battery contacts is a usual suspect in HP41 problems. Both dirty contacts, corrosion or "simply" lack of the right pressure may affect the quality of contacts between this assembly and the main circuit board. There is a small piece of plastic foam below the contacts which are supposed to get pressed against the main board, the piece of foam tends to become dried and less elastic over time. Also any attempt to over-adjust the screws which close the case halves together, or a knock against the floor, etc. may break the plastic posts which hold the screws, making the pressure (and hence the contact) weaker.

The modules that are worrying you need a good deal of power to work, while ROM or RAM did not. Also they probably use the Flag Input (FI) line, since they are peripherals, I think (not 100% sure) that ROM-RAM don't use FI. So a good idea may be to check VCC and FI contacts first.

A careful disassembly and cleaning may be the first step, you also will obtain a good insight on how the HP 41 is built; without such knowledge is difficult even to explain possible causes.

Please look at previous and archived postings here at the MoHPC, and also in the Articles forum, I suggest you should give a good look at postings by Tony Duell, among others, to obtain extra information on what to do and how.

I hope this helps, and please disregard any idiomatic mistake...

Re: Help needed with my 41CX

Message #6 Posted by [Tony Duell \(UK\)](#) on 9 June 2002, 8:08 p.m.,
in response to message #1 by Steve Dimond

My first thought is that the HPIL module, the IR printer module and the 82143 'dedicated' printer all use the DATA line on the bus. ROM modules do not. Have you tried an Extended Memory module in port 1 or 3? My guess is the calculator won't recognise it either. Anyway, as the machine works fine with the HPIL module (etc) in port 2 or 4, it means the chips are working fine. It's most likely a bad connection between the main PCB and the I/O assembly (that flexible PCB wrapped round a plastic block that forms the I/O port connectors and battery contacts). Take the machine apart and clean the contacts on this flexible PCB and the main PCB using propan-2-ol. Then put it all back together again.

Re: Help needed with my 41CX

Message #7 Posted by [David Smith](#) on 11 June 2002, 5:34 p.m.,
in response to message #1 by Steve Dimond

The HP contact assembly is basically a single sided flexible printed circuit that is wrapped around a plastic header. The pressure of the case presses the contacts on it against the calculator circuit board.

Since the flex circuit is a single sided circuit board, the left and right pairs of module contacts are basically independent of each other. They are wired together in parallel by the etch pattern on the keyboard. A problem with one side or the other of the module ports is almost always caused by bad contacts to the keyboard or a break in the flex circuit on that side. If cleaning the contacts does not help then look for a broken trace on the flex circuit with an ohm meter. They can be impossible to see visually.

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Make a text file in HP-9114B, and teach me the method which does reading and writing.

Message #1 Posted by [Hiroshi Ito](#) on 9 June 2002, 3:40 a.m.

*** Machine composition *** COMPUTER HP-71B (HP-BASIC) STORAGE HP-9114B Disc Drive (HP-IL device #1)

*** Background *** I tried to do a text file by using 71B. The following program was made by using the standard basic command as the first trial.

```
10 ! SAMPLE PROGRAM #1 FOR HP-71B 20 INITIALIZE :1 30 CREATE TEXT
"\"SAMPLE:1",5000 40 ASSIGN #1 TO SAMPLE:1 50 INPUT "SAMPLE DATA=";D$ 60 IF D$ =
"" THEN 90 70 PRINT #1;D$ 80 GOTO 50 90 END
```

This program is a bad program obviously. I find many problems that it should be improved in this program. For example. (1) I make a little file first, and I should add it if necessary. (2) Before writing it in to the file, I should check the condition of the file. (3) If all writing is completed, I should close a file.

I improve a program, and want to try to deal with it in accordance with the following process.

Step1 It is checked whether a text file "SAMPLE" has already existed. Step2 It is deleted if a text file "SAMPLE" exists. Step3 It is checked whether the free capacity of the floppy disk is sufficient. Step4 It is finished if it is short of the free capacity of the floppy disk. Step5 A text file "SAMPLE" is made in the little capacity. <Step6 The beginning of the writing loop of the data> Step6-1 The rest of the text files "SAMPLE" of the capacity are checked. Step6-2 File capacity is added if it is short of the capacity of the text file "SAMPLE". Step6-3 Data are written in the text file "SAMPLE". <Step6 The end of the writing loop of the data> Step7 A text file "SAMPLE" is closed.

But, as for the standard command obviously, it is short of the function. I must know how to control 9114B directly with a HP-IL command. I couldn't know the information to control 9114B carefully though I read a manual.

*** Please teach me! ***

Won't you put up the short two sample program which becomes anyone, a hint?

Sample1 The writing sample program which followed the above process.

Sample2 The sample program which reads a text file.

Re: Make a text file in HP-9114B, and teach me the method which does reading and writing.

Message #2 Posted by [Vassilis Prevelakis](#) on 9 June 2002, 7:17 p.m.,
in response to message #1 by Hiroshi Ito

look on page 251 of the HP71 Owner's manual - if you do not have it you can get on CDROM from the HP Museum.

There you will find a program similar to the one you are trying to make. Note that *your* program does not close the file, you need to execute

ASSIGN #1 TO *

to close a file.

Also you are essentially hardwiring into the program the position of the floppy drive in the HP-IL. It is better to use the command

ASSIGNIO ":FD"

to associate the

:FD

name with the floppy and then access the file as

SAMPLE:FD

It will also be helpful if you try to explain what you want to do with the program, maybe using text files is not the best way.

**vp

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Short & Sweet Math Challenges for HP fans #3

Message #1 Posted by [Ex-PPC member](#) on 9 June 2002, 12:43 a.m.

Last week's challenge involved an empirical search for extreme values of determinants, which required to either own an HP calc with built-in matrix operations, or else to remember just how a 3x3 or 4x4 determinant could be calculated, which made it necessary for some of you to reach for that dusty math book on the shelf.

This time we have a new S&S Math Challenge requiring an empirical search, but the underlying concepts are much simpler, no "Matrix Calculus for Dummies" needed. I'll introduce the challenge with an example of what we are going to find out with the help of our precious, museum-quality HP calcs [if you don't use them, they'll dissect and die, you know]:

Have a look at the number 153. Does it have any interesting peculiarity ? Well, it does have several, the most remarkable one being that:

$$153 = 1^3 + 5^3 + 3^3$$

i.e.: 153 is a 3-digit number equal to the sum of the 3rd powers of its own digits. Likewise, have a look at 1634, and you'll see that:

$$1634 = 1^4 + 6^4 + 3^4 + 4^4$$

this is, 1634 is a 4-digit number equal to the sum of the 4th powers of its digits. Let's generalize this to N-digit numbers and so we have the following challenge:

1. Pick up your favorite HP calculator. Almost any will do for the task at hand, as it does not involve anything but arithmetic functions on integer numbers, and negligible memory requirements. Do *not* use any computer for this, the challenge is tailored for the speed and capabilities of HP calculators and using a computer just misses the point by a light-year or more.
2. Find *all* numbers of N digits that are equal to the sum of the N-th powers of their digits. You must find the numbers themselves, as well as just how many there are for each N. The digit 0 *won't* be accepted as first digit, so for instance 153 may be a solution for N=3 but 032 wouldn't even be tested.
3. You should determine all solutions for N=1,2,..., 10. The lower values of N, say up to N=4 are easy and feasible for any HP calculator, from the HP-25 upwards, even using a straightforward programming approach.
4. However, for N=5 to N=10, you'll need to refine your approach significantly if you intend to get results in a reasonable amount of time.
5. For test purposes, this is what you should get:

N	# Solutions	Solutions	Comments
1	9	1, 2, 3, 4, 5, 6, 7, 8, 9	0 is not acceptable
2	0	none	00 and 01 not acceptable
3	4	153, 370, 371, 407	easy

4	3	1634, ?, ?	easy
5	3	?, ?, ?	still easy
6	1	?	less easy
7	4	?, ?, ?, ?	medium
8	3	?, ?, ?	hard
9	4	?, ?, ?, ?	very hard
10	?	?	very, very hard

That's all. May I repeat once more: do **not** use your computer, use your HP calculator. It is much more difficult, but hey, that's where the challenge is. At least see if you can find the *ONLY*, unique solution for N=6 !

Of course, the real 48/49 nuts among you should try up to N=10, using Saturn Assembler if necessary.

Re: Short & Sweet Math Challenges for HP fans #3

Message #2 Posted by [Thibaut.be](#) on 10 June 2002, 5:56 a.m.,
in response to message #1 by Ex-PPC member

Hello,

I programmed a routine on my 41C. To be very honest I first tested it on my computer . I let it run all night and these are the results I found :

n = 4 : 1.634,8.208,9.474 n = 5 : 92.727,93.084 n = 6 = is till running.

Now, I guess there is something to deduct about the series. I'll be thinking about it, but it seems that if my 41C can find in looping the only n=6 solution, it is practically impossible to find the n>6 solutions with a 41...

Re: Short & Sweet Math Challenges for HP fans #3

Message #3 Posted by [Thibaut.be](#) on 10 June 2002, 10:07 a.m.,
in response to message #1 by Ex-PPC member

For n=6 : what about 548834 ?

Re: Short & Sweet Math Challenges for HP fans #3

Message #4 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 10 June 2002, 6:02 p.m.,
in response to message #1 by Ex-PPC member

This time I'm finding a little time to work in this stimulating challenge. Two questions:

- 1) Would you expect us to post here our code to solve the challenge, or just the numerical answers?
- 2) May the digits repeat in the number? (for instance, a number like 1232 would have been a valid answer if $1+16+81+16$ equals 1232 (which of course does not!))

I already have a program running in my HP42S (using just 7 registers and less than 50 steps, even with a little error checking and sort of a "user interface") which works very well for numbers between 1 and 4 digits; while it also works for N=5 and greater, execution time will be more than excessive, so I am exploring a different approach...

As a reference, it took some 25 minutes to find all solutions for N=3

Re: Short & Sweet Math Challenges for HP fans #3

Message #5 Posted by [Ex-PPC member](#) on 10 June 2002, 7:13 p.m.,
in response to message #4 by [Andrés C. Rodríguez \(Argentina\)](#)

Some quick answers to the questions raised:

Mr. Thibaut.be wrote:

"I programmed a routine on my 41C [...]I let it run all night and these are the results I found :

$n = 4 : 1.634, 8.208, 9.474$

$n = 5 : 92.727, 93.084$

$n = 6 = [\dots]$ what about 548834 ? "

Your results are correct, except for the fact that it seems you missed the 3rd solution for N=5. An unwanted omission, or else a bug in your code ? As for the result for N=6, it would be interesting to know how long did your 41C took to find it. Will you try N=7 on the 41C or other faster machine ? (I would suggest a 42S, as the code should run unchanged, and it's 10x to 14x times faster. An HP32S or 32SII would be a good choice, too, as they are faster than the 42S, albeit less compatible with the 41C).

Mr. Andres C. Rodrigues wrote:

"Would you expect us to post here our code to solve the challenge, or just the numerical answers?"

As you like. I guess that posting code is Ok as long as it's not too large and it does use some interesting technique that other users may find worthwhile for learning purposes, or for discussing alternatives. Another possibility is to offer guidelines or hints that others may find useful to develop their own code. If code is too large or too straightforward, I guess that posting just the solutions would be preferable.

"May the digits repeat in the number?"

Yes, they may, and often do.

"I already have a program running in my HP42S [...] for N=5 and greater, execution time will be more than excessive, so I am exploring a different approach [...] As a reference, it took some 25 minutes to find all solutions for N=3"

I thank you for your interest in this challenge, Mr. Rodrigues, and please don't take me wrong, but 25 minutes for N=3 in a 42S is **far** too slow. You should definitely need to explore that different approach you mention :-) That is, unless it's a typo and you really meant 25 seconds.

Re: Short & Sweet Math Challenges for HP fans #3

Message #6 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 10 June 2002, 8:09 p.m.,
in response to message #5 by [Ex-PPC member](#)

Ok, thank you... I am even more engaged by the challenge. It was 25 minutes, and rather brute-force based programming, I admit...

While the "other" approach is promising, I still have to find a way to generate certain "patterns" of numbers, something very easy to do by hand, but not that easy so far to convert in HP code. It also may happen to be more elegant but slower than the first method!

Re: Short & Sweet Math Challenges for HP fans #3

Message #7 Posted by [thibaut.be](#) on 11 June 2002, 8:35 a.m.,
in response to message #5 by Ex-PPC member

While a loop instruction does not seem to be efficient for values above 10^5 , I was wondering about expressing this problem in a mathematical way.

Actually I also recalled my linear programming maths course and the SIMPLEXE algorithm. Have you heard about it ? It is used in economics to calculate maximums or minimums of a linear function under constraints. This is exactly what this is about excepted that the function is not linear.

for instance, for $N=5$, you have to solve the equation

$$10.000a + 1.000b + 100c + 10d + e = a^5 + b^5 + c^5 + d^5 + e^5$$

WHERE

$$1 \leq a \leq 9 \quad 0 \leq b \leq 9 \quad 0 \leq c \leq 9 \quad 0 \leq d \leq 9 \quad 0 \leq e \leq 9$$

and $a; b; c; d; e$ are integers

Does this track is the correct one or is it time loosing searching this way ?

Clarification

Message #8 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 11 June 2002, 1:26 p.m.,
in response to message #4 by Andrés C. Rodríguez (Argentina)

It takes about seven minutes to find 153, 370, 371 and 407. It needs more time to verify there are no more solutions. Still improvable...

What do you think about that !!!!!

Message #9 Posted by [Frédéric ALBERT \(from France\)](#) on 11 June 2002, 6:47 a.m.,
in response to message #1 by Ex-PPC member

1 : 1 2 3 4 5 6 7 8 9

2 :

3 : 153 370 371 407

4 : 1634 8208 9474

5 : 54748 92727 93084

6 : 548834

7 : 1741725 4210818 9800817 9926315

8 : 24678050 24678051 88593477

9 : 146511208 472335975 534494836 912985153

I have some difficulties for 10 but i am still working on I will post the code for hp49g when found !!!! If found ;-(

Fred

Re: What do you think about that !!!!!

Message #10 Posted by [thibaut.be](#) on 11 June 2002, 8:24 a.m.,
in response to message #9 by Frédéric ALBERT (from France)

Félicitations... et quel genre de routine

(Congratulations... and what kind of routine did you use ?)

Re: What do you think about that !!!!!

Message #11 Posted by [Jordi Hidalgo](#) on 11 June 2002, 12:16 p.m.,
in response to message #10 by thibaut.be

Maybe he cheated ... [The complete solution](#)
Pickover's book "[Wonders of Numbers](#)" is really wonderful.

Regards,
Bye.

Jordi Hidalgo
HPCC member #1046

Re: What do you think about that !!!!!

Message #12 Posted by [thibaut.be](#) on 13 June 2002, 6:22 a.m.,
in response to message #11 by Jordi Hidalgo

Well, no reaction from Mr ex-PPC Member ?

I really wonder if calculator program solutions rather than a loop exist. Though the link shown by Jori explains that what we were looking for are narcissitic numbers, no method to compute them was given.

For $n=3$ my CV took 14 minutes. So for $n=10$ it should take $14 \text{ minutes} * 10^7$, or a bit more than 266 years. So, Mr Ex-PPC Member, what is the solution ?

Re: What do you think about that !!!!!

Message #13 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 14 June 2002, 7:27 a.m.,
in response to message #12 by thibaut.be

With a looping program with some "improvements", it took my 42S less than 4 minutes to find the 4 solutions for $N=3$, but it took almost 12 minutes to be sure there are no other solutions. While I have some ideas to try (not sure about them), I have had not enough free time during the week, I would like to have an extra couple of days to see what may happen before the answer is given by Mr. Ex-PPC.

Re: What do you think about that !!!!!

Message #14 Posted by [Fernando del Rey](#) on 14 June 2002, 5:27 p.m.,
in response to message #13 by Andrés C. Rodríguez (Argentina)

I've tried on my HP-71B with a straightforward looping routine, also with some pretty trivial "improvements", and it takes about 320 minutes to find the solution for N=6.

But of course, there's no merit in doing it in BASIC and by "brute force". An this approach will not do the job for N>6 in a reasonable time. There has to be a much more clever way to solve the problem.

By the way, Mr. Hidalgo (a few posts earlier in this thread), please don't spoil the fun for the rest of us by giving the source of the solution away so quickly.

S&SMC #3: Final Remarks [LONG!]

Message #15 Posted by [Ex-PPC member](#) on 14 June 2002, 11:17 p.m.,
in response to message #1 by Ex-PPC member

Thanks to all of you who were interested in my S&SMC #3, the challenge is over and here are some final notes and remarks:

As has been mentioned in a post, the numbers who are equal to some mathematical function of their digits are generally referred to as "*Narcissistic Numbers*". In Challenge #3, we were looking for numbers of N digits that are equal to the sum of the N-th powers of their digits. In the mathematical literature, these are known as "*PluPerfect Digital Invariants*", i.e: PPDI. They can be defined for bases other than 10, but in what follows, base 10 will always be assumed, and we'll call Nth-order PPDI to a PPDI having exactly N digits. A lot is known about them, for example:

1. There is only a *finite* number of PPDI's, exactly 88. It is very easy to demonstrate that their number is finite, but finding that there are exactly 88 of them does require a lot of ingenuity and computer muscle.
2. There are *no* PPDI's of order N when N=2,12,13,15,18,22,26,28,30,36 nor for N>39, so 39 is the largest possible order.
3. There is *one and only one* PPDI when N=6,10,14,20,32,34,37,38
4. The *largest*, 88th PPDI of order N=39 is the 39-digit number:

115132219018763992565095597973971522401

which is equal to the sum of its digits raised to the 39th power.

5. The largest *prime* PPDI is the 23-digit number:

35452590104031691935943

which is equal to the sum of its digits raised to the 23rd power.

The solutions for S&SM Challenge #3 are all PPDI of orders N from 1 to 10, i.e:

Order N	Solutions
1	1, 2, 3, 4, 5, 6, 7, 8, 9
2	none
3	153, 370, 371, 407

4	1634, 8208, 9474
5	54748, 92727, 93084
6	548834
7	1741725, 4210818, 9800817, 9926315
8	24678050, 24678051, 88593477
9	146511208, 472335975, 534494836, 912985153
10	4679307774

Can our beloved HP calculators find these solutions ? Yes, of course. As I said, almost any model from the HP-25 onwards can find all solutions up to $N=4$ with relative ease, even using a straightforward brute-force approach. Finding solutions for orders $N=5$ to $N=10$ in a reasonable amount of time does require a combination of faster models, such as the HP-71B, HP-32S/SII, HP-42S or HP-48/49, as well as much more refined, optimized programming, and even a completely different approach.

Let's see an example of how can you proceed in order to achieve the goal. In this example, we'll compute all 3 solutions for order $N=4$, using an HP-71B, as its BASIC language helps to make the programming easier to understand. We'll start with a very simple brute-force approach, then we will refine it stepwise, creating better and faster versions which will allow us to reach higher orders. Then, once we reach the limits of our direct approach, we will hint at a newer, much faster approach which will deliver what we want. Then, a direct conversion of the HP-71B BASIC code to the HP-41C's native RPN will be shown.

Caveat emptor: You should bear in mind that, in all cases, the programs shown have been produced strictly for demonstration purposes and are not meant to be the ultimate programming solution for this challenge, or even highly optimized, so I don't claim or intend them to be state-of-the-art programming at all.

Program P1-71B:

As we are looking for all 4-digit numbers equal to the sum of the 4th powers of its digits, this means we are looking for numbers which are solutions of this Diophantine equation:

$$[ABCD] = 1000*A + 100*B + 10*C + D = A^4 + B^4 + C^4 + D^4$$

where A goes from 1 to 9, and B,C,D all go from 0 to 9. A very simple program, made essentially of four nested FOR-NEXT loops is quickly produced:

```
10 DESTROY ALL @ DIM A,B,C,D @ STD @ DELAY 0,0
20 FOR A=1 TO 9 @ FOR B=0 TO 9 @ FOR C=0 TO 9 @ FOR D=0 TO 9
30 IF A^4+B^4+C^4+D^4=1000*A+100*B+10*C+D THEN DISP A;B;C;D
40 NEXT D @ NEXT C @ NEXT B @ NEXT A @ DISP "DONE"
```

When run, this program displays all three solutions [1634, 8208, 9474], then terminates displaying "DONE" after verifying there are no more.

Running time: $T = 2050$ sec.

Program P2-71B:

One of the easiest ways to reduce the running time of a program is to simplify the computations within the innermost loop. In this case, program P1 is continually evaluating the expression:

$$1000*A + 100*B + 10*C + D$$

inside the innermost loop. But a bit of thinking or a quick hand simulation will convince you that this is just the value of the

number itself, which is being incremented by one in each iteration. So we can simply initialize this value to 1000 ($A=1$, $B=0$, $C=0$, $D=0$), and then increment it after each iteration, thus saving a lot of computation:

```
10 DESTROY ALL @ DIM A,B,C,D,N @ STD @ DELAY 0,0
20 N=1000 @ FOR A=1 TO 9 @ FOR B=0 TO 9 @ FOR C=0 TO 9 @ FOR D=0 TO 9
30 IF A^4+B^4+C^4+D^4=N THEN DISP N
40 N=N+1 @ NEXT D @ NEXT C @ NEXT B @ NEXT A @ DISP "DONE"
```

Running time: $T = 1854$ sec. (1.11 times faster than P1)

Program P3-71B:

A further refinement comes when we realize that we are continually computing the 4th powers of the digits of N inside the innermost loop. But there are only 10 distinct values, namely 0^4 , 1^4 , ..., 9^4 , so we can save a lot of time pre-calculating them outside of all loops and storing them on a suitably dimensioned array, then simply recalling the values of the powers when needed, instead of computing them anew each time. As it is much faster to recall an array element than to raise a number to a power, great time savings are to be expected:

```
10 DESTROY ALL @ OPTION BASE 0 @ DIM A,B,C,D,N,P(9) @ STD @ DELAY 0,0
15 FOR A=0 TO 9 @ P(A)=A^4 @ NEXT A
20 N=1000 @ FOR A=1 TO 9 @ FOR B=0 TO 9 @ FOR C=0 TO 9 @ FOR D=0 TO 9
30 IF P(A)+P(B)+P(C)+P(D)=N THEN DISP N
40 N=N+1 @ NEXT D @ NEXT C @ NEXT B @ NEXT A @ DISP "DONE"
```

Running time: $T = 460$ sec. (4.46 times faster than P1)

Program P4-71B:

Is that all ? Can't we still do more optimization ? Yes. Look at the IF at line 30. We are constantly recalling and adding up the powers of the digits to compare them against the value of N . But it's clear that inside the FOR $D=...$ loop, the value of $P(A)+P(B)+P(C)$ is invariant, as it does not depend on the loop variable, D . Same applies to $P(A)+P(B)$ inside the FOR C loop, and $P(A)$ inside the FOR B loop. Keeping this in mind, we avoid recomputing sums and invariant values repeatedly, but we'll simply compute them once outside of the respective loops, and store them in intermediate variables, like this:

```
10 DESTROY ALL @ OPTION BASE 0 @ DIM A,B,C,D,N,S,T,U,P(9) @ STD @ DELAY 0,0
15 FOR A=0 TO 9 @ P(A)=A^4 @ NEXT A @ N=1000
20 FOR A=1 TO 9 @ S=P(A) @ FOR B=0 TO 9 @ T=S+P(B)
30 FOR C=0 TO 9 @ U=T+P(C) @ FOR D=0 TO 9 @ IF U+P(D)=N THEN DISP N
40 N=N+1 @ NEXT D @ NEXT C @ NEXT B @ NEXT A @ DISP "DONE"
```

Running time: $T = 320$ sec. (6.41 times faster than P1)

Program P5-71B:

There's still one trick out of our sleeve. Just notice what happens when, for instance, we reach the inner FOR C and FOR D loops when $A=9$ and $B=8$. At this point, the sum is already $9^4+8^4 = 10657$, which exceeds the maximum possible value for N , namely $N=9999$. So, further adding the 4th powers of C and D is no use, since the resulting sum can never equal N . This means we can skip altogether the full FOR C and FOR D inner loops in this case, so saving 100 full iterations. Applying this simple idea gives us the program:

```

10 DESTROY ALL @ OPTION BASE 0 @ DIM A,B,C,D,N,S,T,U,V,P(9) @ STD @ DELAY 0,0
15 FOR A=0 TO 9 @ P(A)=A^4 @ NEXT A @ N=1000
20 FOR A=1 TO 9 @ S=P(A)
25 FOR B=0 TO 9 @ T=S+P(B) @ IF T>N THEN N=N+(10-B)*100 @ GOTO 80
30 FOR C=0 TO 9 @ U=T+P(C) @ IF U>N THEN N=N+(10-C)*10 @ GOTO 70
40 FOR D=0 TO 9 @ V=U+P(D) @ IF V>N THEN N=N+10-D @ GOTO 60 ELSE IF V=N THEN PRINT N
50 N=N+1 @ NEXT D
60 NEXT C
70 NEXT B
80 NEXT A @ DISP "DONE"

```

Running time: $T = 242$ sec. (8.47 times faster than P1)

[By the way, just in case you are wondering, declaring the variables with INTEGER precision instead of floating-point DIM is actually *slower*! HP-71B BASIC always works with floating-point variables internally, so declaring them INTEGER just adds a lot of conversions to floating-point precision and back to integer]

So you see, applying just a few, simple common sense ideas to our initial try has resulted in a program that, while still being very simple and not much larger, nevertheless runs nearly an order of magnitude faster. Which is better, the savings are even greater for larger orders of N , so that this approach allows us to compute all solutions (and to certify there are no more) in these running times:

Order	N	P1	P2	P3	P4	P5
3		02:32	02:21	00:40	00:32	00:25
4		34:10	30:54	07:40	05:20	04:02
5		-	-	-	-	37:20
6		-	-	-	-	5:07:13

Remember, these times are measured from start to until the program stops by itself, not merely until the last solution is displayed. Times for an HP-32S/SII, HP-42S or HP-48/49 would be even better, as their CPUs are much faster than the old 640 Khz Saturn CPU of the 71B.

However, for $N=7$ to $N=10$ our current approach does not work in reasonable times, and we find we have two possible options:

- a) stick to our current approach, but change to a faster language, using for instance FORTH instead or BASIC, or better still, using Saturn Assembler language (using the 71B Forth/Assembler ROM, for instance).

Converting our program P5 to Saturn assembler is not difficult at all, and we can take advantage of fast custom-made all-integer routines, much faster than the floating-point ones we're using in BASIC. The resulting *binary subprogram* (not BASIC keyword) is faster than our BASIC version by two full orders of magnitude, and so allows us to go up to $N=7$ in under 30 min., $N=8$ in some 4 hours, and $N=9$ in roughly a day and a half continuous running time. The final summit, $N=10$, would take more than 2 weeks, so this approach's usefulness ends at $N=9$.

- b) change our current approach for a completely different one. To that effect, we notice that (for our example, $N=4$) we are exhaustively searching all arrangements from 1000 to 9999, using 4 nested loops, so a total of 9000 cases are tested in all. Our trick in P5 avoids some of these, but only to the point where we have an exponential increase of roughly 8.5x per additional digit instead of 10x. Useful but insufficient.

However, *we are testing far more cases than we actually need* !. For instance, for $N=6754$, we are computing the sum $6^4+7^4+5^4+4^4$ and comparing it versus 6754. But the sum itself is invariant whatever the order of the digits may be: we have $\text{Sum4}(6754) = \text{Sum4}(6745) = \text{Sum4}(4567) = \dots$

So, the magic word is *lists*: you just need to test all *different* lists, *order doesn't matter* !! This tremendously reduces the number of cases we need to test, to the point where, with clever list-generating programming, we can succeed even for N=10 ! And, with the help of a fast PC, we can even find all 88 PPDIs, up to order 39, in a reasonable amount of time.

Of course, I won't give here the solution using this lists approach, that's for you to take over. But for the sake of all of you who tried this challenge on your HP-41Cs or your HP-42S, I'm including a straight conversion of P4 to HP-41C/CV/CX's RPN, for the case N=3:

Program P4-41C:

01	LBL "N3"	16	DSE 16	31	RCL 14
02	9	17	LBL 01	32	+
03	STO 00	18	RCL IND 10	33	RCL 15
04	LBL 00	19	STO 13	34	X=Y?
05	RCL 00	20	RCL 16	35	VIEW X
06	3	21	STO 11	36	ISG 15
07	Y^X	22	LBL 02	37	LBL 04
08	STO IND 00	23	RCL IND 11	38	ISG 12
09	DSE 00	24	RCL 13	39	GTO 03
10	GTO 00	25	+	40	ISG 11
11	100	26	STO 14	41	GTO 02
12	STO 15	27	RCL 16	42	ISG 10
13	1.009	28	STO 12	43	GTO 01
14	STO 10	29	LBL 03	44	"DONE"
15	STO 16	30	RCL IND 12	45	PROMPT

This 45-line program will compute all four solutions for N=3, in these times:

Time to find and display 1st solution (153)	24 sec.
2nd solution (370)	1 min 37 sec.
3rd solution (371)	1 min 37 sec.
4th solution (407)	1 min 49 sec.
"DONE"	5 min 6 sec.

This program will also run unchanged on an HP-42S, only much faster.

That's all. Next S&SMC #4 soon, stay tuned !

Re: S&SMC #3: Final Remarks

Message #16 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 15 June 2002, 2:49 p.m.,
in response to message #15 by Ex-PPC member

Thank you, Mr. Ex-PPC Member for a nice challenge, I hope next time I will be able to do it better. My best program incorporated some of the techniques you suggested, but I haven't had enough time during the week to fully polish it. For N=3, I needed about 4 minutes to reach 407, and 12 minutes to exhaust all possibilities. Your example is about four times as fast, taking 3 minutes 12 seconds in my HP42S. By the way, the use of registers and steps count was similar in my case.

I was trying a shortcut by means of aborting the inner loop as soon as the sum of the powers exceeded the number under test, since the function is monotonic inside the inner loop. I also stored the differences between the powers in an array, instead of the powers themselves; so a simple RCL + IND 10 updated the X register with the next value to try. At the loop exit, I subtracted $9 \times n$ from the sum-of-powers last value, and went to the next loop.

A binary search inside the inner loop, halving the range on each iteration may reduce the tests from 10 to 4, but I would lose my job (and-or my family) if I spend that much time and dedication from Monday to Friday. If I find reasonable way to do that in an HP42S, I will let you know.

Thank you again, and keep the challenges coming, please!

Re: S&SMC #3: Final Remarks [LONG!]

Message #17 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 16 June 2002, 8:32 a.m.,
in response to message #15 by Ex-PPC member

While I know the challenge is over, I finished my HP 42S program, using recursive loops. It asks for M (the order of the problem), between 3 and 10, and then proceeds to find all solutions and to exhaust the possibilities.

For M=3, it took 1 minute 46 seconds to finish.

For M=4, it took 17 minutes.

For M=5, it took 3 hours.

The program uses some 420 bytes of program memory, and runs with 24 registers.

I also find that the generality of a program (opposed to write it just to solve a particular value of M) conspires against its speed.

As I am not familiar enough with the Forum formatting techniques for such a long listing (6 pages), I offer to send a RTF text file with Introduction, Code and Comments to anyone interested, who sends me his-hers email address. Or, after some extra time, I may be able to publish it here.

My program (very long)

Message #18 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 16 June 2002, 8:46 a.m.,
in response to message #17 by Andrés C. Rodríguez (Argentina)

Well, this is my first attempt at formatting, not 100% readable,

Author: Andrés C. Rodríguez Date: June 16, 2002 Calculator: HP 42S Size=25

Principle of operation:

Accepts "M", which is the number of digits searched for. There are recursive loops for each digits position.

The Units loop contains the test statements, to check if the Number Under test (NUT) equals the Sum of Powers (SOP) of its digits.

Since the Units loop is monotonic, an extra test is used to abort the loop when there are no more solutions in the decade under test.

To obtain greater speed, this program uses an array (R0-R9), which contains the differences between the powers to be added. The last value of such array is negative, allowing for an easy loop-back.

A Diagnostics routine is provided, which slows the program but helps in debugging or understanding, showing the progression of the values under test.

This program fully uses the 8-level pending subroutine return addresses of the HP42S, hence it needs to be adapted for other calculators like the HP 41 family. The Units routine is called via GTO and has fixed return addresses because of this limitation.

In some cases, a value for NUT already incremented is decremented upon the loop exit, since the calling, outer loop would increment it again (like the carry in addition) causing an erroneous condition.

Based upon the “M” value, the program starts at the proper looping routine. The outermost routine loops between 1 and 9, all others loop between 0 and 9.

While it uses recursive loops, a difference array, a shortcut for Units loop abort and a lot of inline code for speed, I still consider it a “Brute Force” approach.

Special symbols:

The | symbol means “line feed” for nicer Alpha displays The words “Roll Down” are used for the so-called function The symbol is the Alpha Append character

```
LBL "PPC3R"           ; Initialize
CLRG
CLST
FIX 0
"Enter M (3 10)|"     ; Get M (| = line feed)
PROMPT
CLLCD
IP                     ; M must be an integer between 3 and 10
3
x>y?
GTO 26
Roll Down             ; Just for clarity, I write it this way...
10
x<y?
GTO 26
Roll Down
STO 20
0.009
STO 23               ; Constant used for loop initialization
9
STO 22               ; R22 will be reused later on
LBL 22               ; Initialize array of powers differences
RCL 22
1
-
RCL 22
RCL 20
y^x
STO - IND 22
STO + IND Y
DSE 22
GTO 22               ; Differences are in R0 - R9
```

```
; Now, in R(i) we have [(i+1)**m - i**m]
; For instance, for m=3, we should have:
```

```

; R0 = (1-0) = 1      R1 = (8-1) = 7
; R2 = (27-8) = 19    R3 = (64-27) = 37
; R4 = (125-64) = 61   R5 = (216-125) = 91
; R6 = (343-216) = 127 R7 = (512-343) = 169
; R8 = (729-512) = 217 R9 = (0-729) = -729 (!)

10                      ; Continue initialization
RCL 20
1
-
y^x                      ; Calculate 10^(m-1) as initial value, to
STO 21                   ; initialize R21 with Number-Under-Test (NUT)
1                        ; Use 1 to
STO 22                   ; initialize R22 with Sum-of-Powers (SOP)

RCL 20                   ; ***** S T A R T *****
9
+
1.009                   ; The outermost loop starts with 1
XEQ IND Y                ; Entry point of nested routines based on M.
"DONE |"                 ; When back, prepare final message,
CLST                     ; be polite by clearing the stack,
BEEP                     ; and salute
PROMPT
GTO "PPC3"               ; Start over
LBL 26                   ; Improper M values
"Bad M |"
TONE 0
PROMPT                   ; Warn the user
GTO "PPC3"               ; Start over

LBL 19                   ; The following pages contain very
STO 19                   ; similar, nested routines, which
LBL 09                   ; are used to cycle thru each digit
RCL 23                   ; position.
XEQ 18                   ; See comments on LBL 12, the one which
RCL IND(19)              ; takes care of the hundreds digit.
STO + 22                 ; LBL 19 to LBL 12 are essentially the
1                        ; same.
2                        ; The calls are sort of recursive, from
STO + 21                 ; the most significant digits to the
ISG 19                   ; lesser ones.
GTO 09                   ; The internal labels and addresses are
STO -21                  ; shifted from one routine to the next.
RTN

LBL 18
STO 18

```

LBL 08
RCL 23
XEQ 17
RCL IND(18)
STO + 22
1
STO + 21
ISG 18
GTO 08
STO - 21
RTN

LBL 17
STO 17
LBL 07
RCL 23
XEQ 16
RCL IND(17)
STO + 22
1
STO + 21
ISG 17
GTO 07
STO -21
RTN

LBL 16
STO 16
LBL 06
RCL 23
XEQ 15
RCL IND(16)
STO + 22
1
STO + 21
ISG 16
GTO 06
STO - 21
RTN

LBL 15
STO 15
LBL 05
RCL 23
XEQ 14
RCL IND(15)
STO + 22
1
STO + 21


```
ISG 15
GTO 05
STO -21
RTN
```

```
LBL 14
STO 14
LBL 04
RCL 23
XEQ 13
RCL IND(14)
STO + 22
      1
STO + 21
ISG 14
GTO 04
STO - 21
RTN
```

```
LBL 13
STO 13
LBL 03
RCL 23
XEQ 12
RCL IND(13)
STO + 22
      1
STO + 21
ISG 13
GTO 03
STO -21
RTN
```

```
LBL 12                ; Hundreds loop
STO 12                ; Get initial value from calling routine
LBL 02                ; Inner hundreds loop starts here
RCL 23                ; Use 0.009 parameter
XEQ 11                ; to calls the decades routine
RCL IND(12)           ; Then, increase the hundreds digit
STO + 22              ; so SOP is properly incremented,
      1               ; and also increment the NUT by one
STO + 21
ISG 12                ; Try again with the next hundreds digit
GTO 02
STO - 21              ; The thousands routine will increment it (!)
RTN                   ; After exhausting, return
```

```
LBL 11                ; Decades loop (somehow different)
STO 11                ; Get initial value from calling routine
LBL 01                ; Inner decades loop starts here
```

```

GTO 10          ; Branches to Units routine,
LBL 21          ; providing a return address (!)
RCL IND(11)     ; Then, increases the decades digit
STO + 22        ; so SOP is properly incremented,
                ; and also increment the NUT by one
                1
STO + 21
ISG 11          ; Try again with the next decades digit
GTO 01
STO -21         ; The hundreds routine will increment it (!)
RTN            ; After exhausting, return

```

```

LBL 10          ; Units routine
RCL 23          ; Initialize index with 0.009
STO 10
RCL 21          ; Recall NUT
RCL 22          ; Recall SOP
                LBL 00          ; internal units loop
                x>y?           ; If SOP > NUT, go to next decade
                GTO 25          ; (shortcut based on monotonicity)
                x=y?           ; If SOP = NUT, This is an answer!!
                VIEW X          ; Show answer without frills, and
RCL + IND (10)   ; properly increase SOP in the stack
                1              ; and also increment the NUT by one
STO + Z          ; Just by now, we keep the next SOP in X,
Roll Down       ; and the next NUT in Y
ISG 10          ; Try again with the next units digit
GTO 00
STO 22          ; Only before returning, we update SOP
Roll Down       ; and NUT from the stack
STO 21          ; to the proper registers
GTO 21          ; and go back to the decades routine
LBL 25          ; Remaining of this decade has no solutions,
9              ; increment NUT in R21 (!) by 9
STO + 21        ; Note: is not needed to increment SOP (!)
GTO 21          ; Go back to the digits routine

```

```

LBL 27          ; Diagnostics Routine, just for debugging.
CLA             ; It would be called by XEQ 27, inserted just
ARCL Y         ; after LBL 00. It slows the program.
" "            ; Appends a space
ARCL X
"|"            ; Appends a line feed
AVIEW          ; Shows running values of NUT and SOP
RTN            ; (A TONE 7 may replace VIEW X for tests)

```

Yes, I wrote it on a PC...

*Message #19 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 16 June 2002, 8:52 a.m.,
in response to message #18 by Andrés C. Rodríguez (Argentina)*

... just as a text file. But I didn't run anything in the PC!

I just used the PC as a text editor, and then keyed the program to the HP42S. How nice a bidirectional interface would have been !!

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Hand Held Products HP-41 EPROM Box

Message #1 Posted by [Chris Catotti \(Florida\)](#) on 8 June 2002, 8:45 p.m.

I located an old EduCALC Catalog #25 (c) 1995, page 12.

http://images.andale.com/f2/115/106/3428179/1023569107746_EPROMBox.jpg

It says:

"EPROM BOX

An EPROM box the size and shape of a card reader! It plugs in just like a card reader (using one port), but it stores up to 32K of EPROM storage. Now you can have huge application programs or giant amounts of fixed data at your fingertips.

Application areas include survey calculations, oil field computation, flight support insurance analysis and other areas where small size and large memory requirements are essential. Programming the EPROMs can be accomplished through the EPROM Programmer (Stock #MC-506) or for larger and faster programming requirements leased equipment from Hand Held Products is available.

For additional information call (704) 541-1380 [NOTE: phone number no longer valid] or write for literature, Stock #A-526 LIT.

Stock #A-526 [HHP-PE including 8K blank EPROM]

List \$349.00 Please allow 3 to 4 weeks for delivery \$335.95"

Does anyone know how to reprogram it. The unit appears to have 16K EPROM installed. I recently sold it to another individual for what I paid. We have been trying to learn how to use it (asidxe from running the programs already loaded).

The unit with no directions or instructions. Does anyone know how this was/is programmed? Do you recognize the collection of programs installed now? I have a list of programs and functions in it now.

'PROGRAMS are written in user code, and FUNCTIONS are written in mcode. I also have three pictures of it. The locations were determined using the CCD Modules CAT function.

http://images.andale.com/f2/115/106/3428179/1021270165956_Hhp_pe_1.jpg

http://images.andale.com/f2/115/106/3428179/1021270165500_Hhp_pe_2.jpg

http://images.andale.com/f2/115/106/3428179/1021270164846_Hhp_pe_3.jpg

-- port 2 lower -----

'INPROP

'MT

'Z

'ARGT

'RT

'30

-- port 2 upper -----

'P13

'UD

'KTH

'PLT

'PROP2

'DES

'MUW

'OUT

'PX345

'PX34

SI43

SI243

-- port 4 lower -----

'DM

'DPT

'EREQ

'FK

'FSET

'NPMLH

'PROP

'QUAD

'P31

'P01

'P14

'P45

'H7

'H10

'CB12

'CP

'GPM

'NP

'SWAP

'DPCHA

'DCD

'POP

'DPFC

'DP

'DPA

'FP

'PERF1

'PERF2

'REDIS

'RFM

'UT

'PX13

'PX463

'PX1700

'PX1152

'PX850

'PX807

'PX258

'PX27

'PX130

'BPO

-- port 4 upper -----

'DPCK

'MDP

'RPT

'FILM

'MEW

'T2

'AM10

'AX30

'A20B

'AM20

'A15B

'A10B

'CB25

'P2

'IN

GETKEY

REGMOVE

REGSWAP

X<>F

DATA1

DATA2

'AD

'AU

'LGO

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The HP-41 in Space on Space Shuttle with Picture

Message #1 Posted by [Chris Catotti](#) on 8 June 2002, 8:34 p.m.

I was searching my stuff, and found EduCALC Catalog #25 (c) 1985. The cover read "HP-41 floats in mid-air. Sally Ride relaxes on the SPACE SHUTTLE. See a picture at:

http://images.andale.com/f2/115/106/3428179/1023569107094_EC25_Cov.jpg

Re: The HP-41 in Space on Space Shuttle with Picture

Message #2 Posted by [Daniel Kekez](#) on 8 June 2002, 10:17 p.m.,

in response to message #1 by Chris Catotti

Neat. That picture of Sally Ride is also on a Smithsonian web page about the role of the HP-41C in the space shuttle program: <http://www.nasm.si.edu/nasm/dsh/artifacts/GC-hewlett-.htm>.

Re: The HP-41 in Space on Space Shuttle with Picture

Message #3 Posted by [Daniel Diggelmann](#) on 9 June 2002, 5:36 a.m.,

in response to message #2 by Daniel Kekez

Many thanks for the interesting links. Did anyone here ever encounter a NASA ROM for the HP41?

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hp 25 amnesia

Message #1 Posted by [Pierre LANCELOT](#) on 8 June 2002, 4:56 p.m.

I've rescued a hp25 from the trashcan where it had been thrown by a colleague (#1509s36887). After taking apart, cleaning (very beautiful white crystals in battery compartment) with alcohol & plugging a new NiCd inside, it appears that :

- display & kbd in working order
- all basic functions work :arithmetic ops, stack, trig ...
- data : none of the Rx registers memorize anything : RCL returns zero
- instruction : PGM mode doesn't work : the pgm counter increments but any typed instruction displays as "goto 00"

It looks like a failure of some memory to store data/instruction (is there a common place for both) ?

There are 2 chips at PCB top :

- AMI 7523SH 1818-0153
- HP 1820 1382E

The 3 chips at bottom of the PCB are :

- AMI 7523B1 1820-1523
- AMI 7524NE 1820-1564
- AMI 7525CL 1818-0154

I'm completely ignorant : could somebody describe the respective part of each, which one is guilty ?

Is there any way to fix it ? Is there something else I could check (capacitor, transistor ...) ?

Thanks for any help.

Re: hp 25 amnesia

Message #2 Posted by [David Smith](#) on 8 June 2002, 5:22 p.m.,
in response to message #1 by Pierre LANCELOT

The upper two chips are the display drivers. The smaller one also has some ROM code in it.

The large one at the bottom is the ACT chip. It is the CPU and timing generator. The one on the left (0154) is a program ROM. The one on the right (or above the ACT chip on some versions) is the RAM chip. It is the one that ails you. Also some HP25's have two RAM chips.

Re: hp 25 amnesia

Message #3 Posted by [katie](#) on 8 June 2002, 11:06 p.m.,
in response to message #1 by Pierre LANCELOT

Take a look in the Articles Forum on this site. There's an write-up about A Common Woodstock Problem that describes the problem that you are experiencing and solutions to it. It's exactly what I've seen on several Woodstock machines and it's fixable!

-Katie

Re: hp 25 amnesia

Message #4 Posted by [Pierre Lancelot](#) on 11 June 2002, 3:00 p.m.,
in response to message #3 by katie

thanks to both,

Katie, I tried to OFF/ON the calc after several warming hours, without result. I tried also to shortcut the 2 ACT pins but, unfortunately, it doesn't work for me.

Do you know anything else I could try ? Thank you.

Re: hp 25 amnesia

*Message #5 Posted by [katie](#) on 11 June 2002, 10:25 p.m.,
in response to message #4 by Pierre Lancelot*

The article describes the things that I've come up with to fix the warm up problem. But since your 25 doesn't seem to work fully even after the warm up period then those tricks probably won't work. In all likelihood the RAM chip (the one closet to the battery contacts) is seriously dead! Replacing it with one from anohter 25 (22 or other calc with the same chip) is probably your only hope. As a last resort, I usually desolder the chip to check for circuit board problems that might exist underneath it, then solder it back down and hope for the best.

Re: hp 25 amnesia

*Message #6 Posted by [pierre Lancelot](#) on 12 June 2002, 11:56 a.m.,
in response to message #5 by katie*

ok, I'll inspect under the RAM chip.

thank you.

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32SII

Message #1 Posted by [Bird](#) on 8 June 2002, 11:24 a.m.

I have a new 32SII. It is a good calculator except for the fact the certain keys make an annoying click noise when pressed (specifically the 2,5 8 and 9 keys). Does any one know how to correct this or if the problem will go away with use?

Re: 32SII

Message #2 Posted by [steve](#) on 8 June 2002, 12:42 p.m.,
in response to message #1 by Bird

I had the same problem with the clear key but it went away after about a week of use. you are right it is annoying I hope yours gets better

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Ads now available with and without auctions

Message #1 Posted by [Dave Hicks](#) on 7 June 2002, 1:31 p.m.

As you may have noticed, there are now two links to the classified ads at the top of each forum and on the main page. I didn't see any signs that the "to ebay or not to ebay" question was going to be resolved soon but hopefully this will help a little. The "without" link simply filters auction posts from your view of the database. There's also an auction/no auction selection in the search page for the classifieds.

Re: Ads now available with and without auctions

Message #2 Posted by [Renato](#) on 7 June 2002, 11:17 p.m.,
in response to message #1 by Dave Hicks

This helps a little. As far as I can see, a group of people does not care about ebay references at the museum, another group likes it, and some people get annoyed. I'm in the last group - I'm here for fun. Some other people are here for business. That's ok, as long as business and fun can co-exist.

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hp 32SII

Message #1 Posted by [steve](#) on 7 June 2002, 1:28 p.m.

is hp still making the 32SII calculator if not are they producing any rpn scientific calculators?

Re: hp 32SII

Message #2 Posted by [W. Bruce Maguire II](#) on 7 June 2002, 3:28 p.m.,
in response to message #1 by steve

Steve asked:

is hp still making the 32SII calculator if not are they producing any rpn scientific calculators?

No, HP no longer makes the 32sII, but you can still find them at some stores and on the web (for the time being).

The only RPN calculators that HP currently makes are:

- 1) HP-19bII (Algebraic or RPN business calc.)
- 2) HP-17bII (Algebraic or RPN business calc.)
- 3) HP-48g+/gx (Big, graphing calc.)
- 4) HP-49 (Algebraic or RPN big, graphing calc., but without the normal "Enter" key---it is the "=" key in the bottom corner)

I don't think I forgot any...

Bruce.

Correction...

Message #3 Posted by [W. Bruce Maguire](#) on 7 June 2002, 3:31 p.m.,
in response to message #2 by W. Bruce Maguire II

Steve:

Actually, after looking at some other messages posted down below, it appears that the HP-17bII may no longer be in production. I haven't verified this for myself.

Bruce.

Re: Correction...

Message #4 Posted by [Christof \(Davis, CA\)](#) on 7 June 2002, 3:47 p.m.,
in response to message #3 by W. Bruce Maguire

I just got offered several 17bii calcs as a closeout price, so maybe they are.

(And I can't share the info just yet, I have to ask the seller, and then find a way to get the word out without getting him overwhelmed by orders for 1039548382)

-Christof

Re: Correction...

Message #5 Posted by [Ren](#) on 7 June 2002, 5:09 p.m.,
in response to message #4 by Christof (Davis, CA)

Did you forget the 12C, or has it been dissed too?

Re: Correction...

Message #6 Posted by [W. Bruce Maguire II](#) on 8 June 2002, 10:39 p.m.,
in response to message #5 by Ren

Ren wrote:

Did you forget the 12C, or has it been dissed too?

Oops. I *knew* I'd forget one! Man, I'm getting old... ;-)

Bruce.

Re: Correction...

Message #7 Posted by [Ellis Easley](#) on 8 June 2002, 10:27 a.m.,
in response to message #3 by W. Bruce Maguire

I bought two brand new 17BII's from a guy who has been running a dutch auction on Ebay for a while. He says he has a lot of them. They must be warranty replacement units because they just come with a slip cover but he includes a photocopy of the manual. (I guess he's "running afoul of the law".) His starting bid is \$45 and he is getting very few takers.

I wonder if he got these from HP parts too? I understand the 42S wouldn't have been supported by HP anymore and that's why they would have sold them without requiring a "core". But shouldn't they still support the 17BII for a few years, if they just discontinued it? Although they might have a reserve for that purpose and this guy just bought some of the surplus.

Some years ago I got my HP16C from EduCalc when they were selling warranty replacement units. They also advertised 15C's inside the front cover, but by the time I called they only had 16C's left. I think I paid \$30 and the 15C's were priced at \$35!

The Ebay seller with the 17BII's also has complete 38G's of which I also bought a couple. He also lists 48G's and "slightly used" 49G's. Actually, I first learned about his ad here, he had advertised "[38G/not 38GX](#)" on Ebay and that raised hopes of a new model.

I like the 38G! I got a couple of 39G's locally last year when they were being closed out but I like the 38G better. I've realized I don't have a use for a graphing calculator as far as advanced graphing features go, but I like writing my own graphing programs! I'm having fun with the clear screen and pixel set commands. After I had a program working, I transferred it to a 39G and it worked there too.

Re: Correction...

*Message #8 Posted by [Christof \(Davis, CA\)](#) on 8 June 2002, 2:29 p.m.,
in response to message #7 by Ellis Easley*

The seller in question is a very reasonable seller- I've gotten several calcs from him- the 38g and 48g calcs are NIB- though the boxes are a bit shelf worn.

The 49Gs I've gotten have both been new- not in box, but one came with sealed manuals (the other opened) and both came with the screen protector sheets still on.

I haven't gotten one of the 17bII's yet- in the mail. :)

Through several orders now he's been vvery likeable, communicative, and overall a very decent guy.

He's not afoul of the law, he's just buying overstock from an HP reseller.

He's also more than happy to sell for set prices off of ebay. Ebay ID is jeffbunce, IIRC. He's coolwith me giving out his email address, if anyone needs it.

-Christof

Re: Correction...

*Message #9 Posted by [Ellis Easley](#) on 11 June 2002, 4:23 a.m.,
in response to message #8 by Christof (Davis, CA)*

By "afoul of the law" I only meant the photocopied manuals he provides with the 17BII's. For all I know, he has HP's permission. I agree he is friendly and reasonable.

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Last 42's thread deleted

Message #1 Posted by [Dave Hicks](#) on 7 June 2002, 12:29 p.m.

Because there were several false names used.

By the way, the person "accused" emailed me and said that he placed the order after HP indicated they were out of stock and his order remains unprocessed.

Re: Last 42's thread deleted

Message #2 Posted by [Britt Snodgrass](#) on 7 June 2002, 1:40 p.m.,
in response to message #1 by Dave Hicks

Since I missed the opportunity, I'm curious. How were these last HP-42S replacement units offered for sale? Was it on the HP web site?

Re: Last 42's thread deleted

Message #3 Posted by [Ellis Easley](#) on 7 June 2002, 5:28 p.m.,
in response to message #2 by Britt Snodgrass

Apparently, someone (Johnny Bjoern Rasmussen) just happened to notice that the HP parts system had an entry that sounded like it might be a warranty replacement unit and posted the fact here. Some people were pretty sure it wasn't a calculator but a service manual, but as they began arriving it turned out they were calculators! [This is the thread.](#)

another thread: The Arrivals!

Message #4 Posted by [Ellis Easley](#) on 7 June 2002, 5:40 p.m.,
in response to message #2 by Britt Snodgrass

[more 42S excitement!](#)

Re: Last 42's thread deleted

Message #5 Posted by [Y. Samuel Arai](#) on 7 June 2002, 10:44 p.m.,
in response to message #1 by Dave Hicks

Dave:

Thank you for setting the record straight regarding the 42s'es. It makes me very sad that some people have to try and dig up scapegoats, going so far as invading my privacy, and obtaining (mis)information illegally, and falsely accusing me in public of buying up the remaining stock of the 42s'es. Even if I had been able to order all (or any) of the remaining stock of 42s'es, such a post would have been completely unwarranted. I wish I could have gotten just one!

So what's next? Posting real names of all the people who bought more than one XBOX game console on the first date of its sale? Or perhaps posting real names of people on EBay who displeased you with their bids?

I'd also like to set another record straight. "glynn" indicated that I had sold many 16C calculators, which is completely false. I have never sold a single 16C to anyone anywhere. So I ask "glynn", how did you come to the conclusion that I had been selling 16C's, and in a manner which displeases you?

All this has made me feel a bit pessimistic about the MoHPC community...

Sam

Apology to Y. Samuel Arai

Message #6 Posted by [glynn](#) on 8 June 2002, 2:18 a.m.,
in response to message #5 by Y. Samuel Arai

I relied on my memory only, Samuel, and that sometimes is not terribly reliable toward detail, especially in respect to model numbers. I did not believe I was incorrect-- but perhaps in retrospect I made the error of associating your sales here with 16c's, because I am currently in pursuit of such a model. I did note in that memory of mine that you had a stock of numerous calculators of the same model-- but as you state they were not 16c's, I stand corrected and apologize completely. I would have looked in an archive normally but Classifieds, by their nature, expire. Was it 15c's?

The intent of the unidentified poster was to identify what seemed to him to be a profiteer (i. e., somebody acting on information freely given in a spirit of trust within the Forum, to do more than get a calc). I do not know HOW he came to the conclusion that you were the one with the order for 20; I did not ask, and it did not occur to me that he possibly broke any law

to get it. It seemed to me he probably checked his place in the queue with a garrulous sales rep, as I might have done, had I participated in the rush.

If *I* had been in the queue, I might have asked the pointed question: are there any recent LARGE orders for this item? Because I would know that this item languished in complete and untouched anonymity UNTIL the story was broken here; and so it would interest me, too, if the order prior to my name was for 20 or so. Might have been disappointed to hear of one like that, though I myself happened to be relatively sure that several of the calcs were going to be acquired only with an eye toward immediate profitable resale.

MY intent, (in a post that can no longer be reviewed, apparently), was to point out that one who orders 20 calculators, with the intent of reselling them, wasn't doing anything necessarily evil-- that those willing to take the job on of retailing may do so, as they do run risks and assume responsibilities and gamble on a return of their investment made-- all because they assume there will be a demand on the supply that there is.

My intent, further, was to express a FEELING, one that identified with the Unknown Poster's disappointment, while redirecting its target. Of course I see that you agree: it IS a blow to just miss a great deal.

And it's sad that there just aren't enough of these to go around for everybody that wants one OR twenty. Now that Dave has set the record straight and you've corroborated that the order got aborted, no one can, or should, accuse you of even attempting to manipulate the limited supply of what became an out-of-the-blue windfall to this small community.

I'm GREATLY glad to know of your innocence, Y.Samuel; I am glad the unknown poster was wrong about there being somebody who would scarf up all he could-- not because there is anything inherently wrong in that-- but because it would be against a spirit of sharing of both information and resources that characterizes so much of the Forum and its participants. It would not have been wrong to make money, of course; it only would have been sad to see one of our "own" use the "gift" of such information to make it magnitudes harder for those others in our midst.

But GOOD NEWS, all: That DID NOT HAPPEN. All the orders that got filled apparently were for small amounts-- no one here was intent on making their retirements on eBay with this hot tip!! That HAS to make you feel good about MoHPC users, doesn't it?

I apologize to you, Y.Samuel, that what I was willing to believe of you once the unknown poster invoked your name, was so off-base. I hope you won't remain pessimistic about the community here. As you perhaps saw, there were more than a few who came quickly to right the wrongs done you. If anything DOESN'T deserve a jaundice, it is the Forum, its curator, and the community that looked hard at the available facts and reacted responsibly as

the truth came to light. I hope you understand that I held no grudge to you, and made no attempt to deride your alleged actions or motivations. My mistaken contributions to that post, though made for benevolent reasons, are my fault alone, and I fully and publicly retract any error fostered in that mistake.

Take care, "glynn" <-- (my "consistent" identity; recently it has been delineated I must use this)

Thank you glynn (and others...)

*Message #7 Posted by [Y. Samuel Arai](#) on 11 June 2002, 2:31 a.m.,
in response to message #6 by glynn*

glynn: Thank you very much for your reply. I too felt very disappointed that I couldn't get any of the remaining 42S'es, and certainly do empathize with those who also missed out.

So disappointed was I that I missed out, that I went ahead and placed an order against zero stock anyway...only to have my name publicly posted in one of my favorite internet sites, accused of buying up the remaining stock of calculators... talk about rubbing salt into my wounds...

It just would have never occurred to me to go out and try to find out who might have bought the remaining stock, nor if any of the successful orders were for more than one... and then post this information publicly under an alias. I was just disgusted by this behavior...and really saddened that fellow MoHPC members can behave in such an ugly manner.

Anyhow, regarding selling calculators... I haven't sold any calculators here at MoHPC that I can remember. I have sold about 5 calculators on EBay however, to reduce some duplicate items in my collection. I expect I will be selling more as my collection grows.

Finally, I want to thank everyone who expressed disapproval of the original malicious post.

Sam

just suppose ...

Message #8 Posted by [Ellis Easley](#) on 8 June 2002, 9:33 a.m.,
in response to message #1 by Dave Hicks

I'm not trying to throw fuel on a fire, I just want to "pose a hypothetical" regarding the latest controversy:

Suppose a well-intentioned member of the MOHPC community bought all the 42S's simply to pass them on to others at his cost. How would he decide who gets one? What if someone wanted two?

There is a series of articles in the 65 Notes or the PPC Journal, which I only know through the Jake Schwartz CD-ROMs, about a guy who had a business and needed a large quantity of magnetic cards - a few hundred, at least. In order to get the price break, he wanted to buy 1000 from HP and then sell the remainder in lots of 100 to club members at his cost plus expenses. He got so many takers it turned into a major operation. Of course, that case dealt with something that was still in production.

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handheld case screws update

Message #1 Posted by [Ellis Easley](#) on 7 June 2002, 5:48 a.m.

I called the man on Thursday and he hadn't ordered the #2 Plastite screws. He apologized that they had been moving their office and promised he would order them. He said he would probably sell them 100 for \$3.50.

I asked him a number of questions that I had collected.

1. He verified that #3 sheet metal screws have 28 threads per inch (same as #2 Plastite). Last week he told me the diameter was .102 - .106 inch, compared to .089 for #2.
2. Sheet metal thread types: "A" is a coarser thread pitch with a pointed tip, used only on larger sizes, considered obsolete today but still made. When you go to the hardware store and there are two distinctly different thread pitches in the same bin, the coarser one is "A". "AB" is the finer thread pitch and the only pitch in smaller sizes, with a pointed tip. "B" is the finer thread pitch with a blunt tip.
3. He verified that they do stock the #3 X 5/16" sheet metal screws along with the 3/8" and 1/2" that are in the online catalog. He verified that the 5/16" is a "servo arm screw" with a blunt tip. It didn't occur to me at the time, but now I wonder if the "servo arm" application might mean it is not completely threaded, so part of the length serves as a shaft? He also said that he has recently bought #3 X 5/16" sheet metal screws with pointed tips because customers requested them - he said they use them in wood. But I understood that he still has the blunt ones in stock. The catalog number is SMPP0305B, 100 for \$4.50. BTW, he said #3 sheet metal screws are harder to find than Plastite screws!
4. I asked him what is the proper hole size for Plastite screws and as I expected, it depends on the material. From his reference he gave me two hole sizes for each of three screw sizes. The two hole sizes define a range. The smaller hole is for "soft" material and the larger is for "brittle" material: #2 - .076" - .080", #6 - .122" - .128", #8 - .149" - .158" These dimensions are for the original hole and will allow the screw to cut (actually "roll") the best thread.

5. I asked him if he could recommend any good books about screws. He said there were lots of books but no good ones! He did recommend a magazine, "Fastening Technolgy", which he said recently had a 20 part series on screws for plastic! He mentioned another thread type used for plastic, which I recognized from the name: "high-low". I've seen these in equipment, they have two intertwined threads, one deeper than the other.

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hp 41 (halfnut version)

Message #1 Posted by [steve](#) on 6 June 2002, 10:44 p.m.

when was the halfnut manufactured and what is the difference between the halfnut version and the rest of the 41 series

Re: hp 41 (halfnut version)

Message #2 Posted by [db\(martinez,california\)](#) on 6 June 2002, 11:13 p.m.,
in response to message #1 by steve

mine is a cx stamped the 44th month of 87 and was sold as the controler for a numericly controlled machine tooling unit.

Re: hp 41 (halfnut version)

Message #3 Posted by [Richard Garner](#) on 6 June 2002, 11:32 p.m.,
in response to message #1 by steve

The halfnut version of the 41CV/CX were made in the last 3 to 4 years of the 41 run. Someone here check me if I am wrong, but the halfnut was so named because it was manufactured with half of the componants of the original 41. The PCBs went from 4 to 2 and the chips went from about 4 to 1 or 2. The difference in the 2 was denoted by the black band around the display. Only the halfnut versions had the black band. The halfnut version also had additional features built into its chip to allow for better MCode programing. I hope this helps.

Re: hp 41 (halfnut version)

*Message #4 Posted by [Karl Schneider](#) on 7 June 2002, 3:00 a.m.,
in response to message #3 by Richard Garner*

The serial # on my recently-purchased halfnut 41-CV is 2636S21740, placing its manufacture in September 1986. However, text in MOHPC (<http://www.hpmuseum.org/collect.htm#earliest>) says, "Earliest Halfnut version found: 2511." (March 1985)

Some more info can also be found at <http://www.hpmuseum.org/collect.htm#versions>

Re: hp 41 (halfnut version)

*Message #5 Posted by [David Smith](#) on 7 June 2002, 4:58 p.m.,
in response to message #1 by steve*

The halfnut machines tend to be more reliable (but less repairable) than the full nut machines. This is because they have drastically fewer components and connections than the full nuts (especially that zebra connector between the CPU and keyboard). For harsh field conditions the half nut machines are best.

Full nut displays are much better than the half nut ones. They can be read over a wider viewing angle, have higher contrast, and have less temperature dependent variations.

Also full nut keyboards tend to be clickier (both audible and tactile) than the half nut ones. Some people like the softer keys, others like their keys loud and snappy.

Re: hp 41 (halfnut version)

*Message #6 Posted by [Ellis Easley](#) on 7 June 2002, 5:48 p.m.,
in response to message #5 by David Smith*

Didn't the profile of the keys change along the way? Taller to shorter or vice versa. Was this coincident with the fullnut/halfnut transition?

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HP 49G Question

Message #1 Posted by [Jason Ketchel](#) on 6 June 2002, 9:43 p.m.

Please, please can someone help me figure something out on the HP 49G. In what I study, I always have to convert units, and the HP has a huge units library, but I have no idea how to use it. Can someone help me out? An example maybe, like how to convert 17 inches to centimeters... Thanks alot.

Jason

Re: HP 49G Question

Message #2 Posted by [Kenji Nagahama](#) on 6 June 2002, 11:53 p.m.,
in response to message #1 by Jason Ketchel

Read Chapter6 of Advanced User Reference (AUR) first which you can get in HP's official site.

Since I also convert inch to milimeter and vise versa often, I created the following list in CST file for CUSTOM menu.

```
{ { "in>mm" \<< '1_in' * '1_mm' CONVERT \>> } @ inch to milimeter { "mm>in" \<< '1_mm' * '1_in' CONVERT \>> } @ milimeter to inch } @ In your case, 'mm' should be 'cm'.
```

Store the above list as CST file in HOME directory and press L-Shift + CUSTOM. Then you will find your special menu for converting the above.

In another way to do, install UTOOL made by Carsten Dominik, which is very good unit tool.
<http://zon.astro.uva.nl/~dominik/hpcalc/utool28.zip>

Re: HP 49G Question

Message #3 Posted by [Craig Bladow](#) on 6 June 2002, 11:54 p.m.,
in response to message #1 by Jason Ketchel

I was just figuring this out today! On the 49G, in RPN mode (of course!) one does the following: First enter: 17 <right-shift> <units> <leng> <in> That places 17_in on level one of the stack. Next: 1 <cm> Finally: <right-shift> <units> <tools> <conve> Leaving 43.18_cm in level 1.

I'm pretty new to the 49G so I am sure that there are more key-efficient ways of doing this.

Craig

Re: HP 49G Question

Message #4 Posted by [Andy.Henstridge](#) on 7 June 2002, 4:18 a.m.,
in response to message #3 by Craig Bladow

I have converted units as described by Craig and in the user manual. It works, but, as far as I can tell it is not as good as HP48 for converting units on an ad hoc basis. On the 48 you type in the value then select the unit from the menu. To convert just use one of the shift keys (I think it is the right one, I do not have my 48 with me) and then select the unit you wish to convert to, which will be on the menu that is still displayed. Why is the 49 not as slick or is there a better way of using it. Writing custom menu is ok for conversion you perform regularly, but, not suitable for one offs. Regards Andy

Re: HP 49G Question

Message #5 Posted by [Ron Ross](#) on 7 June 2002, 7:58 a.m.,
in response to message #4 by Andy.Henstridge

It will behave exactly like a 48 unit system if you set flag 117 I believe.(I know it can behave like a 48, I am just not positive this is the Flag)

Re: HP 49G Question

Message #6 Posted by [Andy Henstridge](#) on 7 June 2002, 9:04 a.m.,
in response to message #5 by Ron Ross

Thanks Ron. I have set flag 117 and the HP49 behaves like a 48. Infact the "soft menu" option has made my 49 less cumbersome in many areas. Regards Andy

Re: HP 49G Question

Message #7 Posted by [Craig Bladow](#) on 7 June 2002, 9:39 a.m.,
in response to message #6 by Andy Henstridge

Thanks guys, I actually have flag 117 set but was following the instructions from the Advanced user's guide, using soft keys instead of menus. I have verified that the key sequence to convert from one unit to another is <left-shift> <new-unit soft key> from the appropriate unit menu.

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20s problem

Message #1 Posted by [Nick](#) on 6 June 2002, 4:21 p.m.

I have a hp 20s calculator that doesn't respond to the keystrokes for a whole bank of keys. The Blue Shift, 4,5,6 and the X all will not work. But if I press down just below the display, and "squeeze" the calculator, then I can input the keys.

All the rest of the keys work fine.

Before I make this my test calculator that I take apart, is there a fix to this?

Thank you, Nick

Re: 20s problem

Message #2 Posted by [Paul Brogger](#) on 6 June 2002, 4:58 p.m.,
in response to message #1 by Nick

The keyboard connector contacts the printed circuit board internally just below the display. The keyboard connector is 15 (I think) contacts on a flexible mylar (I think) circuit. Pressure for the connections is established by a rubbery strip laying just below the mylar. As the PCB is fastened into place, the rubber holds the mylar and PCB contacts together.

I think in some (especially aging) Pioneers, the rubber strip shrinks over time, and the keyboard traces lose contact with the PCB.

I've fixed some of these by taking them apart, removing the PCB, lifting out the rubber strip (it lies in a slot molded into the plastic face half of the case) and bolstering it with a strip of something about 1 mm thick underneath. (A rolled-up strip of cellophane tape is one approach.)

Then simply replace the rubber strip (it should sit a little "higher" now), the PCB, and the case halves, and it should work fine.

Instructions on how to take apart & put together Pioneer models are to be found elsewhere on

this site:

MoHPC – Repairs & Batteries – [Pioneer Repairs](#)

MoHPC – Articles Forum -- [#199: Increasing HP-42s Memory to 32K](#)

Good Luck!

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Copycat II ?

Message #1 Posted by [Luis](#) on 6 June 2002, 1:51 p.m.

[Here](#)

Re: Copycat II ?

Message #2 Posted by [Dave Hicks](#) on 6 June 2002, 7:24 p.m.,
in response to message #1 by Luis

Thanks Luis. I sent him an email earlier today.

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HP17BII discontinued

Message #1 Posted by [Iqbal](#) on 6 June 2002, 6:31 a.m.

Maybe I missed a post or something, but I was just going through wholesaleadvantage's webstie and they have stated that the HP17BII has been discontinued by HP. Is this old news or a recent development? Since the 20S and 32SII has been also been discontinued it means that the pioneer model is now history.

Re: HP17BII discontinued

Message #2 Posted by [John K. \(US\)](#) on 6 June 2002, 8:31 p.m.,
in response to message #1 by Iqbal

Well, the HP web site still has the product description, but the hpshopping site doesn't list it anymore. Maybe they did discontinue it. Funny that they'd choose to discontinue the 17BII, but the the 19BII in production...

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HP Thermal Printers

Message #1 Posted by [Juergen Rodenkirchen](#) on 6 June 2002, 3:52 a.m.

I have several HP Thermal Printers and I usually keep the paper in place even if I do not work with the machine(s) in a long time. Now I wondered if this could damage the pinter (head) in any way. Can someone answer my question? Any advice is appreciated. Thanks for your time!

Re: HP Thermal Printers

Message #2 Posted by [David Smith](#) on 6 June 2002, 5:21 p.m.,
in response to message #1 by Juergen Rodenkirchen

Since most non-archival papers are rather acidic and the thermal paper contains chemicals, there is a possibility that over time it could corrode the rather small and delicate print head resistors.

I have seen several machines that sat unused for many years. After cleaning them up and installing new paper, they print just fine for a few lines and then a dot or two in the print head opens up. I have attributed this to corrosion of the resistors in the print head. I don't know if the paper had anything to do with it or not, but it probably did not help.

Re: HP Thermal Printers

Message #3 Posted by [Tony Duell \(UK\)](#) on 6 June 2002, 7:54 p.m.,
in response to message #2 by David Smith

Are you sure it's the resistor that opens? I've had several printheads that get clogged with dirt, and I've had the flexiprint cable go open-circuit. I've had the printhead physically cracked. But I've never had a printhead heater resistor go open-circuit. Have you actually checked the resistance of the heaters at the printhead end of the flexiprint (i.e. between the traces on the ceramic substrate)?

Re: HP Thermal Printers

*Message #4 Posted by [David Smith](#) on 7 June 2002, 5:04 p.m.,
in response to message #3 by Tony Duell (UK)*

Yes, I even checked heads under a microscope and they are definitely bad. I have two '19C's, 2 97's, and three or four HP41 printers missing dots in their heads. I have not had any problems with the flex cables opening up.

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Re: Another arrival

Message #1 Posted by [A.J.](#) on 6 June 2002, 2:13 a.m.

Warren wrote "..On one hand, for the sake of my friend and the other collectors and users that may have ordered, I hope that HP intends to make a new batch of these to fulfill the orders that came in before they took the part out of their system. On the other hand, if one of the eBay dealers ordered 100 to sell for \$250 each, I hope HP does not make any more...."

Here we go again. The "We (collectors, etc) have a right and deserve to own all the HP 42S calculators that are made, and if we cannot, we don't want others to have them" mentality.

If a person knows that 42S calculators are popular and gets hold of a few, they surely would know about the HP Museum. So why don't they appear in the Museum's classified section, since there is a captive audience who would pay top dollar with the added advantage of no selling fees ?

I am guessing that it is not worth the hassle dealing with some of the people who read the HP Museum classified ads.

RE:Another arrival & Manual disappointment

Message #2 Posted by [Thibaut.be](#) on 10 June 2002, 3:57 a.m.,
in response to message #1 by A.J.

I just received my calc that was forwarded by a friend. (Again many thanks, T. !).

SN is ID02702605.

I also ordered 00042-90020 (Programming Examples and Techniques four your HP-42S Calculator), which is some pendant of Standard pac for the 42S.

It's really as shame to provide such bad quality items. The manual is a plastic spiral bound bad photocopy/print of the original manual. They sell that for \$34, which is an awful amount of money for what it is.

Something I've always appreciated on HP calcs was the quality of their manuals. Now it seems that even this has gone away...

I would definitely have preferred to pay \$10 to download a .pdf file rather than getting this bunch of crap...

Really I'm outraged...

Re: RE:Another arrival & Manual disappointment

*Message #3 Posted by [Nick](#) on 10 June 2002, 10:29 a.m.,
in response to message #2 by Thibaut.be*

Sad to see HP fall so far.

My solution to get both HP42s manuals was to print out the pdf files with a laser printer and spiral bind them at Kinko's. The PDF files print to full 8 1/2 by 11 page, but really quite readable.

Re: RE:Another arrival & Manual disappointment

*Message #4 Posted by [thibaut.be](#) on 10 June 2002, 10:39 a.m.,
in response to message #3 by Nick*

Have you got an idea where to get the 42S manual ?

Re: RE:Another arrival & Manual disappointment

*Message #5 Posted by [Nick](#) on 10 June 2002, 11:21 a.m.,
in response to message #4 by thibaut.be*

The pdf manual can be purchased here along with all the other classic manuals no longer available. <http://www.hpmuseum.org/cd/cddesc.htm>

Re: RE:Another arrival & Manual disappointment

*Message #6 Posted by [thibaut.be](#) on 10 June 2002, 11:32 a.m.,
in response to message #5 by Nick*

Oh, that pdf !

Of course I have the CD for long time now...

Re: RE:Another arrival & Manual disappointment

*Message #7 Posted by [Ellis Easley](#) on 11 June 2002, 2:42 a.m.,
in response to message #2 by Thibaut.be*

I've received manuals like that from HP before. For what it's worth, HP considers that they are providing reprints of out-of-production manuals as a service to their customers.

One manual I got had a great number of individual dots missing. A message added on a cover sheet said the manual had been scanned into a computer and was then reprinted on demand. They must have used some kind of noise reduction software on the images. You know how in a table of contents there will be a row of dots from the text to the page number? About half of those dots were missing. Also periods at the end of sentences and decimal points in numbers - not helpful in tables of specifications and calibration instructions!

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HP-11C

Message #1 Posted by [Richard Hendricks](#) on 6 June 2002, 12:13 a.m.

I would like to get 11C but have not been able to find one. With the apparent demand will Hewlett Packard start making them again?

Re: HP-11C

Message #2 Posted by [Thibaut.be](#) on 6 June 2002, 4:06 a.m.,
in response to message #1 by Richard Hendricks

Well, the chance is quite minimal... tending to zero I'm afraid...

If you want to get one, some come up in the ads section, otherwise check ebay. There are currently a few for sale...

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solicitud de manual

Message #1 Posted by [Gaspar Ramírez Rodríguez](#) on 5 June 2002, 9:18 p.m.

I'm sorry, no se ingles

Por favor, me pueden decir en donde puedo conseguir el manual del usuario para la calculadora cientifica HP32sii. Por favor en español o algun libro que se pueda utilizar para aprender su uso.

Re: Manual needed

Message #2 Posted by [Ex-PPC member](#) on 5 June 2002, 10:19 p.m.,
in response to message #1 by Gaspar Ramírez Rodríguez

I can't help him with his need, but in case some of you can, he's saying:

"I'm sorry, I don't speak English

Please, could you tell me where can I get the HP-32SII Owner's Handbook ? I would need it to be in Spanish, or else some other book that could be useful for learning how to use the calculator".

de manual

Message #3 Posted by [Christof \(Davis, CA\)](#) on 6 June 2002, 1:51 a.m.,
in response to message #2 by Ex-PPC member

<http://partsurfer.hp.com>

In the part that says:

"enter an HP product number or name"

Type in: calculator

select: 32s (no 32sii, it won't work.)

and you will see:

00032-90072 32SII OWNERS MANUAL SPANISH

Manual disponible - Manual available

Message #4 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 6 June 2002, 10:04 a.m.,
in response to message #1 by Gaspar Ramírez Rodríguez

Por favor, dígame dónde está residiendo, yo creo tener ese manual disponible.

Bienvenido!

Translation:

Please tell me where are you located, I think I have one for you.

Welcome!

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HP9825 / 98032

Message #1 Posted by [Ad van Steen](#) on 5 June 2002, 4:15 p.m.

In my company I still keep an HP9825 alive, it is the brain of a pipe-cutting machine. I want it replaced by a PC but the communication with the servo's of the machine is done through a HP98032 interface. Can anyone give me detailed info about this interface?

Thanks in advance

Re: HP9825 / 98032

Message #2 Posted by [Petr Horsky](#) on 12 June 2002, 1:26 p.m.,
in response to message #1 by Ad van Steen

Well, to speak exactly, I don't have any detailed information on the HP 98032A, but one or two of them now rest in my cupboard and I can still recollect what is it like (as I employed them about 20 years ago). It's a 16-bit bidirectional TTL parallel interface with a breadboard-configurable handshake logic. In your servo application, I believe it's simply used with no handshake and therefore easily substitutable by e.g. a plain, directly programmed LPT1 port of an (older) PC, possibly buffered by some circuitry.

Sorry for speaking so vaguely; I would like to have the old manuals back again, too. If you don't find anybody better informed, perhaps I am able to figure out how it works in your application, provided you try to give me more specific questions. In such case, please contact me also by e-mail, as I don't check the Forum frequently.

Best Regards, Petr Horsky

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Re: Another arrival

Message #1 Posted by [Christof \(Davis, CA\)](#) on 5 June 2002, 3:43 p.m.

Good that you got it! I agree that if someone ordered 100 to dribble out on ebya, it would suck. What I'd really like to see if another batch of a couple gross put out so I can get another one for under \$200.

In the meantime, I'm a horrible collector and am just going to have to open my box and use the only one I've got. Just in time, too, I've got to retake lower level maths over this summer term because I've "been out of school for 4 or more years". Two semesters before they allow me to take calculus again. At least I won't go insane from boredom since I'll have something new to program :)

-Christof

Re: Another arrival

Message #2 Posted by [Dane](#) on 6 June 2002, 8:19 p.m.,
in response to message #1 by Christof (Davis, CA)

I order on the 25th and mine came in yesterday serial #1D13400134. I would bet there are higher numbers out there, seems to me they would have run an even number lot.

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Please don't turn the MoHPC into usenet

Message #1 Posted by [CJ](#) on 5 June 2002, 12:22 p.m.

Hello everyone,

I **REALLY** regret posting my original "Unknown" message. I **wish** I could turn the clock back on that one.

When I was entering the message I struggled with adding my own comments and decided not to. I didn't want it to turn into a flame war like most of usenet is.

This site is so refreshing to come to and be able to relax and not worry about the type of thing that is so prevasive on usenet. Name calling, attacks and such.

Unfortunately it seems the person thought it **was** my words and **not** the quotes I copied, and it did anyway.

This is the reason I don't read usenet much anymore.

Can't we all just relax and get along? 8^)

Well that's my \$0.0001/100 worth of words.

Have a nice and peaceful day all.

Christopher

Re: Please don't turn the MoHPC into usenet

Message #2 Posted by [Chrtistof \(Davis, CA\)](#) on 5 June 2002, 2:54 p.m.,
in response to message #1 by CJ

AYIIIIIIIIII you would have to pick the day we get invaded by a troll to mention the U word.

;) Christof

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Value of the Museum

Message #1 Posted by [Michael Stapleton \(.au\)](#) on 5 June 2002, 10:40 a.m.

There has been a lot of negative talk recently. Here is my 2 bobs worth (Australian slang) and hopefully we can put some perspective on this.

This site is an invaluable resource. Indeed it is a treasure. Where else can you get the information and insight into those marvellous electronic devices we dearly love?

I thank Dave for allowing me to visit and participate in this wonderful site. I also thank all the volunteers and participants who make visiting here such a rich experience.

God bless you all.

Re: Value of the Museum

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 5 June 2002, 11:26 a.m.,
in response to message #1 by Michael Stapleton (.au)

Indeed!

There has been a lot of negative talk, I agree. But... we can simply disregard them at all and keep living. Why bother ourselves for that nonsensical smalltalk? Makes me remember listening to Paul Simon at New York (I only have the CD) when asked: "Say a few words!", to whom he answered: " (...) Let's hope that we... continue to live."

I hope Dave remember us all before feeling sad about the bad stuff. We support you as far as we can, right folks?

I'd add: "Nothing more to say".

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Ban All Commercial And Auction Posts

Message #1 Posted by [J.C. Randerson](#) on 5 June 2002, 9:39 a.m.

The administrator of this site should ban all posts from commercial operators and references to Ebay and other auctions. This should stop multiple posts and the fraud that often accompanies auction sites.

J.C. Randerson

Re: Ban All Commercial And Auction Posts

Message #2 Posted by [Christof \(Davis, CA\)](#) on 5 June 2002, 2:35 p.m.,
in response to message #1 by J.C. Randerson

Well, there are two seperate issues here-

First, banning "commercial" ads would drasitcally reduce the amount of stuff I can find. Not that I can afford most of it. :) So, selfishly, I'd rather not see "commercial" posts banned. From a community standpoint- do you really want to make it harder for people who spend a lot of time finding and selling the calculators we are all nuts for? It may very well be a proftiable business- but I'm extremely loathe to force that business to go elsewhere simply because it is profitable.

As for auctions- Looking at the auction listings, I don't see anything blatanty offensive in any of the posts. I admit I tend to skip over them as I'll never find a "deal" on ebay these days. But those auctions I have looked at have been well put together, by people who post in the forum and "support the community by interaction" (to use OSS speak).

Sure- if there is some specific auctioneer who has been proven fraudulent, tell us- we can ignore him/her or remove postings. But banning because fraud often accompanies auction sites is a bit like killing your pets because ticks carry lyme disease.

-Christof

one clarification.

Message #3 Posted by [Christof \(Davis, CA\)](#) on 5 June 2002, 3:00 p.m.,
in response to message #2 by Christof (Davis, CA)

And no amount of trolling or flaming on the part of *one* ebay seller is going to change my mind :p

Be righteous

Message #4 Posted by [Nico](#) on 5 June 2002, 3:18 p.m.,
in response to message #3 by Christof (Davis, CA)

Nor trolling or flaming on the part of HP-collectors and users. "Never start a fire, 'cause the backdraft might hit ya"

can u define "commercial op" for me?

Message #5 Posted by [barry](#) on 5 June 2002, 4:13 p.m.,
in response to message #1 by J.C. Randerson

just wondering where i fit in. i have profited from my sales here. tnx, barry carson city, nv

Re: Ban All Commercial And Auction Posts

Message #6 Posted by [Spice_Man](#) on 5 June 2002, 4:30 p.m.,
in response to message #1 by J.C. Randerson

I wouldn't ban "commercial" posts, since there's no way to clearly distinguish between a collector who just happens to buy and sell frequently, vs. a "commercial" advertiser.

Re: Ban All Commercial And Auction Posts

Message #7 Posted by [Christof \(Davis, CA\)](#) on 5 June 2002, 7:30 p.m.,
in response to message #6 by Spice_Man

But- even if a person is an admitted commercial seller, why ban his ads at all? What's the point? Are we trying to force everyone to go the educalc route?

-Christof

Just don't help ebay

Message #8 Posted by [Renato](#) on 5 June 2002, 11:24 p.m.,
in response to message #7 by Christof (Davis, CA)

It is supposed to be fun. Do you think current prices at ebay are fun ?

ebay sellers parasite the museum. My suggestion is to keep all references to ebay out of the museum pages.

"THOU SHALL NOT MENTION THE U WORD OR THE E WORD". Have fun.
Renato

Re: Just don't help ebay

Message #9 Posted by [Christof \(Davis, CA\)](#) on 6 June 2002, 1:20 a.m.,
in response to message #8 by Renato

Actually, I'm kinda lookin at one of those 41 series calcs (true, there's the non ebay posting, too).... I need something with printer and hpil eventually to fully convert the data gathering on the van....

But, what's the U word? -Christof

Re: Just don't help ebay

Message #10 Posted by [Iqbal](#) on 6 June 2002, 6:23 a.m.,
in response to message #9 by Christof (Davis, CA)

Renato it's fun alright. Check the cost of this 32SII <http://cgi.ebay.com/ws/ eBayISAPI.dll?ViewItem&item=1356932914>

Re: Just don't help ebay

Message #11 Posted by [Renato](#) on 6 June 2002, 11:24 a.m.,
in response to message #10 by Iqbal

I think it is sad, not fun. Searching the web produces NIB 32sii at lower prices. I don't think it is fun to watch people spending money that way. I don't think it is fun to watch people making money that way. IMO, this kind of behavior produces a significant part of suffering in the world.

Re: Is eBay really THE problem?

Message #12 Posted by [Paul Brogger](#) on 6 June 2002, 2:36 p.m.,
in response to message #11 by Renato

If I might suggest (seriously), if it's not fun to watch, don't watch. If you want to cure one of the world's ills, e-mail the bidder so they learn and don't repeat what seems to you an obvious mistake. But people have a right to act (even though uninformed), to make mistakes, and even to be just plain stupid -- and neither we nor the MoHPC should do anything to circumscribe that right.

eBay, for all its faults, seems to me a great example of market economics. Unfortunately, wider interest in "collectibles" has cased the market to increase prices on what used to be known and sought-after by only a few. On the flip side, that market is making available at any moment a much wider selection (again, at higher prices) than had been attainable previously.

eBay has made calculator (and other item) collecting simpler, quicker, impersonal and more expensive, where it used to be complex, longer-term, person-to-person and relatively inexpensive. Those of you (I don't count myself a member) "true, long-standing users and collectors" may bemoan the advent of eBay and its money-grubbing sellers, but it seems to be the most influential development in collectors' avocation at the turn of the millennium, and we have no choice but to adjust to its reality.

In fact, I think the Internet is most of "The Problem", and the MoHPC is ironically part of it. In providing the kind of communication necessary to establish a global market, and in simultaneously enhancing the popularity of a collectible like calculators (which popularity is a by-product of the MoHPC's presence) the Internet has leveled the collector playing field, and made traditional person-to-person networking less decisive in the discovery, exchange, and profiteering essential to collecting.

(I'm obviously no economist, but I love to wax philosophical about current trends!)

Comments?

Re: Is eBay really THE problem?

*Message #13 Posted by [Ellis Easley](#) on 6 June 2002, 4:17 p.m.,
in response to message #12 by Paul Brogger*

When I looked the high bid was \$88, the high bidder had a feedback of 4 and the two next bidders had feedback of 0. Setting aside the possibility that there is some shilling going on, the high bidder is the one who bid at least \$88 several days before the next two bidders. I found recent 32SII's that sold for up to \$102. One seller with repeat auctions is the well known "Samson Cables" described in the auction headings as an Authorized HP Reseller. They got \$77 on May 22, \$78 on May 28, \$81 on May 31, and \$102 on June 4. All four auctions were for bubble packed brand new units with the new colors, and started at \$1 with no reserve price.

I'm not an economist either, nor am I a psychologist, but from my own experience, I think the psychology at work on Ebay is that at a certain point a prospective buyer decides he's not going to be outbid again. He's tired. He hates Ebay, the sellers, the other bidders, his ISP and all other entities that have conspired to keep him from winning previous auctions. All he cares about is the item! He wants it, and once he gets it, he's never going to look at another auction! It's like in "The Shining" when Jack Nicholson decides he's not putting up with any more. So he places a really high bid, hoping it will finally be over.

Now, as for how high, I think that's where the low feedback number comes in. This bidder might have been watching Ebay for a long time, but I think more likely he's reacting to a flurry of activity associated with the discontinuation of the model. Anybody could have bought one for about \$60 or less just a few weeks ago, when they were still available in some stores and websites!

Every transaction has a seller AND a buyer. Anyone who has \$102 to spend on a 32SII must have a lot of "discretionary income".

Re: Is eBay really THE problem?

*Message #14 Posted by [Renato](#) on 6 June 2002, 8:59 p.m.,
in response to message #12 by Paul Brogger*

Of course, I don't need to watch. Of course, seller and bidders can do whatever they want. My point is that *I* feel like I'm being used, and *I* feel that this community is being used by sellers. Renato

Re: NO! WE ARE!

*Message #15 Posted by [Ron Ross](#) on 6 June 2002, 9:37 p.m.,
in response to message #14 by Renato*

WE ARE THE PROBLEM!

We could all boycott ebay for 30 days and see where the floor would fall for Hp calculators. Of course some of us would probably take advantage of the lull in activity to scoop up Hp calcs at rock bottom prices and after 30 days we would then immediated have to satisfy our addictions and drive the price right back up to where they are now. The fellow collectors who didn't participate in our boycott would of course benefit.

But it might slow down the escallating price of the newer Hp calcs. But Hp calcs are a commodity (perhaps not to us, but emotional buyers always pay top dollar), plain and simple. Some of us may have personnal distaste for the proffessional dealer of Hp calcs, but the reality is, they offer a product for a market. We would have less calculators available to us, if it were not for the professional Hp traders.

Most of you would not sell your precious Hp's (I don't) and therefore are horrible to deal or barter with. Cash at the market price is all you need to get the professional dealers to part with their Hp's. And we set the market price collectively. We are not a business wise smart crowd, but our collections and hobby has got the better of most of us. Therefore, we are at the mercy of ebay for the forseable future.

Re: Are we?

*Message #16 Posted by [Christof \(Davis, CA\)](#) on 7 June 2002, 12:52 a.m.,
in response to message #15 by Ron Ross*

Sure- we help drive up prices- though I tend to end up being frustrated instead of having calculators (I've managed to acquire some, sure, but I'm totally unable to afford even one example of some series.) - but there is a certain amount of profiteering going on that hurts those of us who aren't "shelf" collectors. I don't want something to **invest** in, I want calculators to use- some of them for specific real world projects- some for fun.

And that's the part that sucks. If I find someone selling a couple decent older calcs for a reasonable price, I can't even share it with people, because some guy will buy everything the supplier has at once and make it impossible for me to get the second or third (3 is a reasonable number, IMO, for a real world using calc when there is no more production). That part does, indeed, suck.

I had to wait because my government funded education only gets me certain amounts of spare cash here and there, and now it look like I won't be getting a backup 42s. I may not evne be able to justify a backup 32sii unless I find one on the web on monday for under \$70

So- the profiteering sucks. I've no beef with maintaining a reasonable business (business is NOT seperate from community, and the idiots (IMO) that seperated community and ethics from "capitalism" did more damage to man in the the end than Stalin.) and I would not want- to get back to the original thread- to axe the postings of "professionals" in this community. I'm **still** not opposed to ebay listing in the classifieds page- the most I'd ask for is some form of registration or membership- maybe similar to hpcc.

-Christof (yeah, it's disjointed. finals are over and I'm **done** writing coherently. until monday, when summer term starts.)

Re: Are we?

*Message #17 Posted by [rsenzer](#) on 7 June 2002, 11:39 p.m.,
in response to message #16 by Christof (Davis, CA)*

The FRY's electronics store at the Thunderbird Road exit off of I-17 in Phoenix has at least 30 of these hanging on the ubiquitous metal pegs. These are the new green and blue versions. So if you can get to Phoenix, you can get an HP-32SII. That's as of today -- I was just there.

BTW, I have no connection with FRY's.

HP 32sII

*Message #18 Posted by [Nick](#) on 8 June 2002, 12:03 a.m.,
in response to message #17 by rsenzer*

How much are they selling for?

Re: HP 32sII

*Message #19 Posted by [Christof \(Davis, CA\)](#) on 8 June 2002, 1:27 a.m.,
in response to message #18 by Nick*

Argh- even at list price of 70 bucks it'd be worth it- except I no longer live in PHX!

if there's anyone local....

-Christof

Re: HP 32sII

*Message #20 Posted by [David Smith](#) on 9 June 2002, 4:25 p.m.,
in response to message #19 by Christof (Davis, CA)*

I went to the Fry's in Dallas and bought every single HP32SII that they had... \$49.95, in the box, old style keys. Well, before the whiners crank up, they only had the one unit.

Re: HP 32sII

*Message #21 Posted by [rsenzer](#) on 9 June 2002, 2:48 p.m.,
in response to message #18 by Nick*

Hi,

They're selling pretty much at list price \$69 and some cents if I recall.

Re: Is eBay really THE problem?

*Message #22 Posted by [glynn](#) on 7 June 2002, 12:37 a.m.,
in response to message #12 by Paul Brogger*

Amen, Paul;

I work most of the day, stuck in the shop five days a week, and many of you have more grueling schedules perhaps, but I have never found time to drive to all the places and shop for all the things I've wanted. I wouldn't be collecting ANYTHING the past two years if it weren't for the Internet, and in particular, eBay.

I love the stuff I get! And if I had to crawl thrift-shops and answer classified ads and make midnight dumpster dives, I probably would never have gotten any of it.

And my experiences with personal friends and sales is that sometimes the closer you become to the seller, the harder it is to make the sale a "clean" one-- I don't like people thinking they did me a favor or gave me a special deal. I want also to be free to walk away if the deal doesn't smell right or the terms are not equitable. I once bought a car

from a next-door neighbor, never got the title, and felt like a fool pursuing him for it.

With eBay, while I have been burnt a couple of times in the two years I've used it, for the most part I KNOW what is expected of me, and what to expect from the seller; we play our roles and when we do, everything goes okay. I take some risks, and understand I am taking them. I often don't know how much I'll be asked to pay for shipping; I take that into account before I bid.

Lots of you were into collecting used calcs before they cost real money. You could trade them with colleagues for a ham sandwich. But the only two calcs I ever bought before I came upon MOHPC, I bought new, way back when-- a 33c and a 15c. I remember thinking at the time that they were expensive!!

So now, having bought a 97 and a 75d and a Russian RPN Elektronika and a 25c, all on eBay, as well as innumerable mountains of other gear, mainly computer stuff, my income is the only thing I have to trade-- not my sweat and not my working hours-- and this seems good to me.

Where I live, the garage sales are full of baby clothes and bad furniture, not computers. Thrift stores here have been known to junk the old computers rather than try to deal with them. (Now of course, they eBay what they think will sell there). And the newspaper classifieds here already have two or three "WANTED: Old HP calculators" ads running; so deals are gonna be a bit thin on the ground in THIS territory, no manna from the sky to a guy who can't hunt by day.

But here at my eBay screen is a smorgasbord of stuff to examine. If I want something, it usually shows up within a couple of weeks of searching-- even if it seems uncommon. I look at the prices of the examples I have seen: and decide if I want it that much. I guess I am at a disadvantage because I do not remember how much a HP 28s, say, was in stores a short time ago-- I only see what people are asking for it and paying for it Now on the Internet. And I think on it, read about it, then bid what I feel will get it, when I feel I *CAN* get it.

When I was first on eBay, I paid much too much for a few things. I was both impatient and combative.

I have since learned that everything shows up more than once... that nothing on eBay is a once-in-a-lifetime sighting, and that in fact I can usually afford to search a few weeks prior to making a decision on the first one I see. There WILL be more of them.

This is SO true, I only have two things on my "list" of hundreds of items that I have not been able to cross off after a year (a particularly weird guitar, a particular piece of esoteric calculator accessory gear). I sometimes suspect that if I searched long and hard enough on a regular basis, I would turn up old school assignments of mine or photos of my mother's prom night.... Things are bound to turn up THERE, eventually.

As far as being competitive, THAT took a bit longer for me to work out of my system. I was feedback 26 before I realized that always being on top of the list of bidders was not an honor-- it was stupidity. I was driving my own prices through the roof. A lot of auctions later, feedback 86, I had to buy an expensive network analyser I did not REALLY want in the first place. But, dangit, that guy who kept sniping me on all my other auctions was not going to win THIS time! LOL, I really taught HIM-- that was one he didn't snipe!

Today, at feedback 198, I am still somewhat aggressive, I hate to "lose". After all, I spent all that time and energy searching, turned down other chances, put a lot of thought into my selection and bid amount, arranged to have the money ready-- and I'm only able to win about one of five or one of six auctions I participate in, after all that. But I'm a bit more mellow than I used to be. I bow out of many auctions where I see people I know who will want the thing more than I; if I want it more than I think they will, I put them on notice by putting in an early bid, maybe raising the going price by a dollar... and then I figure they know I'll be in the mood to bid again.

I also don't clench up about losing quite as much as I used to-- partly because I know I'll live to bid again another day, and partly because some of my biggest losses turned out to free me to bid on things that I normally would not have been prepared to deal with. And also, partly, because I now have a small group of people who contact me when they have something they think I might be interested in, so I am doing trading on AND OFF eBay, thanks mainly to my eBaying.

So, there are many things I could catalog about eBay that I hate, but I

am a regular user of it, and come home nights looking at it before I even read emails. Why? It has made collecting a practical matter for me, one who probably wouldn't collect or search the whole internet to find the things I am buying now.

To put it bluntly, eBay is useful enough TO ME that I guess I am one of those with more money than sense, though I am by no means rich OR stupid. Addicted, maybe-- and the atmosphere of auctions is old and storied and lures many like me to behave, on occasion, as if they WERE rich AND stupid.

I just saw an auction, by the way, where a seller botched the listing badly. He has a heading that attracted me: HP 1980b Oscilloscope... so I look and his description is of an HP 8481 Power Sensor (?)... and then his Pictures are of another, older model of oscilloscope altogether. What a mess! But guess what? He's already got a first bidder, some guy with a feedback of 20! It's like I told a co-worker a few months back: don't throw away your dead goldfish, just eBay them, SOMEONE may actually buy them!

Hey! maybe that guy knows something I don't, and he will get that HP1980 oscilloscope for only \$20!! What a steal he would get! I can't let THAT happen, now can I? ;-)

Take care. grh.

Re: Is eBay really THE problem?

Message #23 Posted by [Ellis Easley](#) on 7 June 2002, 4:35 a.m., in response to message #22 by glynn

I agree that Ebay makes it much easier to participate in collecting. Consider the fuel required to shop "in person": with Ebay, not only do you save the fuel cost which you can figure into your bid, but also you are doing your part to reduce Global Warming! I appreciate the sellers who are going to garage sales and flea markets and surplus auctions and I frequently thank them for it. I like going to surplus stores and I made some good finds, including some hard to find calculators, years ago before I really knew what I had. I stopped because I always bought too much. I would go to garage sales to look for calculators except I know I will buy other stuff. I won't start until I am ready to commit myself to becoming an Ebay seller!

Another thing that makes collecting HP calculators easier is the MOHPC CD-ROM set. I told Dave this when there was a related discussion thread underway: having the manuals in hand (on the CDs) makes it easier to decide to buy a certain model if it becomes available, say on Ebay. The first old HP stuff I collected was HP85. At the time, HP still had some manuals available. I spent a lot of money on manuals - probably at least as much as I spent on the hardware. So in a way, the Museum CD's make me feel that I can afford to spend a little more for hardware, since I don't have to search for manuals.

Re: Just don't help ebay

*Message #24 Posted by [Renato](#) on 6 June 2002, 11:35 a.m.,
in response to message #9 by Christof (Davis, CA)*

See <http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/forum.cgi?read=18316>

Or you might try talking to the poster :^)

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HP01 SOS

Message #1 Posted by [lionel](#) on 5 June 2002, 2:44 a.m.

need information, i have a HP01 but i need some information about manipulation to set the date and time thanks for help

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32SII on eBay

Message #1 Posted by [Mike](#) on 4 June 2002, 7:54 p.m.

Just wanted to let everyone know to "ask" before you buy one of the 32sii (old model) on eBay.

There are one or two Canadian sellers that are selling these with French Manuals. They don't tell you that in the auction and don't show the manual or box, so that you can see.

Be sure to ask, if they are French or English manuals, if that is important to you.

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100 Series HP 150 Touch Screen

Message #1 Posted by [Mike Runkel](#) on 4 June 2002, 6:14 p.m.

I am looking for as much information as I can find on an 100 Series HP 150 Touch Screen "PC". Features, uses, options, year made, etc...

The model # is "45611A" or "C-147/82"

Any info would be greatly appreciated.

Thank you

Mike Runkel mrunkel@schneidercorp.com

Re: 100 Series HP 150 Touch Screen

Message #2 Posted by [Ellis Easley](#) on 5 June 2002, 3:49 a.m.,
in response to message #1 by Mike Runkel

My 1986 HP catalog lists "HP 150 Touchscreen II Personal Computers" in the index. On the target page there doesn't seem to be any more mention of "150". The Touchscreen II computers (basic part number: 45851A) are 8088 MS-DOS PCs with 160K ROM and 256K RAM expandable to 640K. They use HP-IB to connect peripherals including external floppy disk and hard disk. Supported storage devices include the 9133 and 9153 hard disk/floppy disk systems, with hard disks from 10 to 40 MB and DS/DD 3-1/2 inch floppy drives. HP states the floppy formatted capacity as "710K" - according to my 9114B manual, which uses a compatible format, it is a 512 byte per sector, 9 sector per track format and the reduction from 720K that standard IBM PC formats get from the same diskettes is due to "track sparing". The computer seems to be built into the monitor which comes (optionally?) with an IR touchscreen mask. It doesn't say how the touchscreen is supported but touchscreens I have seen for Windows interface as mice. The display is 80 X 27 with the two extra lines used for function key labels and a status line. Pixel resolution - alphanumeric: 640 X 378, graphics: 512 X 390, alternate graphics (not supported by firmware/terminal mode): 640 X 400. It used HP-HIL (Human Interface Link) to connect the keyboard. This was like USB in that it was "hot-plugable".

HP provided MS-DOS 2.11 and a "Personal Applications Manager". The catalog says the computer runs more than 600 software packages and "Most of the best selling software packages now run on the HP Touchscreen II family, and have been enhanced to take advantage of such easy-to-use Touchscreen II features as HP Touch, softkeys, and PAM."

Re: 100 Series HP 150 Touch Screen

Message #3 Posted by [Wes Fujii](#) on 5 June 2002, 2:53 p.m.,
in response to message #1 by Mike Runkel

I believe the original HP-150 Touchscreen predated the Touchscreen II by a couple of years. I think I bought mine in 1984. I used it with a 9122 Dual floppy, 9134 Hard Disk, 2601 Daisy Wheel Printer and 7470A 6-pen Plotter. Nice compact little system, introduced the 3.5 in floppies that are standard these days and was fun to use. Too bad it didn't catch on.

Re: 100 Series HP 150 Touch Screen

Message #4 Posted by [Steve \(Australia\)](#) on 5 June 2002, 9:56 p.m.,
in response to message #1 by Mike Runkel

I was involved with supporting users of these PC's, and also in developing quite a lot of software for them. I still have a soft spot for them.

The original HP150 has a rather small screen and a series of holes around the bezel of the screen to let the IR beams through. In the dusty environment I was working in, these would get clogged with dust and the touchscreen would become unreliable.

Our first solution was to squirt freon into the holes. This tended to blast most of the dust out, but was never a really good solution.

A friendly HP tech showed us how to partially disassemble the HP150 to get at the IR assembly and give it a thorough cleaning with copious amounts of freon.

HP also brought out a little plastic thingo which covered the bottom holes. (but kept falling off)

We discovered the easiest and cheapest solution was to simply cover the bottom holes with clear adhesive tape.

Soon after the Touchscreen II came out with the larger screen and rather more sensible IR transparent plastic bezel.

I also still remember that a replacement keyboard was listed at \$600

p.s. Oooh! Just read the "Terms of use". Two thumbs up from me!

Re: 100 Series HP 150 Touch Screen

*Message #5 Posted by [katie](#) on 5 June 2002, 11:41 p.m.,
in response to message #4 by Steve (Australia)*

I used them for years because they were the best solution for word processing on the HP 3000 computers. HPWORD was a fat client (to use today's lingo) application running on HP 3000 MPE mini computers. Our users could also run some (but far from all) DOS programs on them and there was a special version of Lotus 1-2-3 for it too. The 3.5" floppy had different sectoring from the later PC's that used the same diskette. However, HP eventually came out with a program that could read PC sectored diskettes.

My favorite thing about them was the touch-screen solitary game that they included! It was about the only thing that worked well with the very low resolution of the touch sensors.

-Katie

Re: 100 Series HP 150 Touch Screen

*Message #6 Posted by [Steve \(Australia\)](#) on 7 June 2002, 8:11 a.m.,
in response to message #5 by katie*

Ah, yes, programming the touch screen

I developed a number of touch-screen enabled programs. My personal favorite was used in a crusher control room. The users poked the screen with their fat fingers to record faults on conveyors, crushers, etc.

The resolution was not a huge problem if the program was designed well.

It worked *much* better if you poked the screen with the blunt end of a pencil.

I guess that is the standard HP finger :-)

Re: 100 Series HP 150 Touch Screen

Message #7 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 7 June 2002, 6:04 p.m.,
in response to message #1 by Mike Runkel

Look for a Byte magazine around 1983-1984, the HP150 was the cover story

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Dave, can you predict when the DVDs will be available for upgrade?

Message #1 Posted by [Frank](#) on 4 June 2002, 4:02 p.m.

Dave, any updates on this? Thanks

Re: Dave, can you predict when the DVDs will be available for upgrade?

Message #2 Posted by [Dave Hicks](#) on 4 June 2002, 9:27 p.m.,
in response to message #1 by Frank

It was on my todo list this weekend to start sorting through all the scans and see how what I have compares to what has been promised and how big it all is. Unfortunately, this weekend I got kind of side-tracked. I think we're getting very close to a DVD capacity so it may be soon.

Re: Dave, can you predict when the DVDs will be available for upgrade?

Message #3 Posted by [Vassilis Prevelakis](#) on 9 June 2002, 5:06 p.m.,
in response to message #2 by Dave Hicks

How about posting a list of material promised but not delivered. This will act as a reminder to people who have pledged material but haven't delivered yet.

Also there may be people out there who are willing to scan manuals but have not done so because others have promised to do so before them. If these manuals show up on the missing list, they will be able to offer to replace the original volunteer.

**vp

Re: Dave, can you predict when the DVDs will be available for upgrade?

Message #4 Posted by [Dave Hicks](#) on 10 June 2002, 12:52 a.m.,
in response to message #3 by Vassilis Prevelakis

I'm making the first pass at reminding people via email now after my first pass at organizing what I have. A few people have already replied that they have more scans ready or will soon. Once those come in, I'll see where we are in terms of media (CD/DVD) boundaries. We're getting awfully close to 7 full CDs / 1 DVD, and I'm not sure I want to encourage any more scanning beyond that - at least for this release. :-)

Re: Dave, can you predict when the DVDs will be available for upgrade?

Message #5 Posted by [Frank](#) on 11 June 2002, 1:47 p.m.,
in response to message #4 by Dave Hicks

And that may suit us nicely for an interim as the much higher capacity DVD replacement technology is developed and ready for mass market prices soon.

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HP-25 Power-On Issue

Message #1 Posted by [Wes Fujii](#) on 4 June 2002, 12:00 p.m.

My HP-25 worked properly- up until yesterday, evening. One moment it was fine, then the next time I turned it on, all I got was a full display of zeros. Pressing the keys do not affect anything, it just has zeros all the way across the display, frozen. I've taken it apart and made sure that all of the connectors were making contact and that everything else looked visibly normal. No improvements. At this point, I'm thinking that it is terminal. Does anyone have any ideas on what might have happened? Are there chips/caps/etc that might have degraded with age and caused this problem? Thanks for reading.

Re: HP-25 Power-On Issue

Message #2 Posted by [Tony Duell \(UK\)](#) on 4 June 2002, 5:12 p.m.,
in response to message #1 by Wes Fujii

Most likely (alas) it's ACT (processor) or ROM failure, but there are a few quick checks you can do. Firstly, check the supply voltages. Vss (+6.2V) at pin 1 of the ACT (the 22 pin chip near the front edge of the board). And Vgg (-12V) at pin 2 of the ACT. The common reference is the battery -ve terminal. Also check the 2.2uf tantalum capacitor near the ACT -- that's the reset timing capacitor and maybe the machine is not initialising properly.

Re: HP-25 Power-On Issue

Message #3 Posted by [David Smith](#) on 4 June 2002, 5:38 p.m.,
in response to message #1 by Wes Fujii

I have found that a display of all 0's is caused by a defective ACT chip over 96% of the time. My pile of 0000000000 ACT chips is over 25 deep now. You can replace it with the ACT chip from any other Woodstock series machine (except for possibly the HP27)

ACT equivalents

*Message #4 Posted by [Tony Duell \(UK\)](#) on 4 June 2002, 7:34 p.m.,
in response to message #3 by David Smith*

I suspect you can also use an ACT from a Topcat or an HP67. I've done the reverse -- I repaired my 97 (which was dead when I got it) using the ACT from a broken (ROM failure) HP21. I was quite surprised when it worked (I'd previously tried the ACT from a 67 in the broken 97, that worked too, so I knew the fault in the 97 was the original ACT). The HP27's ACT is almost certainly not suitable though. It's NMOS, not PMOS, so the supply voltages (and logic levels?) are totally different.

Re: HP-25 Power-On Issue

*Message #5 Posted by [Wes Fujii](#) on 5 June 2002, 10:26 p.m.,
in response to message #3 by David Smith*

David- Thank you for the comments. From reading your posting, you must have either stockpiled some ACT chips when production was discontinued, or you have a heck of a pile of calculator carcasses in your hobby room...

Re: HP-25 Power-On Issue

*Message #6 Posted by [David Smith](#) on 6 June 2002, 5:10 p.m.,
in response to message #5 by Wes Fujii*

Hint, dead and ugly Woodstock machines make pretty good battery chargers for those oh-so-delicate 25C and 29C models... and the rest of the Woodstocks for that matter.

The full monte involves: 1) Cutting loose the keyboard to free the keys. 2) Remove the LED lens for spare parts 3) Cover over the keyboard holes with a piece of plastic 4) Add stick on rubber feet 5) Remove all the parts from the PCB except the charge resistor and diode. Save for spare parts. 6) Add an LED/current limit resistor across the charge resistor for charge indication. Mount it in a hole drilled in the bottom of the case next to the battery box. 7) Reassemble and voila...

You should only do this for well and truly dead/ugly/engraved/, etc machines. Nicer machines can be used pretty much as is.

Reserve Power Packs

*Message #7 Posted by [Tony Duell \(UK\)](#) on 6 June 2002, 7:50 p.m.,
in response to message #6 by David Smith*

Actaally, battery chargers exist for (almost?) all the the calculator batteries. HP called them 'Reserve Power Packs'. They consist of a plastic box to hold the battery with some very simple circuitry inside (often close to a copy of the calculator charger circuitry). You connect them to the same AC adapter as you'd use with the calculator (well, with one exception -- the classic-series reserve power pack uses the 3 pin adapter as you'd expect, but of course it can also charge the battery in the HP75 which itself uses the 8V 3VA adapter). These Reserve Power Packs certainly exist for the Classic, Woodstock, Topcat and Spice models. The Classic one seems to be the easiest to find, the Spice is by far the rarest (in fact I'd never seen it mentioned until I found one).

Re: Reserve Power Packs

*Message #8 Posted by [katie](#) on 6 June 2002, 11:44 p.m.,
in response to message #7 by Tony Duell (UK)*

Speaking of rare (probably non-existent) reserve power packs. Has anyone ever seen or heard of one for the Stings (10C and 19C)? I'd sure love to have one of those!

Re: Reserve Power Packs

*Message #9 Posted by [David Smith](#) on 8 June 2002, 5:28 p.m.,
in response to message #7 by Tony Duell (UK)*

Unfortunately the Woodstock reserve power packs (and all the others for that matter) are rather hard to come by. Ugly and dead Woodstocks are all too common. My favorite charger for classic battery packs is an HP55 without a battery door.

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HP 22S

Message #1 Posted by [Kevin](#) on 4 June 2002, 8:08 a.m.

Hello, please help, i have no operating manuel for my HP 22s and i need to use it for linear regression (two variable staistics)+ correlation coefficient for paired variables)

Can you please help and give advice?

Kevin.

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Copycat

Message #1 Posted by [Steve](#) on 4 June 2002, 7:16 a.m.

[here](#)

Re: Copycat

Message #2 Posted by [Dave Hicks](#) on 4 June 2002, 1:16 p.m.,
in response to message #1 by Steve

Thanks. I've sent seller a note which asks him to make the source of the picture clear.

A few weeks ago someone else was using that picture to sell several 42s. I asked him to acknowledge that and got no response but someone else asked if that was the actual calculator being sold and the seller told them that it was.

That was suspicious, so I used ebay's copyright infringement process to get that auction removed.

Cracks me up!

Message #3 Posted by [Mike](#) on 4 June 2002, 8:02 p.m.,
in response to message #2 by Dave Hicks

He says, **might be accidentally taken from the www.hpmuseum.org**

How do you accidentally take a photo from here? And **might** be. How could one not be sure (picture unavailable)

LOL !

*Message #4 Posted by [Dave Hicks](#) on 4 June 2002, 9:24 p.m.,
in response to message #3 by Mike*

This reminds me of someone who used my 12C picture on an ebay auction. I wrote to her and asked her to acknowledge the source and make sure buyers knew it wasn't the unit being auctioned.

She sent back an email expressing her great annoyance at me and said that there were just too many 12C pictures in the world for her to have to bother acknowledging the source of the old one, so she got a new one from someplace else. (No bids had been placed yet.)

I looked again and it was a different picture – another one of mine!

So I wrote again and said – um sorry, but that's also my picture and she claimed that it wasn't because she got it from another ebay auction – so there! QED! I explained that the other auction had gotten it from me and she responded to that by deleting the picture entirely and telling me to get a life. :-)

I'm guessing the 42S guy also got his from another auction but at least he's willing to admit that it's not his.

Re: Cracks me up!

*Message #5 Posted by [Nico](#) on 5 June 2002, 9:38 a.m.,
in response to message #3 by Mike*

Dear Mike and Steve, what CRACKS ME UP is the fact that I surfed ALL OVER the internet WORLDWIDE to find information about the HP42S, and that yes I do believe that I got the picture from another collector's website (Who probably STOLE this picture from yours! Better find them before they abuse it! ;-)) Also - as Dave Hicks mentioned -I believe I saw the same picture once on an auction in Singapore. (Not e-bay) So therefore my dearest Stevie and Mikie the words 'MIGHT' and 'ACCIDENTLY'. If I would have been SURE I would have written it, but since this picture is apparently starting to live it's own life on the big internet-planet, I didn't think I got it from www.hpmuseum.org but ain't sure. If I would have known that this futility would have caused such a storm in a cup, I would have scanned my HP42s immediately... They only thing I agree with is that I should have mentioned that it wasn't the actual picture of MY HP42S, but just a picture randomly picked out of cyberspace. I hope this will help you all to struggle through your worries, and that no permanent damage is done. Sincerely, Nico PS: There is a world outside the www.hpmuseum.org ! No kidding !

Re: Cracks me up!

Message #6 Posted by [Thibaut.be](#) on 5 June 2002, 9:46 a.m.,
in response to message #5 by Nico

Obviously nico has forgotten to read carefully the terms of use of this forum...

And this is how decent Nico responded to Thibaut!

Message #7 Posted by [Nico](#) on 5 June 2002, 11:07 a.m.,
in response to message #6 by Thibaut.be

From: "Nico Kristi" <nico.vrydag@pandora.be> > > > > To: <th_c@hotmail.com> > >
> > > Subject: Re: Question for seller -- Item #1356941114 > > > > > Date: Tue, 4 Jun
2002 00:18:28 +0200 > > > > > > > > Hi, > > > > > > > I'm sorry but the selling
goes through e-bay since there are > already > > > some > > > > bids. These bids force
me to pay e-bay +-5 % of the selling price. > You > > > can > > > > still bid and then you
could come and get it personally, so you > won't > > > have > > > > to pay the shipping
cost. > > > > I would have done it if there were no bids, I'm sorry about that. > > > >
> Good luck! > > > > > > > Kind regards, > > > > Nico

Re: Cracks me up!

Message #8 Posted by [Michael Stapleton \(.au\)](#) on 5 June 2002, 10:20 a.m.,
in response to message #5 by Nico

No there is not!

Re: Cracks me up!

Message #9 Posted by [Stephan \(CH\)](#) on 5 June 2002, 10:36 a.m.,
in response to message #5 by Nico

No need to get brassy here. Sometimes it is just a question of decency. It's not concerning
copyright yet but just to know what's mine and what's someone else's. Didn't your parents
tell you about all that long, long ago?

Dishonest Thibaut.be alias VISU .

Message #10 Posted by [Nico](#) on 5 June 2002, 11:05 a.m.,
in response to message #9 by Stephan (CH)

Did you read the terms of use on the auction site my dear Thibaut? Because you surely
sinned big time there buddy!

>----- Original Message from Thibaut.be----- > > > > From: <th_c@hotmail.com> > > >
> > To: <nico.vrydag@pandora.be> > > > > Sent: Monday, June 03, 2002 2:56 PM > >
> > > Subject: Question for seller -- Item #1356941114 > > > > > > > I'm located
in Belgium too. Would you agree to sell it outside > ebay > > > ? > > > > >

----- > > > > > Question from: visu > > > > > Title of item: Hewlett
Packard HP 42S CALCULATOR + >Manual > > > > > Seller: vulcan800_be > > > >
> Starts: May-30-02 17:02:18 PDT > > > > > Ends: Jun-06-02 17:02:18 PDT > > > >
> Price: Currently \$102.50

Re: Dishonest Thibaut.be alias VISU .

Message #11 Posted by [Thibaut.be](#) on 5 June 2002, 12:26 p.m.,
in response to message #10 by Nico

Beste Nico,

- 1) It's useless to answer you. I'm a member of this community since 1997 and it is not what you are writing that will spoil my reputation. On the contrary !
- 2) You seem to have fun in flaming people here. What you don't know is that this is a very friendly and helpful community and that what you are trying to do won't just work.
- 3) If you cut and copy a picture from somewhere, the only thing that is required is that at least you quote the source. It's not that difficult and certainly does not deserve any agressivity from you. Is this really the way you handle your real life ?
- 4) By the way, it seems that you have stopped your auction, what I won't blame you for, but according to your own words, how far are YOU honest ?

A note about stuff on the Internet

Message #12 Posted by [Dave Hicks](#) on 5 June 2002, 1:45 p.m.,
in response to message #11 by Thibaut.be

"If you cut and copy a picture from somewhere, the only thing that is required is that at least you quote the source."

I usually ask people to quote the source of their pictures when they use mine, because I'm generally pretty easy going about it and assume they just didn't think before they used it.

However, simply quoting the source is not enough in general. You could get sued if someone is more aggressive about it. You can also get your website removed or your ebay auction cancelled and your ebay account removed. It's just a question of how far the copyright holder wants to take it.

When you want to use someone else's material - just ask.

Not only that but...

Message #13 Posted by [Mike](#) on 5 June 2002, 10:46 p.m.,
in response to message #12 by Dave Hicks

Seems to me it is down right deceptive to show a photo of a perfect calculator and say: "**You're looking at a HEWLETT PACKARD 42S RPN calculator in a brand new condition**"

First, it may be true that "**what we are looking at**" may be a brand new calculator. **But it is not his.**

For a good example of a **brand new calculator that I bought** look at the link below.

[Another Brand New Calculator.](#)

Now the seller in the auction we are discussing may, in fact, be 100% brand new. But that is the very reason that we should be posting our photos instead of someone else's.

Re: Copycat

Message #14 Posted by [Tom \(UK\)](#) on 5 June 2002, 12:26 p.m.,
in response to message #1 by Steve

Now the ebay item says:

"The seller ended this listing early because the item was lost or broken."

Was this a sad loss of an HP42 or did this turn into a private sale? I'm not sure ebay let people do that.

Re: Copycat

Message #15 Posted by [Thibaut.be](#) on 5 June 2002, 12:37 p.m.,
in response to message #14 by Tom (UK)

He says that "The HP is permanently damaged since this afternoon, it fell on the floor." ([check here](#))

Of course it "smells" a private sale.

Actually ebay does not exactly allow that, but they allow you to stop your auction at any time. They won't even charge you a final fee excepted from the insertion fee which is quite low. So it is practically very much possible to you.

Peace in the valley

Message #16 Posted by [Nico](#) on 5 June 2002, 2:37 p.m.,
in response to message #1 by Steve

They only thing I agree with is that I should have mentioned that it wasn't the actual picture of my personal HP42S, but just a picture from a website on the internet. Trust me , I check for copyrights, as I am a Helicopter Pilot Federal Police Agent. No harm done, I thought, when I downloaded it from a no-copyright protected website. Boy, was I wrong!

I regret nevertheless the insinuations as if I knew where the picture came from and any comparisons with other dishonest people on the auction sites. I also regret he let people make fun of me. This always results in hard words from both sides. I will not react on further insinuations anymore, since I've let people drag me around already way too far. The "We Know Us" feeling reigns here obviously, and then it's easy to attack one man alone who stands up for himself. Usually I don't get involved in these kindergarten games and pissing matches, but I guess they caught me in an extreme weak moment as my parents just died in a car-crash.

What started out as me selling a HP42s for 90\$ - without a minimum price - ended up with tons of e-mails of collectors pushing and bribing me to sell it outside the auction. I guess I offended them when I said I wanted to play the game honestly, because these are the ones on this forum insulting and insinuating. Bad losers, I say. Nothing more to add, case closed.

'There will be peace in the valley...one day'

Re: Peace in the valley

Message #17 Posted by [Dave Hicks](#) on 5 June 2002, 2:56 p.m.,
in response to message #16 by Nico

"Trust me , I check for copyrights, as I am a Helicopter Pilot Federal Police Agent."

Nico,

Since the Copyright act of 1976, pretty much everything that doesn't specifically say otherwise is copyrighted. As one copyright faq says even a doodle on a napkin is copyrighted the instant you create it.

Re: Peace in the valley

Message #18 Posted by [Jonathan Busby](#) on 5 June 2002, 3:04 p.m.,
in response to message #17 by Dave Hicks

Dave Hicks said :

"Nico,

Since the Copyright act of 1976, pretty much everything that doesn't specifically say otherwise is copyrighted. As one copyright faq says even a doodle on a napkin is copyrighted the instant you create it."

Actually, I think it's March 1, 1989 , if it makes any difference. ;) See <http://www.copyright.gov/circs/circ1.html#noc> for more info.

Jonathan

Remove the random permutation of "NOSPAM" from my e-mail address before replying.

That faq is more official-looking

Message #19 Posted by [Dave Hicks](#) on 5 June 2002, 3:12 p.m.,
in response to message #18 by Jonathan Busby

than the one I looked at so I will accept the date it gives.

Re: Peace in the valley

Message #20 Posted by [Nico](#) on 5 June 2002, 3:13 p.m.,
in response to message #18 by Jonathan Busby

Thanks Dave and Jonathan, I've been looking up information about copyrights on internet myself since the day you sent me that e-mail, and you are absolutely right. Very little is known about internet copyright by tons of internet users. I guess it is because the internet world is still very young and generally known as 'free'. Thanks again.

And, if YOU didn't take it...

*Message #21 Posted by [Mike](#) on 5 June 2002, 10:54 p.m.,
in response to message #17 by Dave Hicks*

Or buy the rights,

You don't own the copyright!!!

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Terms of Use

Message #1 Posted by [John K. \(US\)](#) on 4 June 2002, 4:33 a.m.

From paragraph 3:

[...]or otherwise **volatile** of any law[...]

Don't you just hate it when you leave the spell-checker set to "puree"?

:^)

Thanks!

Message #2 Posted by [Dave Hicks](#) on 4 June 2002, 1:12 p.m.,
in response to message #1 by John K. (US)

I thought "huh?" when I read that but forgot to go back and check it.

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LaserJet 3330 MFT software

Message #1 Posted by [Rick S](#) on 4 June 2002, 2:20 a.m.

There are two software programs that come with the HP LaserJet 3330, one for scanning and one for faxing, that I have questions about.

On the scanning software, you can scan an image into HPs HP Doc program (HP Document Image Viewer), which give several image editing features. But you can only save the image in HPs proprietary format, which apparently won't allow you to import or insert the document into any other program, since they don't recognize this unique format.

Does anyone have a suggestion as to import or insert an HP Doc image into, for example, Microsoft Word?

On the fax software, the HP Fax Cover Page Editor, this software is very limited and not very easy to use. Are there any updates? Documentation? Why is it they don't have a special field for the recipients telephone number? Can special fields be added? Any suggestions? Upgrades to this software?

Thanks.

Re: LaserJet 3330 MFT software

Message #2 Posted by [Ellis Easley](#) on 4 June 2002, 3:50 a.m.,
in response to message #1 by Rick S

I've owned three low-end scanners over the years (first was a handheld type that scanned a 4 inch stripe) and they all used the Twain software interface. If your machine is working through a Twain driver, you should be able to select it as the source in any application that knows about scanners. I just remembered that my HP camera also uses a Twain driver, I can use it as the source with the application software that HP provided or with the software that came with my scanner.

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printers

Message #1 Posted by [Christof \(Davis, CA\)](#) on 4 June 2002, 1:37 a.m.

I've got an HP82240A printer and have been looking at the B series.

Assuming I use 19bII, 42S, 48 series, and a 28c for printing- is there any real advantage to getting a B? Will all of these calcs work with the A? (I've read about old printer mode in the 48)

-Christof

Re: printers

Message #2 Posted by [James M. Prange](#) on 4 June 2002, 3:43 a.m.,
in response to message #1 by Christof (Davis, CA)

The 82240B has a red "power on" indicator LED that lights up when you turn it on. If you aren't using the AC adapter, it switches into a "low-power" mode. In the low-power mode, the indicator is off and it won't receive, but all printing modes and any characters accumulated in the buffer are retained. Pressing the paper advance button while in the low-power mode brings it back to normal without losing anything. This might save you some battery life, but it's still best to turn it off when you're through using the printer.

The 82240A doesn't have the character set (for characters 128 through 255) that the 48 uses. The OLDPRRT command correctly remaps some, but not all, of these characters to match the 82240A set. To see which characters will print correctly, execute OLDPRINT PRTPAR 2 GET. This will give you a 128-character string. The 1st character is what character 128 will be remapped to for printing, the 2nd is what character 129 will be remapped to, and so on through the 128th is what character 255 will be remapped to. Characters in the 48 set that aren't available on the 82240A are remapped to character 127, which looks like a grey rectangle. I believe that all of the characters actually used as delimiters or in command names on the 48 are remapped correctly by the OLDPRRT command.

The 28C and 28S have the same character set as the 82240A.

The 82240B has 2 character sets. When it's first turned on (or after a reset escape sequence) the character set used on the 28 is selected. Anytime you print something from a 48, the printer switches to the correct character set for the 48. Note that if if you then need to print from a 28, you need to switch back to the 28 character set by using an escape sequence or turning the printer off and then back on.

I don't know about the 19BII or 42S.

James

Re: printers

*Message #3 Posted by [Christof \(Davis, CA\)](#) on 4 June 2002, 4:53 a.m.,
in response to message #2 by James M. Prange*

Okay- I'm going to guess that the 19 series will operate as the 28c/s would. I don't seem to have anything beyond those capabilities in the 19bii, anyway.

The 42s I'll just have to try out.

since so much of my printing is likely to end up being statistics, I won't worry overly much about character sets :)

-Christof

Re: printers

*Message #4 Posted by [James M. Prange](#) on 4 June 2002, 5:30 a.m.,
in response to message #3 by Christof (Davis, CA)*

Sounds reasonable to me; the only 48 character that I think you might miss for statistics is character 129, the x-bar character, but you can just use a string like "xbar" if you feel a need for it.

As for the low-power mode, I use an AC adapter whenever possible.

James

Re: printers

*Message #5 Posted by [James M. Prange](#) on 4 June 2002, 5:59 a.m.,
in response to message #4 by James M. Prange*

I wrote: "...the only 48 character that I think you might miss for statistics is character 129, the x-bar character...."

I should add character 152, lower-case sigma. But I think that you can get along without either of them.

James

Re: printers

*Message #6 Posted by [John K. \(US\)](#) on 4 June 2002, 4:20 a.m.,
in response to message #1 by Christof (Davis, CA)*

[I]s there any real advantage to getting a B?

Well, it's got a nifty little LED to tell you it's on, and (IIRC) some of the characters are different, but other than that, no, not really.

Will all of these calcs work with the A?

With the possible exception of the 48 (which I haven't tried), all of the machines you've mentioned will work with the A. I did try the 48 with a B some time ago, but I wasn't really impressed by its printing abilities. YMMV, of course. :^)

Re: printers

*Message #7 Posted by [katie](#) on 4 June 2002, 11:22 p.m.,
in response to message #6 by John K. (US)*

The 'B' version goes into low power mode after 10 minutes when it's running on batteries. This can save a lot of money on AA batteries if you forget to turn the printer off after using it -- a constant problem for me with the 'A' version.

Re: printers

*Message #8 Posted by [Christof \(US\)](#) on 5 June 2002, 3:00 a.m.,
in response to message #7 by katie*

Well, the power off thng could be an issue-but I have rechargeable alkalines and a charger that runs off 12v in the van....

I'd happily run an A model in the van and cart around a B model- but i can't find an affordable B.

On another note- these will run with standard officestore thermal paper? I haven't had to test that yet.

-Christof

Re: printers

*Message #9 Posted by [John K. \(US\)](#) on 5 June 2002, 3:26 a.m.,
in response to message #8 by Christof (US)*

I've used the NCR-brand paper successfully in both the A and B. It's black and seems to be slightly more sensitive than the HP paper, so you can turn down the contrast slider and still get good results. Unfortunately, it also fades quicker and it *really* doesn't like to come in contact with vinyl (or most other types of plastic for that matter), fading completely within days.

Re: printers

*Message #10 Posted by [Christof \(Davis, CA\)](#) on 5 June 2002, 2:23 p.m.,
in response to message #9 by John K. (US)*

Fading that quickly could be a problem. I'll have to see which papers do well- though I imagine if I collect 3 dozen rolls of HP paper for the printer it will last me for a couple years.

I might just keep looking for a B series that is affordable, too.

Thanks for the hints- Christof

Re: printer paper

*Message #11 Posted by [David Smith](#) on 5 June 2002, 4:52 p.m.,
in response to message #8 by Christof (US)*

Yes, the NCR paper works great in all the HP machines (including the HP97, etc and the 82143A).

HP has always recommended that if you want to keep a long term copy of a thermal printout to photocopy it.

Re: printer paper

*Message #12 Posted by [glynn](#) on 7 June 2002, 3:07 a.m.,
in response to message #11 by David Smith*

As a longtime user of thermal paper (from Timex 1000 and so on), I offer a few hints:

As said, vinyl and plastics will fade it, as well as sunlight and UV sources of all types, and also if you store it face-to-face with other thermal paper, or folding it so it comes into contact with itself.

BUT! pasted into a blank-book or spiral, one side only, kept in a cool dry environment, such as a filing cabinet, the print can actually last years. I found some art blank books with "acid-free" paper, and they store the thermal print just fine, laid between the pages. When I must paste them on the sheet, I use white glue, sparingly, only a dot or two in corners on one side. (Doesn't wrinkle it up so much).

The paper consists of a clay coating on one side which has been impregnated with a chemical which is thermally reactive. Unfortunately it leaches out over time, taking the dark printed areas with it. The chemical is apparently volatile to some degree; so the answer remains in keeping it cool, dark, airless and away from actively-bonding semi-volatiles such as aerosol sprays, alcohols and oils, and such. This done, I still have readable printouts from 1983...

Re: printer paper

*Message #13 Posted by [Christof \(Davis, CA\)](#) on 7 June 2002, 4:01 a.m.,
in response to message #12 by glynn*

Aha- see, i was using pen plotters and dot matrix mini printers- and the esteemed dmp5 (wish I could find one cheap now), but then, I used sharp and tandy for a long time.

How do you think photo album pages would work? i have several 8.5x11 photo holding pages that would allow me to add them directly to research notes- I'd want a couple years max out of those (once in page format, I could photocopy if needed)

thanks for the tips! Christof

Re: printer paper

*Message #14 Posted by [glynn](#) on 7 June 2002, 4:46 a.m.,
in response to message #13 by Christof (Davis, CA)*

I started out with photo pages, but I really think the clear polycarbonate sheet either contains something which outgasses, or perhaps the thermal chemical just loves to migrate to it-- anyway, my earliest printouts tended to assume an even pink with light brown print and not be very readable. I noticed then though that print hidden UNDER other paper stayed fairly stable. If a couple of years is all that is required of it, I see no reason why you can't do pretty much anything you see fit though, and perhaps you can experiment and find the best transparent cover pages to buy-- different brands may work better than others.

Always liked those little mini pen plotters. At a writing speed of about a character a second, though, I can laugh at the thought of awaiting it three days or so to finish the ROM disassembly listing I once printed on the 2040 printer (took the 2040 about eight hours)... ;-) But, it would have been very nice looking, and no fades!

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When is a 42S truly dead?

Message #1 Posted by [Randy Sloyer](#) on 3 June 2002, 8:48 p.m.

I have my trusty 12yr young 42s which got soaked with rain water about a month ago. It sat for 2 days with the batteries in it while being waterlogged before I found it. I let it dry out for 3-4 days and when I put in new batteries it was doa, no display. After a proper mourning period, I read Paul Brogger article on "Pioneer Internals" and popped it apart.

I found two vcc (bat+) traces that had been somewhat damaged by electrolysis from what I assume was the water between the pcb and the rear metal shield. The traces were not broken electrically, but I resoldered. Still nothing (not that I was expecting a miracle at that point!).

So it was scope time. Absolutely nothing. No sign of anything AC - only +4.5 vdc on the CPU and memory chip. So my question is:

1. When in idle mode, is the CPU clock running? Should I be able to see anything on any CPU pins?
2. If the clock is not running when off, does the "ON" button apply power to a CPU pin to wake it up? I can't seem to find any connection.

My last hope is that something happened to the keypad, but I hold little hope at this stage. I was hoping to resurrect this unit so I could add the 32k chip....

Any ideas?

PS - Are there any schematics out there? Even partials from perhaps some of Pauls work?

Thanks All!

Re: When is a 42S truly dead?

Message #2 Posted by [Paul Brogger](#) on 4 June 2002, 12:28 p.m.,
in response to message #1 by Randy Sloyer

I did fix one calculator recently that had a keypad problem. But it turned on, at least -- it showed faulty keypad behavior, and after replacing the "sandwich" layers, the thing works fine.

If, by chance, it is the "on" key that isn't working, then perhaps a keyboard fix would help. The best way to test is to get 'hold of a 17BII and replace its circuit board with your 42s board. If you get a business calc with scientific behavior, you're on to something. Otherwise, it's probably dead. If it works, you may wish to go on and repair the -42s keyboard.

To fix the keyboard, I cut off (but saved!) all the mushroomed plastic heat stakes with an Exacto knife, lifted up the metal plate, took out the rubber and mylar layers, and replaced 'em with some from another calculator. (I think all the Pioneer keyboards are the same under the skin.)

To re-fasten the keyboard sandwich, I held it all together by hand, and melted one of the decapitated mushroom heads onto each heat stake stub with a small soldering iron. I swirled each around a bit, and pressed the still-hot plastic with my finger to flatten and merge the pieces. I don't think it's nearly as strong as it used to be, but it seems to work fine.

I don't have a 'scope, and so can't advise you on the EEG characteristics of a -42s in REM sleep . . . (Maybe someone else could chime in?)

Re: When is a 42S truly dead? (. . . and may I add ?)

Message #3 Posted by [Paul Brogger](#) on 4 June 2002, 1:21 p.m.,
in response to message #2 by Paul Brogger

If the 17BII/42s hybrid works, you might wish to paint over the keyboard and attach a fold-out, laminated key map. I've got a couple of these, -42s innards in algebraic business calc cases with kludgy keyboard guides. If functionality is what you're after, it might suffice.

Which brings me to a related angle -- I've got two of these, upgraded to 32K, and working fine. If your PCB is toast, I'd like to either buy your case, or sell you a working PCB . . . (We gotta get these working pieces *together!*)

Re: When is a 42S truly dead? (. . . and may I add ?)

*Message #4 Posted by [Randy Sloyer](#) on 4 June 2002, 1:58 p.m.,
in response to message #3 by Paul Brogger*

Since you've had many pioneers apart and the keyboards are the same, is there any chance you ever (in a fit of insanity) decoded the keyboard matrix? If so, I could then determine if the ON/OFF button works with a resistance check.

As for the parts swap, the aluminum bezel is a bit battered from years on road, but keyboard is in good shape cosmetically. I agree we should try and make one good from two bad if at all possible.

Re: When is a 42S truly dead? (Keyboard schematic?)

*Message #5 Posted by [Paul Brogger](#) on 4 June 2002, 2:07 p.m.,
in response to message #4 by Randy Sloyer*

Yes, in fact, I did once. It's in my project box (I think) on a piece of crumpled graph paper. (You asked this in your first post -- I should have indicated such.)

I'll look, and either retrieve it, or do a new one. (BTW, I've not been wonderfully consistent in my follow-through of late, so I won't be offended if you choose to remind me in a few days . . .)

Re: When is a 42S truly dead?

*Message #6 Posted by [Tony Duell \(UK\)](#) on 4 June 2002, 5:23 p.m.,
in response to message #1 by Randy Sloyer*

A lot of the below is from memory, and I've not worked on a Pioneer for a while, so I might have misremembered something. I can check up the details if you have problems. Firstly, I think the CPU buses are stopped in the power-down mode (so don't expect to see activity on the pins of the RAM chip), but that the clock is still running (don't these machines have a hardware realtime clock, even if it's not used by the 42's firmware). So you should see activity on the pins of the Xtal even in power-down mode. But isn't there a deep sleep mode that stops the clock as well? Now for the keyboard. The first trap for the unwary is that the keys measure about 10k Ohms when pressed. They are not a dead short. They can't be. The keyboard lines are also the address lines to the RAM (and to external ROM if present), so they can't simply be shorted together. If you don't realise this you can think the keyboard is not making contact properly even when it is. The ON key is not in the matrix. It's 2 connections are brought out separately, to the 2 keyboard connections on the same side of the machine as the ON key. One of them is connected to battery +ve on the logic board, the other goes to a special pin on the CPU (which is some kind of power on signal). Again the 'on resistance' of this key is about 10k, but this time

a dead short won't matter. You can trace the connections on the processor board (IIRC there's a handy via on the trace you can use for testing) and try shorting that point to battery _+ve (with the board in place, connected to the LCD) to see if that makes it power up. If not, try again, but this time with an insulating sheet between the logic board and the keyboard connections in the top case, so the keyboard is not connected to the logic. If it works then, suspect a short in the keyboard matrix that's shorting 2 address lines together (I've seen this in a 48, which uses a similar keyboard design). I do have a hand-drawn 42S keyboard matrix diagram, but as I said, the ON key isn't in the matrix, so you probably don't need that yet.

Re: When is a 42S truly dead?

*Message #7 Posted by [Randy Sloyer](#) on 4 June 2002, 8:58 p.m.,
in response to message #6 by Tony Duell (UK)*

Thanks Tony and Paul.

I'll have a go at the ON/OFF switch this weekend. Gotta go do work for a few days. It seems to always get in the way of the stuff I think is more important!

Thanks for the 10k info. That would have gotten the keyboard cracked open in a flash had I not known. And I'll try with the whole keyboard isolated and see if it will power up. Good stuff indeed.

Also, I think I'll look around for a 17b to try Pauls logic tree of kbd/pca test.

Thanks to all. I'll report later.

It's alive!!!!!!

*Message #8 Posted by [Randy Sloyer](#) on 13 June 2002, 9:00 p.m.,
in response to message #7 by Randy Sloyer*

Thanks to Tony and Pauls help, I discovered I have only a bad "ON" key!!!. Shorting the keys traces turned it on and only that key is dead. The logic board is a-okay. It must have been in hibernation mode since I saw no AC activity.

Since I have some plastic industry tools around (I work for an extruder manufacturer!) I think I'm going to try to reform the kbd heat stake mushrooms up and back into a straight pin then disassemble the kbd since its dead anyway. I'll let you guys know how I make out. Gotta 17B kbd around just in case.

Re: It's alive!!!!!! after thoughts

*Message #9 Posted by [Randy Sloyer](#) on 13 June 2002, 9:07 p.m.,
in response to message #8 by Randy Sloyer*

Does anybody know if a 20S kbd is the same matrix? It sure looks the same. If I need parts for this puppy, I'd much rather sacrifice a 20s then a pristine 17B (not that I need an AOS biz calc...)

Just wondering.

Re: after thoughts -- at least 27S is the same . . .

*Message #10 Posted by [Paul Brogger](#) on 13 June 2002, 10:02 p.m.,
in response to message #9 by Randy Sloyer*

Glad to hear of your progress.

I believe all Pioneer keyboards are indeed the same.

I have replaced a 42s keyboard circuit with that from a defunct 27s (but those models are of the same vintage). You should be able to make that schematic that I promised you (ahem!) and test the 20s keyboard to verify.

I would be VERY surprised if they're at all different (but I can't honestly say that I KNOW they're identical).

Let us know!

My monster lives!

*Message #11 Posted by [Randy Sloyer](#) on 14 June 2002, 9:57 p.m.,
in response to message #10 by Paul Brogger*

Hooray!

I cracked open a 20S and it's the same. Part number that is. Yeah, beleive it or not, the part number and rev of the pcb are the same but the trace layout is different!(5180-3049 rev A -2905). Go figure.

After getting the 4 layer mylar sandwich out, I plopped into my 42S and voila! a working, 100% functional 42S back from the dead. Kinda fun Paul! You never mentioned how the stakes are smaller in diameter than the holes

in the metal plate. Especially the two doosies in the middle with the smaller holes! It really does make it tough to get it all back together and not have a soft key since when HP put the 4 layer sandwich in, it had some scoot room around the stakes since the holes are larger until the stakes are fused. Gotta really work slow and carefully.

Rather than use Pauls method of cutting the mushrooms off with an X-Acto knife, I used a !Woodburning! tool (from my local Sears Hardware) with a knife edge to melt the mushrooms back up into a stake . I limited the temperature to about 200-250° using a powerstat so that the plastic didn't melt, only soften. If the material melts and sticks to the tip, its too hot! Once reassembled, I used the tool to remelt the stakes while pressing the metal plate down with my other hand. Once the plastic softened enough, I used a small (1/4") aluminum rod that had a counter-sunk hole to press down to make the mushroom again. Had to repeat on a few to get the whole thing tight with no loose keys.

In closing, many thanks to all for the help and background work that made this possible. WELL worth the time and effort.

Re: My monster lives!

*Message #12 Posted by [Ellis Easley](#) on 15 June 2002, 8:40 a.m.,
in response to message #11 by Randy Sloyer*

Randy, Thanks for suggesting a new way to deal with heat staked sandwiches! Your "insider information" is enlightening: first, the appropriate temperature, and then the aluminum tool for re-staking. Thanks!

BTW, do you think HP used an ultrasonic welding technique to stake these in the first place? I've seen that in use at a factory where I worked. The design of the tool that contacts the plastic is critical but the results are amazing. Only thing is, exposure to high level ultrasonic energy can damage hearing, as I recall.

Re: My monster lives!

*Message #13 Posted by [Randy Sloyer](#) on 15 June 2002, 5:02 p.m.,
in response to message #12 by Ellis Easley*

As I said in previous post, I really wanted to thank all those who helped. I think this is a truly great site and I would like to "give back" best I can.

As for the ultrasonic welding, I kind of doubt it. I think this is used more when trying to fuse two separate pieces together. I have always likened it to inertia welding without the motion. All that needs to be done here is soften the material and force it down in a controlled fashion. A short blast of cold air and its solid again. Here's my reasoning:

First, I think the case is some type of styrenic material. Probably ABS with some impact modifiers or other "engineering grade" resin with good impact properties. ABS is the same stuff on the inside of your refrigerator (the food liner and door liner) - it handles the cold well, takes quite an impact without cracking, bends before fracture, and most of all: It's easy to scribe your initials into! I'm sure that was in the spec somewhere.

Assuming the case is of some material in this family, its softening point is somewhere around 150°F. It never really truly melts, it only gets less viscous with higher temp. Since heating it past 450° or so only degrades it, which lowers its strength, I wanted to keep the temperature as low as possible, hence the powerstat. I didn't actual measure the temp at 200-250, I was only guessing. I could do this with an accurate thermocouple if anyone is interested. I tried my IR laser pyrometer, but its spot size was too big to get a good reading. The strong broad tip of the tool was easy to manipulate and roll the mushrooms back into a stubby pin. I found it better to roll the edge up, then back over onto itself. Trying to pull the sides up to form a tall pin resulted in the "ring" of the mushroom falling off after becoming a tall thin cylinder.

After now doing two units (I put the 20S back together first before the 42S!) I find the real problem is getting enough pressure with my fingers on the front plastic and rear metal plates to get the proper key "feel". I have been daydreaming of perhaps milling a female plate that has keytop recesses to drop the front of the calculator into and

use several toggle clamps to get enough squeeze on the back plate to make a good keyboard sandwich. Then both hands are free to do the reheat and form. Since the heating element end of woodburning tool has a #8 or 10/32 female thread, I could machine a female mushroom tip and have the final product be pretty much indistinguishable from the original. Maybe....

Just a curious question: Has anyone here every offered a "no guaranties" repair service? I know Paul Bragger has repaired some, perhaps privately, but I don't know if it exists as a service to our community at large. I for one, would be willing to give time to this cause since "They don't make 'em anymore!" and my fingers will be cold and stiff before I use an AOS calculator! Okay - so I'm biased! Why else would I spend 15 to 20 hours to fix a throw-away calculator? And kill a working AOS unit in the process.

Re: My monster lives!

*Message #14 Posted by [Christof \(Davis, CA\)](#) on 16 June 2002, 4:26 a.m.,
in response to message #13 by Randy Sloyer*

I haven't got any broken calculators, but....

I don't trust my soldering skills quite enough to do a memory upgrade on a 42s, but would love the upgrade. So I'd say it's a possible interest. (the other possibility being getting the tooling and learning smd on my old 48s that needs a ram upgrade- if I can find the info for the s version, instead of the g version.)

-Christof

Re: My monster lives!

*Message #15 Posted by [Randy Sloyer](#) on 16 June 2002, 8:02 a.m.,
in response to message #14 by Christof (Davis, CA)*

Sure, I could do the ram upgrade. I have a full smd rework station at work. The hardest part is on the fingers, getting the case open. I think if this looks like something more people want, I'll make a tool to pop the lower 4 stakes apart from inside the unit.

Post a message here or send me an email if you want to do this.

PS: I'll check Pauls instructions to get the ram part number, see where I can find them and how much \$ is involed.

42S ram upgrade

*Message #16 Posted by [Randy Sloyer](#) on 16 June 2002, 8:29 a.m.,
in response to message #15 by Randy Sloyer*

The 32K low power static rams are available at Digikey for \$2.48 ea qty 1. Sounds like I need to buy some and give this a try!

Re: 42S ram upgrade

*Message #17 Posted by [Christof \(Davis, CA\)](#) on 16 June 2002, 2:45 p.m.,
in response to message #16 by Randy Sloyer*

yeah- it sound like a plan :)

Re: 42S ram upgrade

*Message #18 Posted by [Randy Sloyer](#) on 22 June 2002, 8:17 a.m.,
in response to message #16 by Randy Sloyer*

I did the mod yesterday will Paul Broggers instructions. It was a snap. I found super fine (0.035") solder wick a real help in preping the pads for the new chip. The regular stuff I had (about 0.100") didn't wick well on such small amounts of solder.

A suggestion that I have on the procedure is (obviously?) to remove the batteries and then short the battery contacts with a jumper while working on the unit. This prevents the backup caps from building a charge and having stray voltage on the vcc line when you install the new memory. Perhaps putting the circuit board on an anti-static mat would be better. I also covered the top of the cpu with thin tape to prevent anything from falling into the leads of the chip carrier while doing the job.

The memory test reports 31550 bytes free!

Thanks to all for the infomation that made this possible.

Re: My monster lives!

*Message #19 Posted by [Ellis Easley](#) on 17 June 2002, 6:30 a.m.,
in response to message #13 by Randy Sloyer*

I've never opened up a Pioneer but I have taken apart two Voyagers: I put my 15C back together by putting thick superglue on one post at a time, holding a couple minutes till set. My 12C I never completely fixed and the post tops are cut off. I just filled the space between the case back and the PCB with a pad of stacked duct tape. I have thought of making a fixture to hold the sandwich together while glueing (or now, re-heat staking!)

BTW, Tony Duell says it is fairly easy to take the keyboard bezel

off a Pioneer to get access to the staked end of the bottom posts, instead of just pulling apart till they pop.

I've looked at the top posts and I see they are hollow, and as I have been looking into Plastite screws lately, I wonder if it might be possible to use screws to reassemble Pioneers. What I have learned about Plastite screws can be summarized this way: to use a regular sheet metal screw (circular thread, 60 degrees) in a plastic post, the post wall thickness needs to be greater than the screw diameter (or original hole size - I'm not sure exactly which) but with Plastite screws (tri-lobed thread, 48 degrees) the post wall thickness can be less than the diameter (of whichever it is) - the main point being the post wall thickness can be less than is needed with a sheet metal screw.

Re: My monster lives! -- Congratulations!

*Message #20 Posted by [Paul Brogger](#) on 17 June 2002, 11:55 a.m.,
in response to message #11 by Randy Sloyer*

Sounds like you did a superior job. And I agree, WELL worth the investment!

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Strange addition in a 41CX

Message #1 Posted by [Iqbal](#) on 3 June 2002, 8:42 p.m.

I recently sold a friend an HP41CX. He called me today to say that the CX had an extra capacitor attached to the area where the battery charger plugs into and also that when he presses Cat. 3 the machine flies through all the symbols, at a greater speed than his second CX. Could this be a speeded up 41CX?

Re: Strange addition in a 41CX

Message #2 Posted by [Dave Hicks](#) on 3 June 2002, 10:07 p.m.,
in response to message #1 by Iqbal

That sounds like an overclocked 41. I have several CVs that were hacked to run at 2.3x normal speed, but most speedups are more modest - 40% is typical.

Re: Strange addition in a 41CX

Message #3 Posted by [David Smith](#) on 5 June 2002, 4:55 p.m.,
in response to message #1 by Iqbal

I'll bet that what looks like a capacitor in the charger port is actually a magnetic reed relay. Bring a fairly strong magnet near it and see if the speed changes. Some machines have a toggle/latching circuit on the reed relay, others need the magnet there all the time to change the speed. Also check the "BEEP" command. It is usually the easiest way to detect the speed change.

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Scientific calculators, usage of exp

Message #1 Posted by [Lesley Evensenn](#) on 3 June 2002, 6:36 p.m.

I have wondered whether there is still much use of scientific (as opposed to 'ordinary') calculators outside of school; for instance in mechanical or optical engineering, is most calculation done on software loaded on desktop or other computers, using high-end tools such as Mathematica, Maple or other software packages? Has the scientific calculator gone the way of the slide rule? Also, I wondered why it is often the case that the squaring function was provided on calculators, but an extra button provided for performing other exponentials? Why wasn't/isn't a general exponential button provided? Is this because in the common usage of statistics or geometry, only the 2nd power is used? Thank you for any information you can provide. Lesley Evensen

Re: Scientific calculators, usage of exp

Message #2 Posted by [David Smith](#) on 3 June 2002, 6:44 p.m.,
in response to message #1 by Lesley Evensenn

I have found that most real scientific calculators have a general (Y^X) function key... certainly all the HP's do.

Since $X \cdot X$ is so common they also have this as a shortcut. It is also implemented by direct multiplication and is much faster and more accurate than the Y^X function that uses LOG, MULTIPLY, ANTILOG internally.

Re: Scientific calculators, usage of exp

Message #3 Posted by [Renato](#) on 3 June 2002, 9:25 p.m.,
in response to message #2 by David Smith

BTW, regarding y^x , have you tried on a 21:

2

enter

3

y^x

8

-

This is caused by the log-antilog algorithm, and is documented in a HPJ article that I remember reading in the 80s. I guess other woodstocks have the same rounding error

Re: Scientific calculators, usage of exp

Message #4 Posted by [Ex-PPC member](#) on 4 June 2002, 7:05 a.m.,
in response to message #3 by Renato

Yes, the article is in:

Hewlett-Packard Journal, November 1976

"The New Accuracy: Making $2^{**}3 = 8$ "

The HP-25C (for instance) had the innacurate algorithm while the HP-67 used the new one, if I'm not wrong. I also remember that the first calculator to feature the improved algorithm was the Topcat series HP-91.

As for implementing x^2 by direct multiplication instead of using the much slower y^x algorithm (which does it as log, multiplication, antilog as stated), one of the worst cases I've ever seen was the computation of $\text{sqr}(x)$ [square root of x] in the Sinclair Spectrum micro-computer of the 80's [sold in USA under the namebrand Timex].

Usually the square root is computed using a very fast algorithm, so fast that computing a square root takes almost the same time as a single division operation. But in the Spectrum, it was computed so:

$$\text{sqr}(x) = x^{0.5} = \exp(0.5 \cdot \log(x))$$

so it took a log, a multiplication, and an antilog as well. Both the log and the antilog used Chebyshev series expansions, i.e.: many, many multiplications and divisions. The final result was that on the Sinclair the square root, far from being comparable in speed to a single division, was in fact one of the slowest math functions available. It wasn't the slowest, either, because there were others that did use `sqr` itself ! Some trigonometric functions were calculated as functions of others, so they ended using square roots, and they were incredibly slow !!

Why did the people who wrote the BASIC interpreter use such an inefficient way of computing the square root ? Simple: because of lack of space in the ROM. They had just 16 Kbytes (!!) to implement a complex dialect of BASIC, with many, many commands plus an underlying 'operating system'. So they had to economize and optimize as much as possible. And computing `sqr(x)` as $e^{(0.5) \cdot \log(x)}$ saved a *lot* of bytes, badly needed for other features.

Has this anything to do with HP calcs ? Yes. If you get a copy of the *wonderful* HP-15C "Advanced Functions" manual, you'll read the experts at HP discussing the necessary tradeoffs between accuracy and speed/space needed. In the case of the HP-15C, this has to do with the guaranteed accuracy for the complex functions, which cannot be computed to the same accuracy as their real-only equivalents unless you make them *four* times slower and use a lot of valuable ROM for very unfrequent, boundary cases.

In HP-15C AF you'll learn why this is so, and specific worst cases are given, as well as sample programs to demonstrate how it could be done if necessary. Although the examples are given for the HP-15C, all the discussion applies equally well to the next generations of HP calcs which followed the HP-15C, all of them using the same algorithms, for instance:

- - the 41C Advantage ROM advanced functions for SOLVE and INTEGRATE were taken from the HP-15C.
- - the HP-71B equivalent advanced functions present in the Math ROM, FNROOT and INTEGRAL, as well as complex functions, were also taken from the HP-15C, while the matrix functions were taken partly from the HP-15C and partly from the HP-75C Math ROM and the HP-85 Matrix ROM.

- - all subsequent Saturn-based calculators, such as the HP-42S up to the latest HP48/49, did inherit those basic algorithms as well.

So, you, see, the HP-15C AF manual is essential reading if you are interested in this particular topic.

Algorithms WAS:Scientific calculators, usage of exp

*Message #5 Posted by [Renato](#) on 4 June 2002, 9:18 a.m.,
in response to message #4 by Ex-PPC member*

Great! I also remember a Byte magazine article about calculating day-of-week using zeller congruence formula - a wonderful algorithm, taught me how to use integer arithmetics instead of "if"s. Does anyone know what algorithm is used for day-between-dates ?

Re: Scientific calculators, usage of exp [comments about Sinclair computers, math, etc.]

*Message #6 Posted by [Bill Wiese](#) on 4 June 2002, 11:27 p.m.,
in response to message #4 by Ex-PPC member*

I am familiar with the Sinclair ZX81/Timex-Sinclair 1000 computer to which you referred.

I believe that their improved floating-point BASIC plus the "OS" (NEW, LOAD, SAVE, etc. as well as video management firmware - very clever!) fit in an *8K* byte masked ROM, not the 16KB one you indicated. Not a bad job when you think about it. I looked at its ROM dump once and it was just a few bytes from being "full".

Their predecessor, the Sinclair ZX80, had a simpler integer BASIC that was contained in a 4Kbyte mask ROM. By contrast, a machine like the Commodore 64 had an 8KB version of Microsoft BASIC with a 4KB "Kernal" (meaning OS/system services) ROM. 6502 Ataris were probably about the same.

I believe quite a few other BASICs only offered minimal transcendental/ math functions - usually it was SQR(X) for square root, EXP(x) for e^x , LOG(X) for $\ln(x)$, and SIN(X), COS(X) and ATN(x). The "***" operator was for raising to a power and used log-multiply-antilog method. Other trig functions and Briggs logs would have to be derived by user and perhaps defined via DEF FNA(x) = (expression).

And given that floats were 32 bit or 40 bit (Commodore), accuracy was about 7 dec

digits (for 24bit mantissa) or 9.6 dec digits for 32bit mantissa.

I once looked at the log/trig function accuracy on some of these BASICs and thought the calcs were a bit better at small argument values. (BASICs used Chebyshev polynomials & range reduction). Repeated [argument],[OP],[Inverse-OP] sequences on calculators returned orig value whereas with the BASICs, there would be gradual drift away from the orig supplied argument.

Bill Wiese San Mateo, CA wmwiese@yahoo.com

Re: Scientific calculators, usage of exp [comments about Sinclair computers, math, etc.]

*Message #7 Posted by [Ex-PPC member](#) on 5 June 2002, 4:41 a.m.,
in response to message #6 by Bill Wiese*

Bill Wiese posted:

"I am familiar with the Sinclair ZX81/Timex-Sinclair 1000 computer to which you referred."

Wrong. If you read my post again carefully you will see that I did not refer to the ZX81 but to the ZX Spectrum, which is the much improved successor (kinda "ZX82").

This ZX Spectrum machine did have a *16 Kbyte* ROM (not 8K) which included the BASIC and the operating system. It featured many improvements over the ZX81 you are familiar with, such as: color screen, graphics commands (LINE, CIRCLE), lowercase, up to 48 K RAM built-in, better support for machine code programming, it always ran in FAST mode with a perfectly steady screen, it could use microdrives and ROM cartridges, etc, etc.

This machine was highly successful, many million were sold, and many very good machine-language games were developed for it. A book was published which included the entire contents of the 16K ROM, commented and explained, and it made very interesting and enlightening reading, specially the appendices where the implementation of the floating-point calculator and the transcendental math functions were detailed at length.

By the way, HP did once the same, with the HP-71B IDS volumes. I've read both (the Spectrum's and the 71B's) and certainly the 71B BASIC functions are much more efficiently and accurately implemented, state-of-the-art in fact, though of

course comparing them isn't fair: 71B BASIC is intended for engineers and highly technical applications, and it's 64 Kbytes long, while Spectrum's BASIC is just for the hobbyist, mostly teenager computer user, intended mainly for games and home applications, and only 16 Kb in length. That its programmers could fit so much functionality in only 16 Kb of Z80 8-bit machine code is an amazing feat of space optimization.

Re: Scientific calculators, usage of exp [comments about Sinclair computers, math, etc.]

*Message #8 Posted by [Thibaut.be](#) on 5 June 2002, 5:58 a.m.,
in response to message #7 by Ex-PPC member*

This reminds me that time when in college my brother and I bought together a BBC model B 32K (all other popular home computers such as Vic20, ZX81, TRS-80, ... had 8 or 16K). Powered by a motorola 6502 processor, it had a double disc drive, a 80 cpl Epson printer and a small Sony TV that was used as colour monitor. In 83 we paid more than \$3.000 for it...

Of course I am of the opinion that my home computer was far better than the C64 or the ZX Spectrum :-)

Re: Scientific calculators, usage of exp [comments about Sinclair computers, math, etc.]

*Message #9 Posted by [Ex-PPC member](#) on 5 June 2002, 6:26 a.m.,
in response to message #8 by Thibaut.be*

Thibaut.be posted:

"my brother and I bought together a BBC model B 32K ... In 83 we paid more than \$3.000 for it ... Of course I am of the opinion that my home computer was far better than the C64 or the ZX Spectrum :-)"

You are right, it was a better computer, and faster too. It used a 6502 at 2 Mhz and still was faster than the Spectrum's Z80A at 4 Mhz. Why ? Because its BASIC was less 'cramped' than the Spectrum's, not so much compromise between speed and space. It was also a better version of BASIC, with many advanced capabilities.

However, the comparison is not fair, again. The BBC machine wasn't for everyone, at \$3,000. On the other hand the Spectrum was, at something like \$200. That's why the Spectrum sold millions, while the BBC didn't.

And that's why there were tons of quality software developed for the Spectrum, less so for the BBC, which only had a minimum presence in the market for it being nearly mandatory at British schools.

The exact analogy for HP calcs would be comparing the \$750 HP-71B versus the \$100 TRS-80 PC-1 Pocket Computer of the time.

Re: Scientific calculators, usage of exp [comments about Sinclair computers, math, etc.]

*Message #10 Posted by [Thibaut.be](#) on 5 June 2002, 9:45 a.m.,
in response to message #9 by Ex-PPC member*

Yes, you're right, the Spectrum was far cheaper, but it appeared quite later than the BBC, and its price was lined up with the C64... The Acron 64 was more its competitor, and was also in the same price range of the Spectrum...

Re: Scientific calculators, usage of exp [comments ...

*Message #11 Posted by [Ex-PPC member](#) on 5 June 2002, 10:09 a.m.,
in response to message #10 by Thibaut.be*

"The Acron 64 was more its competitor, and was also in the same price range of the Spectrum..."

Is "Acron 64" a typo and you really mean "Acorn" computers ?

If yes, the Acorn were kinda "BBC Lite Edition", so to say, very capable machines but that were marred for their strange dialect of BASIC, which was cryptic and terse to the point of being unreadable.

So much so in fact, that Acorn BASIC programs were practically incompatible with other BASICs, and very hard to decipher. When printed, they looked much more like some kind of assembler than BASIC, to be sure. They frequently used the local equivalents of PEEKs, POKEs, CALLs, and VDUs, absolutely non-portable. Also, everyone used the abbreviated form of the BASIC commands, and little or no spacing or formatting. The result was frightening, perhaps like RPN or RPL seems to AOS

users ! :-)

Re: Scientific calculators, usage of exp [comments ...

Message #12 Posted by [Thibaut.be](#) on 5 June 2002, 12:16 p.m.,

in response to message #11 by Ex-PPC member

Yes, I of course meant Acorn. I often make typos because I'm browsing the site while I'm working and sometimes write a message whili I'm having a phone conversation.

VDU and on top of that *FX functions were my preferred : they are in some sense similar to some flags of the 41 ;-)

But you're right, the Basic of these machines was not protable but was quite enhanced : they englobed Pascal functions such as REPEAT, DO ... WHILE, PROC and DEF FN functions that were really useful... I had a great time working with these machines...

Re: Scientific calculators, usage of exp [comments about Sinclair computers, math, etc.]

Message #13 Posted by [John K. \(US\)](#) on 5 June 2002, 7:15 a.m.,

in response to message #8 by Thibaut.be

> *Powered by a motorola 6502 processor[...]*

Hmm. I could have sworn that the 6502 was made by someone other than Motorola. I seem to recall that Motorola produced the 6800 and that the 6502 was a slightly improved version produced by a different company (whose name escapes me). The story, as my swiss-cheese-like memory wants to recall it, is that the other company was either founded by, or hired away, several of the 6800's key design people.

Does that sound correct to anybody else?

<crickets chirping>

Anybody?

Please...?

Re: Scientific calculators, usage of exp [comments about Sinclair computers, math, etc.]

*Message #14 Posted by [Wayne Brown](#) on 5 June 2002, 4:02 p.m.,
in response to message #13 by John K. (US)*

You're right. The 6502 was produced by a company called MOS Technology. They were later purchased by Commodore and produced an enhanced version of the 6502, called the 6510, which was used in the Commodore 64.

Re: Scientific calculators, usage of exp [comments about Sinclair computers, math, etc.]

*Message #15 Posted by [Ellis Easley](#) on 5 June 2002, 7:25 p.m.,
in response to message #13 by John K. (US)*

The 6502 was an original product of MOS Technology and was second sourced by Rockwell (and others). Part of the genealogy is 8080 -> 6800 -> 6502, each successive design being a simplification and therefore a cost reduction of the previous. I seem to recall that MOS Technology was started by some Motorola engineers, possibly with seed money from Motorola. Mr. Wozniak (spelling?), I have read, used the 6502 for the Apple 1 design because he was able to buy one from a sales rep at a trade show for about \$15, while other microprocessors cost \$hundreds for one piece. I think it was Rockwell that he originally used.

Rockwell made their own line of industrial control computers based on the 6502, and RCA had a similar line based on the 1802. I am fascinated by the microcomputer products that microprocessor manufacturers sold (or tried, anyway!), as far as it expresses the vision a company had of what you could do with a microprocessor. Most companies had a development system, sometimes based on their industrial single board computer line, like the Intel "blue boxes" and the Motorola "ExorTerm". Then there were the educational boards like the Motorola "D2" kits and the Kim and Sym - I know of these two but I don't know the details, I think they were both 6502 from different second source manufacturers - I think Sym was from Synertek. These generally had a hex keypad and a few LED digits or attached to an ascii terminal. Rockwell had the king of such educational products, the AIM 65, which was a 6502 computer with a

full keyboard, an alphanumeric LED display and a strip printer. (Kind of like an HP9825, now that I think of it.)

Then there are actual end-user microcomputers built by microprocessor manufacturers - two I know of are the TI home computer and the Western Digital microengine (somehow, I always come back to this one! anybody know where I can get a boot disk for it?) But did MOS Technology beget Commodore or did Commodore buy MOS Technology?

Re: Scientific calculators, usage of exp [comments about Sinclair computers, math, etc.]

Message #16 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 5 June 2002, 11:39 a.m.,
in response to message #8 by Thibaut.be

Motorola should be a 6802, MOS Technology may be a 6502 (the kind used in the Apple II, among others)

At that time, I liked the RCA Cosmac 1802, a nice CMOS microprocessor, but rather weak as an architecture (sort of a V-RISC-i: VERY RISC indeed!!)

Re: Scientific calculators, usage of exp [comments about Sinclair computers, math, etc.]

Message #17 Posted by [Thibaut.be](#) on 5 June 2002, 12:17 p.m.,
in response to message #16 by Andrés C. Rodríguez (Argentina)

I don't remember exactly what processor it was... I thought it was a Motorola and/or a 6502. Maybe Mr EX-PPC member could confirm...

Re: Scientific calculators, usage of exp [comments about Sinclair computers, math, etc.]

Message #18 Posted by [Ex-PPC member](#) on 5 June 2002, 12:50 p.m.,
in response to message #17 by Thibaut.be

It was indeed a 6502 at 2 Mhz.

If I remember correctly, the 6502 was conceived and developed by Chuck Peddle while working for MOS Technology. It was more or less inspired on the Motorola 6800, but was considerably cheaper than the \$200 the 6800 commanded at the time.

Re: Scientific calculators, usage of exp [comments about Sinclair computers, math, etc.]

Message #19 Posted by [Kelvin Hunter](#) on 5 June 2002, 6:48 p.m.,
in response to message #18 by Ex-PPC member

I found the reference to ZX Spectrums very interesting with regard to efficiency in the ROM.

The square root algorithm could, as has been pointed out, been implemented more efficiently with the standard division-like method. It could also have been done using Newton's method (on the mantissa only, range $-1 < \text{mantissa} < +1$). By efficiency, I mean speed _and_ space taken.

The HP calculators use the CORDIC method of calculating transcendental functions such as SIN, LOG etc.

I feel that the Z80 code in the Spectrum and other similar machines would have been more compact with this method, as opposed to Chebyshev routines (I can't prove this - not enough time!). It would also have been a hell of a lot quicker. I'll pass silently over the Spectrum's circle routine..

Also, I've heard that machines like the BBC and Commodore 64 used look-up tables with interpolation - dirty but quick!

Yet again, this seems to demonstrate the superb software

engineering inside the HP calculators..

Kelvin

Re: Scientific calculators, etc ...

Message #20 Posted by [Ex-PPC member](#) on 5 June 2002, 8:45 p.m.,

in response to message #19 by Kelvin Hunter

Kevin posted: *"I found the reference to ZX Spectrums very interesting with regard to efficiency in the ROM."*

Thank you

Kevin: *"The square root algorithm could, as has been pointed out, been implemented more efficiently with the standard division-like method. It could also have been done using Newton's method (on the mantissa only, range - 1 < mantissa + 1). By efficiency, I mean speed _and_ space taken."*

No way. When I said that the programmers of the ZX Spectrum's ROM had done an incredible job of optimizing for space I meant it. Their implementation of the square root function SQR(x) takes just *7 bytes* (that's right, seven bytes !!) of Z80 machine-language code in the ROM.

No other approach is likely to take less, not certainly Newton's method, don't you agree ?

Kevin: *"It would also have been a hell of a lot quicker. I'll pass silently over the Spectrum's circle routine.."*

I did remember what was the slowest math function in the ZX Spectrum's implementation. It was arc cosine, because it used the arc sine function, which in its turn used the square root function, and that was computed using log and antilog. Of course, it was done that way for efficiency purposes: arc cosine takes only another 7 bytes of ROM !!

Just in case you are curious, a little table showing the

bytes required to implement various math functions:

Square root	7 bytes
Arc cosine	7 bytes
Tangent	8 bytes
Cosine	11 bytes
Arc sine	16 bytes
x raised to yth power ..	29 bytes

How's that for efficiency ?

Kevin: *"Yet again, this seems to demonstrate the superb software engineering inside the HP calculators.."*

Yes, I agree. But let's not forget that the ZX Spectrum with 48 K RAM was more than 8 times cheaper than the HP-71B with 16 K RAM. And the poor ZX programmers had to fit their BASIC plus operating system into just 16 Kb, while HP engineers had 64 Kb to do their marvels.

Re: Scientific calculators, usage of exp [comments about Sinclair computers, math, etc.]

Message #21 Posted by [Bill Wiese](#) on 5 June 2002, 8:22 p.m.,
in response to message #7 by Ex-PPC member

Whoops!

>Bill Wiese originally wrote: > "I am familiar with the Sinclair ZX81/Timex-Sinclair > 1000 computer to which you referred."

>ExPPCMember wrote: > "Wrong. If you read my post again carefully you > will see that I did not refer to the ZX81 but to > the ZX Spectrum, which is the much improved > successor (kinda "ZX82")."

Yep, you got me. Yes, the Spectrum would've had to have had 16K for the advanced BASIC and graphics.

Wow, didn't know there were any Timex Spectrums sold in the USA - thought they died in Waterbury before they could cross the pond from Sinclair.

Re: Scientific calculators, usage of exp [comments about Sinclair computers, math, etc.]

*Message #22 Posted by [glynn](#) on 5 June 2002, 11:57 p.m.,
in response to message #21 by Bill Wiese*

Yes, very nearly.

The Timex 2068 was an "enhanced" Sinclair Spectrum, and it was to originally be a 20"48", having 48K of User RAM. But thanks to (perhaps excessive) tweaking by Timex, and then having to jump the hurdles of FCC certification of what WAS a newly-designed computer, Timex came round to trying to meet the Commodores and TIs and Ataris of the world by eventually boosting the user RAM to 60K, implementing a bank-switching scheme to support the extra User RAM-- plus an enhanced cartridge slot-- in the area Speccys had ROM in.

By the time they brought this wonder to market, TI had started the home computer bloodbath. They gave up on the market entirely, in the meantime dumping their considerable stock of machines on the market AT COST and virtually sucking all home computer sales down into the swirling drain with them.

Many will remember better than I, I believe it was August '82 (or was it '83?), when TI pulled the plug. Then followed a Toys'R'Us holocaust, with Coleco Adam and Mattel Aquarius and so on following shortly thereafter, then even solid systems like Commodore and Atari swimming in red ink and besieged by panicked investors. Timex rolled out the 2068 in the January following and began their "fire sale" almost immediately, running direct sales ads in March/April. By June, Timex Computer Corporation, a wholly-owned subsidiary of the privately-held Timex Corporation, folded their operations.

The 2068 probably sold 10 to 15 thousand machines, almost all orphans by the time the users unboxed them. It was an extraordinarily GOOD machine, very easy to use, powerful for its price, and with a remarkable lot of software quickly ported from the popular Sinclair Spectrum catalog in the UK.

Unfortunately, it contained a CMOS PAL chip for many of its internal functions, and these 2068s have not proven very robust over the years

since. The PAL chip, once it is gone, has no replacement, since it was proprietary and neither Timex nor Sinclair were free enough of legal fetters to release to hobbyists the formulae of its internal design.

The Spectrum remained popular in the UK, even went through several incarnations to include storage cassettes, etc. and I think they were selling the thing into the early 90's.

Re: Scientific calculators, usage of exp

*Message #23 Posted by [Lesley Evennsenn](#) on 12 June 2002, 3:11 p.m.,
in response to message #4 by Ex-PPC member*

Impressive to see these responses, someone could write a history book...part 2 or question 2 was/is: any of you mechanical/optics/other engineers using calculators (rather than desktop/other 'computers' w/fancy packages such as Maple/Mathematica) in daily work?

Re: Scientific calculators, usage of exp

*Message #24 Posted by [Stephan](#) on 14 June 2002, 5:00 p.m.,
in response to message #23 by Lesley Evennsenn*

@ Lesley: To answer your question: YES. Doing a design job I certainly use work stations with customized programs. Besides that one has a calculator on the desk to estimate tendencies before starting complicated computations.

On site the scientific calculator is all you carry in your pocket. Or could you imagine anybody climbing onto a power transformer with a notebook under his arm? Of course you also have to have the principals either programed or in your memory (mind). Same if you are called to the test bay in cases products do not behave as expected. First analysis on temperatures, overvoltages or what ever is done using a calculator. You would be astonished how close such estimations come to the final analysis done back in the design office. Precondition is you know your job.

All colleagues have one or more calculators, most common is the HP 32SII, but there are even two HP85 still in operation (for engineers with large finger tips). I still use my old 15C (and recently purchased a 48G with memory upgrade to play with).

My opinion is that before one starts to use large software packages, he should have understood the principals behind and be able to judge results. Sometimes problems are not well conditioned and could get one on the wrong track. And

before one starts using calculators, he should be able to do calculations by approximations using log tables and slide rules. In short: using a calculator with little knowledge doesn't make sense, using powerful software under these circumstances makes even less sense.

I simply cannot do my job without a reliable calculator and I hope the 15C will last until retirement, because as I had to learn here I will not be able to get any quality calculator anymore (new models like 6S, 30S, 49G and such nobody in our design department likes, because they are too flimsy).

In case my English yields to misunderstandings, please activate your error correction algorithm.

Best regards,

Stephan

Re: Scientific calculators, usage of exp

*Message #25 Posted by [Ellis Easley](#) on 15 June 2002, 9:26 a.m.,
in response to message #24 by Stephan*

Stephan wrote:

"In case my English yields to misunderstandings, please activate your error correction algorithm."

First, let me say your English is many times better than my German (I do have ein bisschen!)

I love your closing statement because it resonates with an idea I like to think about. It is probably a well described scientific fact to linguists but to me, it is just a fascinating notion: the idea that all languages contain large amounts of redundancy that make it possible for "mere mortals" to communicate easily and reliably. An example of the result is having a conversation in a room full of other conversations. I understand enough of mathematical error detection and correction schemes to know that what makes them possible is redundant information and I think human communication must rely on a similar method. Grammar is a set of code rules that defines some patterns as illegal and that is a form of redundancy. But even when grammar is violated, communication can take place. There must be multiple levels of redundancy, like CD-Audio. The final level with CD-Audio, when the information is just lost, is to interpolate a sample between two good samples, to avoid a "pop".

As Simon and Garfunkle said, "... a man hears what he wants to hear, and disregards the rest."

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HP 42s Replacement Parts

Message #1 Posted by [Richard Garner](#) on 3 June 2002, 11:18 a.m.

I just went to the HP Partsurf and the listing for PCA-Other has been removed from the selection list. It looks like that was all of the 42s.

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Internet fraud and paying with paypal ... story

Message #1 Posted by [Gene](#) on 3 June 2002, 10:39 a.m.

This is from www.macintouch.com, but given that it shows some problems if you pay with paypal, I thought it might be helpful here. If not, sorry! I just don't want anyone here to get ripped off thinking paypal is a good way to get paid or pay for something. --Gene

Subject: MacFraud Reader Report

An earlier poster wrote:

"The order was supposed to come in about 3 weeks. Three weeks came & went, no computer. Patrick put me in touch with Teresa, who was very hard to reach. She explained that one of her suppliers did not fulfill her orders and she was having trouble getting her money back from them. She needed the funds to place a new order."

This might sound convincing, if the exact routine hadn't been used with iBook and TiBook sales from a totally different supplier late last year. A fellow with the user name of "batmanyearone" (later found as Dan Zappin) put up iBooks and TiBooks. He accepted the money, but no computer was shipped. After repeated attempts at contact a "friend" of Mr. Zappin gave everyone a song and dance about how he'd had supply problems because some people had complained prematurely. He was therefore not able to pay his supplier and get the iBooks shipped. So everybody needed to withdraw their PayPal complaints and so he could buy the computers and get them shipped. He even sent out bogus refund checks.

No one we could actually speak to, or verify their ID actually got their computer. A number of the defrauded customers got together and compared notes, and the few who actually spoke to Mr. Zappin on the phone had a similar experience to yours. A "Oh, this is all just a mistake" routine. He was tracked down by a couple of the people who sent the money in. Interestingly enough, there was supposed to be a girlfriend involved in all of this mess as well.

PayPal was a real pain in the butt on this one. We actually got our money back because we paid PayPal through a Credit Card and simply called the bank and charged back the money. If we had accepted the bogus refund check we would have been out the money. If we had paid PayPal by any other means, we would have been out the money. PayPal and its customers that didn't get refunds through chargebacks or other means got stung for something like \$70,000.

Mr. Zappin was a "verified" PayPal user and after this I will ***NEVER*** use PayPal again.

Three lessons from this:

- (1) Seller claims of innocence need to be consistent with seller actions.
- (2) Be VERY careful how you pay for expensive items on e-Bay. Many payment methods offer no protection against fraud.
- (3) Be careful of a deal that's too good.

Ouch.

Re: Internet fraud and paying with paypal ... story

Message #2 Posted by [W. Bruce Maquire II](#) on 3 June 2002, 3:14 p.m.,
in response to message #1 by Gene

Gene:

Scary! But I'm not sure I understand the logic of: "I'll ***NEVER*** use PayPal again." How, exactly, did PayPal cause a problem? Would the buyer have been any better-off with another payment method? It sounds to me, that paying via PayPal and a credit card was the only thing that saved this person!

I always use my CC with PayPal. I don't buy on eBay any other way! It seems to me that this story is just yet more reason to never participate in "Cashiers-Check / Money-Order ONLY" auctions!

Bruce.

I guess the point was paypal wasn't helpful here to bidders either

*Message #3 Posted by [Gene](#) on 3 June 2002, 4:07 p.m.,
in response to message #2 by W. Bruce Maguire II*

Paypal seems to offer no protection to buyers OR sellers.

Sellers are at risk of delivering the goods as they promised they would, only to get charged back by paypal a month or two later because an unscrupulous buyers claimed what was delivered was not what was ordered. Paypal could care less whether the claim was true or false...they charge back the seller and he/she is out of luck.

Seemingly, buyers would be in the driver's seat at paypal, since they could claim the above and charge back ANY seller by claiming "delivered not what was promised", but in the instance this story gave, the buyers probably tried "fraud" or "nothing ever sent" or such and got no action. Don't understand it completely myself, but oh well.

Personally, I don't buy anything much above \$20-30 from someone with little or no feedback. As a seller, hopefully the +400 rating means someone will go with my (regretfully) money order only terms.

Cheers! (as much as possible, I guess) Gene

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Overclocking the HP 49G

Message #1 Posted by [Frederik D. Hjort](#) on 3 June 2002, 7:50 a.m.

There seems to be a lot of a fuzz about whether or not the hp 49G can be overclocked, has anyone actually achieved this or know of a way to do it? I do not mind replacing components in my calculator or the increased power consumption. Will a capacitor replacement do the trick as on the TI83 or perhaps a new clock crystal? Any suggestions or experiences?

Re: Overclocking the HP 49G

Message #2 Posted by [olivier croissant](#) on 3 June 2002, 10:15 a.m.,
in response to message #1 by Frederik D. Hjort

look at the www.cynox.de page .. it seems to be doable

Olivier

Re: Overclocking the HP 49G

Message #3 Posted by [Frederik D. Hjort](#) on 4 June 2002, 6:11 a.m.,
in response to message #2 by olivier croissant

Achievable, yes, but how do you do it yourself? My best bet is that it will be considerably cheaper to purchase the components at the local radio shack and solder it all together yourself. I do not know, however, what parts will be necessary, and what to do.

Re: Overclocking the HP 49G

Message #4 Posted by [Ellis Easley](#) on 4 June 2002, 6:51 a.m.,
in response to message #3 by Frederik D. Hjort

I don't know what parts are required, or how to open a 49 (or close it up properly afterward!) but 15 or 20 Euros sounds like a bargain! To get it done right. Of course, then there is the shipping cost.

what I mean is ...

*Message #5 Posted by [Ellis Easley](#) on 4 June 2002, 7:00 a.m.,
in response to message #4 by Ellis Easley*

Speeding it up is probably very easy, changing a cap or maybe a crystal. Providing for switching between fast and regular speed - without short clock cycles that might require a reset - introduces electrical, logical and mechanical complications that make 15 or 20 Euros sound like a bargain

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rpn on mac

Message #1 Posted by [db\(martinez,california\)](#) on 2 June 2002, 7:25 p.m.

for what it's worth here is a link to some info on the above subject. i know nothing about the program, or mac; i found it while looking for something else. <http://www.dubclick.com/CCS.html>

Re: rpn on mac

Message #2 Posted by [Ernie Malaga](#) on 3 June 2002, 12:27 a.m.,
in response to message #1 by db(martinez,california)

I've been a Macintosh user since 1992. It's unbelievable that 10 years have passed.

The Mac has a large number of calculators available for download from websites. One such program is X48, which is a HP-48 simulator, which looks, feels, and works like the real thing.

To find this and other programs, you can go to

<http://www.versiontracker.com/>

Then search for "RPN" and voilà!

-Ernie

Re: rpn on mac

Message #3 Posted by [John K. \(US\)](#) on 3 June 2002, 12:48 a.m.,
in response to message #1 by db(martinez,california)

Hmm. The link takes me to a page trying to sell me, among other things, domain names. If I try "doubleclick.com" it 404s on me. db, do you happen to remember the name of the program? Thanks!

Re: rpn on mac

*Message #4 Posted by [Cr Toloss, Ca](#) on 3 June 2002, 12:58 a.m.,
in response to message #1 by db(martinez,california)*

Thanks Mr. martinez, I'm a mac fan, but looks like the prices on the downloads went up too. Lots of info on the 41C, very little on the 12C. BTW.. Thanks for changing the subject Sir.

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Ad Forum Closed...

Message #1 Posted by [thibaut.be](#) on 2 June 2002, 4:33 a.m.

... this is the reward...

Well, 1st of all and feremost, I want to thank Dave for the wonderful job he did and is doing, and for having built a wonderful community where I made several friends. And this totally free of charge.

Without this my collection wouldn't have been as good as it is.

One of the reasons I love to come here is that the people are *really* friendly, moderate, helpful, positive and constructive. I really do mean this. For example, Johnny informed everybody that 42S replacements were available ont he HP parts website, what I really want to thank : he enabled so many of us to get one of the last of these babies.

Dave, as site-owner and hence moderator, hardly gets into discussions and this is something I truly appreciate : On many sites the web owner considers himself as a god and because of his permissions is able to get the final word. Dave certainly does npt abuse of his rights.

I guess taht the MoHPC site is currently paying ransom for its success : many and many more people are joining our community, what is of course positive, but maybe from time to time bad internet habits arise.

To be very honest I haven't read the all litigious thread. For one reason : it was too long and too boring. I don't want to have an opinion about this but the main point is that courtesy rules should be applied on the AD forum.

And because someone, certainly respectful and asset to our community by his knowledge didn't want to recognize his slight misuse of the forum, and instead of writing "OK, I'll consider these remarks" wrote a long book to justify his behaviour, including insults to people of this community, the result is that the Ad forum is closed.

What we have to do now, in a constructive mind, is forget about all this and maybe set up some

courtesy rules. Here are mine, that I've applied since a long time : - never the same (or similar) ad twice in a week - grouping the items - if remaining items after a few ads, -> ebay. Though, and you can check my activity on ebay, I seldom use - no too long ads. Link to your own website page for details, pictures, ... In that concern I would ask Dave to enable formatting rules such as existing ones in this forum.

Long life to MoHPC website, and long life to the ad forum, which is one of the best ways to continue maintaining our collections.

Re: Ad Forum Closed...

*Message #2 Posted by [Juan J](#) on 2 June 2002, 12:26 p.m.,
in response to message #1 by thibaut.be*

A pity that the Ad Section was shut down.

I've met good people here and thank their help. And I regret to say that this is not the first bitter, personal, sometimes furious exchange in this forum. But it had never gone so far before, this time it was too much.

If there is an annoying item about anything on this wonderful site, it should be kept between the involved parts. It is sheer cowardry to start a fight without telling who you really are, intending to get as many as possible involved against a single individual; it is not very respectful to go on with it as if to back the illustrious unknown individual who shot the first shell. Suddenly everybody got an ax to grind and Both Dave and Doug, then some others, including Unknown, took it very personally.

Who is "Unknown"? And why suddenly everybody got an ax to grind or made it personal? Who is more jerkish, the jerk himself or the one who follows and backs the jerk? Why the urge to corner the accused after somebody who withholds his name shoots in anger?

I think we know better than this. Certainly. Such personal issues should be kept personal, not public. No one among us has been appointed the Gatekeeper or the Absolute Ruler of the HP Kingdom, and no one should behave as if he/she were it. Our little machines have made us a community, and I would even dare to say that we are a bit different from the rest because of that. Doctor Michael Meyer once highlighted sharing, cordiality and prompt help as the main characteristics of the HP Forum/collectors community. That last exchange about the Ads showed a quite different reality.

We can do better than this. So let's behave like the good people we are and put jerks and all this behavior aside for good.

Dave: is it possible to make it mandatory to include an e-mail address and a name, other than

"Unknown," for each posting? If there are privacy concerns, public free email services are available everywhere to protect your identity or privacy and the like. You can hardly respect a fellow who covers himself as "Unknown" and then, so to speak, starts a war.

By requiring an address, conflicts could be handled (without such bitter exchanges like the ones we have seen recently) between the involved/annoyed parties privately and thus avoid going public on the Forum. There is better fish to fry in the Forum than petty disputes over ads, transactions or replica labels, to name but a few.

Re: Ad Forum Closed...

*Message #3 Posted by [Dave](#) on 2 June 2002, 12:40 p.m.,
in response to message #2 by Juan J*

The issue is one of the 'members' is operating a business (profitable or not) by buying and selling calculators and works to keep his postings near the top of the ads. There is an appropriate place for running a business such as his (EBay) or setting up and operating there own web site where the true operating costs can be incurred. I am truly sorry that Dave Hicks has had to encounter the abuses of the site he has worked so hard to establish but unfortunately there are always people who will take advantage of others. A lot of other sites have had to ban classifieds due to similar behaviors and it is quite unfortunate that the behavior of a few can ruin a good thing for others.

Unknown revealed

*Message #4 Posted by [CJ](#) on 2 June 2002, 10:10 p.m.,
in response to message #3 by Dave*

The reason I used "Unknown" is because I didn't want to be barraged with tons of emails. This was a guess on my part that this person would do that. However my guess was confirmed when Dave said he had gotten 9 emails and didn't even finish reading all of them.

Dave posted:

The issue is one of the 'members' is operating a business (profitable or not) by buying and selling calculators and works to keep his postings near the top of the ads. There is an appropriate place for running a business such as his (EBay) or setting up and operating there own web site where the true operating costs can be incurred.

Exactly. This is why I posted the original message. He is obviously running a business and doing it here to avoid ebay posting and commission fees.

This I feel is taking advantage of Dave Hick's site and generosity. This has been going on for quite some time now. I knew other people had surely complained and it didn't

seem to change anything. I knew if I sent this person an email it would do nothing. Except maybe get me a mailbox full of inane rantings and name calling.

Juan J Posted:

Who is "Unknown"? And why suddenly everybody got an ax to grind or made it personal? Who is more jerkish, the jerk himself or the one who follows and backs the jerk? Why the urge to corner the accused after somebody who withholds his name shoots in anger?

I have no ax to grind and didn't make it personal. I posted 2 quotes. I didn't post any of my own words. My follow up posts to the person I don't feel are jerkish or that I tried to corner him. He said the ads were different. I showed him they weren't, again without any personal attacks. Unlike what I received in return.

I have been on usenet for years and if I wanted to make it personal I could have melted this person down into a smoldering pile. Reading his incoherent posts this would have been like shooting ducks in a barrel.

I didn't do that though did I?

I even asked my wife to read some of his sentences and she couldn't make heads or tails out of them.

I guess that's all I have to say about this issue besides the next 2 things.

I am truly sorry and apologize to the whole HP community here for starting this war.

I would also like to apologize to Dave Hicks for turning a VERY nice and friendly forum so ugly. This was not my intention.

God bless all and may your HP's run for years,
Christopher

BTW. this email address is valid.

Thank you for coming forward...

*Message #5 Posted by [Dave Hicks](#) on 3 June 2002, 2:07 a.m.,
in response to message #4 by CJ*

It's been an interesting weekend. On Friday, I flagged some emails about Doug's ads in my inbox but didn't go check them out right away. About three hours later, I came back and found a message from Doug about your posting on the forum. I did a quick check out of curiosity to see if "Unknown" appeared to be any of the previous complainers and it didn't.

I decided to let this one play out in public in the hope that it would lead to more self-control. I think it did, but it still wasn't pretty and I apologize to everyone for that.

I didn't get where I am today by ...

*Message #6 Posted by [Ellis Easley](#) on 3 June 2002, 6:45 a.m.,
in response to message #4 by CJ*

... failing to try to inject a tiny note of levity, for fans of "The Fall and Rise of Reginald Perrin"

(whose boss, C.J., frequently started sentences with "I didn't get where I am today by ...")

email...

*Message #7 Posted by [Dave Hicks](#) on 3 June 2002, 2:15 a.m.,
in response to message #2 by Juan J*

"Dave: is it posible to make it mandatory to include an e-mail address and a name, other than "Unknown," for each posting? If there are privacy concerns, public free email services are available everywhere to protect your identity or privacy and the like."

I could certainly require that the field be filled in, but doing it "right" requires verifying that the email address exists and that the poster reads that address. That means a registration system. This leads to some additional questions:

- 1) How many one-time/only-time posters will find registration inconvenient and not bother to ask their questions?
- 2) Do I want to implement that myself or switch to new forum software?
- 3) Does the average HP calculator owner not realize he can create a hotmail address in

under a minute?

These questions have so far resulted in me "back-burnering" such a change.

Re: Ad Forum Closed...

*Message #8 Posted by [Michael Meyer](#) on 3 June 2002, 10:19 p.m.,
in response to message #2 by Juan J*

Dear Juan,

Thanks for thinking of me. I followed the thread with a great deal of sadness. I really wanted to simply post, "knock it off." But, as Dave said he thought it best to monitor and let it play out, rather than censor.

I've learned the hard way over the years that it never pays to become "defensive." It makes a person look bad when they don't need to.

A real-life example: There's a surgeon in California that does a stomach-stapling type procedure for weight loss, named after himself, called the "Foby Pouch." A 20/20 (or 40/40 or 60/60..)-like show interviewed a woman who had terrible results; losing too much weight, becoming near-death ill, etc. When he was asked about it, he blamed it on her, saying, "she didn't follow my instructions," etc. This may have been quite true, but his defensiveness immediately made him look bad and the situation became adversarial, etc. Instead, all he had to say was, "...That poor woman. Not everyone has good results, and she did very poorly. And her case shows the risks...." And he would have come out looking fine. The lesson is: if anyone sticks a microphone in your face (with some parallels to the Forum), the worst thing possible is to become defensive. It's far better to say, "I'm not sure, I may have been wrong, I'll look into it..." or ANYTHING other than defensiveness.

I think too many parties on the that awful thread became too defensive and took things WAY too personally.

My hope here is to encourage that helpfulness you mentioned. This community has been very special, unique, supportive, and ... dare I say... even loving, in a hobbyist/collector/engineer/friendship/group-compatible sort of way.

Alright. I said it. And I feel better, anyway.

On to what matters most here: "Another day, another calculator..." Happy Programming,
Michael

It will return...

Message #9 Posted by [Dave Hicks](#) on 2 June 2002, 2:06 p.m.,
in response to message #1 by thibaut.be

The classifieds section will resume operating under these [Terms Of Use](#)

It may be a bit of a shock to go from a system that essentially consisted of "use your common sense" to such a wordy document, but given the age of the forums, perhaps we're overdue.

The terms are pretty generic stuff. I grabbed the text from another web forum's Terms of Use (with permission) deleted about 40% of it, and made it HP-forum specific. For the most part, it doesn't reflect a change in how these forums have operated for years. It just spells things out. It includes a few recent discussions such as using multiple "handles", and posting auction ads under misleading headings.

One important word in the document is "discretion". I think most will agree that I have been pretty hands-off. This document is not intended to signal a change in that attitude. Rather it should indicate that I do reserve the right to get fully hands-on when I feel the need. Historically, this has been very infrequent so a lot of you probably never even noticed.

The Terms are still a work in progress and I'm open to suggestions.

OK for me

Message #10 Posted by [thibaut.be](#) on 2 June 2002, 4:07 p.m.,
in response to message #9 by Dave Hicks

Quite formal, but seems necessary.

BTW abiding to your rules won't change jabits for most of us...

Thanks for opening the forum again, and for keeping this site alive, let's hope that the forum will remain as pleasant as it used to be

It's back (EOM)

Message #11 Posted by [Dave Hicks](#) on 2 June 2002, 7:49 p.m.,
in response to message #10 by thibaut.be

.

Re: It will return...

*Message #12 Posted by [Wayne Brown](#) on 3 June 2002, 3:32 p.m.,
in response to message #9 by Dave Hicks*

Looks good, but might I make a small suggestion? In the part about reposting items, perhaps you should make it clear that ads for particular ITEMS should not be posted more than once a week, regardless of whether those items are advertised individually or as part of a larger ad. That might help stop people from trying to use "loopholes" such as claiming that an ad wasn't a repost because SOME of the items in it had changed.

Re: It will return...

*Message #13 Posted by [Dave Hicks](#) on 3 June 2002, 9:58 p.m.,
in response to message #12 by Wayne Brown*

I added that - Thanks!

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HP 11C LCD DISPLAY

Message #1 Posted by [PHIL KOWALSKI](#) on 1 June 2002, 9:34 p.m.

PART OF THE LCD DISPLAY ON MY 11C HAS GONE BLACK - ANY CHANCE OF RECOVERY FROM THIS PROBLEM OR IS MY CALCULATOR NOW USELESS?

Re: HP 11C LCD DISPLAY

Message #2 Posted by [Christof \(US\)](#) on 1 June 2002, 10:44 p.m.,
in response to message #1 by PHIL KOWALSKI

It sounds like a broken LCD unit, which would be a non-recoverable error. But don't throw it away! It's useful for spare parts at a minimum.(try the classifieds page if you want to sell it.)

-Christof

Re: HP 11C LCD DISPLAY

Message #3 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 1 June 2002, 11:20 p.m.,
in response to message #2 by Christof (US)

You can also do the same, backwards: post a message asking for a nonworking calculator Voyager (except the newest HP12C; maybe their new LCD works with different voltages, due to the fact they use a single, 3.3V cell instead of three 1.5V cells) with a good LCD. Maybe some difficulties on replacing the LCD will arise; by now, it's good idea running for the LCD.

May I ask if the LCD looks like broken? Christof is completely right, there is no recovery from that; I would like to know how bad is it.

Success.

Re: HP 11C LCD DISPLAY

Message #4 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 2 June 2002, 8:59 p.m.,
in response to message #3 by Vieira, Luiz C. (Brazil)

Some time ago there was a question here about using the display of a newer 12C (not even from the last, redesigned model) to repair a 11C, and the experiment failed. You may try finding a 12C from the same timeframe (year?) than your 11C, but there are no warranties.

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Short & Sweet Math Challenges for HP fans #2

Message #1 Posted by [Ex-PPC member](#) on 1 June 2002, 9:27 p.m.

Thanks to all of you who were interested in the very first S&SMC, posted to this forum a week or so ago. Its thread had a total of 17 messages posted (including 3 by myself), so I take this to mean you like the 'section'. Special thanks go to Mr. Andres C. Rodrigues for his enthusiastic support and highly encouraging words. To honour your request, here's a new challenge for all of you and your favourite HP handhelds.

Last week's challenge (the one about the tangents), was mostly theoretical in nature, with just a little programming being useful to empirically try and discover the underlying relationship ($a+b+c=180$). Once postulated, said relationship could be demonstrated using symbolic math, perhaps with the help of some able HP (such as an Hp48 or HP49), though unfortunately nobody commented on whether those advanced models could cope with it and how.

All in all, it was a rather theoretical (if interesting) challenge, so in order to compensate somewhat, this week's challenge, #2, is much more empirical and will have you and your HPs working hard in order to succeed. It goes like this:

- 1) Take your favourite HP calc which can do matrices, either using fast built-in capabilities or else suitable programs for the task at hand. Specifically, it must be capable of storing a 3x3 or 4x4 matrix and compute its determinant. (Models with that capability built-in in fast microcode include: HP-15C, HP-41C + Advantage ROM, HP-71 + Math ROM, HP-42S, and HP-48/49 models, among several others. Most models can also be easily programmed to compute determinants up to 3x3 at least, so you've got ample choice)
- 2) Now, you must define a 3x3 matrix called A, and fill it up with the integers from 1 to 9, in any order you like as long as none of them are repeated. For instance, you can have your matrix like this:

$$A = \begin{vmatrix} 6 & 1 & 8 \\ 7 & 5 & 3 \\ 2 & 9 & 4 \end{vmatrix}$$

and its determinant is $\det(A) = 360$

- 3) The challenge is: find the arrangements of the integers from 1 to 9 which:

1. make $\det(A)$ the minimum possible non-zero value.
2. make $\det(A)$ the maximum possible value.

We are only interested on absolute values of the determinant, regardless of the sign. The solutions are not unique, of course.

- 4) As you can see, there are $\text{fact}(9) = 362880$ possible arrangements of the integers 1,2,...,9 without repetitions, so you'll have to make good use of your ingenuity and your HP's capabilities if you intend to avoid very long computation times.
- 5) If you succeed in the 3x3 case, try your might with the 4x4 case, i.e: find the arrangements of the integers from 1 to 16 which make the determinant of the 4x4 matrix maximum or minimum (but non-zero). The number of possible arrangements is now $\text{fact}(16)$, an impossibly large number to use brute force. Some finesse is indeed required. For instance, can you find an arrangement which makes $\det(A) = 1$? Or $= 4000$? or $= 4444$? Or > 40000 ? Which is more, can you theoretically demonstrate what are the maximum/minimum values of the determinant for an $N \times N$ matrix ?

A hard nut to crack, but thanks to our HP's quality, it can be done ! Give it a chance, refrain from the temptation to use a pc, and let us all see how you and your HP cope with this challenge !

Re: Short & Sweet Math Challenges for HP fans #2

Message #2 Posted by [John Ioannidis](#) on 2 June 2002, 5:24 p.m.,
in response to message #1 by Ex-PPC member

Several observations:

1. The maximum and the minimum solutions have the same absolute value (you get one by exchanging two rows or two columns of the other). Hence, we are only going to consider as solution the absolute value of the determinant.
2. The lowest solution is obviously 0, one of which is

$$\begin{vmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{vmatrix}$$

3. Due to symmetry, the number of solutions for each possible value is a multiple of 72 (exchanging rows or exchanging columns does not change the absolute value of the determinant; there are 3 ways to arrange the rows, and another three to arrange the columns. Rotating or transposing does not change the value either, so there is another factor of 8 there;

multiply and you get 72).

4. Again due to symmetry, the top left element can be considered to be 1; this leaves 8! instead of 9! permutations to consider, a much more tractable number on a calculator.
5. The really hard part is generating the permutations; it gets harder on HP calculators because you can't use a recursive algorithm and have to unwind the recursion yourself.

Now for some solutions:

1. The highest value is 412. Here is the first solution

	1	4	8	
	5	9	3	
	7	2	6	

All the solutions giving 412 are the 72 permutations of this matrix.

2. There are 2736 zero solutions.
3. The most common solution is 45: there are 3456 of those.

Re: Short & Sweet Math Challenges for HP fans #2

Message #3 Posted by [Ex-PPC member](#) on 5 June 2002, 10:15 p.m.,
in response to message #2 by John Ioannidis

Hi Mr. Ioannidis,

It seems that this week's challenge hasn't catch the fancy of math-lover members of this forum, as the only message posted so far has been yours. Thanks for it, but I feel some comments are in order:

Mr. Ioannidis: *"The maximum and the minimum solutions have the same absolute value (you get one by exchanging two rows or two columns of the other). Hence, we are only going to consider as solution the absolute value of the determinant."*

That's exactly what I said in my description of the challenge: "We are only interested on absolute values of the determinant, regardless of the sign."

Mr. Ioannidis: *"The lowest solution is obviously 0"*

Wrong. In my description of the challenge you can read: "find the arrangements of the integers from 1 to 9 which: 1. make $\det(A)$ the minimum possible non-zero value.". Observe that I explicitly requested **non-zero** value. With that condition in mind, the lowest solution cannot

be 0, obviously.

Mr. Ioannidis: *"The really hard part is generating the permutations; it gets harder on HP calculators because you can't use a recursive algorithm and have to unwind the recursion yourself."*

Wrong again. At least one model does allow recursion: HP-71B BASIC language allows subprograms and user-defined functions (single-line and multi-line) to call themselves, so permitting recursion naturally.

Mr. Ioannidis: *"Now for some solutions: The highest value is 412."*

Correct. What about the minimum *non-zero* absolute value ?

Mr. Ioannidis: *"There are 2736 zero solutions. 3. The most common solution is 45: there are 3456 of those."*

While this is of course correct, remember I pleaded: " Give it [your HP calculator] a chance, refrain from the temptation to use a pc, and let us all see how you and your HP cope with this challenge !"

While I'm grateful to you for your interest in the challenge and your results, it seems obvious to me that you ignored my plea and did use your PC or computer, not your HP calculator. While this is fun and interesting, you should bear in mind that these challenges are tailored to levels of difficulty affordable for an HP calculator, and are not intended to be solved using a computer, far too easy for that, no challenge at all. No clever techniques to overcome the difficulties either, a brute-force approach suffices.

Let's hope that, before the week elapses, some other kind contributors of this forum will shed some light on the solutions for the minimum 3x3 determinant, and the maximum and minimum 4x4 determinant. Seeing some code for any HP calculator would be great ! And finding a theoretical expression for arbitrary NxN determinants would be eidetic.

So I repeat: put aside you fancy PC at 2 Ghz and let your 71B, your 42S or your 49 do the job, Ok ? :-)

Re: Short & Sweet Math Challenges for HP fans #2

Message #4 Posted by [Thibaut.be](#) on 6 June 2002, 4:04 a.m.,
in response to message #3 by Ex-PPC member

Well, I have to admit that in order to apply to this challenge I had to go back to my old maths books.

I love those quizzes, but I propose that you lower a bit the level of the questions, I guess you'd get more answers...

Re: Short & Sweet Math Challenges for HP fans #2

Message #5 Posted by [Chris Randle \(Lincoln - UK\)](#) on 6 June 2002, 8:53 a.m.,
in response to message #3 by Ex-PPC member

At least one model does allow recursion: HP-71B BASIC language allows subprograms and user-defined functions (single-line and multi-line) to call themselves, so permitting recursion naturally

All RPL machines can have programs that call themselves too. If you have a program called FAC to calculate a factorial, then:

```
<< -> n << IF n 1 == THEN 1 ELSE n 1 - FAC n * END >> >>
```

works quite nicely with FAC(n) calling FAC(n-1) * n, etc. Tried it on a 28S. I know the "IF n 1 == " can be replaced by "IF n", but I thought the intent was clearer.

I'm going to have a go at your puzzle now, instead of doing the work I'm paid for ;-) I love puzzles like these for little machines. Thanks for posting them.

Recursion in HP calcs

Message #6 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 6 June 2002, 11:38 a.m.,
in response to message #3 by Ex-PPC member

I would just say that the HP 41 programming model (hence including the HP 41C/CV/CX and HP 42S calculators) allow for recursion at the user programs level.

Re: Recursion in HP calcs

Message #7 Posted by [John K. \(US\)](#) on 6 June 2002, 8:19 p.m.,
in response to message #6 by Andrés C. Rodríguez (Argentina)

[T]the HP 41 programming model [...] allow for recursion at the user programs level.

Unfortunately, due to the limitations one calling chain depth, this ability is somewhat limited. One of the programming projects I was working on many, many moons ago was a routine to copy out the return address registers in the 41 to the main storage registers and back again to seamlessly allow for longer calling chains. I don't think I ever got it working quite right and, since it was (obviously) filled with synthetic commands, it won't work on a 42S. Still, it might be interesting to see if I still have a copy of it somewhere...

Re: Recursion in HP calcs

Message #8 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 7 June 2002, 7:23 a.m.,
in response to message #7 by John K. (US)

You are right, I should have said that "...the 41 programming model allow for limited recursion"

Re: Recursion in HP calcs -- Pseudocode

Message #9 Posted by [Paul Brogger](#) on 7 June 2002, 6:48 p.m.,
in response to message #7 by John K. (US)

Here's how I think it would work.

.

.

Scenario:

. Main process named "MP"

. . calls recursive subprocess to figure something.

,

Recursive subprocess named "RSP"

. Figures something in two blocks of code ("RSP_a" & "RSP_b"),

.. with possible recursive self-call in between them.

- . Needs to maintain two local variables, “x” & “y” across recursive calls.

,

Logic:

```
. process MP
```

- .. allocate recursive call/return stack

```
.. initialize stack pointer to 0
```

```
.. [ do some work ]
```

```
.. initialize x = 0
```

```
.. initialize y = 0
```

```
.. set caller = "MP" [could be a numeric code, whatever]
```

```
.. GSB RSP_a
```

```
.. [ do some more work ]
```

```
.. clean up & exit.
```

```
..endprocess MP
```

•

```
process RSP_a
```

```
. [use x & y]
```

```
. push x
```

```
. push y
```

```
. push caller
```



```
. IF recursive descent indicated THEN
```

```
.. set caller = "RSP_a"
```

```
.. GTO RSP_a
```

```
. ELSE
```

```
.. GTO RSP_b
```

```
. endprocess RSP_a
```

```
.
```

```
process RSP_b
```

```
. pop caller
```

```
. pop y
```

```
. pop x
```

```
. [ use x & y ]
```

```
. IF caller = "RSP_a" THEN
```

```
.. GTO RSP_b
```

```
. ELSE
```

```
.. RTN
```

```
. endprocess RSP_b
```

```
.
```

"push" & "pop", of course, would utilize an array as a stack to save values and caller codes.

I'll have to try to implement a general solution to, say, the "Tower of Hanoi problem" on my 42s this weekend . . .

Re: Recursion in HP calcs

Message #10 Posted by [Paul Brogger](#) on 7 June 2002, 12:56 p.m.,
in response to message #6 by Andrés C. Rodríguez (Argentina)

If one kept one's own "call/return stack" in user memory in the form of codes indicating what was called and where to return, couldn't one simply use GTO rather than XEQ/RTN (or equivalents)? That should extend the depth of the call/return stack greatly. (Especially in, say, a 32K 42s or a 48/49.)

Re: Recursion in HP calcs

Message #11 Posted by [thibaut.be](#) on 7 June 2002, 2:09 p.m.,
in response to message #10 by Paul Brogger

XEQ <lbl> or GTO <lbl> are exactly the same, aren't they ?

Re: Recursion in HP Calcs

Message #12 Posted by [Paul Brogger](#) on 7 June 2002, 2:26 p.m.,
in response to message #11 by thibaut.be

Details, details!

Actually, that may betray how little I actually am engaged now in *programming* the things.

On my -32s (and presumably the -32sii) I believe that XEQ means "GOSUB" (call with return) and GTO means "GOTO" (go there without expectation of return). If I've got it right, the first enters a return address on the internal return stack, while the latter doesn't.

My HP-48G doesn't seem to have a GOTO, but perhaps I haven't looked closely enough. Regardless, one or more recursive routines could be broken into segments and sequenced through codes passed to special "Call" and "Return" subroutines. (Without a GOTO, it would just be a little more work.)

Of course, any variables whose values need to be maintained across such a recursive call would need to be maintained by the programmer on a stack as well. As with *any* actual implementation, there would be an real (if not a practical) limitation on just how far the process could recursively descend before the end of memory is reached.

I imagine that general-purpose "Recursive Call" and "Recursive Return" subroutines could be written for each calculator, with some documentation

detailing how to use them, and what other requirements there may be of the programming and storage for the actual routines being called. (I wouldn't bother with the -32s -- not enough memory. But the -41, -42S & beyond should be capable of supporting such.)

In fact, I don't know what the limit on subroutine descent is in the 49/49 models. I doubt it's anywhere near as limited as it is on the earlier machines. But I don't have my manual handy . . .

Re: Recursion in HP Calcs

*Message #13 Posted by [thibaut.be](#) on 7 June 2002, 4:56 p.m.,
in response to message #12 by Paul Brogger*

Well, on the 41C the GSB function is well present. Now I have a doubt. The difference between GTO and GSB is, as most of us know I guess, that the RTN function steps to the next instruction after GSB.

I will check that on my 41, but I think the XEQ function works like the GSB in that sense...

Re: Recursion in HP Calcs

*Message #14 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 7 June 2002, 5:05 p.m.,
in response to message #13 by thibaut.be*

In fact, XEQ as used in the HP41/42 replaced the GSB mnemonic used in previous models. The discussion about recursion has to do with the "pending returns" depth of an internal "return addresses" stack (nothing to do with the RPN stack, of course). The HP41 had 6 levels of pending returns, the HP42 increased it to 8; in any case this limits the "recursionability" of these models.

So your statement can be enhanced as "the RTN function steps to the next instruction after GSB" [as long as there are no more than "n" pending returns].

Re: GSB Considered Harmful

Message #15 Posted by [Paul Brogger](#) on 7 June 2002, 5:52 p.m.,
in response to message #14 by Andrés C. Rodríguez (Argentina)

Right. We're not talking about the RPN stack at all.

But, my point is, if you *AVOID* using GSB/RTN (or whatever) to call subroutines, you aren't bound by the limited subroutine call depth supported by the calculator's firmware.

To avoid GSB/RTN, one would have to *simulate* GSB/RTN functionality using application logic that is based on GTO (and probably utilizing arrays). This logic would have to save return "addresses" and local variable values on a stack, pushing the values at the time of pseudo-GSB, and popping those values as part of a pseudo-RTN.

So, given some clever programming and enough memory, you needn't be limited by the depth calculator's internal return stack.

Return addresses

Message #16 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 7 June 2002, 6:11 p.m.,
in response to message #15 by Paul Brogger

While we may think about keeping our own management of return addresses, it should be noted that you cannot return to an arbitrary program line. You can simulate a return by means of a GTO to an existent label (somehow identified by your "return handling" extensions), or go to a PHYSICAL address (which is most harmful, indeed!) using synthetic programming and a lot of discipline.

While I was the one who stated that HP41/42 could operate recursively, I am also among the first to admit such feature is very limited for general recursion.

Re: Return addresses

Message #17 Posted by [John K. \(US\)](#) on 7 June 2002, 8:58 p.m.,
in response to message #16 by Andrés C. Rodríguez (Argentina)

The method I used was actually a little simpler (in theory, anyway) than that mentioned by Mr. Brogger. It involved copying the two status registers ("a" & "b" as I recall), which contain all six return pointers and the program counter, to main memory, starting at an address that the user specified in an initialization routine. Two other registers were also used to keep track of the number of return frames (set of six return pointers) that had been used and the current reference count within each frame (so that the routine knew when it was time to copy the current frame and start a new one), and a third register to keep track of the starting point. I tried using one of the alpha registers for the last, but every once in a while something would happen and a program would munge the value. Lossage would then ensue.

It worked -- to a point. One of the problems I ran into involved the program counter, and another problem was (as is often the case with reference-counting systems) with calls to routines that didn't play along. The details are a little fuzzy in my head since I haven't really thought about this for 15 years or so.

(Wow. High weirdness in the forums.)

Final Remarks

Message #18 Posted by [Ex-PPC member](#) on 8 June 2002, 11:35 p.m.,
in response to message #1 by Ex-PPC member

Thanks to all those people that posted and/or were interested in this thread. This time there were fewer solutions given and no HP-calc code was produced, but I hope that at least you enjoyed the challenged. Now, just some final notes:

- Mr. Ioannidis was able to find the maximum value for the 3x3 determinant, 412. This is indeed correct.
- The minimum *non-zero* value es 1. One such arrangement is:

$$\begin{vmatrix} 1 & 2 & 3 \\ 7 & 5 & 8 \end{vmatrix} = 1$$

| 4 6 9 |

- The minimum *non-zero* value for the 4x4 determinant is also 1. One solution is:

$$\begin{vmatrix} 1 & 2 & 3 & 4 \\ 5 & 6 & 7 & 9 \\ 8 & 10 & 11 & 12 \\ 16 & 15 & 13 & 14 \end{vmatrix} = 1$$

A more economic notation for the above solution is:

$$\det(1, 2, 3, 4, 5, 6, 7, 9, 8, 10, 11, 12, 16, 15, 13, 14) = 1$$

- As for the additional, miscellaneous questions, here are two solutions:

$$\begin{aligned} \det(1, 2, 3, 4, 5, 6, 16, 8, 12, 15, 10, 9, 14, 7, 11, 13) &= 4000 \\ \det(1, 2, 3, 4, 5, 8, 14, 6, 11, 16, 9, 10, 15, 7, 12, 13) &= 4444 \end{aligned}$$

- Finally, the solution to the maximum value for the 4x4 determinant, I'll leave that for you. For instance, the following arrangement gives a suitably high value, but ... is it the maximum possible value ? That's for you to find out:

$$\det(16, 9, 7, 4, 8, 1, 13, 11, 3, 12, 15, 5, 6, 10, 2, 14) = 39030$$

- Also, many of you were interested in recursion. Actually, it has little to do with this challenge, as the most efficient procedure does not entail using recursion at all, but it is an interesting topic in itself.

As was stated, some HP calculators do support recursive procedures natively, such as the 71B BASIC, which supports recursive subprograms and user defined functions, and also the RPL models, which by the very nature of their programming model being based on a stack do also permit recursion very easily.

What to do when a programming language does not support recursion ? Simple, you fake it. For instance, in the 41C normal recursion would be limited to 6 levels deep if using XEQ. So the answer lies in not using XEQ (or GOSUB, GSB, etc. in other HP models), which uses the internal, limited return stack, but simply to use that much-dreaded instruction, GOTO (GTO, etc), together with a fake "return stack", created and maintained by ourselves, typically in some structure like an array, or some suitable registers put aside for this.

Does this sound difficult, or does it require complex, lengthy programming to achieve it ? Far from it, it's extremely simple, almost trivial. It has been mentioned here that the "Towers

of Hanoi" program would be a suitable test case, and it is. As an example, suppose we were to implement this using a version of BASIC that does not support recursion. As the only HP calculator that includes BASIC is the HP-71B and it does support recursion, let's use some other version, say the most simple, limited BASIC of them all, the one used in a famous contemporary of the HP-41C, the original Tandy Radio Shack TRS-80 Pocket Computer (exact clone of the Sharp PC-1211 Pocket Computer). This is a perfect machine for the experiment, as its BASIC is as simple as it gets, it has only 1.4 Kb of memory, and very few commands, not even multiple arrays or two-dimensional arrays.

Well, in such limited machine/language you can use the simulated-return technique to program the entire "Towers of Hanoi", simulated recursion and all, in just **six** (6) lines of BASIC. That qualifies as absolutely trivial. You can try the technique in your favorite HP calc as well, see how many lines/steps/bytes does it take you to program ToH simulating recursion. You can test your program running this example, which on the TRS-80 PC-1 goes like this (N is the number of disks, limited only by available memory, i.e: more than 50 disks possible)

```
RUN
N=3
FROM 1 TO 3
FROM 1 TO 2
FORM 3 TO 2
FROM 1 TO 3
FROM 2 TO 1
FROM 2 TO 3
FROM 1 TO 3
DONE
```

Re: Final Remarks

*Message #19 Posted by [Chris Randle \(Lincoln - UK\)](#) on 9 June 2002, 6:00 a.m.,
in response to message #18 by Ex-PPC member*

I'm still thinking about this puzzle! My brain is slower than most!!

I hope to have some code soon, so could you give me another 24 hours to come up with something (like code that can find the answers) before posting any solution? I mean algorithmic solution - not numeric (which has already been found).

Re: Final Remarks

*Message #20 Posted by [Ex-PPC member](#) on 9 June 2002, 6:52 p.m.,
in response to message #19 by Chris Randle (Lincoln - UK)*

Chris Randle wrote:

"I'm still thinking about this puzzle! [...] could you give me another 24 hours to come up with something (like code that can find the answers) before posting any solution?"

Thanks for your interest, and don't worry for any deadline to develop your solution, as I rarely post my 'code' solutions, if ever.

Normally I'll post a "Final Remarks" message, which may contain some numeric solutions and/or interesting related notes, hints and references, and that's it.

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problem with 42S

Message #1 Posted by [Craig](#) on 1 June 2002, 12:14 a.m.

I have a service replacement 42S made in 1999. Thing is, of late it seems to be just loosing memory and displaying 'memory clear' very often. Any ideas? It fell a couple of times.

Re: problem with 42S

Message #2 Posted by [Craig](#) on 1 June 2002, 12:15 a.m.,
in response to message #1 by Craig

I forgot to mention that I have changed batteries a few times hoping that the new batteries would solve the problem.

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HP Forum Archive 08

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AD over posting

Message #1 Posted by [Unknown](#) on 31 May 2002, 5:29 p.m.

"Ad section text quote"

HP Classified Ads

Please do not post ads for the same items or services more frequently than once per week.
Inappropriate or frequently reposted ads may be deleted at any time with or without notification.

"End Ad section text quote"

Posted by doug on 29 May 2002, 12:03 a.m.

ALL ARE BRAND NEW CALCULATORS

HP11C/Case - Original retail package - Sealed - Shrink-Wrapped - New in the Box

HP12C/Case - Original retail package - Sealed plastic Blister Pac with Manual & 1 Lithium Cell

HP16C/Case - No Box - No Handbook

etc.

posted by doug on 31 May 2002, 2:57 p.m.

BRAND NEW CALCULATORS

HP11C/Case - Original retail package - Sealed - Shrink-Wrapped - New in the Box

HP12C/Case - Original retail package - Sealed plastic Blister Pac with Manual & 1 Lithium Cell

HP16C/Case - No Box - No Handbook

etc.

EOL

Re: AD over posting

Message #2 Posted by [doug](#) on 31 May 2002, 7:46 p.m.,
in response to message #1 by Unknown

This is the forum not the classified section, and what you posted here does not belong here. This is a FORUM for resolution, not for personal slights, or threats of action against someone.

Next the sections of the ad you posted and the changes were necessary for other people. A person contacted me and didn't notice that below it was "Used Calculators" and thought all were new. That change was made to accommodate them and others like them. But since you chose the dates you did, why didn't you also notice the other changes such as the HP11C, and HP71 products added. Corrections were made to the HP11C addendum when I realized it didn't belong with the items it was listed with. The wording on a couple of other lines were simply invalid. Want me to continue this list? Want me to get your permission first?

I don't like reposting the ad at all. But when calculators or accessories have sold, or new calculators or accessories have been purchased or traded for, the ad needs to be changed. I don't set the frequency of the change, people that buy from me, or sell to me, or trade with me do.

Other people have ran one single ad with the exact same ad information and have only changed the time of the posting and I never seen anyone complain about it. I have certainly never seen a posting like this on the FORUM before.

I use to run multiple ad's but it is to much of a hassle to keep up with. I don't repost to keep my ad at the top, but only to add or remove items as necessary. People don't like to contact a person to buy something and then be told it is already sold.

If you wish to address me personally then select my id and send me an email personally with your email id. Don't ever post an item in the Forum to me with "UNKNOWN" again. Got something to say, then say it to me not to the people on this FORUM.

This discussion is appropriate here

*Message #3 Posted by [Dave Hicks](#) on 31 May 2002, 9:16 p.m.,
in response to message #2 by doug*

The classifieds section is not suited to discussions since there is no reply button.

"Other people have ran one single ad with the exact same ad information and have only changed the time of the posting and I never seen anyone complain about it. I have certainly never seen a posting like this on the FORUM before. "

Doug, people have complained about your repostings before. In fact, you've complained to me about people complaining about your posts so I don't see how you can claim that this is unique.

I'm aware of three other people who have annoyed visitors by frequent posting. The most recent was the PANAME module poster that was referenced in the recent cross-posting thread. Those posters toned it down after they realized they were bugging people. I requested the same courtesy from you some time ago.

Re: This discussion is appropriate here

*Message #4 Posted by [Spice_Man](#) on 31 May 2002, 10:23 p.m.,
in response to message #3 by Dave Hicks*

Thank you. I also felt Doug's frequent, virtually identical posts were getting quite annoying, and was doing no one but himself service.

Re: This discussion is appropriate here

*Message #5 Posted by [doug](#) on 1 June 2002, 8:14 p.m.,
in response to message #4 by Spice_Man*

"Thank you. I also felt Doug's frequent, virtually identical posts were getting quite annoying, and was doing no one but himself service."

You say this was doing no one a service but me. What do you think a classified ad is for. Charity?

But just in case you can't seem to reach far enough to understand this. Where did I buy these items from in the first place? Did someone else possibly make money from me when I bought from them? You bet your butt they did. If I don't sell them then I don't buy anymore. What does that tell you? Who really does benefit when a

sale is made?

How do you read the newspaper classified ads when they are almost the same all the time, until something sells?

How can a little line on a classified sales ad bother you so much? I really don't understand this.

If a simple classified ad bothers you that much then you need to find out why. My ad isn't your real problem.

Thanks

*Message #6 Posted by [Jim L](#) on 31 May 2002, 11:59 p.m.,
in response to message #3 by Dave Hicks*

It was getting a monotonous to see the same ads over and over.

Re: This discussion is appropriate here

*Message #7 Posted by [doug](#) on 1 June 2002, 12:14 a.m.,
in response to message #3 by Dave Hicks*

You did contact me in the past about posting the ads. You said you had received complaints that I was posting to keep my ad at the top of the list. That simply wasn't true, and is childish for adults to think such a thing, and worse for them to even say it. The only thing that can top that is for someone to hide behind an id like "UNKNOWN" to try to provoke a person, no matter who it is. They posted and threatened to delete my ads. I have no time for such people. They posted large sections. Not the one statement they were trying to bring to site. What happened in this instance was a person thought the statement meant all calculators in the list were new, not just up to the point where it stated "USED CALCULATORS". I found some people just don't catch such things and others have a hard time with English and I try to re-write so it isn't confusing to them.

As a matter of fact it really doesn't make any difference where it is posted because most people use a find command to get a hit on the subject field for what they are searching for. I know that because I have been in DP since 1976. Many times items appear in a combined ad like this to be the same, because some people gloss over them. But the items change as well. Sometimes you might see an Hp-11c or Hp-15c or even Hp-16c for example and think it is the same unit or the same unit being reposted after being pulled a while, and it isn't.

At that time you contacted me in the past I asked you if two things are possible.

1. Could you make a change to the software so that an ad could be updated in place. In other words without having to delete the complete ad and going through the hassle of deleting the lines in the ad or placing new lines and then copying everything back over.

2. I asked you at that time to post specific rules and I would be glad to follow them.

But when I post an ad and nothing sales in a week or more it hasn't been changed. If something sales I repost the ad without the item. If I make an acquisition I post the new item(s). If you have a problem with this then you want a selective person classified ad, not a true classified section. What that means is you want to pick and choose who use this website, and not run a true classified ad, or forum. Forums are not for personal attacks by anyone on anyone, or for a website owner or anyone else to use it to badger or pound on people, or to build a personal case against a person you just want to push around or off of a website. I told you before if you don't want me on your website just say it. But I did request that you give me a stated reason.

You carefully stated that people complained to me and you. No, one person complained to me. I'm still not positive they know how to read or comprehend what they read for sure. When you posted your response today, you left out the two main items I asked as a resolution above. You always try to paint a negative picture in your wording when you don't like someone. That is not only evident, but proven, to me if no one else. You and some of the other people have already responded to what I wrote and you couldn't have read it, and responded as you have, if this wasn't true. It just couldn't be possible.

So, if what you have caused me to believe isn't true, then explain why you would make such a big deal out of nothing. A reposted classified ad, that has been changed. What rules? Am I the only person that has to wait to re-post? You put changes should be held to once a week at the top of your classified ad. I had 3 items sell in about a days time. Within a day or so latter I traded one of the new calculators for a used older calculator and one had to be removed and the other added. What should I have done? Wait another week? So people could contact that are looking for the unit I no longer have, and not contact and get the unit I do have to sell?

Re: This discussion is appropriate here

Message #8 Posted by [Dave Hicks](#) on 1 June 2002, 1:55 a.m.,
in response to message #7 by doug

"At that time you contacted me in the past I asked you if two things are possible."

I received your nine responses and for the most part didn't read them to completion. Thank you for being more civil this time. Last time when you asked "Do you really know how many jerks visit this website?" I responded that you were welcome to stop using it if you wished. If the jerks are still annoying you, the offer is still open. I have no control over them, can't identify them, and may even be one of them for all I know.

If you wish to stay, that's great, but please remember that this is a free service. It may not meet your idea of perfection. It doesn't even meet mine! I often extend the site and add features when asked nicely. I generally don't respond as well to insults and demands. Nevertheless...

"You put changes should be held to once a week at the top of your classified ad."

Thank you for noticing. You demanded that rules to be spelled out and enforced. You got it.

Re: This discussion is appropriate here

Message #9 Posted by [doug](#) on 1 June 2002, 3:27 a.m.,
in response to message #8 by Dave Hicks

You received ever how many responses after I received ever how many false accusations.

The main thing you did the last time was the fact that you didn't verify what the person complained about before you sent me emails and flat out accused me of doing what they had accused me of. You said I was posting an ad to just keep it on top. I wasn't. You followed that email by more than one and did the same thing before you looked at what I actually wrote. For a person to make such an accusation is ridiculous. What would I or anyone have to gain by such a childish action? Nothing. Who would think such a thing? A childish minded person. You did that more than once, before you even looked at what I said. You did have me angry by then, and it was uncalled for, and I responded accordingly, whether you consider it right or wrong. What you don't understand is I don't even think like most people do. I never have even when I was a child. I don't spiteful things,

because they are a waste of time and energy.

You obviously don't know how many jerks do get on this website and work together to tear down a person that does sale. Most of the people that make inquiries are civil, but many don't respect the postings. You can put an FSBO ad on this website and people will send emails asking you to quote a sales price. Why?

Some people have made offers in the past and I accepted. They asked for a shipping quote and give me their address, and I would look it up and let them know. They have said it is fine and would send payment. I have waited a week or more sometimes and sent an email to find out if they had sent the payment yet. They would then ask if I take paypal. When I said yes then they said they would just send payment that way. I waited 3 days and sent them an email again. Then they said they bought a "" calculator somewhere else, and was no longer interested. I think once a person has extended an offer and it has been accepted, and all the other information is exchanged and provided as well as the item is packaged and ready to go, and then a person do something like that, well, I think JERK is appropriate, among other things, how about you?

Many people had bought from me the last time I told you some were jerks on this website. I wasn't as new as you may have thought I was at this. That was just one example of those types of people, not the average buyer or shopper.

I appreciate it when a person buys from me. I don't get angry or even care if they don't. I know not everyone is going to buy what you sale. Some want these items at 1980 prices. If someone would sell me batch of brand new HP16C's for \$100 each, I would be glad to sell them for \$200, or maybe even \$150. But in reality land that doesn't exist anymore. Sometimes many people come back to me and buy something latter because I don't get emotional or angry when they don't. I just try to keep the information as accurate as I can. I don't need childish testing by people, I am just selling objects, not my love. Though some of them are hard to let go of at times.

If you prefer people or only collectors that post an ad for only one or two items at a time then that is fine. I think you don't understand that 99% of my sales are to users. They are the kind that buy these units and put them to work earning a living. Most are buying units for one of these reasons.

1. Security Blanky - They are going up in price and they want a backup while they can afford it.
2. Theft - One of the major reasons. Their unit was stolen.

Many times where they work and they feel violated much worse than many other

people. Most can't stand the idea of putting \$200 to \$300 into a calculator than is so likely to be stolen. It just takes the heart out of them. 3. Loss of a buddy - Their unit is now only doing calculations in the calculator hereafter. Because their unit doesn't respond on this earth anymore. 4. KIA - They were killed in action - People have contacted and bought from me that have dropped them into sewers, water, mud, and even in front of a moving bulldozer. Needless to say they were put to work immediately upon purchase and not sent to any calculator survival training, and they couldn't swim, jump or run, so they didn't have a chance. .

I have to be able to update the ads to accommodate peoples needs. So I will look for another website to sell on. But I will tell you that for every person that bought from me, made it possible for me to buy from some of you. And some of you made a lot of money off of me, to turn such cold shoulders to me now. That I won't forget.

Re: This discussion is appropriate here

*Message #10 Posted by [Dave Hicks](#) on 1 June 2002, 3:58 a.m.,
in response to message #9 by doug*

The main thing you did the last time was the fact that you didn't verify what the person complained about before you sent me emails and flat out accused me of doing what they had accused me of.

As I said back then "I've looked through the logs and the ads from 11, 9th, 6th, 4th etc. do look nearly identical. I don't see the difference between some days but on others I do see a few dollar price change" and you responded with "you fall just short of calling me a liar"

Well I'd say it was FAR short of calling you a liar. I was saying that I could understand why they thought you had reposted the same ad, because I couldn't tell them apart either. Perhaps you were in error. Perhaps there was something I also missed. In either event, I thought the complaint was understandable.

Sheesh, all this that started with "Could you please reduce the frequency of reposting the same ad?"

Re: This discussion is appropriate here

*Message #11 Posted by [doug](#) on 1 June 2002, 4:38 a.m.,
in response to message #10 by Dave Hicks*

That is the whole point. I didn't post the same ad. I wouldn't.

If it means so much to you to know. Do you have a utility program that will allow you to compare the two files and find the differences? If so run it.

Yep, there may only be price changes. That is one of the most common changes to any classified ad.

There very well could be changes made back then, where I found words that were wrong in usage, or the spelling was incorrect. And silly me, I would correct it. If someone wants to gripe about that they need to find something to do with their time. And I will admit I did do that quiet often at that time. I have gotten to the point to where I do a spell checker an the entry before I post it most of the time now.

I will agree that the same exact ad posted all the time at the top of the list would be annoying. But if a new item is added, and it is exactly what you are looking for, then it isn't annoying to that person. You have people that are lazy at everything. They just don't want to read and see what is different. They want to tell you how to place your ads for them. Well if they want to do the work that is fine with me. But I don't like people telling me what to do with my property. It is that simple.

Try and understand this. My ads appeared they were changing much more often then and recently because I did combined ads. That will happen. If you read my other postings, you will see I tried it all. Grouped ads by series of calculators, or accessories will cause about a daily change, if items sell. But instead of many ads being changed there is only one ad. The frequency of actual changes has been greatly reduced. And another reason, I removed the prices. This is just more noticeable on a single big ad. Re-posting of an ad that has only one or two items every couple of days isn't good. But don't you think combined ads with up to 10 or 20 or more items should be allowed to be re-posted when items sell or new items are purchased to sell?

An update in place would be much better, easier, less time consuming, less work, and it would only be at the top of the list once when it is

originally posted, or when it is about to roll off and gets re-posted. An automatic warning sent before your ad rolls off the website with a 3 day lock which allows you to just push a button and re-list would be great also. This combination would be the ultimate.

Re: This discussion is appropriate here

*Message #12 Posted by [Unknown](#) on 1 June 2002, 7:37 a.m.,
in response to message #11 by doug*

<Do you have a utility program that will allow you to compare the two files and find the differences?>

Yes, It is called "diff".

\$ man diff

<If so run it.>

I did.

EOL

Re: This discussion is appropriate here

*Message #13 Posted by [Dave Hicks](#) on 1 June 2002, 10:31 a.m.,
in response to message #11 by doug*

"That is the whole point. I didn't post the same ad. I wouldn't.

If it means so much to you to know. Do you have a utility program that will allow you to compare the two files and find the differences? If so run it."

I did.

Re: This discussion is appropriate here

*Message #14 Posted by [doug](#) on 1 June 2002, 6:03 p.m.,
in response to message #13 by Dave Hicks*

What is the point of this? This issue was covered quiet thoroughly, and the whole original posting against my ad was proven invalid. I have received emails from people that like myself have figured out for themselves who the "UNKNOWN" is.

This is the last time I will address this issue with you or anyone, unless you can prove to me I broke the rule you have concerning this issue in the classified section of the website, and only after you have read this posting in its entirety. If you say anywhere in a response to this posting that you didn't read it in it's entirety for any reason, I will consider this issue dropped, and I will not respond again. You better understand how serious I am about this now.

"Do you have a utility program that will allow you to compare the two files and find the differences?"

No you didn't. If you did run the utility on the file and find only this one instance then your file system or program is hosed.

The keyword here is "differences" Did you compare the file over the time of it's existence or even over a 24 hour period before or after this one instance, and find all differences or do you just want to Harp on one change that you program did find? And this was a valid change to the ad even if there was no other.

"Please do not post ads for the same items or services more frequently than once per week. "

Once again I didn't break this rule. I combined many items into one ad. I don't repost one ad with one or maybe two items over and over. You are totally out of line with your own rules.

If an ad is ran on a classified section and one item is added or deleted to that ad and then it is re-posted, it is obviously not the same ad, and it didn't break your written rule. It is not by law the same ad not matter how similar it appears. If a person has found

misspelled or improper word usage which changes the original intent of the ad, or the there are changes made for the clarification as to the understanding of an ad, then it is proper for it to be corrected as soon as found and the reposted.

A proper explanation was given on the one change you continue to HARP on. The first time you posted was to try to shame me, and turn your crew into discrediting me as a person or as a re-seller. I took the time to respond to you properly even though the manner of attack didn't warrant it.

The emails you addressed that we exchanged were not submitted as a part of this FORUM and you had no right to bring them up here. If you want to email me about them then do so and I will listen. But don't ever try this type of technique to bring private emails into a public FORUM again. That is totally unacceptable. Had you researched what the person claimed I did in the first place, I would have never received the emails from you or you from me in the second place.

The first time a person brings an issue or claim against a person on a FORUM and it is properly responded to and proven to be invalid should end it. Any subsequent attempt at the same thing is nothing short of harassment, which is illegal. You should have researched and proved it to be true before attempting to post such an accusation.

So address the exact issue I defined as having proved this isn't a repost of the same ad, or simply leave it alone.

Don't try to pull one quote at a time and try to harass me with nonsense opinions. I don't care. I don't and won't make time for it again.

I stand ready for you to address the exact issue if you wish and I will respond in kind, but only to proof that my ad was a repost of the same ad. Otherwise I consider this the completion to this issue.

Doug: This isn't YOUR WEB PAGE

*Message #15 Posted by [Ron Ross](#) on 1 June 2002, 10:03 p.m.,
in response to message #14 by doug*

Doug,

While you may feel you have been attacked unfairly, your responses have been immature and extremely counter-productive. I have felt that you have provided a product to the communtiy, a reliable source of hard to find Hp calculators, should someone have an immediate need and want to bypass ebay.

However, your name calling and reaction to others, regarding how you handle criticism from the host of this site, simply means that you should either try to reconsider your position, or advertise elsewhere. You could create your own web page perhaps. Dave did not charge you a posting fee, or did he? I don't think so. And how do you repay his genorosity? By name calling and resorting to immature behavior.

Your responses have only mired you and your reputation. The crowd you are arguing with has no business or revenue loss to associate with their comments, or any real repercussions. You do.

AND IT ISN'T YOURS EITHER

*Message #16 Posted by [doug](#) on 1 June 2002, 10:30 p.m.,
in response to message #15 by Ron Ross*

First, and foremost, I invite you to show me where I did any name calling, on this FORUM.

Second, I personally can't stand internet slang lingo name calling. I despise it. I was called a "flame". That to an adult is an insult. People that believe in that lingo are childish. I believe it is nothing short of defamation character to even attempt to call anyone such a name. And it is CHILDISH!

Third, Provoke a person and they will respond.

Fourth, Falsely accuse and they will fight back.

Your large lettering of this is not my website was uncalled for. I didn't say it was. I did nothing to anyone but run a classified ad. Why should I accept criticism of any kind on a public forum about a classified ad? Want to show me anything that warrants this type of treatment of anyone on a public FORUM? You should have read all of my post's before you commented.

You are just like another person on this website. You don't even know what this is really about. It isn't over the one little ad reposting, that is just an excuse. You do not know what actually transpired. Mister you are way out of line, but I know you don't even realize it.

Counterproductive Messages

*Message #17 Posted by [Wayne Brown](#) on 2 June 2002, 10:43 a.m.,
in response to message #16 by doug*

Doug, I really think you're shooting yourself in the foot here. How many times you post an ad doesn't make any difference to me whatsoever. It does seem to me that the intent behind Dave's rule about re-posting ads would be to prevent any individual ITEM from being re-listed more than once per week, either individually or as part of a multi-item ad. So if a single item was listed in two ads in the same week, even if the ads were worded completely differently, I think that would be a violation of the rule. That appears to me to be the obvious interpretation of the rule's intent. (Dave is welcome to correct me if I'm wrong). However, as I said, it doesn't bother me, personally, how often your ads are posted.

What does bother me is the tone of most of your messages in this thread. I don't remember if I've ever bought anything from you before, but I do recall you as a helpful person who has posted a lot of useful

information here. But the extremely belligerent messages you've been posting the last few days (especially those addressed to Dave) would make me very hesitant to do any sort of business with you. A seller is only as good as his reputation, and I think you're doing serious damage to your own. Before you ask: Yes, I've read every message in this thread so far, and based on that, I see no reason for you to behave so rudely to Dave. We are all guests in his forum, and the impression you're giving is of someone who goes to a party and begins abusing the host verbally in front of the other guests. You'll probably say that I don't know the whole story because I haven't seen the private emails. You're right, I don't know the whole story. But that's the point. I, and most of the others here, know only what we see in this public thread. Based on your messages -- not other people's messages or accusations anyone has made against you, but only on your responses, on YOUR OWN WORDS -- I simply wouldn't be comfortable doing business with you.

Again, this isn't a judgment of whether you're in the right or in the wrong, simply a statement that your behavior, regardless of the reason for it, is presenting you in a very bad light. If there are others who feel the way I do (and I suspect there are), then you have lost (or are losing) potential customers over an argument whereby you stand to gain NOTHING even if you "win" your fight. My advice is to take it back to private email or (better yet) drop it altogether as you're only hurting yourself.

Re: Counterproductive Messages

*Message #18 Posted by [doug](#) on 2 June 2002,
12:08 p.m.,
in response to message #17 by Wayne Brown*

The only way I can respond is this. You really don't know what is behind this. You haven't paid attention to when some of these people do this type of treatment to other people before. It is WRONG. I don't care who it is.

You wrote a considerable amount in the beginning of what the rule meant. The original contact to me was "I was reposting my ads to keep them on top of the Classified Sections list". Which was ridiculous.

You said yourself you don't care. Who could honestly look at a classified list, and see a line and just not ignore it if it is something you aren't interested in?

"A seller is only as good as his reputation, and I think you're doing serious damage to your own."

A seller's reputation is and should be based on his honesty with people he does business. I don't appreciate you trying to infer that my reputation as a seller has anything to do with people's opinions about a placed ad.

This is the final posting about this. You really didn't read the postings with understanding.

You really don't know what this is about, and I know you don't. But, I will not discuss it further at this time.

I did not abuse anyone. I did not provoke any of this.

"You'll probably say that I don't know the whole story because I haven't seen the private emails. You're right, I don't know the whole story. But that's the point. I, and most of the others here, know only what we see in this public thread."

Did you read enough to see where he said he didn't read all of my emails? He didn't. He should have responded to me with emails instead of doing what he did. What do you think a big part of this problem really is?

If anyone contacted you and started telling you that you had done something you hadn't, then you would be aggravated. If they did it more than once and continued to try to prove themselves right no matter what you would get angry. If they call you certain names, you would be ANGRY! Understand now?

I don't really care about this at all. I am a mature enough and old enough man to know how stupid and childish the attempts were and are. That will never change.

You made an awful lot of statements as to what I have done and what I am based on a few tiny FORUM responses. I don't know how you or anyone else can get such detailed information about what a person is, by such few words.

YOU CAN'T. No one is that smart. You nor anyone else has a right to state what I am or anyone else is on a public FORUM. But can provoke certain responses, to try to anger a person into writing something that some of you will walk away from. But in the end, the techniques don't change the facts or the truth.

Re: Counterproductive Messages

*Message #19 Posted by [Wayne Brown](#) on 2 June 2002, 10:06 p.m.,
in response to message #18 by doug*

"A seller's reputation is and should be based on his honesty with people he does business. I don't appreciate you trying to infer that my reputation as a seller has anything to do with people's opinions about a placed ad."

Sigh. You've completely missed the point of what I was saying. Your reputation as a seller consists of WHAT PEOPLE THINK ABOUT YOU. No matter how honest you are, if you are perceived as an unpleasant person, some people will choose not to do business with you. I'm one of those people; no doubt there are others. If you think our numbers are small enough that you don't need to worry about losing our business, fine. That's your decision. But if you think that your honesty is the only factor people consider in dealing with you, then you have a few things to learn about human nature. I know of people changing the brands of products they use, just because they didn't like the politics and/or lifestyle of actors who were hired to promote those products in television commercials! And I myself have never purchased any "Ben and Jerry's Ice Cream" because I dislike the politics of the men who founded the company. That's why most smart business owners never make public statements on controversial topics.

"This is the final posting about this. You really didn't read the postings with understanding."

"You really don't know what this is about, and I know you don't. But, I will not discuss it further at this time."

"I did not abuse anyone. I did not provoke any of this."

You didn't read MY message with understanding if you think any of that matters. How your customers (especially *potential* customers) perceive you is what matters. You would have done much better not to discuss it (at least in the way you did) in the first place.

You provided a reasonable explanation for why you posted your ads the way you did. Had you simply done that and ended by saying you were sorry if you had offended anyone, and asked them (POLITELY!) to discuss any further concerns privately, you would have come across as a reasonable person with good intentions. Instead, you appeared (to me at least) as touchy, defensive, and unpleasant. That's enough to put any merchant out of consideration for any of my future business. It doesn't matter whether you think that's unfair, or foolish, or whatever. It doesn't matter that you were responding to what you saw as an unfair attack. I (and probably the other people posting in this thread) don't stand to lose anything important in this discussion. I'm not trying to sell anybody anything. YOU ARE. You stand to lose business over this issue.

"If anyone contacted you and started telling you that you had done something you hadn't, then you would be aggravated. If they did it more than once and continued to try to prove themselves right no matter what you would get angry. If they call you certain names, you would be ANGRY! Understand now?"

Yes, I would be angry. (Well, not at the name-calling; name-calling amuses me more than anything else, as it's a sign the other person has run out of real arguments.) But if I were a seller, no matter how offended I was, I would

have responded to the first message from "Unknown" by stating the facts politely and apologizing for any misunderstandings, because I would have cared more about the impression I was giving other people who read this forum than about defending myself. Most importantly, I would have responded to any criticisms from Dave by either (1) accepting his terms unconditionally or (2) saying I was sorry, but I would have to stop using the classified ads under those terms. What I would *NOT* have done was to show anything but gratitude to him for providing the "Classifieds" section and giving us the privilege of using it.

"I don't really care about this at all. I am a mature enough and old enough man to know how stupid and childish the attempts were and are. That will never change."

Regardless of how mature you may be, you didn't *appear* that way. That's what counts.

"You made an awful lot of statements as to what I have done and what I am based on a few tiny FORUM responses. I don't know how you or anyone else can get such detailed information about what a person is, by such few words."

"YOU CAN'T. No one is that smart. You nor anyone else has a right to state what I am or anyone else is on a public FORUM. But can provoke certain responses, to try to anger a person into writing something that some of you will walk away from. But in the end, the techniques don't change the facts or the truth. "

People get wrong impressions all the time. You could be the nicest, sweetest guy on Earth for all I know. But people act on what they

believe, and if you lose a sale because of a false impression, it still costs you money. The people who provoke or misjudge you don't lose anything.

The fact that you responded to my advice with another defensive message about how right you are and about how I have no right to state these things just reinforces my original opinion. I simply won't do business with someone who can't handle complaints in a calm, polite and impersonal manner.

Re: Counterproductive Messages

*Message #20 Posted by [doug](#) on 3 June 2002, 12:35 p.m.,
in response to message #19 by Wayne Brown*

Do you actually realize what you wrote. You wrote honesty in business isn't important as long as you are popular.

You simply don't know what this is about. Yes I resented you making a comment about my postings. You obviously didn't read my postings with understanding. No one had a right to write anything about me in a negative light on a public forum. Or comment about it. It should have been handled by email where it was started, or by two attorneys if a person doesn't clearly know when they are in the wrong and simply back off and let it go. When a webmaster constantly demands to be acknowledged as right at all times, is wrong. When one of them always tries to involve other people and never handle anything themselves, they are wrong. When they try to get multiple buddies to provoke and annoy and abuse, and then expect to be apologized to, then they are idiots. Do you understand now? You can't

just write what you want about a person especially to anger people towards them, or to provoke them.

Dave Hicks brought private discussions to a FORUM.

Do you understand what is wrong and who is in the wrong? I have to hold my comments now until some information is provided to me.

You are wrong about sales. People that know me, trust me, and know when they buy from me they will get what I describe. Not technicalities, or excuses. Sometimes they pay more when they buy from me than other places. Some people think that I charge a fortune and make a fortune. Some try to stiff me with prices. I actually try to help them make money. Some think because we are in the US we are loaded. Wrong. I make \$5 to \$50 on almost any sale. That is before paying any bills. Computer cost, electric, or any of my time. I actually make about \$1 an hour down to - \$3 to maybe \$4 at times. Some of the people on this website will say anything. They are all wrong. I am not a merchant, nor do I have a merchant account. Everyone that has insinuated I am running a business is full of crap. Do you understand now. They lie. They don't have any proof of what they claim because there isn't any! Did any of this simply sink into your heads this time? DID you read and comprehend what I wrote this time? Do you really expect me to tell these kind of people I am sorry. You got it backwards PAL. They owe me many public apologies.

The people that buy from me know I filter what I sell. I recently got a piece of junk

dumped on me by a seller on MoHPC. He also runs a museum. I didn't receive a working calculator I purchased but a calculator that had 5 holes punched in the keyboard membrane. He tried to claim it was done in shipping even though I sent him photographs of the box and there was no damage. But the damage was on the inside of the calculator where it could only have been done by use or abuse. Or simply something hot dumped on the keyboard like coffee with sugar, and then waiting until it dried and hardened and then pushed the buttons and they punctured the membrane.

I didn't and wouldn't try to dump something on someone else. It was junk at the price paid but fine as a parts calculator. I could never find the part to repair it so I posted an ad to sell it as parts only.

I also bought a unit from a guy the same week in Europe where that one was from, and it was exactly like he told me. I was amazed. He made it possible for me to hold my breath and just make it work. Without a dose of his honesty I would have flipped. Do this enough and let me see you be so sweet and kind.

Anyone that has gone through that type of situation once, knows what a drain it is on you as a person, financially, time, trust, you name it.

That is why most people that buy from me come back when they want something. They know I won't try to dump something on them. That is the main reason. They know I will have handled it, and not them. I am some people security blanky.

At this time, I have list from people in both the USA and Europe, and I can't even find 2% of what they have requested. Some have strict almost impossible prices, and some have items that just don't ever show up. They didn't watch MoHPC as much as they did, because they had me doing it. So yes, they are paying me to watch the websites, and find what they want, if I find what they want. I don't just buy and sell. I am actively looking all the time for items that are already sold if I can find them.

I won't be able to buy from people on MoHPC if they have something that is on a list that a person wants. People on MoHPC won't see what I have found that they may want to purchase. People on MoHPC that I use to buy from won't make those sales now. People that use to sell to me on MoHPC won't see my money or other peoples that I have to spend for them. Now you look at what you wrote, and look at what I wrote. Who is right?

I have other websites that gratefully welcome me. Their main complaints are con artist and liars. They love honesty. I am no real problem to them or their users. I tried one a few days ago for the fun of it. My sales are up 400% on what I do have. And I can sale anything including a pissed off moose if I had one. They wouldn't care, and someone would buy him just to say he owns a pissed off moose. Understand?

This isn't all personally to you. This is to those that know who they are and what they have done. They can be smug today, and they will pay tomorrow. To those that didn't get the beam out of their own eye before trying to get the splinter out of mine,

will find out for sure. That is for those that like to put God Bless immediately after breaking the golden rule. Talk about hypocrites.

Re: Counterproductive Messages

Message #21 Posted by [Wayne Brown](#)

on 3 June 2002, 3:22 p.m.,

in response to message #20 by doug

Well, it's clear that I'm wasting my time trying to help you here, so I'll quit trying. But first I'll address a few points from your latest message:

"Do you actually realize what you wrote. You wrote honesty in business isn't important as long as you are popular."

Believe it or not, it's possible to be honest and courteous at the same time. Think about it. It's not such a difficult concept.

I never said "honesty in business isn't important." I said that honesty ALONE isn't enough. For someone who keeps harping on "reading with understanding" you certainly seem to have some issues with reading comprehension.

"Dave Hicks brought private discussions to a FORUM."

This thread was started by someone who was posting as "Unknown." Dave didn't get into it until after you responded to "Unknown's" message. Are you implying that Dave and "Unknown" are the same person?

Someone else has already confessed to being "Unknown." Besides, why do you think you are free to criticize the way Dave runs his forum? As I keep pointing out, you (and the rest of us) are his guests here. If Dave gives you instructions in the use of the forum, whether publicly or in private email, your options are to (1) leave or (2) say "Yes sir, Mr. Hicks, sir." Talking about him the way you've been doing demonstrates ingratitude and just plain rudeness. He must be a much more patient person than I am; by now I would have banned you from the "Classified" forum (and possibly the "Discussion" forum too) if I were in his place.

"Do you understand what is wrong and who is in the wrong? I have to hold my comments now until some information is provided to me."

I don't have much hope of this, since you've already told us several times that you weren't going to discuss it further, but somehow your messages keep appearing. However, I actually **meant** it when I said I was going to quit, so this is my last message in this thread. If you feel the need to have the last word, then feel free to insult or ignore me as you choose. You've already convinced me that I will never do business with you under any circumstances.

As a parting gift, here are a couple of old sayings you may want to meditate upon:

"The customer is always right."

"Don't bite the hand that feeds you."

Re: This discussion is appropriate here

*Message #22 Posted by [Spice_Man](#) on 1 June 2002, 3:58 p.m.,
in response to message #11 by doug*

>I will agree that the same exact ad posted all the time at >the top of the list would be annoying. But if a new item >is added, and it is exactly what you are looking for, then >it isn't annoying to that person.

Then may I suggest you post only the new item, and not your entire repeat listing?

>You have people that are lazy at everything. They just >don't want to read and see what is different.

I think most of us have better things to do than to try and peruse through your entire ad every other day to see what may be different.

>They want to tell you how to place your ads for them. Well >if they want to do the work that is fine with me. But I >don't like people telling me what to do with my property.

The classified section is not your property. It is Dave's property, provided to us for us to borrow, free of charge. It is a privilege for us to be able to post in the classified section. I believe many of us feel that you have been abusing this privilege, with disregard for many of the regular users here.

Perhaps you can at least try take this into account when posting future ads.

Re: This discussion is appropriate here

*Message #23 Posted by [doug](#) on 1 June 2002, 7:26 p.m.,
in response to message #22 by Spice_Man*

"Then may I suggest you post only the new item, and not your entire repeat listing?"

The combined ad has 3 main purposes, and I only went back to it after I tried all the other ways.

1. To keep the website clear of so many ads from one person, which seems to make some people want to whine and complain about that. 2. To keep the frequency of repost to a minimum, which this way does. If you need it explained the read my other postings on this issue. The answer is there. 3. To keep from having to track so many individual ads when an item is sold or a change is necessary. One item sales from an ad with associated items.

If you want to do the work to keep up with my ads for at least 3 months and see what it is like I will be glad to let you. I will also let you answer the people's questions. Would you also like to actually do the sales and then send me the money. When a person want one item that is with two others and you finally decide to sell I want you to show me how you make sure that ad is posted again, and especially if that person also wants 2 other items from 2 other like ads. But try it yourself first. Then you will start to understand.

"I think most of us have better things to do than to try and peruse through your entire ad every other day to see what may be different."

Then don't. I don't understand why you care so much about this issue because you have never bought anything from me anyway, nor have you even contacted me that I remember. I designed this ad from experience so that a person can look through it in less than 30 seconds on the average. Keyword at the beginning of each entry that identifies the item. It is fast and simple.

So what is there to complain about? The main people that actually read my ads are users. They are the people that are really looking

for items they need to accomplish real work, and they do buy. Very few collectors have. Most already have 5 or 10 of everything they really want anyway. But you have never purchased anything from me so why do you care at all?

Mine: "They want to tell you how to place your ads for them. Well if they want to do the work that is fine with me. But I don't like people telling me what to do with my property."

Yours: "The classified section is not your property. It is Dave's property, provided to us for us to borrow, free of charge. It is a privilege for us to be able to post in the classified section. I believe many of us feel that you have been abusing this privilege, with disregard for many of the regular users here. Perhaps you can at least try take this into account when posting future ads."

Your response is totally invalid. This was made to a person other than yourself over an issue you know nothing about.

This is the last thing I will say to you on this issue. I ran a classified ad. It is none of your business to make any public comment about my classified ad. EVER.

If you wanted to lodge a complaint about a documented rule being broken by me then you should have written the webmaster and filed a formal complaint. You should have never posted your personal opinion on a FORUM and neither should have anyone else.

This was invalid and totally improper treatment of me and anyone else that has suffered through this type of abuse. And that is exactly what it is.

Re: This discussion is appropriate here

*Message #24 Posted by [Raymond Hellstern \(Germany\)](#) on 2 June 2002, 7:52 a.m.,
in response to message #11 by doug*

Hi,

to make things short:

If your nearly identical repeated postings are **not** for the same calcs, please provide the serial numbers of each unit beneath it's description from your next ad on. So everybody should be happy;-)

Since you're kind of professional seller, maybe Dave could a special 'dealer's page'...

Regards,

Raymond

BTW: I still haven't read the whole long thread, so if this idea has come up before...

Re: AD over posting(*long* with both ads)

*Message #25 Posted by [Unknown](#) on 31 May 2002, 10:02 p.m.,
in response to message #2 by doug*

<This is the forum not the classified section, and what you posted here does not belong here. This is a FORUM for resolution, not for personal slights, or threats of action against someone.>

Yes this is a forum for resolution and that's what I am doing. Were do you suggest I post it in the ad section?

Tell me were I even hinted at personal slights or threats of action? What action could I take anyway I am not the owner of this site.

Read my post it is a quote from the ad forum rules and your ads just 2 days apart.

<Corrections were made to the HP11C addendum when I realized it didn't belong with the items it was listed with. The wording on a couple of other lines were simply invalid. Want

me to continue this list?>

No need to do that. Corrections, it wasn't even in the original ad. Maybe post a new ad with the new items?

<Want me to get your permission first?>

No just respect the rules of this site like everyone else does that's all.

<Other people have ran one single ad with the exact same ad information and have only changed the time of the posting and I never seen anyone complain about it. I have certainly never seen a posting like this on the FORUM before.>

Well I have seen people do that and have seen complaints. I think it was a 71B about a year ago and someone brought it up in this FORUM. I looked in the archives for the message but couldn't find it and I am not going to spend hours looking for it.

<If you wish to address me personally then select my id and send me an email personally with your email id. Don't ever post an item in the Forum to me with "UNKNOWN" again.>

"Don't ever" Who are you to tell me what to do. If Dave doesn't like my message he can delete it.

<I don't like reposting the ad at all. But when calculators or accessories have sold, or new calculators or accessories have been purchased or traded for, the ad needs to be changed. I don't set the frequency of the change, people that buy from me, or sell to me, or trade with me do.>

Both ads with changes noted:

Posted by doug on 29 May 2002, 12:03 a.m.

ALL ARE BRAND NEW CALCULATORS

HP11C/Case - Original retail package - Sealed - Shrink-Wrapped - New in the Box

HP12C/Case - Original retail package - Sealed plastic Blister Pac with Manual & 1 Lithium Cell

HP16C/Case - No Box - No Handbook

HP17BII/Case - Original retail package - Calculator in plastic cage with shrink-wrapped Handbooks

HP28S/Case - Original retail package - Calculator in plastic cage with Both Spiral Handbooks

HP42S/Case - Replacement Unit Box - Plastic cage - No Manual

HP48G/Case - Original retail package - Calculator in plastic cage with shrink-wrapped Handbooks

USED CALCULATORS

HP11C/Case - Original retail Box - Shrink-Wrapped Handbook & Addendum Card, Service Card

HP15C/Case - No Box - Clean display, positive key action, clean silkscreen, Bezel has one scratch

HP15C/Case - No Box - Clean display, positive key action, clean bezel & silkscreen

HP15C/Case - No Box - Minor places on corner of screen, and back. Key action like new

HP16C/Case - No Box - Clean display, positive key action, clean silkscreen

HP16C/Case - No Box - Just like new - Professionally Engraved Name & Company Name

HP45/Kit - Travel Case, Leather Case, Manuals, A/C Charger, Warranty Cards, New Batteries

HP48G/Case - Original retail package - Calculator/Case with User Guide

HANDBOOKS

HP11C Owner's Handbook and Problem-Solving Guide 00011-90001 2/81 Spiral - Mint Rare

HP15C Owner's Handbook 00015-90001 English 6/87 Spiral

HP15C Owner's Handbook 00015-90001 8/82 (GERMAN Hardbound)

HP16C Computer Scientist Owner's Handbook 00016-90001 9/85

HP71B Quick Reference Guide 00071-90019 10/83 Mint

HP71B Owner's Manual 00071-90001 10/83 - Rough Cover - Mint Clean Pages

CASES

New HP Leather Case / Flap - 92169[D(Black) / E(Brown) / F(Burgundy)] 6.5" H x 4" W x 3/4 D

Woodstock Series Zippered Case (21, 22, 25 27, 29c) - Looks like miniature HP71B Carrying Case

OTHER

HP71B 4K Memory Modules - 82420A - 2 Boxed & Booklet - Static Pac's opened

HP71B Card Reader 82400A - Booklet 82400-90001 / 5 cnt pack Magnetic Cards / New in Box

HP71B HP-IL Interface Module 82401A - Owner's Manual 90026 - QRG 90010 - New in Box

HP Voyager Series Battery Compartment Doors - Brand New - Fits 11C, 12C, 15C, & 16C

PayPal or Money Order Accepted

eMail for photographs

Prefer Trades? SHARP EL-5500II, EL-5500III, CE-126P, EL-520, EL-525, 10 Rolls of EA-3815P,

TI-92, TI-36X Solar, TI-1700 Data Clip (Dead) with Leather Case,

TI Programmer, TI-LCD Programmer, TI-LCD Programmer II

Ditto Max Professional External Tape Drives - Shrink Wrapped Retail Packages,

Compatible with Win95/98 & SE / 3.1 / NT

Contact alwaysup@att.net

Posted by doug on 31 May 2002, 2:57 p.m.

BRAND NEW CALCULATORS

HP11C/Case - Original retail package - Sealed - Shrink-Wrapped - New in the Box

HP12C/Case - Original retail package - Sealed plastic Blister Pac with Manual & 1 Lithium Cell

HP16C/Case - No Box - No Handbook

HP17BII/Case - Original retail package - Calculator in plastic cage with shrink-wrapped Handbooks

HP28S/Case - Original retail package - Calculator in plastic cage with Both Spiral Handbooks

HP42S/Case - Replacement Unit Box - Plastic cage - No Manual

HP48G/Case - Original retail package - Calculator in plastic cage with shrink-wrapped Handbooks

USED CALCULATORS

HP11C/Case - Original retail Box - Shrink-Wrapped Handbook, Service Card

HP15C/Case - No Box - Clean display, positive key action, clean silkscreen, Bezel has one scratch

HP15C/Case - No Box - Clean display, positive key action, clean bezel & silkscreen

HP15C/Case - No Box - Minor places on edge of screen, and back. Key action like new

HP16C/Case - No Box - Clean display, positive key action, clean silkscreen

HP16C/Case - No Box - Just like new - Professionally Engraved Name & Company Name

HP45/Kit - Travel Case, Leather Case, Manuals, A/C Charger, Warranty Cards, New Batteries

HP48G/Case - Original retail package - Calculator/Case with User Guide

HANDBOOKS

HP11C Owner's Handbook and Problem-Solving Guide 00011-90001 2/81 Spiral - Mint Rare

-> HP11C Solutions Handbook 00011-90009 Spiral - Shrink Wrapped

-> HP11C Addendum 00011-90043 2/82 for Owner's Handbook & Problem-Solving Guide - 00011-90001 Rev. B. dated September 1981.

HP15C Owner's Handbook 00015-90001 English 6/87 Spiral

HP15C Owner's Handbook 00015-90001 8/82 (GERMAN Hardbound)

-> HP15C Advanced Functions Handbook 00015-90011 English 8/82 Spiral - New Shrink Wrapped

HP16C Computer Scientist Owner's Handbook 00016-90001 9/85

HP71B Quick Reference Guide 00071-90019 10/83 Mint

HP71B Owner's Manual 00071-90001 10/83 - Rough Cover - Mint Clean Pages

CASES

New HP Leather Case / Flap - 92169[D(Black) / E(Brown) / F(Burgundy)] 6.5" H x 4" W x 3/4 D

Woodstock Series Zippered Case (21, 22, 25 27, 29c) - Looks like miniature HP71B Carrying Case

OTHER

HP71B 4K Memory Modules - 82420A - 2 Boxed & Booklet - Static Pac's opened

HP71B Card Reader 82400A - Booklet 82400-90001 / 5 cnt pack Magnetic Cards / New in Box

HP71B HP-IL Interface Module 82401A - Owner's Manual 90026 - QRG 90010 - New in Box

HP Voyager Series Battery Compartment Doors - Brand New - Fits 11C, 12C, 15C, & 16C

PayPal or Money Order Accepted

eMail for photographs

-> Please respect the selected ad listing type: (FSBO) For Sale at Best Offer

Prefer Trades? SHARP EL-5500II, EL-5500III, CE-126P, EL-520, EL-525, 10 Rolls of EA-3815P

TI-92, TI-36X Solar, TI-1700 Data Clip (Dead) with Leather Case,

TI Programmer, TI-LCD Programmer, TI-LCD Programmer II

-> Litronix 2140 Scientific & A/C Adapter - Both New in Box

Ditto Max Professional External Tape Drives - Shrink Wrapped Retail Packages,

Compatible with Win95/98 & SE / 3.1 / NT

Contact alwaysup@att.net

It doesn't look like you have sold a thing. You just added a few more items. Why not post another ad with the new items?

Can't you give some other folks a chance to have there ad at the top for awhile. This isn't the only time you have done this. Relax, if somebody wants your items they will email you, Right? I bet you have been flooded with emails.

The reason I don't give my email is because I don't want to have to go through the abuse emails to your ISP because of flaming emails from you. I think your first paragraph

confirms what I mean.

EOL

In defense of Doug

*Message #26 Posted by [Valentin Albillo](#) on 31 May 2002, 11:30 p.m.,
in response to message #25 by Unknown*

Though I've been in "lurker mode" in this terrific forum for us HP fans, I've read this thread and I want to say some words in praise of Doug.

I won't discuss his recent adds, though I must say I didn't feel annoyed by them, at all. If anything, I found his offerings interesting and even made him an offer for one of his items, which was kindly refused.

The point is, apart from his adds, Doug has been a frequent contributor to this forum, posting his valuable opinions at times, helping people who asked questions now and then. He has always tried to help, and I've found his attitude quite positive and of a most amiable nature. That's my opinion of him as a forum contributor.

On the other hand, as a seller, I've bought a number of items from him in the past, and he always was most kind, provided perfect and accurate descriptions, sent lots and lots of detailed pictures, and most importantly, sent perfect items, many times unbelievably mint, extremely well packaged. Not only wasn't I ever dissatisfied, but each and every time I was amazed at the extreme care he took with his 'customers', well above and beyond 'the call of duty'.

That said, my point is this: I can't believe that Doug has been posting those adds unkindly, so to say, as I think he's one of the kindest, most considered sellers I've met. If he has annoyed some people with them, I'm sure he did it unknowingly, else he would never have acted so. And in any case, as a valuable, helpful member of this forum and an honest, caring seller, he's a real asset to all HP fans and collectors, and he deserves respect and, at the very least "the benefit of the doubt".

If someone was annoyed by his adds, I think the proper thing would have been to think something like "No, I can't believe Doug is abusing anyone, let's get in touch with him", and see what happens. But the way he has been treated re this theme seems to me on the verge of abuse. Let's cool a little those tempers, let this matter settle, and let's be friends like always, for the benefit of this forum and all its contributors.

Best regards from Valentin Albillo.

Re: In defense of Doug

*Message #27 Posted by [Christof \(US\)](#) on 1 June 2002, 1:40 a.m.,
in response to message #26 by Valentin Albillo*

I'll agree that, in general, I'm not annoyed by Doug's ads. I haven't purchased anything from him yet, but our private communications on the subject have been quite good.

I do think a better brief mode for the main display might be nice- but I'm not sure how he could get the info on what's for sale in one line.

Anyway, my vote would be to err on the side of laxity than to err on the side of restriction.

Christof

In praise of Valentin!

*Message #28 Posted by [Gene wright](#) on 1 June 2002, 9:49 a.m.,
in response to message #26 by Valentin Albillo*

I was so pleased to see your post to the forum. Please allow me to thank you for all the wonderful HP41 games and programs you contributed to PPC over the years. They were always some of my favorites. In fact, I typed up your Othello game and put it on my webpage a couple of years ago.

Do you happen to have any games lying around that never made it into the journal?

Gene Wright <http://www.rskey.org/gene/hpgene>

Re: In praise of Valentin!

*Message #29 Posted by [Valentin Albillo](#) on 2 June 2002, 8:33 p.m.,
in response to message #28 by Gene wright*

Hi Gene, best regards from Valentin Albillo:

Thank you very much for your kind words and for your enthusiasm about my humble HP contributions of the distant past, to the point of manually keying-in some of my programs and including their listings on your excellent web site.

I will contact you off list tomorrow (it's nearly 2:30 AM right now in Madrid,

Spain) and send you some HP-related articles, etc. of mine, which you may like.

Again, thanks for your wonderful message and

Best regards from Valentin Albillo

Re: AD over posting(*long* with both ads)

*Message #30 Posted by [doug](#) on 1 June 2002, 12:24 a.m.,
in response to message #25 by Unknown*

Like I stated, people like you are a waste of time. The ad you copied was changed a couple or three times that day if I remember correctly.

And even if something is added, it is added. What is the difference in putting a new ad on top or just updating the current ad. It is the same end result except now there are two ads to maintain, and if they get reposted then they may happen every three days or so. And if there are three ads, they might get reposted every 2 days or so. And if there are four or more ads they may get reposted every day. That is why I chose the way I have. Tested and tried. I got tired of reposting like ads I had.

Most people that call people names like "FLAME" are childish mentalities that never had to grow up yet. But the time is coming in this country where most of you will have to.

Read my response to Dave Hicks. A response is in there for you personally. CHILD!!!

They shouldn't allow you to post anything on a forum!!!!!!!!!!

Re: AD over posting(*long* with both ads)

*Message #31 Posted by [Spice_Man](#) on 1 June 2002, 1:18 a.m.,
in response to message #30 by doug*

...so who's being childish?

Re: AD over posting(*long* with both ads)

Message #32 Posted by [doug](#) on 1 June 2002, 1:52 a.m.,
in response to message #31 by Spice_Man

People that take the time to criticize a classified ad to this extent, and hide their identities, are childish.

People that call other persons names like "flames" are childish.

A person that is above 16 years of age and still believe that it is ever appropriate to call a person any kind of name is childish. Is that a clear enough and direct answer for you and to you, or do you need a better explanation?

Re: AD over posting

Message #33 Posted by [Unknown](#) on 1 June 2002, 8:00 a.m.,
in response to message #30 by doug

<Most people that call people names like "FLAME" are childish mentalities that never had to grow up yet. But the time is coming in this country where most of you will have to.>

<Read my response to Dave Hicks. A response is in there for you personally. CHILD!!!>

Look at these two quotes from YOUR message carefully.

This is my last comment on this. I don't think anymore are needed. This is just beating a dead horse now.

EOL

possible solution for the next time

Message #34 Posted by [db\(martinez,california\)](#) on 1 June 2002, 11:04 a.m.,
in response to message #33 by Unknown

dave; can you make the "password" a mandatory field in the adds section so that we can't forget and then the regular posters can delete their own out of date ads.

Re: possible solution for the next time

*Message #35 Posted by [Dave Hicks](#) on 1 June 2002, 4:15 p.m.,
in response to message #34 by db(martinez,california)*

The classifieds section doesn't work like the main forum. Because deletion is to be expected, and because people kept forgetting their passwords, no passwords are required to delete ads in the classifieds section - just a simple step to prevent web crawlers from deleting ads by accident.

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Re: The HP-42s from HP SERNO Question

Message #1 Posted by [Rob Ferguson](#) on 31 May 2002, 5:00 p.m.

Well, for the record, mine has serial number ID13400053.

- Rob

Re: The HP-42s from HP SERNO Question

*Message #2 Posted by [Dave Shaffer](#) on 31 May 2002, 5:40 p.m.,
in response to message #1 by Rob Ferguson*

Mine just arrived (ordered Tuesday evening - see additional post in thread below).

It is ID13400073

Made in Indonesia

Looks like there might have been (just) a few more than 40 available.

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HP's LED displays when running programs

Message #1 Posted by [Paul Novaes](#) on 31 May 2002, 4:03 p.m.

At least for the HP-67/97 it appears to be random garbled numbers.

I was curious: Is it true for other (LED programmable) HP calculators?

The "garbled effect" may be space-agey, but wasn't it an awful engineering decision? I mean, it must drain the batteries very quickly. (The TI-59, for example, displays a simple/elegant "]" on the right side.)

-- Paul Novaes

Re: HP's LED displays when running programs

Message #2 Posted by [Paul Brogger](#) on 31 May 2002, 7:22 p.m.,
in response to message #1 by Paul Novaes

It's true of the HP-29C, at least. I remember swinging mine in a dark room while running a loop to see if I could recognize the individual flashes. I didn't have much luck, but I thought it was displaying essentially what was shown when I single-stepped through the program.

Some enterprising photographer could probably come up with an image that would help explain the behavior . . .

Re: HP's LED displays when running programs

Message #3 Posted by [David Smith](#) on 31 May 2002, 9:05 p.m.,
in response to message #1 by Paul Novaes

An HP65 Key Notes says that they toggle the display on and off with each instruction step executed. They give a trick program to hang the machine in an internal counting step with the display enabled.

Re: HP's LED displays when running programs

Message #4 Posted by [Ellis Easley](#) on 1 June 2002, 10:03 a.m.,
in response to message #1 by Paul Novaes

Also the HP Key Notes says they decided the flashing LEDs would let you know the machine was still working and take your mind off how long it was taking!

Re: HP's LED displays when running programs

Message #5 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 1 June 2002, 11:03 a.m.,
in response to message #1 by Paul Novaes

I once had an HP 25 (a friend of mine lost it many years ago), and I recalled that the "running program" display, while mostly random, showed some patterns. Specifically, one of the digits position showed a faint 2, 1 or 0 depending on the display mode (FIX, SCI or ENG). Other position showed a faint 2, 1 or 0 depending on the angular mode (DEG, RAD or GRD).

I posted a comment about this about a month ago at this Forum, and someone was kind enough to verify it was so. (That thread seems to be archived now, but you can search for it).

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HP31E, position of the IC's??

Message #1 Posted by [Gunther](#) on 31 May 2002, 3:11 p.m.

Hello, who can me help, fit my HP31E? I have open the calculator for cleaning and now i dont´ t know what is the right position of the three Ic´s on the base?

Many thanks for help...

Gunther

Re: HP31E, position of the IC's??

Message #2 Posted by [Tony Duell \(UK\)](#) on 31 May 2002, 5:43 p.m.,
in response to message #1 by Gunther

Firstly, all the ICs fit with pin 1 (notched end) towards the display. And it's obvious where the 40 pin chip (processor, etc) goes. I think that for a -E machine it doesn't matter which of the 8 pin ICs goes where. In a -C machine, the top position, closest to the display, receives the backup supply, so must be used for the RAM, but in a -E, all the locations are wired the same. I am almost certain that you won't damage anything by trying it.

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handheld case screws update

Message #1 Posted by [Ellis Easley](#) on 31 May 2002, 2:34 p.m.

I have another lead on the screws for the handheld cases that we have been looking for. I should get some real Plastite screws next week!

I got the #2 X 1/2" plastic thread cutting screws from the website that Paul Brogger pointed out, that had #3 X 3/8 sheet metal screws. The #2's that I got are not what I hoped. They are 32 threads per inch, circular thread like a sheet metal screw, with a blunt end and a notch. I also bought an assortment of small sheet metal screws that unfortunately didn't include #3. I say unfortunately because as soon as I found the #2's weren't what I hoped, I wanted to kick myself for not ordering the #3's to see what they looked like! They sent a paper catalog and I went through it looking for some more items to make up a new order and found listed with sheet metal screws, a #3 X 5/16" with a footnote that said "Servo arm screw Type B - blunt end"! Sounds perfect! However, it doesn't show up on the website and when I asked for it in their search, the system said to call, so I did.

I explained to the gentleman what the screw is like that we are looking for and the HP description of the similar screws in the 97 card reader, #2-28, and my belief that the screws are "Plastite". He was familiar with Plastite, said it was a trademark for a patented idea for which the patent had expired and which is made by a number of manufacturers. He said "tri-lobular" is the distinctive feature of "thread rolling" screws of which there are "Plastite" for making threads in plastic and "Taptite" for making machine screw threads in metal. He verified that the #2 Plastite is 28 threads per inch and had a term for the maximum diameter - something like "encompassing circle" - that would be slightly larger than the measure I've been taking with my dial calipers, which for the #2 Plastite is .089 inch. He also told me the diameter of a #3 sheet metal screw is .102 - .106 inch.

In the sheet metal screws that I got, the #2 measure .085-.087 inch diameter and have 32 threads per inch. The #4 measure .113 inch diameter and have 24 threads per inch. It may be that #3 have 28 threads per inch - I didn't get a definite answer on that - but the guy is pretty sure that at .102-.106 diameter they would crack a post intended to take a #2 Plastite.

The good news is that he is getting some #2 X 5/16" Plastite panhead phillips screws! They will be zinc plated. They should be just a few dollars per hundred - he couldn't give me a price today but I will call him next week when he will have them in stock. I will order some to make sure they are

what we are looking for and post the results here.

Re: handheld case screws update

*Message #2 Posted by [Renato](#) on 1 June 2002, 10:28 a.m.,
in response to message #1 by Ellis Easley*

I found this: http://www.ftel.net/~aburg/hp_screws.htm Not much information, but a interesting photo. Renato

Re: handheld case screws update

*Message #3 Posted by [Ellis Easley](#) on 2 June 2002, 8:37 a.m.,
in response to message #2 by Renato*

It seems this guy's main interest is the 41 - I wonder if the provision for a longer screw applies to any other models? I'm going to try a "depth gauge" (a length of broom straw) on some of my calculators.

BTW, on the page up from the linked page, the guy says he has some 41 parts to sell - give him a few days to put them up - page last updated: 6-4-98!

Re: handheld case screws update

*Message #4 Posted by [Renato](#) on 2 June 2002, 11:19 p.m.,
in response to message #3 by Ellis Easley*

Yes, 5+ years old information - but useful anyway - digging the web fossiles can be as useful as digging used books stores. And at the end of the day your clothes are clean.

BTW this is a great forum - let's keep spirits up.

Re: handheld case screws update

*Message #5 Posted by [David Smith](#) on 1 June 2002, 4:07 p.m.,
in response to message #1 by Ellis Easley*

Did you order any of the #3 servo screws or did they say if they had them or could get them?

Re: handheld case screws update

*Message #6 Posted by [Ellis Easley](#) on 2 June 2002, 7:57 a.m.,
in response to message #5 by David Smith*

I'm afraid I didn't order any #3's in my original order. I'm going to get some when I place my order for the Plastites, after he gets them in stock next week. I want to see them and have them on hand, plus I want to get more for my \$5 shipping charge!

The #3 X 5/16 were not orderable via the website, even though I had the catalog number from the paper catalog. When I called, I never asked him specifically about those screws - I was so happy he knew what Plastite screws are! But I have a note to ask more questions and order some #3's when I talk to him again. I'm especially curious to see if 28 is the normal thread pitch for #3, since #2 are 32 and #4 are 24.

Re: handheld case screws update

*Message #7 Posted by [David Smith](#) on 2 June 2002, 4:42 p.m.,
in response to message #6 by Ellis Easley*

I checked my HP screws with a caliper and they are 0.087 diam. with between 24 and 30 threads/inch depending upon the vagaries of measurement. So it looks like they may indeed be #2-28. The HP97 reader screws match the normal HP calculator screws.

The #2's that I originally compared them to are apparently some weird or metric #2's that have a different diameter and pitch. I found some other #2's (different pitch than HP though) that do match the HP diameter.

The HP screws all have the type "B" (blunt) point. A few do have a small "V" notch in the tip, but this is not the norm.

Re: handheld case screws update

*Message #8 Posted by [Ellis Easley](#) on 3 June 2002, 7:35 a.m.,
in response to message #7 by David Smith*

When I was on the phone with the guy, he started to explain why sheet metal screws come in two (or more) thread pitches for the same basic screw size. That's one thing I'm going to ask about again, and take some notes. He agreed that in an actual sheet metal application it doesn't really matter what the exact thread pitch is since you're cutting only about one turn of the thread in the material and if you put a screw with the other thread pitch in a previously threaded hole, the metal will bend a little to accomodate it. I think it is interesting that in machine screws, only #10 has two common thread pitches (24 and 32).

I think the Plastite screws (if that's what it turns out to be) always have a blunt tip which is slightly tapered to make it easier to start. The typical application is in a hole molded in a plastic part with the bottom of the hole flat. A pointed tip could damage the thread if it stopped the screw going in when the tip hits the bottom, or worse, it could poke through or cause a bump on the outside of the molded part. Also with a blunt tip you get threads all the way down the hole (as far as the screw goes, anyway).

One more thing I'm going to ask about is hole sizes for Plastite screws. In addition to the #2's I'll be getting, I have #6 and #8 in my junk box. I imagine the ideal hole size depends somewhat on the material. My Pocket Ref book has a page on sheet metal screws and gives hole sizes which depend on the thickness of the metal. Also has a footnote: "Variations in materials and local conditions may require significant deviations..."

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HP 42s calculators on Ebay.

Message #1 Posted by [Nick](#) on 31 May 2002, 9:59 a.m.

I am finding it very interesting that there are 8 different auctions on ebay right now for HP 42s calculators. (one auction is selling 3 at once) Are we seeing the sell off of 42s by collectors who got brand new ones? or is it a coincidence? I don't remember seeing so many for sale all at once.

Re: HP 42s calculators on Ebay.

Message #2 Posted by [Ellis Easley](#) on 31 May 2002, 11:47 a.m.,
in response to message #1 by Nick

Maybe the sudden availability of a bunch of relatively inexpensive 42S's from HP has prompted some sellers to try to sell their calculators now, in case some more machines come from HP and the value drops.

Re: HP 42s calculators on Ebay.

Message #3 Posted by [Iqbal](#) on 31 May 2002, 12:31 p.m.,
in response to message #2 by Ellis Easley

I doubt that any more would surface. I know for sure that no more would be made again. But it would make sense buying a new one and then selling the old one. I guess if you could get 12 years out of an old 42S, then even if one gets 8 years out of a new one, something is bound to happen in eight years time [well maybe Carly might leave]. Or maybe some wealthy 42S lover might buy over the rights from HP and restart production . Who knows??

Re: HP 42s calculators on Ebay.

*Message #4 Posted by [Christof \(US\)](#) on 31 May 2002, 2:08 p.m.,
in response to message #3 by Iqbal*

Some of what's appeared on bay has definitely been our current stock sale. I think it's interesting that someone is just now selling an empty 42 box/manual set, too. (oops, was selling, auction ended.)

I don't think HP will end up selling rights. Enough interest to sell the rights means enough interest to make the calculators, but not necessarily enough interest to push through the stock bureaucracy and produce. Sad, ain't it?

-Christof

Re: HP 42s calculators on Ebay.

*Message #5 Posted by [Matt Kernal](#) on 31 May 2002, 2:48 p.m.,
in response to message #3 by Iqbal*

I think the worst thing about new 42S's (w/ Indonesian s/n) would be build poor quality. I'm specifically thinking about painted keys (like newer 17B's and GX's), instead of the original injected-molded keys.

Matt

I spoke too soon..

*Message #6 Posted by [Matt Kernal](#) on 2 June 2002, 11:57 a.m.,
in response to message #5 by Matt Kernal*

After posting the previous message (from work), a couple hours later I arrived at home to find a package containing my new 42S. I was very happy to find it DOES have injected key labels even though it was manufactured in 2001 (I mistakenly assumed ALL recently manufactured calculators would have painted keys).

Matt

Re: HP 42s calculators on Ebay.

Message #7 Posted by [tomd](#) on 31 May 2002, 3:09 p.m.,
in response to message #1 by Nick

FWIW, new HP42S calcs are still available. If you are willing to do a little searching. I picked up a NIB 42S from the UMass bookstore about a year ago. \$75. And a little hole-in-the-wall photo/electronics store in NYC had them for \$79.95. Happy hunting.

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Re:(no stock) or HP consumer test???

Message #1 Posted by [Thibaut.be](#) on 31 May 2002, 2:32 a.m.

Well, I think that has to be considered on a wider point of view

a) even if the profit per share wouldn't increase drastically, we are speaking about marginal income, which means that whatever small it is it is always welcome b) HP could also take advantage of their image and once reputation : the best calculator manufacturer in the world. At the office, or at meeting (I'm leading an investment club), evrybody recognizes my calculator as being an "HP" and say "Oh, yes, I remember, at school/work 20 years ago we were jealous of the ones who owned a HP" c) if they don't want to invest in more research, they could stil produce the 42S, the 32SII, the 12C, the 19BII, the 17BII, the 27S... there is definitely demand for these products and I'm not sure that their end of cycle is that far away...

Re:(no stock) or HP consumer test???

Message #2 Posted by [Christof \(US\)](#) on 31 May 2002, 12:55 p.m.,
in response to message #1 by Thibaut.be

EO (useful) L for these, IMO, is a long way off. No one is building good programmable calculators of thse types (42s, 32sii, 15c) anymore.

I'm sitting here debating what exactly to do with my brand new 42s- I lucked into this (should ahve ordered 2) and am not going to easily find an affordable replacement (\$229 on ebay?!?!). Would I buy one for \$89 new in a store? Yes! \$109? Yes- though non dedicated fansprobably wouldn't.(I'd buy three at once and not worry about spares ever again.) Would I buy a 15c for the same price as a 12c? Yes.

-C

It's HERE !!!

*Message #3 Posted by [Dave Shaffer](#) on 31 May 2002, 6:02 p.m.,
in response to message #2 by Christof (US)*

My brand-spanking new HP42S arrived moments ago (that's about 2PM, PDT/MST, in Flagstaff, Arizona), via UPS from HP "Warehouse L7" in Lincoln, California. The product number is the fabled 00042-60911.

What came is _just_ the calculator and slip case - no manual (hope there's one around here).

This was ordered via partsdirect.hp.com on Tuesday evening (PDT), charged to my AmEx card, and delivered for free by UPS ground to my vacation address (not the address on the credit card - which IS shown as the "sold to" address).

The serial number/ID is ID13400073, which indicates it is a later item in the sequence of values discussed in a thread above. Has anybody gotten a later (higher number?) one? Based on those who were given an indefinite shipping date (when ordering on Wednesday, I'm guessing), I suspect this is close to the last one. (The calculator was made in Indonesia.)

I, too, thank Johnny and Michael for the heads-up about these units.

Mine Too!

*Message #4 Posted by [Randy Sloyer](#) on 31 May 2002, 10:02 p.m.,
in response to message #3 by Dave Shaffer*

HP paid the FedEx to send mine!

Ordered two Tuesday night the 28th online and when the order confirmation came in Wednesday it said the order was "open" but the stock entry said "yes" so I held my breath. Wednesday night brought a new email with the FedEx tracking number! Watched them right to the front door. Wow!

Both sn's are 1D045028xx

Thanks Johnny!

Re: Mine Too!

*Message #5 Posted by [thibaut.be](#) on 1 June 2002, 3:44 a.m.,
in response to message #4 by Randy Sloyer*

Well, mine arrived too ! Great !

From the S/N # difference one can assume that there were more than 40 in stock..

Anyway thanks johnny ! I think that all of us who got one should pay johnny's one in reward for his precious hint !

Re: Mine Too!

*Message #6 Posted by [Ynnhoj](#) on 4 June 2002, 3:45 a.m.,
in response to message #5 by thibaut.be*

Yes - I agree.

I also think we should pay johnny's one in reward for his precious hint! But maybe he rather wants another calculator instead... (Eg HP-65, -67, -75C or -75D)

Just a hint!

Ynnhoj 8^)

Re: Mine Too!

*Message #7 Posted by [Dave Shaffer](#) on 1 June 2002, 11:25 a.m.,
in response to message #4 by Randy Sloyer*

Randy,

Can you tell where yours was shipped from? Your serial numbers are much different from all the rest that have been reported - which all seem to be from the same production run.

Thibaut: what's your serial number?

Re: Mine Too!

*Message #8 Posted by [Randy Sloyer](#) on 2 June 2002, 11:06 a.m.,
in response to message #7 by Dave Shaffer*

Dave -

My units shipped from:

1731 Aviation Blvd - Whse L7

Lincoln, CA 95648

Surprise! Serial Numbers not Sequential

*Message #9 Posted by [Paul Brogger](#) on 2 June 2002, 7:24 p.m.,
in response to message #4 by Randy Sloyer*

I think it's a mistake to think that, even if these were the "last 40 units left" in HP's inventory, that the serial #'s would be handed out in ascending order.

I'm guessing the units were made in Indonesia, shipped over unpackaged (there's a lot of air in the packaging), wrapped in plastic here, boxed, cartoned, crated, and stored in whatever order was convenient -- perhaps totally randomly.

Later, the were uncrated, de-cartoned, stacked on shelves, and moved all about as - 42s servicing went from a high-volume, perhaps multi-workstation activity, to a low-volume, then occasional and finally no-volume activity. By the time it came to house-cleaning, they were probably all jumbled up.

We shouldn't assume that the "last one made" was even released with this batch. (And I suppose the offer was made available to HP employees before we got wind of it . . .)

Re: It's HERE !!!

*Message #10 Posted by [CJ](#) on 2 June 2002, 10:17 p.m.,
in response to message #3 by Dave Shaffer*

I ordered mine Wed. and the site still says "open".

My CC hasn't been charged yet. I guess I missed out on this one. Oh well atleast I have a few trusty 41s and other HP's to keep me going for awhile.

Christopher

Re: It's HERE !!!

*Message #11 Posted by [John K. \(US\)](#) on 3 June 2002, 12:38 a.m.,
in response to message #10 by CJ*

Have faith. Just because they haven't charged your card doesn't mean it's not on the way. Heck, I've already got mine and they still haven't charged my card yet... :^)

You may want to go back there and take a look at details for your order ("View Details" button). Look at the second section (it'll say something like "Part Number 00042-60911") and see if they have a link for tracking your order. I know that the status on my order wasn't "complete" until two days after it shipped. And the tracking link didn't appear until the day after it shipped.

It will be on the way

*Message #12 Posted by [CJ](#) on 3 June 2002, 8:33 a.m.,
in response to message #11 by John K. (US)*

Seems I was a little hasty in my thought that I was too late for this. I checked the order status this morning and the estimated ship date has changed from "N/A" to "07/24/2002".

This seems kind of strange that it is almost 2 months from now. But I am happy that they have posted a shipping date at all. Now I wait with anticipation.

John K.(US):

Have faith. Just because they haven't charged your card doesn't mean it's not on the way. Heck, I've already got mine and they still haven't charged my card yet... :^)

Thank you for your faith John it seems to have worked 8^).

Regards,
Christopher

Re: It will be on the way

*Message #13 Posted by [Mike Markowski](#) on 3 June 2002, 10:10 a.m.,
in response to message #12 by CJ*

Hey, thanks for mentioning that. I just checked, and my estimated ship date is now also 7/24/02. Yay! Since my credit card has been charged, I'm *really* hoping that this means it will work out!

If not, well, I'm sure the new HP 50G when they go back to the traditional colors and keys, use software better than Mathematica, provide wireless links to your LAN, and a new programming language so you can interface calc apps with your heavy duty apps running on networked machines, and all personally demoed by Elizabeth Hurley will be even more fun. Wait, maybe that was a dream... Mike Markowski

Re: It will be on the way

*Message #14 Posted by [Ellis Easley](#) on 3 June 2002, 11:13 a.m.,
in response to message #13 by Mike Markowski*

If some people received machines from stock in a few days and now they are quoting two months, that must mean either they are bringing units from stock in other countries, or they are building new ones.

Re: It MAY be on the way

*Message #15 Posted by [Paul Brogger](#) on 3 June 2002, 11:42 a.m.,
in response to message #14 by Ellis Easley*

. . . or it's their default response that gives them time to evaluate whether there really ARE any more available . . .

(I'm not simply trying to be negative -- I've got a couple hung up in "OPEN" status and am hoping they'll come through, too.)

Re: It MAY be on the way

*Message #16 Posted by [Richard Garner](#) on 3 June 2002, 12:05 p.m.,
in response to message #15 by Paul Brogger*

I went to the site this morning and the option for PCA-OTHER is no longer a selection from the list. You can type in the part number and it comes up no longer available.

Re: It MAY be on the way

*Message #17 Posted by [John K. \(US\)](#) on 3 June 2002, 7:09 p.m.,
in response to message #15 by Paul Brogger*

"Always with the negative waves, Moriarty..."

:^)

Re: It MAY be on the way

*Message #18 Posted by [Christof \(Davis, CA\)](#) on 3 June 2002, 7:39 p.m.,
in response to message #17 by John K. (US)*

"It's a mother beautiful bridge, and it's gonna be there."

Re: It will be on the way

*Message #19 Posted by [clarion](#) on 3 June 2002, 11:58 a.m.,
in response to message #14 by Ellis Easley*

From previous message.."If some people received machines from stock in a few days and now they are quoting two months, that must mean either they are bringing units from stock in other countries, or they are building new ones."

I ordered a 42S from HP in Melbourne, Australia and it is supposedly arriving in 10-14 days from the States, so I doubt that there is stock anywhere in Australia. Maybe in Europe or other parts of Asia like Singapore.

Re: It will be on the way

*Message #20 Posted by [David](#) on 3 June 2002, 3:10 p.m.,
in response to message #19 by clarion*

I called and the guy said that my order won't be processed because they are out of stock and the item is obsolete. So I guess I would have to settle for the first two I got. Also, they only charge your credit card when the item is shipped.

Re: It will be on the way

*Message #21 Posted by [Christof \(Davis, CA\)](#) on 3 June 2002,
7:40 p.m.,
in response to message #20 by David*

They precharged my card, then did the "real" charge after shipping.

-C

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Anyone Out There Using Coconut Connected For Palm OS?

Message #1 Posted by [John K. \(US\)](#) on 31 May 2002, 1:21 a.m.

If so, you may want to grab a backup/database management utility (I use Backup Bitster) and set the database backup bit (or perform a manual backup) of any saved databases. Coconut doesn't do this automatically.

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The HP-42s from HP SERNO Question

Message #1 Posted by [Christof \(US\)](#) on 30 May 2002, 11:28 p.m.

It is (was) for real.

The serial number, though...

If I'm reading this right, this was produced in 2001!?!?!

ID13400020

Has anyone else who ordered one of these gotten the same series? I am interested to know if we've got sequentials. (If we do, it would be interesting if they all went to hpm people instead of random ebay.)

Christof, one very happy camper.

Re: The HP-42s from HP SERNO Question

Message #2 Posted by [John K. \(US\)](#) on 31 May 2002, 7:14 p.m.,
in response to message #1 by Christof (US)

I ordered two over the weekend and received them today. The S/Ns are:

ID13400001

ID13400037

Re: The HP-42s from HP SERNO Question

*Message #3 Posted by [Nick \(US\)](#) on 31 May 2002, 9:06 p.m.,
in response to message #2 by John K. (US)*

I also ordered and got two. Hope somebody is counting. I'd be curious to know how many are accounted for. My serial numbers are 1D13400115 and 1D13400045. Could somebody give me a recap as to how to tell what year these calculators were made. Thanks.

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Re:(no stock) or HP consumer test???

Message #1 Posted by [CJ](#) on 30 May 2002, 9:27 p.m.

<Somebody, somewhere in HP knows good and well that there is a market.>

That was my thought. Maybe this somebody is trying to show the suits that there is a market still for RPN calcs.

I guess I am just dreaming though.

If HP does stop making RPN calcs I will be done with them. There printers are junk(inkjets). There quality has gone down the drain over the years.

The only thing that is of any quality coming out of HP is there laserjet printers and even those seem like they are headed down the same road.

Oh well I guess I will have to hold on to my 'ol HP's and hope they outlast me.

Christopher

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Re:(no stock) or HP consumer test???

Message #1 Posted by [Randy Sloyer](#) on 30 May 2002, 9:16 p.m.

I couldn't agree with Warren more.

Since Carley and company seem to be driven by greed and a sense of "to hell with the customer (who needs 'em anyway?) - we know better" the smartest thing to do would be to put the whole of the A.C. O. on EBAY for sale to the highest bidder.

Now there's a real business for sale!

The sad part is, HP/Compaq doesn't know what they have....

It may end up like the Expanders - smashed and tossed in the dumpster.

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DOUBLE SPEED hp49g ?

Message #1 Posted by [olivier croissant](#) on 30 May 2002, 1:53 p.m.

I see on Ebay.de and on www.cynox.de that it is possible to double the speed of a hp49g. Is this real ? How do they do that, I thought that it was impossible to open a 49g without destroying it?

oliiver

Re: DOUBLE SPEED hp49g ?

Message #2 Posted by [Tom \(UK\)](#) on 31 May 2002, 3:42 a.m.,
in response to message #1 by olivier croissant

Yes, they double the clock rate to the CPU with internal modifications, I think the high speed can be turned on and off by the user. I think the higher clock rate is 8MHz - still slow compared to alot of modern stuff.

However this doubles the battery consumption and some calcs may not work above room temperature (20°C).

I don't know how they open the HP49G but if they have had a few broken ones to experiment with they probably know what they are doing.

Tom.

Re: DOUBLE SPEED hp49g ?

Message #3 Posted by [Jonathan Busby](#) on 1 June 2002, 1:46 p.m.,
in response to message #2 by Tom (UK)

Tom said :

"Yes, they double the clock rate to the CPU with internal modifications, I think the high speed can be turned on and off by the user. I think the higher clock rate is 8MHz - still slow compared to alot of modern stuff."

This is not quite correct. The clock speed is actually only increased from 4 MHz to 6 MHz via a

new crystal with a faster clock rate. The calc can be switched from normal to "double-speed" (which is kind of a misnomer it seems) mode by holding down the on key. (they install a small microcontroller I believe)

As far as I know, the maximum speed at which the 48/49 cpu (actually the Yorke IC) can be clocked at is somewhere around 6 MHz. After that it stops functioning. There are however other ways of overclocking the Yorke that could result in higher achievable speeds and lower power consumption. See <http://groups.google.com/groups?hl=en&lr=&selm=kpgmbu0ldjjkgbfe6it2a6cpcntibleqo%404ax.com&rnum=2> . To the best of my

knowledge no one has tried this method though.

Remove the random permutation of "NOSPAM" from my e-mail address before replying.

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I know where to get the HP 42S stock sale...

Message #1 Posted by [Thibaut.be](#) on 30 May 2002, 10:44 a.m.

Check [here](#)

and myabe other current 42S sales...

Re: I know where to get the HP 42S stock sale...

Message #2 Posted by [Iqbal](#) on 30 May 2002, 5:07 p.m.,
in response to message #1 by Thibaut.be

Well it's gone already. Even faster than on HP's website.

Re: I know where to get the HP 42S stock sale...

Message #3 Posted by [John K. \(US\)](#) on 30 May 2002, 7:07 p.m.,
in response to message #2 by Iqbal

...and for US\$229 too -- but only one bidder. Hmmmm.

(Hi Iqbal! How's things in the EC?)

Re: I know where to get the HP 42S stock sale...

Message #4 Posted by [Ellis Easley](#) on 31 May 2002, 11:54 a.m.,
in response to message #3 by John K. (US)

Somebody must have "bought it now" if it is already gone, I know the auction had offered BIN for \$225, I think. I looked at the seller's feedback and he has sold a lot of things Buy It Now.

Buy It Now goes away after the first regular bid.

*Message #5 Posted by [Ellis Easley](#) on 31 May 2002, 11:55 a.m.,
in response to message #4 by Ellis Easley*

... I should have mentioned.

Re: I know where to get the HP 42S stock sale...

*Message #6 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 31 May 2002, 12:52 a.m.,
in response to message #1 by Thibaut.be*

That's what I was 'fraid about: vultures in the back yard.

Well, as once mentioned here before: they have their rights. If HP offers more and more HP42S, none of this is going to happen.

I'm in Brazil (whatelse is new) and no further offer here is available (since the beginning of the rush).

Good luck you there. I thought it would be world wide; now it's up to you, the ones who can show HP we exist.

Cheers.

Re: I know where to get the HP 42S stock sale...

*Message #7 Posted by [Casey](#) on 31 May 2002, 5:07 a.m.,
in response to message #1 by Thibaut.be*

Not quite. I know this seller and she did NOT get this machine from HP, but from YKWong. It's a 1999 build.

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How to input "not equal"

Message #1 Posted by [m emori](#) on 30 May 2002, 1:13 a.m.

How to input "x not equal y"? My calculator is hp-41cv. It have "="key, but "not equal"key. Please tell me.

Re: How to input "not equal"

Message #2 Posted by [Nick](#) on 30 May 2002, 2:04 a.m.,
in response to message #1 by m emori

Look on the back of your HP41cv. It has the alpha keyboard laid out. "Not Equal" is the shift of the of the "H" key. Cheers,

Re: How to input "not equal"

Message #3 Posted by [m emori](#) on 30 May 2002, 7:50 p.m.,
in response to message #2 by Nick

Thank you Nick. I could input "not equal".

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What is a DDCT Module for 71B?

Message #1 Posted by [Spice_Man](#) on 29 May 2002, 6:04 p.m.

Anyone know what a DDCT module is?

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old 12 for an old gezer

Message #1 Posted by [db\(martinez,california\)](#) on 29 May 2002, 1:42 a.m.

on saturday i found a 12c made in 1983 that has a silver bezel with a bit of gold paint around the screen. does this signify any bugs or interior differences from the later units? btw: wish me happy something-day. it told me that i just turned 562 months old today.

happy something, youngster

Message #2 Posted by [barry](#) on 29 May 2002, 12:27 p.m.,
in response to message #1 by db(martinez,california)

only 562 months? darn youngster!

Re: Mathematical Epitaphs

Message #3 Posted by [Paul Brogger](#) on 29 May 2002, 1:17 p.m.,
in response to message #1 by db(martinez,california)

I've got my gravestone inscription chosen -- I just need to have someone perform some "final calculations".

For example, assuming I leave this earthly plane, say, tomorrow at noon, I'd like the monument to read:

Paul Jerome Brogger

Born: 1952-05-15 at 07:22

Died: 1,577,903,898 seconds later. (YOU figure it out!)

Re: Mathematical Epitaphs

*Message #4 Posted by [Pascal](#) on 29 May 2002, 1:25 p.m.,
in response to message #3 by Paul Brogger*

Cum mortuis in lingua mortua 2002-05-15 18:38:18

:~)

Pascal

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Pls Give Advise - Is this Fair

Message #1 Posted by [Efrain Vas Hochfarber](#) on 28 May 2002, 2:36 p.m.

I'm dealing with a Buyer that won my auction on Ebay...pls visit the link below:

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1352611011>

The Buyer is a very kind person but we have a difference in opinion about the payment options. On the item description, I excluded PayPal as a valid payment option. But my Buyer would prefer to use PayPal instead of any of the accepted payment methods indicated on the Auction, such as money order, cashier check or personal check. I indicated to the Buyer that I would take PayPal if he pays the fees. And this is the problem for the Buyer, because according to his opinion, I shouldn't charge him fees.

What do you think about this...is this fair? Could someone pls offer a wise advise that can allow us to settle this difference. Txs in advance...Efrain

Re: Pls Give Advise - Is this Fair

Message #2 Posted by [thibaut.be](#) on 28 May 2002, 3:43 p.m.,

in response to message #1 by Efrain Vas Hochfarber

You are both known people of this community.

Normally such an issue should never come up to this forum.

Actually both of you are quarrelling on trifles, ie : - one side the payment of paypal fees which are not that important on \$ 152.50 - on the other side not exactly complying the sales terms.

Both of you have a 0 neg. feedback and I'm not sure a few dollars differences are worth a neg. feedback.

My suggestion is to ask buyer to send money in cash by air registered mail = 10 days max,

cots about €5.00, to scan post office registered mail receipt , send it so seller, who'll immediately ship the item. With this solution - buyer gets his purchase sent immediately - seller is sure to receive his money - the transaction is completed at lowest cost - then EVERYONE IS HAPPY !

But, with paypal, the SELLER has no protection at all

*Message #3 Posted by [Gene](#) on 28 May 2002, 10:26 p.m.,
in response to message #2 by thibaut.be*

Check www.paypalwarning.com

A buyer who pays with paypal can tell paypal a month afterward that they were sent something other than what they purchased and then paypal will CHARGEBACK the seller.

The seller is out the merchandise and out his/her money.

I no longer take paypal at all because of this behavior by paypal.com and the potential abuse by ebay bidders with little or no feedback.

Just an FYI.

This is Absolutely CORRECT!

*Message #4 Posted by [Mike](#) on 29 May 2002, 8:28 p.m.,
in response to message #3 by Gene*

I have asked this **directly to PayPal** and they verify that a bidder can DEMAND a chargeback, a month later. **Seller has no choice in this matter.**

Further, if the seller disputes the matter, PayPal will simply take the money out of the bank account or credit card that is on file. **Again, verified with PayPal**

Also, there is no way for PayPal to verify that the bidder actually sent the merchandise back. All the bidder has to do is send a package that can be a brick or a pile of dirt and get a delivery confirmation. All that PayPal requires, from the bidder, is a delivery confirmation that **a package** was sent.

PayPal is very risky for sellers. Bidders, on the other hand can check out the seller before they ever decide to bid. That is their protection.

Re: This is Absolutely CORRECT!

Message #5 Posted by [Ellis Easley](#) on 30 May 2002, 10:26 a.m.,
in response to message #4 by Mike

Could it be that Paypal's advantage to buyers balances Ebay's advantage to sellers? I don't use Paypal for a somewhat silly, personal reason, although I did use it when it first started. BTW, I've never sold anything, I'm just an Ebay buyer. I like the new "Billpoint", how does that compare to Paypal as far as cost and risk to the seller? If a seller doesn't offer it, I prefer to send a money order even though it costs extra and takes a little more time. I've used "Bidpay", which charges you to mail a money order to the seller, twice for purchases from Canada. The cheaper deal for amounts under \$50 is comparable to a USPS money order to Canada. Also, the seller in both cases had an arrangement with Bidpay where they ship as soon as Bidpay tells them the money order is in the mail.

Paypal seems to be the most frequent option offered. I've seen a few "Paypal only" auctions and this thread is the second one I've seen about a buyer who wanted to use Paypal even though it wasn't offered. I imagine the reason so many sellers offer it is because so many buyers want to use it. Could it be that the buyer's advantage is the reason it is so successful?

Re: This is Absolutely CORRECT!

Message #6 Posted by [John K. \(US\)](#) on 30 May 2002, 7:51 p.m.,
in response to message #5 by Ellis Easley

The reason many sellers prefer PayPal for eBay auctions is that, if you have a business PayPal account and generate enough volume, the fee charged by PayPal drops to 0.7% + \$0.30 per transaction, which is amazingly low for a merchant account. Much cheaper (for a small business) than trying to go through a merchant services organization (MSO).

Unfortunately, as others have pointed out, charge-backs on PayPal are a real problem. No matter how you slice it, the risk of charge-backs is simply a fact of life if you want to accept credit cards. The rub, if you're using PayPal, is that you are not the holder of the merchant account -- PayPal is. A seller can't take up the issue with the card issuer directly. Any action must be taken by PayPal on the seller's behalf. But, since they are generally unwilling to do so, *caveat caupo...*

It's really up to you

Message #7 Posted by [Jim L](#) on 28 May 2002, 4:11 p.m.,
in response to message #1 by Efrain Vas Hochfarber

You specified what payment methods you would accept. He has no right to expect anything different. You're already doing more than you need to by offering to take paypal on your terms.

Re: Pls Give Advise - Is this Fair

Message #8 Posted by [Raymond Hellstern \(Germany\)](#) on 28 May 2002, 4:55 p.m.,
in response to message #1 by Efrain Vas Hochfarber

Hi Efrain,

I wonder if 'hp-collection' has problems taking the fees, because he doesn't seem to have problems paying high prices for 'HP' items;-)

If the PayPal fees are a few bucks, just forget about them, if they're higher (above ~\$5), I'd suggest either of you take 50% of them.

the other options are insisting on the terms of payment you set for the auction, or let him send cash, which worked well for me many times.

If none of the above will fit, I'd cancel the deal.

BTW: On eBay Germany (and maybe Switzerland, too) it's forbidden to charge the buyer even part of the eBay fees. But since the fees you mentioned are **not** for eBay, there shouldn't be a problem, and Matthias should understand that.

Regards,

Raymond

Re: Pls Give Advise - Is this Fair

Message #9 Posted by [Matthias Wehrli](#) on 29 May 2002, 12:36 a.m.,
in response to message #1 by Efrain Vas Hochfarber

Everything is ok. It's really my fault: I didn't realize Efrain does not take paypal. If he allowed me to pay through paypal now this is gentle and I have to pay the fee. I excuse myself for this misunderstanding. I didn't want to blame someone..

Matthias

Re: Pls Give Advise - Is this Fair

Message #10 Posted by [Mike](#) on 29 May 2002, 8:19 p.m.,
in response to message #1 by Efrain Vas Hochfarber

First, let me say that I have dealt with hp-collector and he is a good, reputable bidder. My comments are in general and not aimed at him.

You are the seller. You set the terms.

If the bidder wants different terms, he has two choices. 1) Negotiate them before the auction ends 2) Go to a different auction

You are not obliged to let bidders dictate after the auction is over. If you don't want to absorb the selling fees, don't take PayPal. **It is totally fair for you to decline to use PayPal.**

Most bidders like PayPal because they don't have to pay fees. I see this all the time. But you DO NOT have to let bidders dictate terms.

But, there is one other thing you should know about PayPal. **PayPal is very risky for the seller.** It protects the bidder but not the seller.

It is possible for the seller to pay with PayPal and demand a chargeback, against your return policy. You will have no choice but to give the return, if the bidder pays with Credit Card.

There are many legitimate reasons for not having a return policy but with PayPal that option is taken out of your hands.

FEES:

This gets a bit sticky. If you don't list PayPal, you might be able to negotiate the fees. If you list PayPal, you may not be able to charge a fee.

eBays policy on surcharges

Payment Surcharges

"Sellers may not charge eBay buyers an additional fee for their use of ordinary forms of payment, including acceptance of checks, money orders, electronic transfers or credit cards. Such costs should be built into the price of the item."

Then, they list 3 ways that you may charge a fee and things like PayPal, checks or credit cards are not in the three.

It may be that if you list PayPal, technically, you may not be able to charge a fee.

I have heard of eBay cancelling auctions for people trying to charge fees for processing checks.

I do know that people try to charge fees all the time for PayPal. Personally, I would NEVER advertize PayPal in an auction.

Re: Pls Give Advise - Is this Fair

*Message #11 Posted by [Chris Catotti](#) on 31 May 2002, 1:18 p.m.,
in response to message #10 by Mike*

I accept PayPal, but then I will accept almost anything (I prefer to stay away from personal checks, but if requested, I usually do). I accept cash (US Dollars, Euros, or British Pounds), Money Orders, BidPay, PayPal, and for low-dollar items I accept unused US Postage Stamps (self-adhesive preferred).

Because Credit Card agreements forbid charging more for credit than cash, organizations like PayPal have no choice but to forbid the seller charging the buyer the extra cost. I use to do shipping at actual postage, but now add a dollar extra to help defray fees. Anyone asking for PayPal fees to be paid by the buyer is violating PayPal and Credit Card rules. On the other hand, if I am the buyer of an item from Europe, and the listing says essentially "ship to Europe Only", I voluntarily include approximately the PayPal fee, because I have inconvenienced the seller, and I know he is not allowed to ask for the fees.

Thank You

Message #12 Posted by [Efrain Vas Hochfarber](#) on 1 June 2002, 9:55 p.m.,
in response to message #1 by Efrain Vas Hochfarber

I would like to thank everyone who provided advise about this issue...to Thibaut, Gene, Mike, Ellis, John, Jim, Raymond and Chris. But special thanks go to the Buyer because he came forward as soon as he realized the mix up. The buyer is a nice person and also a man of honor. Txs again...Efrain

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SUP-R-ROM Module

Message #1 Posted by [Randy](#) on 28 May 2002, 1:44 p.m.

I just bought a HP 41CX and it has a SUP-R-ROM module in it, could someone tell me what this module does ? Thanks!

Re: SUP-R-ROM Module

Message #2 Posted by [David Smith](#) on 28 May 2002, 4:02 p.m.,
in response to message #1 by Randy

It is a surveying applications module.

Re: SUP-R-ROM Module

Message #3 Posted by [db\(martinez,california\)](#) on 28 May 2002, 11:00 p.m.,
in response to message #2 by David Smith

i had one. in it's time it was (for you brits out there) "the bee's knees".

it was better for traversing than the hp rom because it would let you enter an arc legnth for a horizontal distance (say you were in a curve), it would sort of offset established points (not fast or easy though), and if memory serves; it would store 144 points in main. then, that was HUGE!

it was not better, just different for other routines. the bad thing was that it was written before the cx and since the subroutines were "secret" you could not put a new storage program in main with the same label to let you store in extended.

they were pretty small minded about sharing info with users to improve their product and folks like ted kerber who invited people to modify his programs for special needs and tds who at least moves with the times took thier market share.

if you ask around you may find a surveyor with the manual who will let you dust it off and photocopy it.

Re: SUP-R-ROM Module

*Message #4 Posted by [Randy](#) on 29 May 2002, 11:45 a.m.,
in response to message #3 by db(martinez,california)*

Thanks db, I appreciate the info. and help.

Randy

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coe si scrive?

Message #1 Posted by [dennis](#) on 28 May 2002, 1:43 p.m.

Come devo scrivere alla linea di comando (in modalità algebrica) per risolvere simbolicamente l'equazione lineare

$$4x - 3LY = 0 \quad 5x - LY = -2FL/EA ?$$

le soluzioni dovrebbero essere

$$x = -6 FL/11EA \quad y = -8F/11EA$$

Re: coe si scrive?

Message #2 Posted by [thibaut.be](#) on 28 May 2002, 3:46 p.m.,
in response to message #1 by dennis

Vorriamo lei ascuitere, ma penso que e migliore da scrivere in Inglse, pero non habbiamo capito la questiona.

Re: coe si scrive?

Message #3 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 28 May 2002, 11:56 p.m.,
in response to message #1 by dennis

Chiao, Dennis;

as a Latin-based native speaker, I believe the question is: how to write (would it be) the command line (in algebraic mode) to symbolically solve the linear equation? What I don't understand is the problem itself. You have:

$$4x - 3LY = 0$$

$$5x - LY = -2FL/EA$$

Is it correct? If so, you want to solve the system by using which calculator?

Hope this is correct.

Re: come si scrive?

*Message #4 Posted by [Dennis \(Italy\)](#) on 29 May 2002, 5:41 p.m.,
in response to message #3 by Vieira, Luiz C. (Brazil)*

Thank you fo the response. I have the Hp 49G calculator and I would like to solve that system. I think the command to use is LINSOLVE(), but I don't know what I have to write in (....)

Dennis

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lcd for HP48GX

Message #1 Posted by [sinisa](#) on 28 May 2002, 5:54 a.m.

Helo

i have a problem with my HP48GX,i broke LCD,i dont know how,so i try to find HP servis in slovenia and i didnt find it.Id like to know if it is posible to fix that LCD in my HP and how much it will cost.I cant get that part in slovenia so if someone know link where can i find that part please help!!!!

Re: lcd for HP48GX

Message #2 Posted by [JR\(italy\)](#) on 28 May 2002, 6:25 a.m.,
in response to message #1 by sinisa

Try this company <http://www.srssoftware.com> they are located in Milano. They maybe able to help out.

Good Luck

JR

Re: lcd for HP48GX

Message #3 Posted by [Bill](#) on 28 May 2002, 7:48 a.m.,
in response to message #1 by sinisa

Sinisa, the part number is 48GX - ie a new calculator. The 48GX CANNOT be dismantled without damaging the calculator (amount of damage depends on how you do it). If you get it open, you would need to fit a display from another 48 series calculator that has also been dismantled since I believe the display has never been available as a spare part. Note that the display is mated to the main pcb via a rubber zebra strip which is compressed between the pcb and display. It is extremely difficult to get it all back together so that it works reliably. Hope this helps.

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HP11C

Message #1 Posted by [Fred Rumak](#) on 27 May 2002, 11:43 p.m.

I just bought an HP11C on eBay and it arrived today. It comes from Australia. It's in great shape. However, where there should be a decimal, there is a comma and visa versa, where there should be a comma, there is a decimal. Is this an Australian thing? Can this be reversed? or am I out of luck?

Thanks,

Fred

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Short & Sweet Math Challenges for HP fans #1

Message #1 Posted by [Ex-PPC member](#) on 27 May 2002, 9:59 a.m.

Hi HP lovers:

Here is a new, tentative 'column' for those HP fans mathematically inclined like myself. If you like math, specially the recreational, funny variety, you're bound to like this 'column'.

If the number of (hopefully positive) responses warrants it, I will post a new math 'challenge' every Monday or so. If not, well, at least I tried ...

This week, a sweet trig challenge in 6 short steps:

- 1) Take your favourite HP handheld (any will do as long as it can do trigs)
- 2) Set it to [Degrees] trig mode
- 3) First, compute: $\tan(59) + \tan(60) + \tan(61)$
- 4) Then, compute : $\tan(59) * \tan(60) * \tan(61)$
- 5) Explain the result
- 6) Enlightened by your clever explanation, write a very short program for your HP handheld which will output many other sets of 3 numbers with the same property.

That's all, folks. Best regards.

Re: Short & Sweet Math Challenges for HP fans #1

Message #2 Posted by [Pascal](#) on 27 May 2002, 6:12 p.m.,
in response to message #1 by Ex-PPC member

Interesting feature :-)

Obviously there's a symmetry: $\tan(x-e)+\tan(x)+\tan(x+e) = \tan(x-e)+\tan(x)+\tan(x+e)$

So, if e goes to 0, you get $3*\tan(x) = \tan(x)^3 \Leftrightarrow \tan(x)^2 = \sqrt{3} \Leftrightarrow x = \text{atan}(\sqrt{3}) \Leftrightarrow x = 60$ degrees

So for $x=60$, e can be basically anything as long as you stay within the defined range for $\tan$.
Incidentally, this works also for $x=-60$ deg, $x=120$ deg, and so on...

Why? Well, I don't know. The "center" points have in common that their 1st derivative is 4 [given by $1/\cos^2$].

Once these properties are known, writing a program to produce those triplets is easy enough.

But that's only my 5 cents, and I'm already looking forward to a better explanation...

Pascal

Just off the top of my head...

Message #3 Posted by [Steve \(Australia\)](#) on 27 May 2002, 10:20 p.m.,
in response to message #1 by Ex-PPC member

excuse any errors, I haven't got a calculator here :-)

$$\tan(a \pm b) = (\tan a \pm \tan b) / (1 \mp \tan a \tan b)$$

$$\tan(60 \pm x) = (\sqrt{3} \pm \tan x) / (1 \mp \sqrt{3} \tan x)$$

$$\tan(60 - x) + \tan 60 + \tan(60 + x) = (\sqrt{3} - \tan x) / (1 + \sqrt{3} \tan x) + \sqrt{3} + (\sqrt{3} + \tan x) / (1 - \sqrt{3} \tan x)$$

$$= \sqrt{3} + ((\sqrt{3} - \tan x)(1 - \sqrt{3} \tan x) + (\sqrt{3} + \tan x)(1 + \sqrt{3} \tan x)) / ((1 + \sqrt{3} \tan x)(1 - \sqrt{3} \tan x))$$

$$= \sqrt{3} + (\sqrt{3} - \tan x - 3 \tan x + \sqrt{3} \tan^2 x + \sqrt{3} + \tan x + 3 \tan x + \sqrt{3} \tan^2 x) / (1 - 3 \tan^2 x)$$

$$= \sqrt{3} + (2\sqrt{3} + 2\sqrt{3} \tan^2 x) / (1 - 3 \tan^2 x)$$

$$= [\sqrt{3}(1 - 3\tan^2x) + 2\sqrt{3} + 2\sqrt{3}\tan^2x]/(1 - 3\tan^2x)$$

$$= [\sqrt{3} - 3\sqrt{3}\tan^2x + 2\sqrt{3} + 2\sqrt{3}\tan^2x]/(1 - 3\tan^2x)$$

$$= [3\sqrt{3} - \sqrt{3}\tan^2x]/(1 - 3\tan^2x)$$

$$= \sqrt{3}(3 - \tan^2x)/(1 - 3\tan^2x)$$

$$\tan(60-x)\tan(60)\tan(60+x)$$

$$= (\sqrt{3} - \tan x)/(1 + \sqrt{3} \tan x) \cdot \sqrt{3} \cdot (\sqrt{3} + \tan x)/(1 - \sqrt{3} \tan x)$$

$$= [\sqrt{3} \cdot (\sqrt{3} + \tan x) \cdot (\sqrt{3} - \tan x)] / [(1 + \sqrt{3} \tan x) \cdot (1 - \sqrt{3} \tan x)]$$

$$= \sqrt{3}(3 - \tan^2x)/(1 - 3\tan^2x)$$

so they're equal!

so subject to the usual restrictions the +/- 1 used in the example can be any real number.

Is the HP48/49 up to the task ?

Message #4 Posted by [Ex-PPC member](#) on 28 May 2002, 7:15 p.m.,
in response to message #3 by Steve (Australia)

Congratulations to those keen people that saw that the required condition is:

$$a + b + c = 180 \text{ (degrees, or } 2\pi \text{ radians)}$$

Now the question is: can the advanced symbolic math capabilities of the HP48/49 models help with the demonstration ?

Basically, you need to transform, rearrange, and generally symbolically manipulate this identity to get one side given the other (or to reduce both sides to a common intermediate expression):

$$\tan(a) + \tan(b) + \tan(180-a-b) = \tan(a) \cdot \tan(b) \cdot \tan(180-a-b)$$

(or 2π instead of 180, if using radians). This is a much harder nut than the usual run-of-the-mill trigonometric identities frequently seen as didactic examples.

Can your symbolic-math-capable HP handheld help with it ?

Re: Is the HP48/49 up to the task ?

Message #5 Posted by [Mike Markowski](#) on 7 June 2002, 10:56 a.m.,
in response to message #4 by Ex-PPC member

The hp 49g can do almost all of it. First, you the wielder of the blue box must realize that $a+b+c=180$ degrees. (I wish I could format this post.) Next, in the equation writer I entered: $\text{TAN}(X) + \text{TAN}(Y) + \text{TAN}(\pi - (X+Y))$ and then hit TEXPAND from the TRIG menu. Then I hit FACTOR from the ALG menu. At that point the display read $\text{TAN}(X) \text{TAN}(Y) (\text{TAN}(X) + \text{TAN}(Y)) / (\text{TAN}(X) \text{TAN}(Y) - 1)$ and it was up to me to realize that the final factor was really $\text{TAN}(\pi - (X+Y))$. So the brain was needed for a little bit of it. :-) -- Mike

Re: Just off the top of my head...

Message #6 Posted by [John Ioannidis](#) on 29 May 2002, 8:35 a.m.,
in response to message #3 by Steve (Australia)

It's much easier than that: the property holds for any three angles A, B, C such that $A+B+C = 2\pi$. Then:

$$\tan A + \tan B + \tan C = \tan A + \tan B + \tan(2\pi - A - B) = \tan A + \tan B - \tan(A+B)$$

$$\tan A + \tan B = \tan A + \tan B - \frac{\tan A \tan B}{1 - \tan A \tan B}$$

$$(\tan A + \tan B)(1 - \tan A \tan B) = 1 - \tan A \tan B$$

$$\tan A + \tan B = \frac{1 - \tan A \tan B}{1 - \tan A \tan B} (1 - \tan A \tan B)$$

$$= \tan A + \tan B$$

$$= \tan A + \tan B + \tan(2\pi - A - B)$$

$$= \tan A + \tan B + \tan C$$

QED

Re: Just off the top of my head...

Message #7 Posted by [John Ioannidis](#) on 29 May 2002, 4:07 p.m.,
in response to message #6 by John Ioannidis

Bloody 'ell! I forgot that things get reformatted here. OH well, someone else has effectively the same proof in this thread.

One of my favorite trigonometric (well, geometric really) properties is that the area of a triangle is $\sqrt{t(t-a)(t-b)(t-c)}$, where a, b, and c are the lengths of the sides, and $t=(a+b+c)/2$

Thanks to both and yes, but ...

Message #8 Posted by [Ex-PPC member](#) on 28 May 2002, 9:24 a.m.,
in response to message #1 by Ex-PPC member

... just a little hint:

The triplet (37, 73, 70) is also a solution:

$$\tan(37) + \tan(73) + \tan(70) = \tan(37) * \tan(73) * \tan(70)$$

as you can easily verify with your favorite HP calc, yet, it isn't of the form (60-x, 60, 60+x) as you can easily observe ...

Perhaps it will be enlightening (if slow) to give a chance to empirical methods. After all, most HP calcs do not do symbolic math. You could for instance run a version for your HP of this pseudo-code:

```
set degrees trig mode
```

```
for a = 0 to 360
```

```
for b = 0 to 360
```

```
for c = 0 to 360
```

```
if tan(a)+tan(b)+tan(c)=tan(a)*tan(b)*tan(c) then print "Solution:",a,b,c
```

```
next c
```

```
next b
```

```
next a
```

and see if you can deduct anything from the solution triplets printed. Once enlightened, you can use your wonderful 48/49 to do the symbolic math needed to prove your clever conjecture.

[of course, the above program would need to be optimized to run in acceptable times, and to cater for rounding errors in the computation before testing for equality, not to mention range errors]

Re: Thanks to both and yes, but ...

Message #9 Posted by [thibaut.be](#) on 28 May 2002, 10:00 a.m.,
in response to message #8 by Ex-PPC member

It seems than when the sum of $a+b+c = 180^\circ$ (or π), the product and the sums of the tans are equal... I'm currently running this routine (not on a HP calc, because 360^3 loops 46.656.000 loops are too much, and I'll see if I can deduct something...

But why, I don't know. I've had a look at my trigonometric formulaes, but I haven't found yet something that rang me a bell...

Re: Thanks to both and yes, but ...

Message #10 Posted by [Dave Shaffer](#) on 28 May 2002, 12:08 p.m.,
in response to message #9 by thibaut.be

Thibaut seems to be on the right track.

A simple BASIC program indicates that when the sum of the angles equals 180 degrees, the product of the tangents equals the sum of the tangents. I haven't done the expansions yet, but I suspect the method used by Steve, applied (recursively) to $\tan(a + (b+c))$, with the condition that $a+b+c = 180$, will prove fruitful.

By the way, when writing your programs (HP or otherwise) to check $\text{sum}(\text{tangents}) = \text{prod}(\text{tangents})$, don't forget that the proper check is to determine whether the (absolute value of the) DIFFERENCE is within some tolerance (that depends on the number of significant figures in your computer). $1e-5$ or $1e-6$ (to use old-fashioned (?) FORTRAN notation) is probably good enough. This is something you learn on day 2 or 3 of a programming techniques course.

Re: Thanks to both and yes, but ...

Message #11 Posted by [thibaut.be](#) on 28 May 2002, 2:18 p.m.,
in response to message #10 by Dave Shaffer

I forgot to mention than none of a, b , or c must be $= 0$ of course.

But I'm still expecting the maths demonstration

Re: Thanks to both and yes, but ...

Message #12 Posted by [Steve \(Australia\)](#) on 28 May 2002, 7:44 p.m.,
in response to message #10 by Dave Shaffer

Ah! If the rule is that the sum of the angles must be 180 then I suspect you should be looking at some of the identities involving triangles :-)

(I'm rather too busy at the moment)

Re: Thanks to both and yes, but ...

Message #13 Posted by [Steve \(Australia\)](#) on 28 May 2002, 8:01 p.m.,
in response to message #8 by Ex-PPC member

since both addition and multiplication are commutative, and because the solution a, b, c is the same as c, a, b and c, b, a, ... you can halve your execution times as follows:

```
for a = 0 to 360
```

```
  for b = a to 360 <----- this
```

```
    for c = b to 360 <----- and this
```

```
      if tan(a)+tan(b)+tan(c)=tan(a)*tan(b)*tan(c) then print "Solution:",a,b,c
```

```
    next c
```

```
  next b
```

```
next a
```

and because all possible values of tan can be found in the interval -90 to 90, we can reduce the number of iterations (as well as the nasty discontinuities) by

```
for a = -89 to 89
```

```
  for b = a to 89
```

```
    for c = b to 89
```

```
      if tan(a)+tan(b)+tan(c)=tan(a)*tan(b)*tan(c) then print "Solution:",a,b,c
```

```
    next c
```

next b

next a

if we're only interested in the domain 0 to 360, then we need to report +ve a, b, c as

a or $180 - a$

and negative a, b, c as

$360 + a$ or $180 + a$

then find a general solution by inspection :-)

then you need to convince yourself that there are **not** solutions at the discontinuities ;-)

Obvious correction

*Message #14 Posted by [Steve \(Australia\)](#) on 28 May 2002, 8:26 p.m.,
in response to message #13 by Steve (Australia)*

when I said

> a or $180 - a$

> and negative a, b, c as

> $360 + a$ or $180 + a$

I obviously didn't mean that :-)

a or $180 + a$

and negative a, b, c as

$360 + a$ or $180 + a$

and I have found empirically that $a + b + c$ must be a multiple of 180

I would tend to suspect that 90, 1, 89 would be a solution, but would anyone care to comment?

By the same token, 90, 90, 90 would not be a solution.

Hmmmm.....

oh, and I'd write a pseudo code solution for anyone wanting to investigate this in this manner:

```
i, j, k : integer
a, b, c : double

epsilon = 1e-9
begin
  for i := -89 to 89 do
    a := tan(i*pi/180)

    for j := i to 89 do
      b := tan(j*pi/180)

      for k := j to 89 do
        c := tan(k*pi/180)

        if abs((a+b+c) - (a*b*c)) < epsilon then
          solution is i, j, k (sum is i+j+k)
        endif
      next
    next
  next
end;
```

And the answer is ...

Message #15 Posted by [Dave Shaffer](#) on 28 May 2002, 9:45 p.m.,
in response to message #14 by Steve (Australia)

With the $a+b+c = 180$ degrees condition, things are trivial.

Recall Steve's initial fact:

$$\tan(a+b) = (\tan a + \tan b) / (1 - (\tan a) * (\tan b))$$

which can be looked up in your favorite book of trig identities. Note, also, that $\tan(-a) = -\tan a$.

Then, with the 180 degree condition, we need to determine whether

$$\tan a + \tan b + \tan(180-a-b) = (\tan a)(\tan b)\tan(180-a-b)$$

Note, also, that $\tan(180-x) = -\tan x$ (which can be derived from the sum formula above, realizing that $\tan 180 = 0$).

$$\text{Then we get } \tan(180-a-b) = -\tan(a+b)$$

This relation greatly simplifies our task!

To keep from typing "tan" all over the place, I let $\tan a = a$, $\tan b = b$, and $\tan c = c$ everywhere below. Since only tangents appear, there is no loss of meaning.

Then, our expression to check becomes (with the 180 degree identity included, which puts in some minus signs):

$$a + b - \tan(a+b) =? -a * b * \tan(a+b)$$

where $\tan(a+b)$ has its normal meaning (i.e. NOT $\tan(\tan a + \tan b)$) !!

Now, expand $\tan(a+b)$ to get

$$a + b - [(a + b)/(1-ab)] =? -a * b * [(a + b)/(1-ab)]$$

where a, b, c now all mean their respective tangents.

Multiply this expression through by the (1-ab) denominator to get

$$(1-ab)(a+b) - a - b =? -a * b * (a+b)$$

This becomes

$$a + b - aab - abb - a - b =? -aab - abb$$

where I have elected to write aa (and bb) instead of a^2 (a-squared) for a times a.

The a and b terms cancel on the left side, leaving us with an identity: $-aab - abb = -aab - abb$

So, indeed, if the sum of the angles equals 180 degrees, the sum and product of the three tangent terms ARE EQUAL.

QED

Next challenge?!

I think we're off on a tangent

Message #16 Posted by [Steve \(Australia\)](#) on 29 May 2002, 8:10 p.m.,
in response to message #15 by Dave Shaffer

groan

> So, indeed, if the sum of the angles equals 180 degrees,
> the sum and product of the three tangent terms ARE EQUAL.
>
> QED

If the sum of the angles is a multiple of 180

But what of the case where one of the angles is 90 or 270 (-90, 450, ...)???

You will be asking for a tan at one of the points where the result is undefined.

Is the relationship still valid at these points? Are the infinities equal?

Final remarks

Message #17 Posted by [Ex-PPC member](#) on 30 May 2002, 12:33 p.m.,
in response to message #1 by Ex-PPC member

Thanks to all those people that posted and/or were interested in this thread, I think the issue has been made perfectly clear, just a few final remarks.

First, the original challenge could have been presented like this:

"What condition must a,b,c meet for us to have:

$$\ln(a + b + c) = \ln(a) + \ln(b) + \ln(c) \text{ ?}"$$

where, weirdly enough, the log of the sum is equal to the sum of the logs !. The required condition can be expressed of course, as

$$\arctan(a) + \arctan(b) + \arctan(c) = \pi$$

which is quite astonishing at first, making a seemingly logarithmic expression depend on a trigonometric identity involving the number π .

Second, as a corollary of this fact, we have the beautiful identity:

$$\pi = \arctan(1) + \arctan(2) + \arctan(3)$$

which is just a particular case. You just need to realize that $1 + 2 + 3 = 1 * 2 * 3 (= 6)$ to demonstrate it.

Third, I would love to know if the symbolic math capabilities of the HP48/49 can cope or help with this kind of unusual trigonometric identities. Can some dedicated and loving HP49 user tell us ?

Next S & S Math Challenge soon, stay tuned ! :-)

Re: Final remarks

*Message #18 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 1 June 2002, 10:57 a.m.,
in response to message #17 by Ex-PPC member*

Thank you, Mr. Ex-PPC (would you ever reveal your identity?), for an enlightening challenge and the "bonus track" with the final remarks!!

Please keep such challenges coming!!

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Many q's about the 4x series.

Message #1 Posted by [HPhreacke\[r\]\(Brazil\)](#) on 26 May 2002, 11:40 p.m.

Hi all!

I have an 49, 48GX+2MB ram, 41CX with Advantage, Wand, HP-IL, printer and PPC ROM, 16C, 38G, 28S among others.

My questions are:

1. Is there any rom to make the HP41 graphing on printer? Printing of images is possible, 'coz i've seen the PPC rom printing logo...
2. Is the 41 printer compatible with the 48?
3. Can I use the 48 series printer on my PC? the thermal printing is cool for notes.

Re: Many q's about the 4x series.

Message #2 Posted by [Steve \(Australia\)](#) on 27 May 2002, 3:37 a.m.,
in response to message #1 by [HPhreacke\[r\]\(Brazil\)](#)

Short answers

- 1) yes (kinda) 2) no 3) yes (with considerable difficulty)

Longer answers

1) you can define bitmap characters and this way you can print graphics, but it's limited. Some ROMs provide better support. With HPIL and a mixture of hard work, ROMs (Plotter) and persistence you can produce plotted graphics.

- 2) No, it's not

3) The IR interface to the printer is non-standard (for the PC world) but given persistence, I'm sure you could develop an interface. With the IR printer ROM for the HP41 your HP41 can print to the 48's printer.

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just picked up an HP9845B, any value?

Message #1 Posted by [barry](#) on 26 May 2002, 6:27 p.m.

i have not seen any classified ads regarding this unit; does it have any value (just the machine, haven't opened it up yet, or powered it up)?

Re: just picked up an HP9845B, any value?

Message #2 Posted by [glynn](#) on 27 May 2002, 7:09 p.m.,
in response to message #1 by barry

Don't have anything to say about *collector* value, Barry-- I'd look at it as something very akin to the 9830a, and take your cues from that.

As far as utility, if you've got a use for a calculator that runs an HP instrument Basic, say for controlling some process or interfacing to an Integrator or a set of electronic scales, or a plotter, the 9845 could be a fun project. Lots of 9800-series peripherals-- even the 9880 hard drive. Option roms will be hard to find, but possible. A full-up system, of course, has more value than a naked 9845, so maybe as a collector, you'll want to assemble all the bits and pieces to make it as versatile as possible.

I think a manual or two have turned up on the Museum's CD-ROM collection about it-- you might start by perusing those.

Re: just picked up an HP9845B, any value?

Message #3 Posted by [Spice_Man](#) on 28 May 2002, 3:42 a.m.,
in response to message #1 by barry

What is a 9845B? I don't see any info about it here in the museum...

Re: just picked up an HP9845B, any value?

*Message #4 Posted by [Ellis Easley](#) on 28 May 2002, 6:53 p.m.,
in response to message #3 by Spice_Man*

It's like a 9825 with a built-in CRT monitor and an 80 column printer (that might have been optional, also 1 or 2 tape drives). The 9835 is like a 9825 with built in video circuitry but not the monitor, has the tape drive and the strip printer (uses an external CRT monitor, only the 9825 had the 32 character LED display). They all use the same interfaces.

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Is this fair?

Message #1 Posted by [Matthias Wehrli](#) on 26 May 2002, 12:04 p.m.

I won an auction on ebay.com... Now the seller and me are different opinions for the payment. I want to pay through paypal. In his auction text the seller (not named by name) noted that paypal is ok. Now he wants me to pay the paypal fee without noting this into the auction text... I did dozens of transactions through paypal and the seller never wanted me to pay the fee. Now I ask you: What do you think? Does the seller have to note that the fees have to be paid by the buyer or not?

Matthias

Re: Is this fair?

Message #2 Posted by [thibaut.be](#) on 26 May 2002, 1:13 p.m.,
in response to message #1 by Matthias Wehrli

Well, according to what you are writing, this is not fair.

I also experienced a few problems (but fortunately a very low %age of all my ebay transactions) with people who change up their mind after the auction is won. That's why I'm now only occasionally trading on ebay and really prefer to do the tradings amongst this community, where up to now EVERYBODY is really great.

Re: Is this fair?

Message #3 Posted by [Ellis Easley](#) on 26 May 2002, 2:08 p.m.,
in response to message #1 by Matthias Wehrli

I think it is not fair if the seller didn't state it in the first place. I bid in one auction where the seller stated "buyer pays Ebay", I suppose he meant the commission. I won, and he never itemized the total payment - I imagine it is possible to look up the commission schedule on Ebay but I never did - it couldn't have been more than a couple of dollars. He was one of those sellers who say very little - mostly sells auto parts! Recently I bought something from a person who I bought from before in an Ebay auction. She is selling me some things of hers and also selling me some other things on consignment from someone else, on which she will earn a finder's fee. She asked me if possible, to please not use Paypal, because she would have to pay the entire Paypal fee and most of the sale is the items on consignment. I told her she was in luck because I don't use Paypal.

Re: Is this fair?

Message #4 Posted by [Tedy](#) on 26 May 2002, 6:50 p.m.,
in response to message #3 by Ellis Easley

In order for an EBay transaction to be fair, all disclosures must be mentioned upfront, not on the back end. I myself would never do business with a person that changed the sale terms on the back end. That is just wrong. I would back out of the sale and do two things. First I would make a remark about this person, and second I would make sure they do not give you a negative rating, even if they do, you can dispute it and have it removed for unfair sales reasons. Just the fact that the person did this to begin with, would make me wonder about the product I'm getting, or if I'll end up getting it at all. Make sure you print off all the pages that describe the terms that seller had described so you have proof it wasn't discussed. EBay is pretty good about things like this. Viel Glueck!

Re: Is this fair?

Message #5 Posted by [Thibaut.be](#) on 27 May 2002, 3:25 a.m.,
in response to message #4 by Tedy

The main problem with ebay is the negative feedback. Often you are reluctant to post a negative or neutral feedback for someone who really deserve it because you're afraid of getting one in return. And don't beleive ebay will cancel the negative feedbacks. I have personnally been granted of 4 of these, and NO one is deserved : - 1st neg feedback : from a ripper-off who has been in the meantime excluded frim ebay. His feedback is now private but I know he had more negs than positives. I filed the fraud form, the insurance form, the ebay contact forms, all I got where electronic replies. - 2nd neg feedback : I won an auction for a US shipping only. The guy immediately posted a neg feedback "not respecting the sales terms". The fact is that 2 people of this community

have kindly offered me their address as a US mailbox. He posted a "feedback review" apologizing, but ebay though contacted many times *never* canceled that - 3rd neg feedback : there has been a merging last year with a belgian auction site. For a really unknown reason, they consolidated the feedback systems of this prior site. I collected a negative feedback for something I was absolutely not concerned. Of course all my e-mails and letters remained unanswered. After having read the merging issues, I came to the conclusion that the criterias where a) e-mail address or b) credit card number. The people needed a valid credit card number to get a user ID. I am under the impression someone took my card number (it's quite easy as it's printed on each transaction voucher) to log in - 4th neg feedback : again, someone who was very friendly at first but did not want to ship abroad. I gave him the address on a fellow community member and said he wouldn't ship to an address that was not mine. Then he said I never paid for the auction. Of course, no answer from ebay yet.

So, you see, this feedback policy is useful to a certain sense and can really be pervert when you deal with unfair people.

Re: Is this fair?

Message #6 Posted by [barry](#) on 26 May 2002, 7:12 p.m.,
in response to message #1 by Matthias Wehrli

i believe it is illegal for the seller to charge you the fees when paying by credit card; its also illegal for him to mention it upfront in the auction description. if the purchaser OFFERS to pay the fees then there is no problem.

Re: Is this fair?

Message #7 Posted by [Mike McDonald, Leavenworth KS](#) on 26 May 2002, 10:59 p.m.,
in response to message #6 by barry

The Paypal agreement you review and sign before becoming a user specifically prohibits you from creating customer "classes", and requires that all people regardless of payment method, pay the same amount.

Paypal User Agreement Re: Is this fair?

Message #8 Posted by [Mike McDonald](#) on 29 May 2002, 10:55 a.m.,
in response to message #6 by barry

For the record - Paypal's website has the user agreement, a section of which is shown below;
===== No Surcharges.

Under Visa, MasterCard, Discover and American Express regulations and the laws of several states, including California, merchants may not charge a fee to the buyer for accepting credit card payments (often called a "surcharge"). You agree that you will not impose a surcharge or any other fee for accepting PayPal as payment. This restriction does not prevent you from imposing a handling fee in connection with the sale of goods or services, as long as the handling fee does not operate as a surcharge (in other words, the handling fee for transactions paid through PayPal may not be higher than the handling fee for transactions paid through other payment methods).

=====

Re: Is this fair?

Message #9 Posted by [David Smith](#) on 26 May 2002, 8:10 p.m.,
in response to message #1 by Matthias Wehrli

Doesn't Ebay and/or Paypal have a rule against buyers being charged for the Paypal vig? I have seen lots of auctions where the seller wanted the buyer to pay the fee, but later added something along the lines of "Sorry, as per Ebay rules, I will pay the Ebay fee"

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HP-48 HP-IL connection

Message #1 Posted by [Jose Ernesto \(Brasil\)](#) on 26 May 2002, 10:21 a.m.

Can anyone tell me how to use HP-IL or some other means but the IR link to connect a HP-41 to a HP-48G+ and what kind of material that connection will be able to handle ?

Thanks

Re: HP-48 HP-IL connection

Message #2 Posted by [HPhreaker](#) on 26 May 2002, 11:11 p.m.,
in response to message #1 by Jose Ernesto (Brasil)

Do you know the specs for the HP-IL? Otherwise it's not possible without hacking.

Re: HP-48 HP-IL connection

Message #3 Posted by [Steve Borowsky](#) on 27 May 2002, 8:50 a.m.,
in response to message #2 by HPhreaker

There were HPIL-to-RS232C converters made at one time. Getting one of those is probably your best bet. The problem is they are hard to come by and would likely be expensive on ebay. You could probably send any type of data you wanted over but it would probably require some parsing on the 48 side.

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Canadian Mortgages on 12C

Message #1 Posted by [Nawus](#) on 25 May 2002, 11:12 p.m.

I've recently switched back to my 12C after using the 17BII for mortgage calculations. While I use the solver to program the Canadian mortgage factor in the 17BII, there is no solver in the 12C. Any idea how I can do this on my 12C? Thanks in advance for any response.

Re: Canadian Mortgages on 12C

Message #2 Posted by [Ellis Easley](#) on 26 May 2002, 3:04 p.m.,
in response to message #1 by Nawus

The 12C is programmable. You may not be able to accomplish the Solver-type user interface, but if you know the algorithm, you should be able to write a program to do it.

Your question rang a bell in my memory - I looked in the various manuals I have for anything to do with Canadian finances. The HP10B manual, on page 105, tells exactly how to do it on a 10B, which has an interest rate conversion function which doesn't seem to be on the 12C. You convert the nominal rate to an effective rate based on the two compounding periods per year used in Canada. Then you convert that effective rate back to a nominal rate which the book calls a "Canadian mortgage factor", by specifying 12 payments per year. Then the calculated nominal rate makes the TVM function give the correct results. In the example, a 12% nominal rate at two compounding periods per year gives 12.36% effective rate, which at 12 payments per year gives 11.71% Canadian mortgage factor. The HP12C manual has a section on interest rate conversions on pages 179-181. It shows how to do conversions from nominal rate to effective rate and vice-versa, manually and with a program.

This is not my area of expertise, but I hope these pointers help you. You might want to get a 10B, I got mine at WalMart for about \$15 clearance price.

Re: Canadian Mortgages on 12C

Message #3 Posted by [Thibaut.be](#) on 27 May 2002, 3:50 a.m.,
in response to message #1 by Nawus

Hi,

I found an interesting page for you at [here](#).

I will develop this more practically on my web site page and as soon as it's updated I'll mail you the html code.

As I'm not very familiar with this all I need to know is what kind of rate is given by the financial institutions : is it annual, semi-annual or monthly ?

Good luck !

Thibaut

Re: Canadian Mortgages on 12C

Message #4 Posted by [Thibaut.be](#) on 28 May 2002, 3:07 a.m.,
in response to message #1 by Nawus

Hello,

I've just calculated for you the formula.

The Canadian mortgages are actualized on a semi-annual basis on the "yield" rate given, while the American mortgages are calculated on a monthly basis on the given "yield".

Just note that, as demonstrated, the American financial institutions are the most greedy, the Canadian far less. The law in France and Belgium oblige the banks and other lenders to show the APR, which makes all offers more comparable.

So what you actually need is to convert a) the canadian yield into APR b) this APR into the american yield to use correctly your 12C with Canadian mortgages.

There are several way of doing this, including the financial solver of the 12C, what I don't recommend because you may by mistake forget one value of this conversion in the financial registers and use it your final calculation. One really has to be very careful with financial calculations. It's amazing to see how simple maths (+,-,*,/ and ^) can become so complicated.

So, let's calculate the APR (i'll call it 'i') for the canadian mortgage.

$i = \text{APR}$ $i_c =$ showed annual percentage of the canadian mortgage

Since it's capitalized twice in the year,

$$i = (1 + i_c/2)^2 - 1$$

and the reverse is

$$i_c = 2((1 + i)^{1/2} - 1)$$

So, if the showed rate is 12%, the APR is 12.36%

Now we've got this, we need to convert the APR into a monthly capitalized rate, to get the value to be inputed into the i variable of your 12C, as it uses the american annuity formula.

$i_m =$ showed percentage of american mortgages $i = \text{PAR}$

$$i = (1 + i_m/12)^{12} - 1 \text{ and the reverse is } i_m = 12((1 + i)^{1/12} - 1)$$

So the 'only' thing we have to do is to replace in the last statement i with the calculated value of i_c , so

$$i_m = 12((1 + i_c/2)^{1/6} - 1)$$

If you take the former example :

if $i_c = 12\%$ $i = 12.36\%$ $i_m = 11.71\%$, which is the value you have to key in i (in%!)

Don't forget in these formulas to key in percentages in real values, ie $12\% = .12$, or it won't work !

Re: Canadian Mortgages on 12C

*Message #5 Posted by [Nawus](#) on 28 May 2002, 8:40 a.m.,
in response to message #4 by Thibaut.be*

Thanks Thibaut and Ellis for your assistance. I will try out the formula and report back.
Also found a similar method on the hp site which I'm trying out as well.

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HP-41 to HP-48 connection

Message #1 Posted by [José Ernesto \(Brasil\)](#) on 25 May 2002, 10:16 p.m.

Can anyone tell me how to use HP-IL or some other means to connect a HP-41 to a HP-48G+ and what kind of material that connection will be able to handle ?

TNX

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Scientific/Financial Calculator

Message #1 Posted by [Tedy](#) on 25 May 2002, 2:50 p.m.

Hi People! I am wondering if there is an HP out there that does both scientific and financial calculations that will get me through college. I'm trying to avoid buying 2 calculators. I want something like a combination between a 17B/BII and a 30S/32S. Is there such a model? Thanks.

Re: Scientific/Financial Calculator

Message #2 Posted by [Ron Ross](#) on 25 May 2002, 6:22 p.m.,
in response to message #1 by Tedy

Yes, an Hp 48/49g series (graphics with TVM and you can download nearly any extra financial functions or programs you want).

Or probably more to your likeing would be an Hp19BII. It has all the functions of the Hp17B plus trig and units conversions. My wife used this calc to get her through a tough physics course. Afterwards, tossed it back into my colection and returned to her 27s (but you don't have that option).

Re: Scientific/Financial Calculator

Message #3 Posted by [thibaut.be](#) on 26 May 2002, 3:42 a.m.,
in response to message #1 by Tedy

Hi,

Apart from a 48 or 49 where simple financial functions are integrated and where financial pacs are available, the best choice under my opinion is a 19BII. There are a lot of maths functions (check HP's site) including a very convenient solver. It's also very powerful in financial and statistical functions. It's really easy to use and incredibly powerful. The IR beam can point to an IR printer which might be interesting for printing amortization schedules et.

So if you don't need a CAS, matrixes and complex numbers, the 19BII would be my best choice. Otherwise go for a 48 or a 49 !

The 2nd hand market might be interesting, I would then recommend a 41 with the math 1 and Finance modules. Though the 41 is a hell of a machine, it's rather slow and a bit more difficult to use, but once you're used to it you don't want anything else. The bad news is that getting a 41 and these 2 packs on ebay can reach the price of a new 49 and certainly 2 19BII !

Thibaut

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Serial number hp-30s

Message #1 Posted by [Frank B. \(Germany\)](#) on 25 May 2002, 2:36 p.m.

What about the serial number format on HP-30S's? I just obtained one from Ebay with serial number CN0031. CN stands for China, I guess, but 0031? Year 2000, weak 3, number 1???

Frank.

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HP41 cv Problem

Message #1 Posted by [Nitro882](#) on 25 May 2002, 1:12 p.m.

Can anyone tell me what might be the problem when I have to apply upward pressure on the battery pack to get the 41cv to power up and when I release the pressure it turns off again?

No corrosion on battery pack

Thanks in Advance.

Nitro

Re: HP41 cv Problem

Message #2 Posted by [Tony Duell \(UK\)](#) on 25 May 2002, 2:27 p.m.,
in response to message #1 by Nitro882

It's almost certainly bad connections between the parts inside -- probably between the 'I/O Assembly' (the flexible PCB that forms the port connectors and battery contacts) and the keyboard PCB. This has been covered many times here in the past, but basically you take the machine apart (the screws are under the stick-on feet), clean the contacts with propan-2-ol (isopropyl alcohol) and put it all back together. Remember that the 41 is almost all CMOS chips (and irreplaceable custom ones at that) so take anti-static precautions when you're working on it.

Re: HP41 cv Problem

Message #3 Posted by [David Smith](#) on 25 May 2002, 10:22 p.m.,
in response to message #1 by Nitro882

Bad contacts due do dirt/corrosion on the battery contact accembly or (more likely) broken out screw bosses on the case back.

Re: HP41 cv Problem

Message #4 Posted by [Ellis Easley](#) on 26 May 2002, 3:13 p.m.,
in response to message #1 by Nitro882

I think the strip of resilient material that pushes the I/O block contacts against the PCB tends to get compressed in some revisions of the I/O block.

Re: HP41 cv Problem

Message #5 Posted by [Tony Duell \(UK\)](#) on 26 May 2002, 6:36 p.m.,
in response to message #4 by Ellis Easley

Yes, that can be a problem too (the foam block gets compressed and the flexible PCB doesn't make proper contact). When you have the machine apart, squeeze the front and back faces of the part of the flexible PCB that touches the keyboard PCB (around said foam block) so that it bulges up a little and makes better contact when the machine is put together. That normally cures it. Do not pull the foam out. You will never get it back in again -- at the factory it's fitted before the flexible PCB is wrapped round the plastic support -- and you guessed it, the flexible PCB is then heat-staked in place.

Re: HP41 cv Problem

Message #6 Posted by [Nitro882](#) on 27 May 2002, 8:09 p.m.,
in response to message #5 by Tony Duell (UK)

Thanks to everyone for their help. One of the screws was broken and it wasn't clamping down all the way. A little small spot of super glue fixed it right up and I can still take it apart.

Thanks Again, Nitro

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Re: Stick It!

Message #1 Posted by [Chris Randle \(Lincoln - UK\)](#) on 25 May 2002, 7:16 a.m.

Thanks for the information. I had hoped many people would respond with what they have actually been successful with.

When the little badge came off my 16C I used the merest dab of Locktite superglue (UK brand name). Many years later and it's still stuck.

Re: Stick It!

Message #2 Posted by [doug](#) on 25 May 2002, 4:27 p.m.,
in response to message #1 by Chris Randle (Lincoln - UK)

Is it a thick glue, or did you just glue the thin edges?

Re: Stick It!

Message #3 Posted by [Chris Randle \(Lincoln - UK\)](#) on 26 May 2002, 4:49 p.m.,
in response to message #2 by doug

It's a thin watery glue that you use quite sparingly. As I remember, I used a pin to dab a small qty around the rim of the badge (it was many years ago now). I don't know what trade name it goes by in other countries, but it's the glue that sticks your fingers together - you know the sort of thing! Can also dissolve some plastics. Either the plastics here are not affected or else I didn't use enough to see any melt. YMMV of course!

Locktite Was: Re: Stick It!

Message #4 Posted by [Ren](#) on 28 May 2002, 10:20 a.m.,
in response to message #3 by Chris Randle (Lincoln - UK)

It would help if you mention which formula of Locktite you used. I have 3 different formulations of Locktite at home, and they make many more...

Re: Loctite Was: Re: Stick It!

Message #5 Posted by [Chris Randle \(Lincoln - UK\)](#) on 28 May 2002, 3:54 p.m.,
in response to message #4 by Ren

Wish I could help more. All I can tell you is that it's Loctite "Super Glue". It's just a brand name, and matching one country's against another is impossible without a universal identifier (e.g. a chemical formula). The tube/pot thing says "CYANOACRYLATE. DANGER." plus loads of good advice about not squirting it in your eyes :-)

If you think it might help, I'll happily e-mail you (or anyone else) a picture of the (quite distinctive) container, but I imagine they'll differ from one country to another too.

Loctite sell a few different glues in the UK too, but this is the one that everyone knows. If you go to the hospital late on a Friday night, this is the glue with which somebody has stuck one part of their body to another. It bonds in seconds.

Re: Loctite Was: Re: Stick It!

Message #6 Posted by [Ellis Easley](#) on 28 May 2002, 7:30 p.m.,
in response to message #4 by Ren

I don't know what kind Chris used, but my favorite kind of superglue is Loctite "Quicktite" "high performance superglue" which is a thin glue. What I like best about it (other than it sticks good!) is that the bottle cap has a metal pin to keep the spout clear. I've had the best luck with this kind as far as being able to use a bottle multiple times; with other brands, sometimes after one or two uses the cap won't close right and the bottle dries up. An earlier bottle of "the good stuff", that I kept for several years, did become quite thick; I then used it to glue my HP15C PCB back in place.

I recently bought a new bottle and didn't notice till just now that what I got is Quicktite but there is a brush built-in to the bottle cap, so no pin. I might keep it and see how I do with a brush.

The one with the pin in the cap is identified on the card as "reorder 79340-82193", that's just the UPC without the check digits. The kind with the brush is "79340-26442".

Re: Locktite

*Message #7 Posted by [Ren](#) on 29 May 2002, 9:53 a.m.,
in response to message #6 by Ellis Easley*

I apologize Chris, in my zeal, I only read "Locktite" and not "Locktite superglue" as you had posted. So, I was thinking about all the other formulations of Locktite, some of which may or may not work for attaching emblems.

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Problem with HP41CX

Message #1 Posted by [Dennis](#) on 25 May 2002, 6:17 a.m.

I have a problem with the USER button on my 41CX. It's very hard to press and only registers probably every two presses. Anything I could spary it with to repair it??

Re: Problem with HP41CX

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 25 May 2002, 10:54 a.m.,
in response to message #1 by Dennis

Hi;

the contacts for each key in the HP41 are built with a metal bubble (flat) carefully positioned over the keyboard's PCB. All the keys are locked with a self-adherent plastic stick.

Right bellow these bubbles there is a small hole that allows access to the "inside" of the key's contact assy. I read many stuff in here about how to clean their inner guts, and people suggested using chemical cleaners that would not dissolve the plastic cover nor the glue, so they would not disturb the contacts.

I got good results by using thin brushes, thin enough to have their coats inside the small holes. Carefully rotating the brush would allow cleaning the contacts.

I know it sounds vague, but try looking in here, maybe May-December 2001.

Good luck and best regards.

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32SII memory increase

Message #1 Posted by [Don](#) on 25 May 2002, 6:14 a.m.

There is a lot of talk of adding memory to a 42S, could memory be added to the 32SII? Just wondering?

Re: 32SII memory increase

Message #2 Posted by [Tony Duell \(UK\)](#) on 25 May 2002, 2:33 p.m.,
in response to message #1 by Don

I've never found a way to do it. The HP42S is relatively easy because it was _designed_ to use a 32K RAM. There's a separate RAM chip in the machine (an 8K one on standard 42s), but the PCB is designed so a 32K one can be fitted by just changing one link. And the HP42S firmware is designed to look for the extra RAM. I am told, BTW, that although you can fit a 32K RAM to an HP17B (it's the same PCB as the 42S), the machine will only use the first 8K of it. The 17B's firmware is not designed to use a 32K RAM. Anyway, getting back to the 32S, it's all on one chip (CPU, ROM, RAM, etc). There is no separate RAM chip to replace. And I've never found anything looking like a memory bus (neither a normal 'industry standard' one nor a Staturn Bus) on any of the 32S's chip pins. Pity, as the standard 384 bytes (or whatever it is) is nowhere near enough.

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Re: Stick It!

Message #1 Posted by [Ellis Easley](#) on 25 May 2002, 1:11 a.m.

One of the mechanical engineers I worked with explained that the reason so many plastic parts are made hollow is not to save plastic but that the shrinkage of plastic when it cools is more pronounced when the plastic is thicker. Especially for a decorative item, which you are trying to pretend is made of metal, it's not good if it sags in the middle!

I'd been looking for a reason to try Shoe-Goo, so since Richard has used it for a logo, and I need to fix a shoe, I bought a tube! There's no telling when I will try it on the calculator, though - I have more issues with my "street" HP-12C, such as the bezel is all scratched and bent and I need to fasten the PCB, but since it fits in a hole in the bezel, I guess I could just glue the logo on!

Re: Stick It!

Message #2 Posted by [doug](#) on 29 May 2002, 10:44 p.m.,
in response to message #1 by Ellis Easley

Thanks for the explanation. Thinner materials would cool quicker than thicker and therefore would be less time and substance to distort. It actually makes sense when you think about it.

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Multi-valued functions

Message #1 Posted by [Andrejs](#) on 24 May 2002, 12:14 p.m.

Hi,

I have the following question - does any of HP calculators, like 42S, 48GX, etc., have the ability to show all the results of a multi-valued function, like square root, cubic root, etc., especially if their argument is a complex number ?

Thanks!

Re: Multi-valued functions

Message #2 Posted by [Thibaut.be](#) on 24 May 2002, 3:11 p.m.,
in response to message #1 by Andrejs

The answer is definitely YES for the48 and yes at certain conditions (use of solve for instance) for the 42

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HP spare parts

Message #1 Posted by [Johnny Bjoern Rasmussen](#) on 24 May 2002, 6:43 a.m.

Hi

If you go to: <http://partsurfer.hp.com/cgi-bin/spi/main> and search for "calculator" you'll find some partnumbers for miscellaneous HP calculators, mostly manuals. Well - what I really stumbled over, is an "HP-42S PCA-Other" -item called

00042-60911 CALC, SVCE -42S HP INTERNAL USE ONLY

I asked my HP printer spareparts supplier for the price, just to have an idea of what this could be, and he answered me, that the price is about US\$100,- and he would need 5-8 working days to get it for me...

Anyone out there knows what the heck this is? Can this be an HP-42S test model?

Re: HP spare parts

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 24 May 2002, 8:07 a.m.,
in response to message #1 by Johnny Bjoern Rasmussen

Hi;

it seems SVCE refers to SerViCE. Maybe this is the reference for a replacement, when you send an HP42S to be repaired. I don't know for sure, but this subject has already been discussed here, and I believe HP no longer replaces the 42S for new ones.

Is it available now?

Dave, do you have any info for us?

Cheers

Re: HP spare parts

Message #3 Posted by [Michael \(South Texas\)](#) on 24 May 2002, 9:11 a.m.,
in response to message #1 by Johnny Bjoern Rasmussen

Well, I just ordered two of whatever they are (I assume that they are the remaining service replacements) @ \$96.00 ea. They had 40, now 38, in stock. I ordered over the phone @ 1-800-227-8164, but I also went to partsdirect.hp.com and was able to add them to my cart. Let's hope they are in fact the fabled 42S.

Re: HP spare parts

Message #4 Posted by [W. Bruce Maguire II](#) on 24 May 2002, 12:46 p.m.,
in response to message #3 by Michael (South Texas)

Michael:

Sorry to say this, but I don't think you're going to get calculators... I just called them, and I asked what this was, and the lady told me that it was a service manual. I asked why it wasn't in the documentation section. She said that she didn't know, but that it was a manual. I continued to press, and asked her if she had more information on her machine that indicated that it was, in fact, a manual; she said yes.

So, for what it's worth, it is probably a service manual, not a service calculator replacement. It would be interesting to know what, exactly, would be in the service manual. It's not like they can repair the calculator, right? So what would be in the service manual? Just a method of obtaining error codes for feedback to the factory or engineers?... I'm curious!

So, whatever it is, please let me know! If it is a manual, I'd sure like to know what's in it! If it's interesting, I might be willing to buy one of your copies---if you don't want two!

Good luck,
Bruce.

Re: HP spare parts

Message #5 Posted by [Thibaut](#) on 24 May 2002, 3:09 p.m.,
in response to message #4 by W. Bruce Maguire II

Thanks Bruce ! You just saved me 98 bucks !

Re: HP- 97 spare parts

Message #6 Posted by [CHRIS](#) on 7 June 2002, 1:27 a.m.,
in response to message #5 by Thibaut

hello, does anyone know the part# for the 220 volt charger/supply for the HP-97 and or where I can get one?.

Re: HP- 97 spare parts

Message #7 Posted by [Ellis Easley](#) on 7 June 2002, 4:00 a.m.,
in response to message #6 by CHRIS

According to the HP97 service manual on the MOHPC CD-ROMs, there are four different 230V adapters: 82031A for Europe (two round pins), 82032A for UK (three big rectangular pins), 82032A Opt. 001 for UK with RSA plug (three round pins), 82039A for Australia (two flat pins at an angle [/ \]).

There is also a 115V adapter for Europe, 82043A which looks like the same plug as the 230V Europe version.

For USA 115V, the manual says 82040A. I have been using (in the USA) an 82059D with my HP97, this is the "general purpose" one that is used with most HPIL devices, HP71B, HP75C/D etc. The output is rated 8VAC 3W.

The Museum section on ["Battery Packs & Chargers"](#) in the "Collector's Corner" says 82040A or 82059A/B/C/D are correct for the HP97 on 115V, and says "(82066B 240 VAC only)".

Re: HP- 97 spare parts

Message #8 Posted by [Thibaut.be](#) on 7 June 2002, 5:53 a.m.,
in response to message #6 by CHRIS

I think I have a spare one.

But if you're located in Europe, as most of the items come from the US? I recommend you to buy in any DIY shop a 220-110 V convertor. This has helped me a lot. Quite cheaper than any European adapter and much easier to find.

Re: HP spare parts

Message #9 Posted by [Michael \(South Texas\)](#) on 24 May 2002, 5:09 p.m.,
in response to message #4 by W. Bruce Maguire II

Bruce,

Thanks for the info, I knew there was some risk, but I figured that they could always be returned. In the HP part surfer, manuals for consumer distribution are under the heading "documentation", don't you think that a service manual would be under that heading as well, much less a service manual for an item that can't be serviced? Does anyone have an idea what "PCA" might signify? Certainly, if it is printed material, I'll keep one and donate it to the museum.

Interestingly, if you query "calc", a few spice models and a 9830a come up. Unfortunately, no parts listed for the spices, but you can get a fan for your 9830a.

Re: HP spare parts

Message #10 Posted by [Tony Duell \(UK\)](#) on 24 May 2002, 8:07 p.m.,
in response to message #9 by Michael (South Texas)

'PCA' normally means 'Printed Circuit Assembly' and is a circuit board with the components soldered to it. It's what field-servoids replace at random to make the fault go away rather than actually bothering to trace the fault properly (but that's a different rant) Now, AFAIK, the HP42S was never classed as 'repairable' so the internal PCB is not going to be available as a spare part. The thing you'd swap to get a 42S running again would be the entire machine. Are you sure this is not one of those 'service-replacement' HP42 machines that have been discussed here in the past? Certainly sounds like it...

Re: HP spare parts

Message #11 Posted by [Michael](#) on 24 May 2002, 11:20 p.m.,
in response to message #10 by Tony Duell (UK)

Not to belabor HP's part nomenclature, but it was in the "PCA-Other" category. For a fleeting second, I thought maybe I would receive a circuit assembly, but upon further thought, it seemed unlikely.

I think the only reason I hold any hope is that the full item description is: "CALC, SVCE -42S HP INTERNAL USE ONLY", and it seems that HP uses or has used "CALC" as an item description for calculators themselves. Thankfully, HP uses FedEx, so I won't have to wait long. We'll see.

Re: HP spare parts

*Message #12 Posted by [Borja Marcos](#) on 3 June 2002, 5:10 a.m.,
in response to message #9 by Michael (South Texas)*

PCA - Printed Circuit Assembly? It may be the printed circuit board with the components, but without housing.

Borja.

Re: HP spare parts

*Message #13 Posted by [David](#) on 24 May 2002, 9:47 p.m.,
in response to message #3 by Michael (South Texas)*

The last time I got a HP42S service replacement I paid \$67 or therabouts. Could this be for another HP product??

Re: HP spare parts

*Message #14 Posted by [David](#) on 24 May 2002, 10:23 p.m.,
in response to message #13 by David*

The part number for my service replacement is 42S-OBO, whatever that means. These are probably really some type of manual as Micheal has said in the previous posting.

Re: HP spare parts

*Message #15 Posted by [Jonathan Busby](#) on 25 May 2002, 2:18 a.m.,
in response to message #1 by Johnny Bjoern Rasmussen*

I ordered one of these six months ago thinking I was going to receive the service manual (pretty steep price for a service manual ;) but when I opened up the box it was brand new 42S! :D Maybe I should have shared this little secret but that might have created a buying storm causing HP to pull it off their price list. Well, ok, I'm just that selfish. ;)

Regards,

Jonathan

P.S. If anyone has the service manual or any other "internals document" for this calc I would be much obliged if I could get a scanned copy. (as would many other people on this board I'm sure)

Remove the random permutation of "NOSPAM" from my e-mail address before replying.

Hope it's no hoax !

*Message #16 Posted by [Thibaut.be](#) on 28 May 2002, 3:44 a.m.,
in response to message #15 by Jonathan Busby*

Well, I also tried my chance and incidently ordered the application manual. At least it will be new and cheaper than on ebay.

But look at the status of my order :

Part Number 00042-90020 Description 00042-90020 Quantity Ordered 1 Estimated Ship Date 05/27/2002 Part List Price (ea) \$38.51 Part Discount 0.00% Part Net Price (ea) \$38.51
Part Number 00042-60911 Description 00042-60911 Quantity Ordered 1 Estimated Ship Date Part List Price (ea) \$96.00 Part Discount 0.00% Part Net Price (ea) \$96.00

While there's an estimated ship date of the manual, the supposed calculator has none. In addition, it was quoted 'HP Internal use only'. Anyway I'll keep you informed !

Re: Hope it's no hoax ! (Me too!)

*Message #17 Posted by [Johnny Bjørn Rasmussen](#) on 28 May 2002, 6:33 a.m.,
in response to message #16 by Thibaut.be*

Okay - I'm waiting with excitement. When I started this thread, I was almost certain that this was "just" a Service Manual kit of some kind.

Now it really looks as if there will be some kinda' electronic gear in it too. However having two excellent working HP-42S in my collection (and a couple more to come soon), I will probably not place any orders, but I hope for other 42S-hungry fans, that this will be the way for them, to get one. I really look forward to read about it :P

Cheers!

Johnny

Orders out here????

Message #18 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 28 May 2002, 12:15 p.m.,
in response to message #17 by Johnny Bjørn Rasmussen

What about Brazil?

Re: Hope it's no hoax ! (Me too!)

Message #19 Posted by [Michael \(SOTX\)](#) on 28 May 2002, 9:36 p.m.,
in response to message #17 by Johnny Bjørn Rasmussen

I just received two brand new 42s calculators with slip cases, no less, in two business days. Get them while you can

Can one order from outside US?

Message #20 Posted by [Håkan Thörngren](#) on 28 May 2002, 11:47 a.m.,
in response to message #16 by Thibaut.be

Is it possible to order stuff from HP this way if you live outside USA? I live in Sweden...

Re: Can one order from outside US?

Message #21 Posted by [thibaut.be](#) on 28 May 2002, 3:50 p.m.,
in response to message #20 by Håkan Thörngren

For Europe HP on their site partsufer.hp.com suggest to address to a local dealer. I dunno how it is for Brazil, just give a try.

Actually a fellow collector (Tom) agreed to be my US mailbox and ships me back the items. It costs me a supplemental inner US fee (in the case of HP it's free), but this has definitely solved many problems ! Thanks Tom !

Re: Can one order from outside US?

Message #22 Posted by [Richard Anderson](#) on 29 May 2002, 11:24 a.m.,
in response to message #21 by thibaut.be

I just did the whole business of signing up and buying only to find that the US HP site says my European Visa number is invalid. The site also now says "In Stock: NO" and it may take a long time to arrive for the 00042-60911. Oh, well... I hope it works for genuine stateside people. Richard

Re: Can one order from outside US?

*Message #23 Posted by [thibaut.be](#) on 29 May 2002, 11:33 a.m.,
in response to message #22 by Richard Anderson*

I had no problem with my european visa number and there was no "no stock" messgae; Though presently there is no shipping date for my PO but well for the manual I ordered in the same PO...

Re: Can one order from outside US?

*Message #24 Posted by [Johnny Bjoern Rasmussen](#) on 31 May 2002, 7:27 a.m.,
in response to message #20 by Håkan Thörngren*

Yes - I live in Denmark and my distributor have no problems getting it to me.

You can e-mail me, and I will respond you the e-mail adress to the danish distrubutor, who can either sell directly or redirect you to a retailer.

Cheers!

Johnny

Re: Hope it's no hoax !

*Message #25 Posted by [Paul Brogger](#) on 28 May 2002, 6:28 p.m.,
in response to message #16 by Thibaut.be*

Thanks for the info -- I just ordered two, too! It all looks legit -- and the last time I tried something "HP-only" (a sale price on a 48G+) it worked fine, so I'm feeling pretty confident.

THANKS again!

Re: Hope it's no hoax !

*Message #26 Posted by [Spice_Man](#) on 28 May 2002, 10:25 p.m.,
in response to message #25 by Paul Brogger*

I ordered two, but the ordering system said there were none in stock. I'm not sure I'll be getting any... we may see who ordered a bunch to sell on EBay soon.

Re: Hope it's no hoax !

*Message #27 Posted by [John K. \(US\)](#) on 28 May 2002, 7:58 p.m.,
in response to message #16 by Thibaut.be*

A couple of years ago, I order two copies of the Programming Examples and Techniques book (00042-90020). The copies I received are the standard HP comb-bound reprints (photocopies or laser-printed scanned images with generic covers) of the original editions. They are a wealth of good info for those new to programming the 42S (and even experienced 41/42S aficionados will probably find a golden nugget or three), but they probably have limited value as collector's items (for those to whom such things matter).

Re: Hope it's no hoax !

*Message #28 Posted by [Ellis Easley](#) on 28 May 2002, 8:13 p.m.,
in response to message #27 by John K. (US)*

Also, that manual is on the Museum CD-ROMs.

Re: Hope it's no hoax !

*Message #29 Posted by [John K. \(US\)](#) on 28 May 2002, 9:01 p.m.,
in response to message #28 by Ellis Easley*

True enough. But for those of us who prefer printed manuals, the HP offering has the advantages of being a marginally cleaner reproduction, avoiding the hassle of printing the PDF (two-up odd pages, flip stack, two-up even pages), and is pre-bound (after a fashion). Of course, if these things aren't valuable to one, <shameless-plug>then the MoHPC CD-ROM set provides a better bang-for-buck value at US\$35 than the printed version (US\$38.51).</shameless-plug>

:^)

Re: Hope it's no hoax !

*Message #30 Posted by [Nick, California USA](#) on 29 May 2002, 12:32 a.m.,
in response to message #29 by John K. (US)*

I'm really curious now what other treasures are available at hpdirect.com .
Interesting!

HP Cleaning House in Anticipation of Compaq Merger?

Message #31 Posted by [Paul Brogger](#) on 29 May 2002, 1:06 a.m.,
in response to message #30 by Nick, California USA

I wonder if the timing is purely coincidental . . .

Re: Hope it's no hoax !

Message #32 Posted by [db\(martinez,california\)](#) on 29 May 2002, 1:25 a.m.,
in response to message #30 by Nick, California USA

i doubt it's a hoax. i just hope it's not a service book. well, i bit and placed an order for one. no need to be greedy and besides; i didn't like my first one all that well. i'm spoiled by the 41. it took the order so i'll see in a week or so....

Re: Hope it's no hoax !

Message #33 Posted by [Iqbal](#) on 29 May 2002, 5:47 a.m.,
in response to message #32 by db(martinez,california)

Hi John (K) It's not a hoax. It's extra stock that was left over after HP stopped servicing the HP42S in Aug 2000. Most likely it was probably left in some corner and recently found. The part number matches the number on the HP42S service replacements box that I sell. So it's the real thing.

Re: Hope it's no hoax !

Message #34 Posted by [Pascal](#) on 29 May 2002, 1:20 p.m.,
in response to message #33 by Iqbal

So, if I understand well, you sell the 42S "service units"? If so, would you be interested to sell me one? I would be more than happy to have a back-up machine for my old 42S, but it's rather difficult to get one here in Luxembourg!

Pascal

Re: Hope it's no hoax !

*Message #35 Posted by [Thibaut.be](#) on 29 May 2002, 2:18 p.m.,
in response to message #34 by Pascal*

Moiien !

Wei geet et?

*Message #36 Posted by [Pascal](#) on 29 May 2002, 4:38 p.m.,
in response to message #35 by Thibaut.be*

It seems you are living close to Luxembourg and/or working there :-)

Pascal

Re: Wei geet et?

*Message #37 Posted by [Thibaut.be](#) on 30 May 2002, 2:43 a.m.,
in response to message #36 by Pascal*

Well, I lived 3 years in Lux. when I was a child and I worked there for 6 months part time in a well known luxury brand which has a store over there (rue Philippe II, bags, you see what I mean ?)

Besides my father is from Messancy and I spent some holidays in the area where people still speak Luxemburgish though they are belgian !

Eddi !

Re: Hope it's no hoax ! (no stock)

Message #38 Posted by [Mike Markowski](#) on 29 May 2002, 4:27 p.m.,
in response to message #16 by Thibaut.be

Rats. Out of stock. Have any others who got the "out of stock" message heard from HP? I got a message saying it could take a few weeks, but I have a sinking feeling the 42s'es are gone for good. So if anyone who's ordered multiples finds they're just taking up too much space and you need to get rid of one, I think I can help you out! :-)

Mike

Re: Hope it's no hoax ! (no stock)(but there was yesterday - I hope!)

Message #39 Posted by [Dave Shaffer](#) on 29 May 2002, 4:58 p.m.,
in response to message #38 by Mike Markowski

I ordered one of these yesterday afternoon, and the claim I got while placing the order (all done on-line - no human intervention) was that this _was_ in stock.

Claimed delivery (for free!) was 2 to 4 days. (They offered an overnight option for \$35 - I was tempted: just to see if this was for real!).

The means tomorrow or Friday I might have results. Will let everybody know.

Re: Hope it's no hoax ! (no stock)(but there was yesterday - I hope!)

Message #40 Posted by [Thibaut.be](#) on 30 May 2002, 5:09 a.m.,
in response to message #39 by Dave Shaffer

If you check now the status of the reference 00042-60911 , it says "part not orderable (<https://partsdirect.hp.com/ShopForParts.ASP?WCI=ShopForParts&WCE=PartLookup&WCU>).

But it seems my calc has been shipped by fedex (at their cost !) as it has not been shipped the same date my applicaiton book was.

Damned ! I wish I had ordered 3 of these !

Now the question is : is this old stock they wanted to get rid of or just a temp who put a wrong flag on the item master record ?

If there are such "old" stock parts or items, is there a way to convince HP to sell it to us ?

Re: Hope it's no hoax ! (no stock)(but there was yesterday - I hope!)

*Message #41 Posted by [Iqbal](#) on 30 May 2002, 5:56 a.m.,
in response to message #40 by Thibaut.be*

The stock is really exhausted. It was only about 40 units to start with. After Aug. 2000 HP wasn't obligated to service the 42S. So what would they have done with the extra stock they remained with. Well I guess we know now. I guess we must all thank Johnny for putting this posting in the first place. He could have bought all for himself and resell them on ebay, but that was really unselfish of him to let us know. Well I would really be interested in seeing the serial numbers on these babies when I receive them. I had gotten a service replacement in 2000, from the US made in early 2000. I wonder if it's from the same batch?

Thanks Johnny and S/N contest

*Message #42 Posted by [Thibaut.be](#) on 30 May 2002, 8:06 a.m.,
in response to message #41 by Iqbal*

Yes, Thanks Johnny !

And who will have the last S/N ? Remember my S/N database project !

Re: Thanks Johnny and S/N contest

*Message #43 Posted by [Johnny Bjoern Rasmussen](#) on 31 May 2002,
7:20 a.m.,
in response to message #42 by Thibaut.be*

Ooops! You're welcome... Oh - I guess that I'm not so popular now among people using the HP-42S as investing objects. Sorry to them, but on the other hand, maybe a few Ebay Shieks have got some condesiterate faces by now...

Oh well - It's just calculators ;-) and now it's weekend, so what the heck....

Cheers!

Johnny

Re: Thanks Johnny and S/N contest

*Message #44 Posted by [Paul Brogger](#) on 31 May 2002, 7:06 p.m.,
in response to message #42 by Thibaut.be*

My two just arrived via UPS. (Ordered on the 29th, here the 31st -- not too shabby!)

S/N's: ID13400057 and ID13400141. (Not sequential, which would have been a minor plus.)

After reading confirmation that they were, indeed, HP-42s calculators (and not manuals or something else), I confess I ordered two more, late afternoon on the 29th. That order is *still* listed as "OPEN", while the first order is marked "COMP" ("complete", I assume). I've a sneaky suspicion that my greed will not be rewarded . . . (But, hey -- I didn't try to order TEN, as I was tempted to!)

I suppose I'll be one of those evil sellers trying to double my money on one so I can cover the other. (Limited discretionary resources, and no hobby support from my wife!)

First, however, I need to decide which to open up . . .

Correction: I ordered on the 28th

*Message #45 Posted by [Paul Brogger](#) on 31 May 2002, 7:34 p.m.,
in response to message #44 by Paul Brogger*

Ooops! In the interest of accuracy, let me state that I ordered early (and again later) on *Tuesday, the 28th*, not on the 29th as indicated above.

(In case anyone cares.)

Re: Thanks Johnny and S/N contest

*Message #46 Posted by [Christof \(US\)](#) on 31 May 2002, 7:39 p.m.,
in response to message #44 by Paul Brogger*

141? I wonder how many of these actually got ordered in the past week.

anyone sorted out a running total?

Christof- (who would have bought two if he could have afforded it at the time and is cursing his slow check clearing. Too late now.)

Re: Thanks Johnny and S/N contest

*Message #47 Posted by [John K. \(US\)](#) on 31 May 2002, 7:08 p.m.,
in response to message #42 by Thibaut.be*

I don't know about the last one, but the one I got has S/N ID13400001... :^)

Re: Thanks Johnny and S/N contest

*Message #48 Posted by [casey](#) on 31 May 2002, 7:52 p.m.,
in response to message #47 by John K. (US)*

one of mine was: ID027xxxxx. The other was ordered for a friend; also a ID027xxxxx Both 2000 builds!

Re: Hope it's no hoax ! (no stock)(but there was yesterday - I hope!)

*Message #49 Posted by [J. Lopez \(New York\)](#) on 30 May 2002, 9:29 a.m.,
in response to message #41 by Iqbal*

Well, I ordered one of these babies and got it a couple of days ago. I was surprised by the serial number I got: ID13400018 which, if I'm not mistaken, puts its manufacturing date somewhere in the 34th week of last year, huh?

Isn't it a pity to know HP was still able to assemble these units as recently as August last year?

Re: Hope it's no hoax ! (no stock)(but there was yesterday - I hope!)

Message #50 Posted by [P.Sale](#) on 30 May 2002, 12:03 p.m.,
in response to message #41 by Iqbal

Iqbal says "...He could have bought all for himself and resell them on ebay, but that was really unselfish of him to let us know. Well I would really be interested in seeing the serial numbers on these babies when I receive them."....

So how many did you order for personal use, and how many to on-sell ?

Re:(no stock) or HP consumer test???

Message #51 Posted by [CJ](#) on 30 May 2002, 12:11 p.m.,
in response to message #41 by Iqbal

I ordered one last night. I want to have a RPN calc for years to come if HP is going to stop making them. That is why I got a 32SII. I can not and will not use a AOS calc.

I am going to watch my CC and see if it is charged over the next few days.

I can't believe there are only 40 units left out of the replacement units. Maybe the web page just isn't being updated.

I went through the order process and it took all my info and checked me out at the end. Order complete.

Wouldn't you think they would take the page down if there really wasn't anymore units left???

Could this be a HP test to see if there is a real interest still in this type of calculator?

Christopher

Re:(no stock) or HP consumer test???

*Message #52 Posted by [thibaut.be](#) on 30 May 2002, 12:45 p.m.,
in response to message #51 by CJ*

The 42S is discontinued for a long time now. I think something like 5 years. They serviced it until August 2000. At that your last chance to get a brand new one was to change it with a defective one and 50 bucks.

So evrybody was astonished to see that it could be ordered - I suspect a bad input in their article master records.

Re:(no stock) or HP consumer test???

*Message #53 Posted by [Mike Markowski](#) on 30 May 2002, 1:24 p.m.,
in response to message #51 by CJ*

Even though I got the "will take several weeks" message when I ordered yesterday, I notice that my credit card was billed this morning. Don't know if that's good news or not though! (My order status is still "open".)

Mike

Re:(no stock) or HP consumer test???

*Message #54 Posted by [David\](#) on 30 May 2002, 4:02 p.m.,
in response to message #53 by Mike Markowski*

Part is not orderable. Those who acted in haste are the lucky ones I guess.

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HP-9825B Light go on but no display

Message #1 Posted by [Joost Backus](#) on 24 May 2002, 4:22 a.m.

Hi

When I attach mains I see a led light go on and the Fan starts. When I press caps also a led goed on.

But I don't seen anything on the Display.

Must I boot something or start or whatever to get this thing going ???

Joost

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HP25 - Display problems ?

Message #1 Posted by [Ingo](#) on 23 May 2002, 12:35 p.m.

I bought a hp25 - the first test with new NiCd-accus was successful... but the dot appears only sometimes and the keys doesn't work properly and sometimes there were zeroes instead of blanks. The 7-key displays sometimes 9 and I have to press some keys twice befor the number appears on the display. I hit those keys very often and then it works better, but after I hit one key the display shows only 4 zeroes on the right side (flickering) - after that without pressing a key only a very bright zero appears on the right – for some seconds. After that the hp doesn'n work, only sometimes when I switch it on the bright zero appears for less than a second. I opened the calculator and cleaned all contacts – but not the keypad.

Who can help me... display-driver ? / power-switch ? other parts ?

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Do you let HP-71B read the text file of MS-DOS if you do what?

Message #1 Posted by [Hiroshi Ito](#) on 23 May 2002, 11:20 a.m.

I have HP-71B. It is hoping to want to improve the development environment of the HP-BASIC language. Working efficiency thinks me that you had better edit it on the text editor of the personal computer by far rather than I input it on the liquid crystal screen each one line. Is there a method which makes HP-71B read the text file of the personal computer as a program file? And, as for that, how to change the program file of HP-71B and a data file into the text file of the personal computer is in the opposite direction? I want to know the method which makes HP-71B read the text file of the personal computer concretely through HP-IL 3 -1/2 Disc Drive (9114B). And, I want to know how to take out the program file kept in the memory of HP-71B, and a data file as a text file of the personal computer concretely through HP-IL 3 -1/2 Disc Drive (9114B). Is the method thing that it gets over a difference in the disk format of MS-DOS and HP-71B possible? Or, is my idea unacceptable?

Re: Do you let HP-71B read the text file of MS-DOS if you do what?

Message #2 Posted by [bsmith](#) on 23 May 2002, 12:57 p.m.,

in response to message #1 by Hiroshi Ito

i believe the information you're looking for is available in the Articles section of this web site. in particular, start with Article 24, and also 42 and 54.

good luck /bs

Re: Do you let HP-71B read the text file of MS-DOS if you do what?

Message #3 Posted by [Hiroshi Ito](#) on 25 May 2002, 12:40 a.m.,

in response to message #2 by bsmith

Thank you for the answer. The first part of the article was read.

Because they are difficult contents, a question may be possibly asked to it again. Because a calculator manufactured by HP is minor existence, it has difficulty in the collection of the information in Japan.

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95lx ac adapter

Message #1 Posted by [db\(martinez,california\)](#) on 23 May 2002, 12:37 a.m.

i found a 95lx for cheap and its kind of fun. i'd like to give it an ac adapter. i think it wants a 12vdc 700ma unit. what + & - variance do i have here?

Re: 95lx ac adapter

Message #2 Posted by [barry](#) on 28 May 2002, 8:48 p.m.,
in response to message #1 by db(martinez,california)

hi db: my used 95LX came w/ HP AC adapter #82241A, output is listed as 9V AC, 13.5VA max; can anyone verify this is the correct unit? it works correctly, altho i don't use it for long periods of time; the adapter is a fairly large (physically) unit. tnx, barry carson city, nv

Re: 95lx ac adapter

Message #3 Posted by [David Smith](#) on 30 May 2002, 5:38 p.m.,
in response to message #1 by db(martinez,california)

When they first came out, I was a registered HP95LX developer. Their engineers told me that it was O.K. to drive the machine directly off of a 12VDC car system (14.4V avg, really nasty transients). For some other reasons, I wound up doing this but dropped the voltage around 4V through a string of six diodes and some filtering inductors and capacitor. On the connector, I had the center post positive.

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HP-19C printer overhaul discoveries

Message #1 Posted by [Michael Meyer](#) on 23 May 2002, 12:35 a.m.

Hi to all.

I just finished a complete overhaul of my HP-19C printer. Why? Because it was there. I ended up using the best parts from 2 printers (one is a parts machine). I wanted to post my lesson so as to help others do this more easily....

1. Remove the motor. Lubricate it, if needed, with very fine oil.
2. Remove the pressure plate that pushes against the print head. I polished mine on a flat fine-toothed file. Restored a "mirror" image (well, close for plastic).
3. Remove the print-head metal bracket to expose, remove, and clean the little tiny brass bit that guides the printhead on the cross-cut motor shaft. Be careful not to lose the spring holding it in! I find it best to now gently remove the print-head itself from its bracket to clean and to not be swinging it around with the printer overhaul.
4. The motor shaft will remove after the spring clip is carefully removed from the left-hand side furthest from the motor. The shaft and guide bar then come out with a little spreading of the frame.
5. The bottom shaft and gear, there to make the paper advancing frame move evenly, isn't on a shaft. (I found out the hard way... good thing I have extras...) The gear, top and bottom paper guide assembly are held in by brass pins.
6. Remove the brass pins that hold the paper guide mechanism in place. There is a fixed top section and a moving (advance mechanism) bottom section.
7. Be careful not to lose the spring that presses the top paper guide against the printhead pressure bar.
8. Remove and clean the parts. Carefully remove the spring clips holding the printer paper advance parts together. The inner surface of both the top and the bottom contain a spring holding in a metal

bar. Clean these carefully and tighten the leaf springs if necessary. These bars are what hold and advance the paper. It looks like they'll never wear out. Nice design. The guides themselves are held in parallel by two thin plastic paper guides, one on each side.

9. Reassemble unit. I found out... again, the hard way, that the upper mechanism is hard to push in place against the pressure spring and then put in the brass pins. Instead, install the bottom mechanism, then install the upper mechanism with the brass pins. The upper mechanism will swing out, allowing you to replace the pressure spring easily. Then just drop in the two paper guides (nibs "up" to lock in place) on both sides.

10. Replace the motor shaft and guide bar with printhead unit in place, and then replace the little brass part with the spring and metal clip. Don't forget the snap ring clip on the left side of the motor shaft. Replace the motor. Replace the printhead in its carrier to come just even with the top of the pressure bar. Check to see if the relay-type switch at the bottom functions well and is clean.

11. Turn the shaft to test and to move the printhead to the right. This should also drive the lower paper guide up and down with each excursion (to advance the paper). Now, reinstall the whole print mechanism.

My printer now prints much darker (probably due to the smoothness of the pressure bar and the clean reassembly of the spring on the upper paper guide which holds the pressure bar also). The paper advance leaves uniform space now, as it grabs the paper perfectly again. Uses up more paper, but looks REALLY nice.

Let me know if I've forgotten anything. Just wanted to save everyone the trouble of finding out about the brass pins only after breaking the gear or other parts....

Peace Michael

Re: HP-19C printer overhaul discoveries

Message #2 Posted by [Katie](#) on 24 May 2002, 12:55 a.m.,
in response to message #1 by Michael Meyer

Dr. Mikey,

Thanks for that great write-up! I need to do the same thing on one of my 19C's, but I've been putting it off. Although it's my favorite HP calculator to use, it's my least favorite to repair.

You should put this write-up in the articles forum so that people can find it more readily in the future.

-Katie

p.s. Thanks for the recognition in your other post!

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Programmable Calculator Book

Message #1 Posted by [Kelvin Hunter](#) on 22 May 2002, 6:50 p.m.

Hi,

has anyone heard of a book called something like "Programming Programmable Calculators"? It was in my local library (UK) about 15 years ago. It had sections on programming the HP55, HP65 and HP67. I think it had a section on the Commodore and Nova programmables also.

I realise this description is a bit vague, if anyone knows where I can get it, I would be interested.

Thanks, Kelvin

Re: Programmable Calculator Book

Message #2 Posted by [Paul Brogger](#) on 22 May 2002, 7:30 p.m.,
in response to message #1 by Kelvin Hunter

A large library database shows:

"Programming Programmable Calculators" (1978) by Harold S. Engelsohn, Hayden Book Co., Rochelle Park, N.J.

Supposedly available in paperback, used, from an Amazon affiliate for \$9.50 .

Re: Programmable Calculator Book

Message #3 Posted by [Erik Wahlin](#) on 23 May 2002, 1:31 a.m.,
in response to message #1 by Kelvin Hunter

Sounds like the book by Henry Mullish

Programmable Pocket Calculators. by Henry Mullish And Stephen Kochan. Hayden Book Company new Jersey 1980 0-8104-5175-1 Programmable pocket calculators examined in detail, their architecture, special features, and programming techniques. Calculators examined are: Novus Mathematician PR, Sinclair Scientific Programmable, HP-25, HP 25-C, HP-55, HP-65, HPD-67, HP-19C, HP-29C, H0-33E.

Re: Programmable Calculator Book

Message #4 Posted by [W. Bruce Maguire II](#) on 23 May 2002, 11:35 a.m.,
in response to message #1 by Kelvin Hunter

Kelvin:

I'm almost positive that I have this book. Let me check at lunch (hopefully I'll remember!), and I'll let you know.

Bruce.

Re: Programmable Calculator Book

Message #5 Posted by [Kelvin Hunter](#) on 23 May 2002, 8:13 p.m.,
in response to message #4 by W. Bruce Maguire II

Thanks for the replies. It sounds like the Engelsohn book (from Paul), but I also recall the Mullish book (Erik), now it's been mentioned..

Both sound interesting anyway!

OK, here it is: Programmin Programmable Calculators

Message #6 Posted by [W. Bruce Maguire II](#) on 24 May 2002, 11:57 a.m.,
in response to message #1 by Kelvin Hunter

Hello all:

Well, of course I forgot to look at lunch time yesterday..and this morning! But I called home, and my wife was good enough to look at the book for me. It is:

Programming Programmable Calculators
by Harold S. Engelsohn
1978

The chapters are (approximately):

- (1) Introduction to computing
- (2) Developing simple algorithms and programs
- (3) Branches, loops, and decisions
- (4) T-register and special functions (SR-56, TI-57,58,59)
- (5) Programming flags and "if" decisions (SR-52)
- (6) Subroutines and advanced programming
- (7) Indirect addressing (SR-52, TI-58/59)

The back cover states that the book covers the SR-55, the SR-56, the "brand-new" TI-57, the TI-58/59, the Commodore PR100, and the APF Programmable Model. It also mentions that it touches on the TI PC-100 and PC-100A printers.

As I remember it, the book was _very_ basic, and was just a hand-holding alternative to reading the manual! ;-) I don't think it mentioned any HP calculators at all. Probably a book only useful as memorabilia or a collection of old programmable-calc books.

Hope that helps.

Bruce.

Re: Programmable Calculator Book

Message #7 Posted by [Frank](#) on 24 May 2002, 12:01 p.m.,
in response to message #1 by Kelvin Hunter

I have it on the shelf, bought this one to go with my other Pocket Calculator Mullish book I got in about 1976.

Re: Programmable Calculator Book

Message #8 Posted by [Frank](#) on 24 May 2002, 12:03 p.m.,
in response to message #7 by Frank

Since the other found is not Mullish I will post exact details on this one I have when I get home. Bruce's wife is a good woman, mine would think I was nuts to call on this ;+}

Re: Programmable Calculator Book

Message #9 Posted by [W. Bruce Maguire II](#) on 24 May 2002, 12:48 p.m.,
in response to message #8 by Frank

Bruce's wife is a good woman, mine would think I was nuts to call on this ;+}

Yes...she is! :-)

Bruce.

Re: Programmable Calculator Book

Message #10 Posted by [Frank](#) on 25 May 2002, 10:25 a.m.,
in response to message #9 by W. Bruce Maguire II

OK< the one I have is by Mullish and Kochan, covers 25, 25c, 55, 65, 67, 19c, 29c, 33e and Novus and sinclair models. 1980 published by Hayden in a paperback, 254 pages in small font with some calc pics and dwgs.

Re: Programmable Calculator Book

Message #11 Posted by [Kelvin Hunter](#) on 25 May 2002, 3:12 p.m.,
in response to message #10 by Frank

Yes, the Mullish book is definitely the one I had in mind. Thanks again folks, for the memory-joggers!

It seems, unfortunately, that this book is almost impossible to get in the UK now (i.e. in out-of-print bookshops etc.)

Kelvin

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HP Luxury Accoutrements (sp?)

Message #1 Posted by [John Kercheval](#) on 22 May 2002, 4:20 p.m.

Ok, here is a new topic.

What luxury add ons/mods have you guys done?

Mine were:

Leather cases for the 41s and the 71.

Gold Name Plates for the 41.

And, most importantly, removing the plastic surrounding the screen on the Portable Plus and replacing it with a wood fascia.

John Kercheval

Re: HP Luxury Accoutrements (sp?)

Message #2 Posted by [Chris Randle](#) on 22 May 2002, 4:45 p.m.,
in response to message #1 by John Kercheval

Ok, here is a new topic. What luxury add ons/mods have you guys done?

A new set of batteries for my HP16C after 10 years, even though it didn't need them ;-)

Re: HP Luxury Accoutrements (sp?)

Message #3 Posted by [Paul Brogger](#) on 22 May 2002, 5:24 p.m.,
in response to message #1 by John Kercheval

I sewed a back pocket from an old pair of Levi's (including the little red cloth label) onto the outside of my HP-21 belt-case, so I could carry colored pens & etc. in addition to my calculating device. (I suppose a pocket protector to protect my add-on pocket would have completed the package, but to my recollection I never went *THAT* far . . .)

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Seeking advice from expert HP collectors

Message #1 Posted by [John Smith](#) on 22 May 2002, 11:45 a.m.

Hi, everybody

I'm seeking advice from some of the very knowledgeable HP collectors in this list, as I'm fully confident you will be kind enough to offer me very good guidelines.

The question is: I've got a number of HP calculators from the Voyager series (HP-11C, etc), and all of them use three small button cells. Now, as I can't use them all regularly, most of them have spent a number of years carefully stored in a drawer, with their batteries in place.

Now, though it has never happened to me, I'm aware that this is a very dangerous policy, because of battery leakage potentially ruining the machines, though I've never ever seen this happen in a Voyager series model, on the contrary, their batteries seem to last for decades on end.

Anyway, fearing leakages I decided to take out all the batteries from them and return them to their storage place, but after thinking about it for a while, I'm not so sure, i.e: could it also be bad policy to keep the calculators without batteries indefinitely, for many years ? Perhaps there's some internal electronics which would resent not being powered for a very long time ? I've heard something about 'dry capacitors' or the like, and I wonder if the lack of 'juice' could be as damaging as a potential battery leakage.

Just for example, an analogy from photography: should you keep a large, complex zoom lens without using it at all for many years, the internal lubricants necessary for positioning the glass elements (as well as controlling the f-stop) would get stuck in place, so to say.

On the other hand, putting the batteries in for a while, then taking them out again periodically would be a real chore, as we're talking about a dozen calculators, and besides I fear this would result in creating some usage marks on the battery compartment door on the long run, or even damage the pressure pad eventually.

So, I would be very obliged if you could give me some advice on this, and guidelines to keep my

Voyagers stored safely for many years to come. Thanks in advance.

Re: Seeking advice from expert HP collectors

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 22 May 2002, 2:36 p.m.,
in response to message #1 by John Smith

Hi;

just a short story of mine.

I kept an HP41CV disassembled in a shoe box for about 9 years. It was spread around the box with some other components. After taking contact with this forum, I decided to build it again and, after some unfortunate attempts, it got back to life (my personal Phoenix 41).

Many things have been told about dried capacitors in here. Everything referred to electrolytic capacitors, standard type, found in some earlier calculators. The HP41 fullnuts being one of them.

I am not completely sure about it, but I believe the Surface-Mount Device (SMD) capacitors used in the Voyagers are tantalum type, not electrolytic type (they look too small). In this case, their 'juice' (electrolytic solution) is absent, say, they don't have it.

I have also an HP15C and an HP16C; their batteries are in their compartments for more than 6 years, and I sometimes trade their places both for checking purposes AND cleaning. Their compartment door seems steady and resistant. It's a pity the HP12C is different now, because its previous batteries' door was the same as the earlier voyagers, so buying a new one would not be hard, if needed.

I'd guess it's up to you. I can't think of an actual reason you should maintain OR not the batteries in place that's not for your own decision. Internal components (semiconductors) will degrade if they are connected to the power supply or not. A small current flow will maintain operating condition as well, and if we think removing the batteries will cause the discharge of each inner capacitor AND replacing them will also cause a small, not regular current surge, then keeping the batteries in place is harmless. Unless you want to keep your voyagers for the generations to come... Who knows how much will they value in 50? 80? 100 years?

Live long and prosper! (and best regards)

Re: Seeking advice from expert HP collectors

Message #3 Posted by [Spice_Man](#) on 22 May 2002, 3:59 p.m.,
in response to message #1 by John Smith

I've never heard of capacitors degrading from lack of useage... and I'm not aware of electronics aging faster because it isn't being used... these things usually go bad because of environmental conditions (heat, humidity, static electricity, etc.)

So in my opinion, its safest to keep the batteries removed.

Re: Seeking advice from expert HP collectors

Message #4 Posted by [Ren](#) on 23 May 2002, 9:32 a.m.,
in response to message #3 by Spice_Man

Spice_Man wrote: I've never heard of capacitors degrading from lack of useage...

As an electronics technician, let me assure you, there are thousands of 10+ year old Sony built 8mm camcorders that are no longer working because several dozen surface mount electrolytic capacitors in each are failing from lack of use! The particular brand of capacitors they used from about 1988-1992 will start leaking and corrode the surrounding printed circuit board if they are not replaced. If the camcorder is used on a weekly basis they'll keep working. But if you leave it unused for a period of time (4 months in my case) the capacitors are not getting the charge they need to maintain molecular stability. Most electrolytic capacitors will degrade without use due to the electrolyte "drying out".

Now if this has anything to do with the caps in an HP calculator, I don't know...

Re: Seeking advice from expert HP collectors

Message #5 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 23 May 2002, 2:58 p.m.,
in response to message #4 by Ren

Hello, Ren;

May I?

As a technician, and dealing with SMT, is there an easy way to identify electrolytic SMD capacitors? Do they have any particular sign or mark? I'd like to know.

Maybe you know some sort of links to sites where I (we) can find info about them

(SMD).

One point: my HP41CV (earlier fullnut) still has all original SPRAGE electrolytic capacitors. They seem to be fine, no visible leakage. Good stuff!

Best regards and thanks for the valuable info.

Re: Seeking advice from expert HP collectors

*Message #6 Posted by [Ellis Easley](#) on 23 May 2002, 5:55 p.m.,
in response to message #5 by Vieira, Luiz C. (Brazil)*

I'm not speaking for Ren, but I think tantalum capacitors are electrolytic. I know tantalum electrolytic capacitors are made two ways: foil and "slug". The foil type is similar to aluminum electrolytics where one side of the capacitor is a strip of foil rolled up and the dielectric is a layer of oxide "formed" on the foil by electrolysis during manufacturing, the other side of the capacitor being the conductive electrolyte which fills, and is connected to the outside through, the can that contains everything. Because the dielectric is quite leaky electrically and is easily breached by excess voltage, the electrolyte allows the capacitor to "heal" after a non-destructive breach by forming new oxide by electrolysis through the application of the "correct" voltage. I understand if you carefully (with very low current limiting) apply an increasing voltage to an electrolytic capacitor over a period of time, the dielectric will build up to tolerate the higher voltage and produce a lower capacitance. The "slug" (or is it "wet slug"?) type uses a solid formed from tantalum powder with pressure and heat (I think the word for this is "sintered") so while it is solid, it is also porous and the particles of tantalum metal have a large total surface area. Sleeve bearings are also made this way from powdered metal so they can be saturated with oil. The capacitor slug is saturated with electrolyte and the dielectric is formed in a similar manner to the foil type.

Tantalum electrolytics usually have less leakage than aluminum ones and the slug type have a very low ESR (equivalent series resistance) and a high capacitance per physical volume, which is the main reason they are so popular in the age of miniaturization. I recently got an HP465A general purpose amplifier (I thought I was getting an oscilloscope for \$20! -just kidding) which has several components damaged, apparently because the output was connected to a high voltage for some time. One bad component is the output capacitor which is an axial can, mounted to the chassis with a steel clip, about an inch in diameter and about 3 inches long - 1000 mF, 30V! A quick look in a DigiKey catalog found a 1000 mF 40V axial which is 12.5 mm diameter and 30 mm long. Also a 15000 mF 35V upright at 30 mm diameter and 50 mm long. That illustrates the improvement in aluminum electrolytics since the 1960's. My catalog doesn't have any similar value tantalum

capacitors for comparison. I've seen some surface mount aluminum electrolytics that are the can-type attached to an SMD base. I think that because of the higher leakage current, aluminum types need to have some kind of pressure relief seal to allow them to vent, rather than explode, if excessive voltage is applied. Once, in high school, I saw a tantalum foil capacitor blow up in a very interesting display. I've never tried it again because I'm too cheap. Tantalum capacitors are always more expensive than aluminum ones. My catalog has a lot of the can-type aluminum SMD, one advantage of that package is that it can be quite tall for a small footprint for more mF per sq. in. The catalog also shows one type molded aluminum SMD but just a few low values and expensive - \$2 to \$3 each. It says they have "Excellent endurance characteristics due to adoption of solid electrolyte" - I wonder if that eliminates the need for a safety pressure relief seal? Then it has a number of molded tantalum SMD types.

I watched a news report because it stated at the beginning that there was a connection between high performance video games and a civil war in Africa. I couldn't think of any special components that might be in an X-box that weren't in other kinds of electronic devices. It turned out to be about tantalum. Somewhere in Africa, it is being mined with manual labor in open pits similar to the gold mines in South America, and the proceeds from the mining are figuring into a civil war. I'm afraid I don't remember whether the rebels are buying arms with the takings, or if they are fighting for their share.

Good info (as always in here)

*Message #7 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 24 May 2002, 7:58 a.m.,
in response to message #6 by Ellis Easley*

Wow! Thanks, Easley. I believe I speak for others, too.

Mam, that's the kind of info we cannot find easily. At least together, in one piece, like this.

One (more) request: do you know some (any) e-address where we can find specs for electrolitics? Mostly manufacturers. I know Philips, Siemens and Sprage (Sprague?). Are there others (and their sites) you know?

Thanks again.

Re: Good info (as always in here)

*Message #8 Posted by [Ellis Easley](#) on 24 May 2002, 10:52 p.m.,
in response to message #7 by Vieira, Luiz C. (Brazil)*

I don't have any particular websites that I use, when I need something specific I usually just take "a shot in the dark" and type in the the company name + ".com". My previous post was just drawn from my experience and a DigiKey catalog! (DigiKey is a mail order electronics supplier in Minnesota. I've never used their website, but it is www.digikey.com) Also I have a lot of databooks for different kinds of parts, but nothing newer than around 1995.

There is a website called freetradezone.com which I found out about a couple of years ago which had made available, for free, an online database, called "PartMiner", of semiconductor sources and specifications that had previously been available only by paid subscription. I used it to find spec sheets for a lot of obsolete parts I had in my collection. They had a lot of data sheets that manufacturers didn't have on their websites - pre-Web content that was scanned from paper databooks. Then, a while back, they changed their policy and started charging for it. I just went there to check the URL, and looked at some email they had sent me. Apparently, the database of current parts is still free but the obsolete parts data costs \$300/month or \$3000/year! I'm glad I used it while it was free!

Also, the emails indicate that the website has resources for all kinds of parts - they mention "semiconductors, passives, connectors, electromechanicals and more". Other than the special database of obsolete datasheets, the main thing this website did was provide links to manufacturer's websites along with selection help across manufacturers, like, provide a list of all manufacturers that make a certain size memory chip, then provide links to the manufacturers' websites. I've just gone through the registration process again, the system remembered my "organization" (a company name I use when I need one) and allowed me to register. I'm waiting for a confirmation email which will give me a temporary password. I had to provide my phone number - it was the same last time, and within a few weeks, a representative called to find out how they could help me. I guess I can muddle through it again! If you have a reasonable organization to register under (any group pursuing electronics, that might conceivably buy any parts sometime!), you could probably register!

I got my password, but now "the system is not available" - maybe they remember me - I never bought any parts!

Re: Seeking advice from expert HP collectors

Message #9 Posted by [Wayne Brown](#) on 24 May 2002, 8:44 a.m.,
in response to message #6 by Ellis Easley

I saw a capacitor blow up in high school, too (in about 1970). It wasn't an electrolytic, though. It was one of those old paper capacitors made with a layer of foil and a layer of paper that were rolled up together and then sealed with wax. In electronics shop we were working on an old TV set that was full of them, and one of my fellow students applied too much voltage to part of the circuit. One of those paper capacitors went off with a loud BANG and a moment later, there were little bits of paper falling like confetti all over the workbench.

The student who blew it up was named Al Hacker. I've always thought he had a great name for an electronics guy!

Re: Seeking advice from expert HP collectors

Message #10 Posted by [Ellis Easley](#) on 23 May 2002, 7:16 p.m.,
in response to message #5 by Vieira, Luiz C. (Brazil)

One thing I forgot to mention - the seal on aluminum electrolytic capacitors is very sensitive to chlorine compounds, or used to be. They attack the rubber and cause the capacitors to leak. This limited what kinds of solvents could be used to clean the boards. I notice some of the capacitors in my catalog list the feature "anti-solvent" with a list of types of Freon they can tolerate, I don't know which are chlorinated. Also there are some Philips solid electrolyte aluminum electrolytics, electrolyte is manganese dioxide and they have a ceramic seal.

Re: Seeking advice from expert HP collectors

Message #11 Posted by [Ren](#) on 24 May 2002, 9:42 a.m.,
in response to message #5 by Vieira, Luiz C. (Brazil)

Luiz, SMD means Surface Mount Device. That includes, fuses, diodes, transistors, resistors, inductors, Integrated Circuits (ICs), et al. So, to answer your first question, yes, an SMD capacitor is visibly different from a regular capacitor. A regular capacitor has leads(wires) coming out of it, either axially or radially. SMD capacitors have a couple of metallic pads that solder directly to matching pads on the Printed Circuit Board (PCB). The SMD electrolytic caps that have been failing in Sony built 8mm camcorders are small alumini(u)m 'cans' about 3mm in diameter and about 4mm tall. They also have a small black plastic square base. They are silver in appearance and the negative(-) connection on the bottom is designated on the opposite end (top) with by black crescent shaped mark. Again, I don't believe HP

used any of the faulty SMDs.

To distinguish a non-electrolytic SMD capacitor from another two terminal SMD device such as a fuse, resistor, or inductor, is more difficult. I'm not sure I know how to tell them always apart, much less describe the differences. But, a silk screened marking on the PCB may give a clue.

I think Ellis did a good job describing capacitors, though I'm not sure I've seen a foil tantalum, I thought all tantalums were sintered.

To find out more about the Sony 8mm camcorder leaky capacitors, do a Google search on the sci.electronics.repair newsgroup using "camcorder" +"leaky capacitors". or Sony camcorder.

Re: Seeking advice from expert HP collectors

Message #12 Posted by [Frank Glitz](#) on 22 May 2002, 4:07 p.m.,
in response to message #1 by John Smith

My policy for Voyager batteries: keep in the machine and change every five years. Or when empty, of course (I use the 16C _very_ often as I'm a "near-hardware-programmer", assembler, C and that sort of stuff).

These batteries can be obtained quite cheap (well, unless you let a watchmaker do the change ;-). And you always have every Voyager "ready for use". The five year interval means only 10 changes in 50 years. This should keep the battery compartment doors as well as the contacts "in good shape". And I've never seen such a battery leaking, even over 10 or more years. You should use batteries of high quality though, not the very cheap ones from Asia.

I also never had that "corrosion" effect - well known on HP 41s stored with battery in - with a Voyager.

My first 10C is about 20 years old now. It hasn't been without its batteries for more than a minute and the battery compartment looks like new. It works fine of course.

Hope that helps, Frank

Re: Seeking advice from expert HP collectors

Message #13 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 22 May 2002, 5:28 p.m.,
in response to message #1 by John Smith

Eventually, silver-oxide (SR44) may be better than alkalines (LR44). As per myself, I would let the calculators with batteries and check them every three months, but I accept is a matter of personal preference; there are valid arguments for both stances.

Re: Seeking advice from expert HP collectors

Message #14 Posted by [David Smith](#) on 22 May 2002, 5:48 p.m.,
in response to message #1 by John Smith

Yes, electrolytic capacitors can and do dry out. Much more so in the larger higher power applications. For the low voltage low power application in calculators their life is pretty much the same, powered or unpowered. Power tends to keep the electrolytic film intact but it also causes it to dry out and degrade over time. These two things tend to balance out in the long run. Batteries can and WILL leak. Keep your batteries out of stored machines. I keep my packs in a double sealed small plastic bags so that when they spew it won't be over something of value.

Re: Seeking advice from expert HP collectors

Message #15 Posted by [The Expert HP Collector](#) on 22 May 2002, 6:44 p.m.,
in response to message #1 by John Smith

I am an expert collector of HP calculators and what I (and other expert collectors) recommend is that you let _me_ store your collection for you. I know all the advanced techniques for HP Voyager storage and have the climate-controlled facilities for such long-term storage, and the staff who can keep the machines rotated and properly powered, lubricated, and serviced. Of course you will be able to come view your machines at any time, simply call before coming over to arrange an appointment in advance. I'll be happy to help in any way possible, and my service is free of charge.

Re: Seeking advice from expert HP collectors

Message #16 Posted by [Paul Brogger](#) on 22 May 2002, 7:34 p.m.,
in response to message #15 by The Expert HP Collector

Now, see? Isn't this just the most generous, helpful group you're likely to find anywhere?

(And I'll bet there's lots of competition offering similar services -- that should drive the price down, so don't just jump at the first offer you come across . . .)

Thanks ! I accept your offer !!

*Message #17 Posted by [John Smith](#) on 23 May 2002, 6:30 a.m.,
in response to message #15 by The Expert HP Collector*

I accept your generous offer to take care of my many Voyagers for me, it's very kind of you !

Please contact me at my usual e-mail address within 24 hours. Thank you. :-)

What a wonderfull world...

*Message #18 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 23 May 2002, 8:03 a.m.,
in response to message #15 by The Expert HP Collector*

Have you lost your minds?

I believe some guys in here need to talk to D. Mike Meyers.

Hey, Doc, do you do e-assistance?

Re: What a wonderfull world...

*Message #19 Posted by [Mike Meyer](#) on 23 May 2002, 10:12 p.m.,
in response to message #18 by Vieira, Luiz C. (Brazil)*

Luiz,

I do e-assistance more than I'd like to.... But for you guys (and gal(s) Katie?) it's always a pleasure.

I remember fondly the days that this forum helped me mourn for and then resurrect a failed HP-67. I still use it as my daily calculator.

Dr. Mikey

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Is this for real?

Message #1 Posted by [David](#) on 22 May 2002, 5:47 a.m.

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1354231305>

Re: Is this for real?

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 22 May 2002, 6:37 a.m.,
in response to message #1 by David

Hi;

what amuses you? The book itself or the price that's asked for it?

I will no longer take any e-bay score as a scare.

Cheers.

Re: Is this for real?

Message #3 Posted by [Ellis Easley](#) on 22 May 2002, 8:00 a.m.,
in response to message #1 by David

I once paid way too much for an HP71B on Ebay because it included both manuals, and back when I first got a used HP71 from Educalc (they used to sell used machines that people had traded in for new ones - at least they did this when the HP48 came out), Educalc wanted \$99 for the HP71B Reference Manual. Of course, since then I have seen that manual on Ebay for comparatively reasonable prices.

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HP Forum Archive 08

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Screws for HP Calculator

Message #1 Posted by [Spice_Man](#) on 22 May 2002, 12:24 a.m.

Has anyone found any good replacement screws for your HP calculators? I'm missing some screws on some of my calcs (Classics, Spices, Woodstocks, and 41Cs). Can the right size be found at local hardware stores?

Thank you!

Re: Screws for HP Calculator

Message #2 Posted by [db\(martinez,california\)](#) on 22 May 2002, 12:49 a.m.,
in response to message #1 by Spice_Man

try the fourms search function. about a year or so ago someone wrote the numbers/name for the 41's screws. the bad news is that he said he could only find them in huge lots.

Re: Screws for HP Calculator

Message #3 Posted by [Ellis Easley](#) on 22 May 2002, 8:22 a.m.,
in response to message #1 by Spice_Man

The tri-lobed "Plastite" screws made to cut threads in plastic will probably be hard to find in a regular hardware store. Is there anyone in the Denver area who can look in McGuckin's? I went to one of their stores while visiting in the late 1980's, it was amazing. They had a large selection of orange juicers (for some reason that is my most striking memory!) and I think they sold HP calculators.

I looked in smallparts.com the other day and they don't have screws made for plastic.

Since the threads are already cut, the important thing from a replacement point of view is to find a screw with the same thread pitch (and diameter, of course). The worst thing you can do is to start cutting a new thread, even of the same pitch. This is what leads to the situation where a small, spiral cut tube of plastic comes out of the hole, then the threads are destroyed and you will have to start over with a larger screw. This is why I am always extremely careful when

replacing a screw - even the original one - in a plastic hole. I always rotate the screw backwards to let it fall into the original thread, then slowly start turning forwards. I'm in the habit of doing this with all screws, but threads cut by a self-tapping screw, in plastic or metal, are the easiest to mess up.

Sheet metal screws are the closest commonly available type and I've noticed they come in two very different thread pitches for the same diameter, often mixed in the same bin. I've never heard an explanation for this. If you cut off a sheet metal screw to get the right length, be sure to de-burr the leading edge of the thread or you might wipe out the threads in the workpiece the first time you drive the screw in.

McGuckins Was: Re: Screws for HP Calculator

*Message #4 Posted by [Ren](#) on 22 May 2002, 10:08 a.m.,
in response to message #3 by Ellis Easley*

I no longer live in Colorado, so I can't pop over to McGuckins (Boulder)during my lunch hour. It is a shame that Traylor Hardware in Longmont is long closed, they were almost as good as McGuckins when it came to stocking screws and bolts. I wonder how McGuckins is doing now with competition from Home Depot and other hardware superstores?

Re: McGuckin / Screws for HP Calculator

*Message #5 Posted by [W. Bruce Maguire II](#) on 22 May 2002, 11:39 a.m.,
in response to message #3 by Ellis Easley*

Wow! Lucky you! ;-)

I have not been keeping up with the Forum lately (months, actually!), but I looked yesterday and today...AND...I live in Longmont!

I'll go look at McGuckin's, but you have to help me out a little---can you give me specific names/types? What screws are we looking for? I have some classics and 41s, but no Spice or Woodstock calc.s. If you're looking for a classic or 41 screw, I can take sample into the store. Otherwise, I'll need a name or _really_ good description (so that I don't look like the lost fool that I really am in the hardware store!).

Bruce.

My McGuckin story...

*Message #6 Posted by [W. Bruce Maguire II](#) on 22 May 2002, 12:01 p.m.,
in response to message #3 by Ellis Easley*

Ellis:

You know, McGuckin claims to be "World Famous", but after seeing their name mentioned HERE, in this most-international of forums, I'm a true believer!

Here's my story (to match your "juicer-selection" story):

In 1988 I was an undergrad at CU. My pride and joy (and sink of all my income) was my 1986 Toyota MR2. My dad lived in Idaho, and that was where I bought the car, so I had Idaho plates. They were very nice commemorative plates: red, white, and blue. Well, one morning I went out to my car, and found that someone had stolen my plates! No doubt for some sort of plate collection. Well, even worse than that (in my mind), they weren't considerate enough to leave the screws! Not being hardware-inclined, I figured I had a big problem---how to get screws to fit the rear license-plate-holder, when I had no SAMPLE to show anyone!

Well, I went to McGuckin, figuring that it was a real long shot... I went in. I was directed to the "screw" isle, and found a green-smocked employee there. I sheepishly told him that I needed four screws to fit the rear license plate holder on a Toyota MR2.

Without a hesitation, he said:

"Toyota MR2, huh? What year?"

Being REALLY impressed, I said: "1986." He went to a little drawer in a vast sea of little drawers, and brought me back four screws! And if there was any doubt, it was quickly erased, as the screws fit perfectly.

So, to this day, I don't know if this was an easy question or not, but it really impressed me! It also cemented the fact that McGukin is the LAST WORD in hard-to-find hardware (and more!).

Bruce.

Re: My McGuckin story...

Message #7 Posted by [Ellis Easley](#) on 22 May 2002, 5:29 p.m.,
in response to message #6 by W. Bruce Maguire II

It was in Boulder that I went to McGuckin's. I forget what year. I had the impression there were more stores, is that correct? I remember the scale model of the solar system on the University campus. Also we went to the National Bureau of Standards, watched an orientation film starring Gomez Adams (it was John Astin, but he was smoking a cigar and grinning), looked at the atomic clock, learned that the UTC people (is that the right order? Coordinated Universal Time) use HP atomic clocks to keep all the national clocks in agreement, and how the NBS engineers had been trying for years to prove that a clock with a resonant cavity twice as long should work better, and how WWV uses a local TV signal to synchronize their clock in Fort Collins with the big clock in Boulder (that last one might be in the ARRL Handbook). Also went to NCAR, watched deer from the lunchroom window, saw the two Crays that they had, recognized the model number of IBM computer the Crays used for a disc controller as the same model Tandy used for their corporate mainframe, and saw for myself why those big disks are called washing machines.

Of course, there was a fire burning in the forest.

I pulled one screw from each of a 35, 25, 67, and 34C. They are all the same. I tried swapping them and all combinations I tried worked easily except one of the case screws in my 67 seems to be slightly smaller in diameter, and a bit longer, than the others. What is special about them is that they are made to be self-tapping in plastic and have a three-lobed cross section, one trademark for which is "Plastite". I thought they might be #4 but I found some "store-bought" #4 sheet metal screws which measure .110 inch diameter while the calculator screws overall outer diameters measure from .087 to .091 inches (that is the spacing I can set my dial caliper to, and the screws turn between the jaws without binding). The 97 service manual says the 97 case screws are "#4-20" (they are a lot bigger than the screws in the handhelds) and the screws that thread into the card reader plastic are "#2-28", which does appear to be the same as the handheld case screws. The length is 5/16 inch. The finish is called (I think) "black oxide".

Here's what I would do to avoid losing a screw or risking any damage to a calculator: drill some 1/16 inch holes in a piece of plastic about 1/4 inch thick. It should be a similar kind of plastic to a calculator case, not like polyethylene at the rubbery end of the scale or Lucite at the very hard end. The first source that comes to mind is a piece of a TV cabinet. Thread a screw from your calculator into these holes. If you've never turned one of these screws into a fresh hole, you'll be amazed how easily the screw stays upright and cuts a clean thread (if 1/16 is the right size hole!) Then just take the piece of plastic to the store, along with a post-it that says "5/16" "round head" "philips (or is it Posi-

Driv?)" "black oxide" and any other things you need from the store while you're out (save a trip!) and try the candidate screws you find in the threads that the HP screw cut. It's normal for Plastite screws to turn in slight fits and starts in a previously cut thread, because of the "tri-lobe" triangular cross section. While you're at it, it would be interesting to see if any sheet metal screws fit in the HP screw threads.

BTW, while I was looking for my #4 sheet metal screws, I found what looked like a regular #6-32 machine screw, but on closer inspection, had a similar triangular cross section, and I remembered that this is called a "thread roller". It is a self-tapping screw that is just slightly tapered at the leading end, doesn't have the deep "drill bit" notch that some other self-tapping machine screws have. At Tandy we used them in "extruded holes" in sheet metal, where some metal is pushed out when a hole is punched, surrounding the hole and providing a region that has room for more thread turns than the sheet metal thickness alone.

Re: My McGuckin story...

*Message #8 Posted by [W. Bruce Maguire II](#) on 23 May 2002, 11:51 a.m.,
in response to message #7 by Ellis Easley*

Ellis:

I'm really busy at the moment, but I'll try to get in to McGuckin this weekend. The store in Boulder is the only one! My wife's brother is good friends with the family that started/owned (I don't know if they still do...) the store.

From what David wrote below, exact replacements may not exist, but I'll see what they've got.

So, "Spice_Man", cross your fingers! ;-)

Bruce.

Re: My McGuckin story...

*Message #9 Posted by [Spice_Man](#) on 28 May 2002, 4:42 a.m.,
in response to message #8 by W. Bruce Maguire II*

My fingers are getting tired from being crossed for so long... :-)

Re: My McGuckin story...

*Message #10 Posted by [W. Bruce Maguire II](#) on 28 May 2002, 4:15 p.m.,
in response to message #9 by Spice_Man*

My fingers are getting tired from being crossed for so long... :-)

Sorry Spice_Man!

To tell you the truth, I thought the issue was dead, given the two follow-on posts that seemed to authoritatively say that the screws were not available (especially the one that mentioned that he looked a year ago, and even checked with McGuckin's supplier!).

So, I have not made the trip in.

But, since you have crossed your fingers for so long, I'll give it a shot.

Do you think you could wait until this time next week? I don't know if I'll be going into Boulder during the week---I'll try on the weekend if not earlier. OK?

I'll let you know.

Bruce.

Re: My McGuckin story...

*Message #11 Posted by [Spice_Man](#) on 29 May 2002, 5:06 a.m.,
in response to message #10 by W. Bruce Maguire II*

Bruce: Please don't go out of your way to try and find it... I don't think that an identical screw is available.

Something close may be, as posted on the other branches of this thread, at some other hardware websites...and I'm crossing my (tired) fingers that someone will report back and say they found a screw that works just right! Let's hear it for optimism! :-)

Spicey

Re: My McGuckin story...

Message #12 Posted by [Erik Wahlin](#) on 23 May 2002, 10:42 p.m.,
in response to message #6 by W. Bruce Maguire II

I grew up in Boulder and checked McGuckins a year ago for the screws. They are (if my memory serves me right) a # 3 sheet metal and not available. I checked with Timberline fasteners (A&I Bolt) in the area (huge distributor that McGuckins get's their screws from)and they told me the only way to get them is a special order of 10,000 screws or more. I think I mentioned this in the forum a year or two ago.

Re: Screws for HP Calculator

Message #13 Posted by [David Smith](#) on 22 May 2002, 5:40 p.m.,
in response to message #1 by Spice_Man

The sacred screws are #3 self tapping sheet metal screws with a type "B" point. You won't be able to find them... anywhere... For \$2000 bucks plus shipping a guy in Taiwan will crank out 250,000 of them though... or so it was several years ago when I last quested for the holy grail.

Re: Screws for HP Calculator

Message #14 Posted by [CJ](#) on 22 May 2002, 6:18 p.m.,
in response to message #13 by David Smith

I know nothing about these screws but after looking at some descriptions here, one thought came to mind.

Since I fly RC Helis I thought maybe a hobby shop might be another place to look.

Some of the parts on helis are plastic and have self tapping screws.

Just a thought. Good luck.

Christopher

Re: Screws for HP Calculator

Message #15 Posted by [David Smith](#) on 23 May 2002, 5:41 p.m.,
in response to message #14 by CJ

Been there, checked that. Lots of stuff that is sorta similar but nothing that is proper.

Re: Screws for HP Calculator -- #3 x 3/8"? Pan Head?

Message #16 Posted by [Paul Brogger](#) on 24 May 2002, 2:24 p.m.,
in response to message #13 by David Smith

[Here](#) are some #3 x 3/8" pan heads. Will those work?

Re: Screws for HP Calculator -- #3 x 3/8"? Pan Head?

Message #17 Posted by [David Smith](#) on 24 May 2002, 5:03 p.m.,
in response to message #16 by Paul Brogger

It looks like they may be very close. I don't know if they have the type "B" tip or not. It may not matter, it is the little "V" shaped notch in the end that helps them cut threads in plastic. Also the regular HP screws are 5/16 inch long. Again it probably does not matter, you could probably grind the tip off. For less than five bucks a hundred they are certainly worth a try. They are also silver (like the early HP35 screws) and not regulation HP black. They could be black oxide coated at a metal shop if you are picky.

Re: Screws for HP Calculator -- #3 or #2?

Message #18 Posted by [Ellis Easley](#) on 25 May 2002, 12:32 a.m.,
in response to message #17 by David Smith

I was mistaken when I said I took a screw from my 35 yesterday, it was my 45! My type 2 35, which I have never opened, does have silver screws. (If it had HPIB, that would mean non-metric threads!) But otherwise it is identical to the screws in my other units.

You mention the V-shaped notch - all the calculators in my HP collection have screws without such a thread cutting notch. They have the blunt tip and the tri-lobe cross section which I recognize as similar to "Plastite" brand. As far as whether the pointed tip matters - in my opinion, if the overall length with the tip was no longer than the original, I wouldn't be concerned except that it means there will be a couple thread turns less hold. But if the tip made the screw longer than the original, I would be very concerned that if the tip hits the bottom of the hole, the screw will stop going in and will strip the threads if you try to tighten it any further - same with a longer blunt tip screw. If I checked the depth of the hole and it had more room, I guess it would be OK, except the circular cross section sheet metal threads won't cut a new thread in plastic as well as the tri-lobe thread will (of course, it would only be a thread or two).

Regarding the size #3 or #2 - I have no special experience here, I thought it might be #4 at the outset because that's the smallest size I usually see in common use. But

here are the reasons I now think it is #2:

1. The handheld case screws I measured were from .087 to .091 inch in diameter. I got this measurement by finding the smallest setting of my dial calipers that allowed each screw to turn between the jaws without binding. This is necessary because of the tri-lobe cross section.
2. The HP97 service manual (on Museum CD 5) says on page 6-6 that the six screws (three 1/4 inch long and three 3/8 inch long) that thread into the plastic of the card reader are #2-28. The ones I have out for repair right now measure from .086 to .091 inch diameter. I held a 1/4 inch long one alongside the handheld case screws, crest to crest, and the thread pitch matches across 6 threads. Also, I tried the case screws in the card reader plastic and they fit just right.
3. www.smallparts.com has a page of stainless steel sheet metal screws which says the diameter of a #2 is .0891 inch. It doesn't say just how that is measured, but another page of stainless steel flat washers says the inside diameter of a #2 is .094 inch.
4. I have a little book "Pocket Ref", Second Edition, compiled by Thomas J. Glover. I dug it out because I noticed [smallparts.com](http://www.smallparts.com) sells it - I got mine at Harbor Freight Tools. On page 277, it says the shank diameter of a #2 wood screw is .086 inch, a #3 is .099 inch, and a #4 is .112 inch. Then on page 278 it has some data on sheet metal screws starting with #4, it says the diameter of a #4 is .112 inch. Unfortunately, [smallparts.com](http://www.smallparts.com) doesn't give the diameter of #4 and above sheet metal screws, and skips #3 altogether.

Even if a #2 sheet metal screw has the right diameter, I wouldn't try it in a calculator until I verified that the thread pitch was the same as the originals.

Re: Screws for HP Calculator -- #3 x 3/8"? Pan Head?

*Message #19 Posted by [David Smith](#) on 25 May 2002, 10:18 p.m.,
in response to message #17 by David Smith*

At one time I put #2, #4, and HP screws under a microscope. It's definitely not either. Also Katie Wass also came to the same conclusion.

Re: Screws for HP Calculator -- #3 x 3/8"? Pan Head?

Message #20 Posted by [Ellis Easley](#) on 26 May 2002, 4:10 p.m.,
in response to message #19 by David Smith

Have you compared the handheld case screws to the ones that hold the 97 card reader together? There are three 1/4" that join the two plastic parts and three 3/8" that hold the PCB. The case screws fit into the threads they cut perfectly. The 97 service manual says they are #2-28.

I think we are dealing with something similar to pipes: there are a lot of different kinds of pipe that are all nominally 1/2 inch but are all very different in outside diameter. It has to do with the difference in material, wall thickness and the inside finish, but all 1/2 inch pipes will supply about the same amount of water at a given pressure. Likewise, the "#n" sizes are used for a lot of different kinds of screws and probably refer to something fundamental like "holding power" but it results in something slightly different for each kind of screw. The screws in my HP calculators are not sheet metal screws. Sheet metal screws have a circular cross section. The three-lobed screws that HP used are made especially to cut threads in plastic. As I understand it, sheet metal screws have a tendency to crack plastic posts because being circular, they are exerting the same force in all directions from the center. The tri-lobes screws stretch the plastic into a triangular shape. The extremes of the lobes cut a deep thread but then move on, relieving the pressure between the lobes. It is as if you cut a thread with a certain size tap and then used a slightly smaller screw. It works, and it improves the situation, because plastic is resilient, which metal is not.

I ordered the #2 X 1/2" "plastic thread cutting screws" from the website that Paul found. It's the first time I've seen anything by that description offered in a catalog. I've been trying to remember the name of the company that used to supply hardware to the factory where I worked. They were in Dallas and "Central" was in the name and the guy who we worked with was named Joe Brown. It might have been Central Industrial Supply Inc., they are listed under fasteners in the Fort Worth yellow pages with a 972- number. I might just call them next week for a reality check! Of course, whatever we got from them we bought in large quantities and were probably made to order.

That's an idea for a new thread - things you have, or had, access to at work that you can't find as a retail customer!

Re: black oxide finish

*Message #21 Posted by [Ellis Easley](#) on 26 May 2002, 4:24 p.m.,
in response to message #17 by David Smith*

This is something I discovered by accident, it's not the same as black oxide but it is dark and, hopefully, corrosion resistant. I found that after leaving some slightly rusty plated screws soaking in CLR for too long, it had dissolved all the zinc. After I rinsed them they started rusting immediately. So I put them in the oven at 400F for about a half hour, sitting on a piece of foil. Then I took them out and immediately dribbled some 3-In-One oil over them. The result is a dark brown finish much smoother than black oxide (maybe it is just a very thin black oxide). I don't know how much the soak in CLR had to do with the result. If it is iron oxide, it would probably be necessary to remove any zinc or cadmium plating first.

Re: Screws for HP Calculator -- #3 x 3/8"? Pan Head?

*Message #22 Posted by [Ellis Easley](#) on 25 May 2002, 12:57 a.m.,
in response to message #16 by Paul Brogger*

I'm still thinking they are #2, but I saw an interesting thing on another page of the site you linked - click on "Self tapping or Wood Screws" and among the choices are "Self Drilling Screws - Phillips" and "Thread Cutting Screws for Plastic - Phillips - Ptd". They use the same image for both, which I recognize as the self-drilling screws used for galvanized steel studs used in building construction as a replacement for wood. The screws literally have a short length of twist drill at the tip to drill a pilot hole. Now, I wonder what the "Thread Cutting Screws for Plastic - Phillips - Ptd" really look like? And they only have one size - #2 X 1/2. I may order a bag, after I've looked around this site for a while.

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HP-42S LCD change

Message #1 Posted by [Pavel Rans](#) on 21 May 2002, 10:02 a.m.

I own a HP-42S for about 12 years. The display was probably wrong since the beginning but it began to be bad in last 2 years. The left side of the display is getting black, probably caused by air coming right between the LCD cover and a polarisation filter. The black spot now covers almost x and y characters, so I can still use it, but it is still slowly going on and on. Is there any chance how to change the display? eg. take one from other damaged device with a good LCD? Or does HP still offer some kind of service?

Thanks for any opinion,

Pavel Rans

Re: HP-42S LCD change

Message #2 Posted by [Paul Brogger](#) on 21 May 2002, 11:27 a.m.,
in response to message #1 by Pavel Rans

There are at least two articles available here that are relevant to your problem:

MoHPC – Repairs & Batteries – [Pioneer Repairs](#)

MoHPC – Articles Forum -- [#199: Increasing HP-42s Memory to 32K](#)

Read all, go SLOW, and be careful.

I'd offer to help, but I'm WAYYYYYYYY overdue supposedly helping someone else, and I don't want to cause any more grief in the community!

Re: HP-42S LCD change

Message #3 Posted by [warren](#) on 21 May 2002, 12:59 p.m.,
in response to message #1 by Pavel Rans

HP offered an exchange service for five years after the 42S was discontinued in 1995. That service ended in 2000. I believe Paul Brogger has suggested transplanting a display from a 17BII, which appears to be identical to the 42S display. That doesn't look easy, but may be possible. If you really want a 42S (and who wouldn't?), and have a spare \$200 to \$250, there's always eBay...

Re: HP-42S LCD change

Message #4 Posted by [Tony Duell \(UK\)](#) on 21 May 2002, 6:46 p.m.,
in response to message #1 by Pavel Rans

An LCD turning black nearly always means that the liquid crystal itself is leaking out, probably because of damage to the seal between the 2 parts of the display. The polarising filters can often be removed and replaced without problems, and slight air gaps between the filters and the display don't matter. Anyway, you need a new display. It's best to find a broken 42S with a good display and keyboard and just swap the logic board (see the article others have mentioned for how to open the case, then just twist the tabs holding the PCB to the metal frame and lift it off. Do NOT press on the CPU chip -- you can tear it (and ruin the machine)). It is not easy to remove the display from the metal frame (it's glued in place) without breaking it, and it's not easy to align a new display so that it makes contact with the right traces on the PCB. It probably is possible (the contacts aren't at that fine a pitch), and IIRC a display from a 17B would work as well. Don't even think about dismantling the keyboard sandwich (i.e. removing the metal frame from the top case). I have done this on a wrecked 42S, and I wouldn't want to try to get it to all stay together again.

Re: HP-42S LCD change

Message #5 Posted by [Pavel Rans](#) on 22 May 2002, 2:14 a.m.,
in response to message #4 by Tony Duell (UK)

Thanks for everybody's advices. I still can use the machine, the black spot is partly outside the "matrix" area. Do you think I could prevent LCD from further leaking by putting some glue where the seal is broken???

Anyway, buying HP-42S from ebay for \$200 seems relly crazy to me. Is it really such "hot stuff"??

Pavel Rans

Re: HP-42S LCD change

*Message #6 Posted by [Ellis Easley](#) on 22 May 2002, 8:27 a.m.,
in response to message #5 by Pavel Rans*

I don't have a 42 of any kind, but from what I have heard others say about it, let me ask you - would you trade yours for another model?

Re: HP-42S LCD change

*Message #7 Posted by [Pavel Rans](#) on 23 May 2002, 2:28 a.m.,
in response to message #6 by Ellis Easley*

Hmmm... I wasn't thinking about it yet. This machine is really cool. The only thing I miss is IR input.

Re: HP-42S LCD change

*Message #8 Posted by [Tony Duell \(UK\)](#) on 23 May 2002, 6:42 p.m.,
in response to message #6 by Ellis Easley*

Actually, I fail to see why the 42S is so desirable. OK, it runs the same user code programs as the HP41, but all the good bits (synthetic programming, HPIL, plug-in modules, time module, extended functions, ...) are missing. I'd rather have my 41CX stuffed with modules. My 42S tends to get used as just a calculator -- I don't generally bother to program it as there is no way to save the programs on another device. And to answer your question, of course there are models that anyone would trade a 42S for. The HP95C is one of them. So (I suspect) is an HP01.

Re: HP-42S LCD change

*Message #9 Posted by [Wayne Brown](#) on 24 May 2002, 8:50 a.m.,
in response to message #8 by Tony Duell (UK)*

At last, someone who agrees with me about the 42S! It's a nice calculator and I wouldn't mind having one, but not at the prices I see on eBay. My 41CX is my idea of the perfect calculator -- it does everything I need, and with the card reader and/or HPIL it has unlimited storage.

Re: HP-42S LCD change

*Message #10 Posted by [CJ](#) on 24 May 2002, 9:15 a.m.,
in response to message #9 by Wayne Brown*

I will agree with both of you.

I got my 41 in '80(still have it) and one day when I went into the store were I got it I saw the brand new 42.

I was told it was compatible with the 41.

I then asked were are the expansion ports for all the other great hardware I had for my 41?

There aren't any I was told. So I reply how is that compatible? And what do I do with my 41 hardware?

I looked at it in the case and said to myself boy that thing looks cheaply made and I have to type in my programs(some big) by hand.

With that and the price I said pass and walked away. To this day I don't regret it.

I picked up a 32SII that I use as a banger for check book etc. and I have a feeling if I had bought the 42 it would have this duty right now and would have been a waste of my money at the time. which wasn't cheap at the time.

I wrote a program for the 41 that accesses a big DB on the DCD. How could I do this with the 42? No it will not fit in 32K.

So I guess I will 3'rd this one.

Christopher

Does the 42S deserve its fame?

Message #11 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 24 May 2002, 12:30 p.m.,
in response to message #8 by Tony Duell (UK)

I am a supporter of the 42S, but I do admit it has minuses against a 41. There are pluses too.

Pluses are BASE, MATRIX, STATS, PROB, SOLVE and INTEGRATION preprogrammed functionality and rather good menus, apart from a lower price, better size and no corrosion prone parts. I bought my 42 mainly because it was very expensive then to repair my corroded 41C backplane (which also left it I/O-less!)

The 42S certainly should have had some kind of BIDIRECTIONAL I/O, a serial port might have been acceptable. And also, the ALPHA keyboard is clumsy. It also should have been repairable instead of a sealed unit.

If the 32SII had been not so inconsistent, it could fill the role of a reasonable scientific calc, with lots of preprogrammed functions, but it should had a BEEPer, some more memory (less than 400 bytes for programs and data... no comment), and more consistency about equations, complex numbers, etc. The way the 32SII "does" an AVIEW involves toggling a syntax-error-override flag, and then use a purpose-invalid equation (!!)

Re: Does the 42S deserve its fame?

Message #12 Posted by [Tony Duell \(UK\)](#) on 24 May 2002, 8:20 p.m.,
in response to message #11 by Andrés C. Rodríguez (Argentina)

Well, and HP41 Advantage Pac will add some of those functions to the HP41. In fact I generally consider the HP42 to have the advantage pac (and little more) built-in. The problem with the advantage pac on the 41 is that it has the same XROM IDs as the Devil ROM, and you can guess which one I find more useful :-). Now you say that there are no internal bits in the 42 that corrode and need cleaning. Well, agreed the 41s do suffer from bad contacts. But it's not too hard to open up a 41 and clean the contacts. Opening a 42 is much harder and I have seen 42s with keyboard problems due to damaged/dirty contacts. It's possible to disassemble the keyboard, but it's next-to-impossible to get it to stay together again. And the 42 keyboard is _cheap_ (like the 48 keyboard, etc). The 'PCB' is a thin plastic sheet with carbon traces printed onto and through it. I am not surprised it fails. In fact I am

surprised that it ever works at all! Against the 42S are the lack of any external input other than the keyboard (I do not like having to retype programs, OK), and the horrible alpha keyboard/menus which (IIRC) you can't get into a known state by just pressing keys (even 'Exit' doesn't always behave consistently) -- you have to look at the display as well to see where you are. Some menus go away after you've selected something from them, others don't. And the alpha mode is plain unpleasant. I must admit I don't much like programming the 42 (unlike the 41, which is nice to use IMHO).

Re: Does the 42S deserve its fame?

*Message #13 Posted by [Larry](#) on 25 May 2002, 10:47 a.m.,
in response to message #12 by Tony Duell (UK)*

Has anyone ever actually dismantled a pioneer keyboard and successfully re-assembled it?

Pioneer keyboards

*Message #14 Posted by [Tony Duell \(UK\)](#) on 25 May 2002, 2:23 p.m.,
in response to message #13 by Larry*

Well, I can tell you how one comes apart and why it's so hard to put back together. Start by Peeling off the metal overlay and removing the bottom case (we've been through this many times). Stwist the 6 metal tabs behind the display so that they will fit through the slots on the pCB (look to see which way they were originally twisted and 'undo' it). Some of the tabs have little grounding spikes on them -- flatten these with pliers after untwisting them so that that they will fit through the slot and so they will make good contact when reassembled. Now lift off the PCB (take care to avoid electrostatic damage) and remove the 2 zebra strips for the display connections. So far it's not hard to put back together. Look at the back of the keyboard. It's covered in a metal plate with a _lot_ of heat-stakes holding it down. Cut them off, not forgetting the 2 'above' the display. Do not attempt to separate the display from the metal frame. Now lift off the metal plate and separate the keyboard layers. There's a plastic insulator, then the 'PCB' (very thin, almost paper-like), then another insulator, then the sheet with the dome contacts on it. No for the problem in putting it back together. It has to be fairly solid so as to stand up to having the keys pressed. But there's not enough plastic to re-heat-stake the pegs. You can't use metal screws because there's not enough clearance between the keyboard and the PCB and you'll get short-circuits on the main PCB tracks. You can't get tiny plastic

screws for the obvious reason. I've not found a way of doing it yet...

Re: HP-42S LCD change

Message #15 Posted by [W. Bruce Maguire II](#) on 23 May 2002, 11:47 a.m.,
in response to message #5 by Pavel Rans

"Anyway, buying HP-42S from ebay for \$200 seems really crazy to me. Is it really such "hot stuff"??"

The short answer: yes. ;-)

The long answer: Just try to go buy a comparable new replacement calculator! By that, I mean one that is as compact, powerful, and easy to program as the 42S. The only RPNs that HP sells today are the 12C, 17BII, and 19BII business calculators, and the big 48g+/gx graphing "compu-calc.s" (the big 49 graphing "compu-calc" can be RPN, but it has no real [Enter] key; you have to use the tiny [=] key in the bottom corner...yuk! ;-)).

Bruce.

Re: HP-42S LCD change

Message #16 Posted by [Pavel Rans](#) on 24 May 2002, 2:37 a.m.,
in response to message #5 by Pavel Rans

So, the result is that 42S is one of the best calculators (with few issues) and I can hardly imagine buying one of the newest models. Trading for similar model of same age is better option. But I still hope to get a spare LCD display.....

Pavel Rans

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HP Xpander

Message #1 Posted by [Gianmaria \(Italy\)](#) on 21 May 2002, 2:15 a.m.

Just a short note after a recent addition of the HP Xpander to my collection.

It's sad to note that this new device is miles far from the HP way... made in China (argh!), cheap appearance, no keys feedback (not the old good audible click) and strange double springs for batteries, both the "+" and "-" poles have springs to hold the battery (why?) so it's really a nightmare to insert them into the compartment!

I placed the Xpander in my glass near the HP-35 "Red Dot", to simbolize the first and the last, the remote past and the future, the baby and his grandfather :-) but looking them my preference is still for the "Classic" look!

Greetings.

Re: HP Xpander

Message #2 Posted by [Frank](#) on 21 May 2002, 8:37 a.m.,
in response to message #1 by Gianmaria (Italy)

Finally opened a HP39G the other day, and CHINA as well. Not that there is anything wrong with China, nice place to visit. Just now what one would expect from the old HP. Speaking for myself, I'd rather pay 6x as much and get a quality design/mfg.

Re: HP Xpander

Message #3 Posted by [J.Manrique](#) on 21 May 2002, 9:07 a.m.,
in response to message #1 by Gianmaria (Italy)

How hard is to get one?..

Thanks, J.Manrique

Re: HP Xpander

*Message #4 Posted by [Colinc](#) on 21 May 2002, 9:04 p.m.,
in response to message #3 by J.Manrique*

Only 2000 Prototype Xpanders were built in August 2000. Approx 1800 were distributed to schools in the US for field trials. Most of these were returned to Hp and destroyed when the project was cancelled about 50 were unaccounted for. The other approx 200 were at ACO in their original packaging. About 60 were handed out to staff the rest were smashed in the car park with a hammer. So about 60 exist Mint (most of which are in Melbourne Australia, some have been sold) about 50 Used (in the US from the school trials). Regards Colin

PS: Check out ad posted here around 9/5/02

Re: HP Xpander

*Message #5 Posted by [Spice_Man](#) on 21 May 2002, 11:42 p.m.,
in response to message #4 by Colinc*

The figure that I received was that there were 3000 to 5000 prototypes built (from an implementor in the pilot program), and that he himself received about 30 of them... is 2000 a "definite" figure?

Re: HP Xpander

*Message #6 Posted by [ColinC](#) on 22 May 2002, 2:02 a.m.,
in response to message #5 by Spice_Man*

There was only 2000 Made of these Xpander Prototypes used in the pilot program. I had to redesign the keyboard, get 2000 made and up to the factory in China in the first 2 weeks of starting at ACO as the Hardware Team Leader at the end of July 2000. So I am quite sure on the number made. Then the project was cancelled in Oct 2000. There were no others made. Colin

Re: HP Xpander; what can one do with it?

Message #7 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 22 May 2002, 9:46 a.m.,
in response to message #4 by Colinc

Hi;

after all that sa(i)d, one question: what sort of SW exist for the Xpander? What does it do?

I am not a collector at all, I use my calculators for personal/professional purposes, because I believe that's what calculators are for: to be used (that reminds me Toy Story-2). If they are broken, let's pack them and show everybody their look. I have 12 calculators (I recently bought an HP12C, cause I was invited to teach classes about its use), and ALL of them are used somehow. I bring both the HP41CV (halfnut) and the HP12C with me everywhere, just in case.

I have a fully working HP25 with original batt pack, manuals, QRG, dust cover (I use an Spice's charger because I don't have the original) and I think seriously about offering it for trading (41's IL components). I just did not post it yet. Why? Because I do not use it at all, and this condition teases me! A collector would find a better place for "her", but it still works fine. What to do?

That's why I'm asking what can one (that is NOT a collector)do with an Xpander that is not only exposing it as a trophy. Did ACO find the time to develop/port SW for the Xpander? I would like to know. For the records.

Best regards.

Re: HP Xpander; what can one do with it?

Message #8 Posted by [J.Manrique](#) on 22 May 2002, 2:32 p.m.,
in response to message #7 by Vieira, Luiz C. (Brazil)

Well, you seems be looking for this: <http://www.saltire.com/xpander.html>

It is the SW that comes with the Xpander..

Have fun, J.Manrique

About your HP25... (a little off topic)

*Message #9 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 22 May 2002, 5:33 p.m.,
in response to message #7 by Vieira, Luiz C. (Brazil)*

Luiz:

If you decide to let her go, please let me know (the current exchange rate is really hard for us here, but I would like just to think about it). We may be able to keep it within the Mercosur!

Cheers

Andrés

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10B II Emulator needed!

Message #1 Posted by [Bjorn Vang Jensen](#) on 20 May 2002, 6:48 p.m.

I am looking for a PocketPC emulator, but a dektop will do as well. HP Support claims they don't have it, although several web sites point to a file called <http://www.hp.com/calculators/go/10bii/10biiemu.zip> This URL now takes you to the ofical 10BII home page, which has no emulators.

If anyone out there has the file, I would be extremely grateful if you would e-mail it to me. I already have the calculator, but I'm tired of carrying that and my Pocketpc at the same time! Thanks a lot in advance.

Bjorn

Re: 10B II Emulator needed!

Message #2 Posted by [aruid](#) on 20 May 2002, 9:32 p.m.,
in response to message #1 by Bjorn Vang Jensen

The HP 10Bii is cheap now, My local Wal-Mart had them for \$18. Assuming you are interested in the actual calculator.

Re: 10B II Emulator needed!

Message #3 Posted by [Jeff](#) on 21 May 2002, 3:09 p.m.,
in response to message #2 by aruid

As the original poster mentioned, is there anywhere on the net where the emulator is posted? It appears that Raymond Hellstern mailed it to him, but where did it come from?

thanks, Jeff

You have mail.

Message #4 Posted by [Raymond Hellstern](#) on 21 May 2002, 1:06 p.m.,
in response to message #1 by Bjorn Vang Jensen

Regards,

Raymond

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Question to Ron

Message #1 Posted by [Joan Cárdenas](#) on 20 May 2002, 4:24 p.m.

I'd like to explain you witch is my dilemma:

I've got a hp49g a hp48gx, a hp19bii, a brand new hp42s and two news hp 32sii. I'm enjoying a lot of this late liking, but I have a doubt, because my favorites are the hp42s and the 32sii. Probably I prefer to work with the hp 42s in the office but I'm worried about the possibility of an accident and not to have a replacement. So.. from your expirience, is better to go directly to your favorite and forget the fear about the future?

Who is Ron? Was: Question to Ron

Message #2 Posted by [Ren](#) on 20 May 2002, 5:22 p.m.,
in response to message #1 by Joan Cárdenas

Who is Ron? I believe many people who read this forum would give you their opinion to your question. (Except me, as I don't own any of the machines you mentioned!)

Re: Question to Ron

Message #3 Posted by [Rin](#) on 20 May 2002, 6:34 p.m.,
in response to message #1 by Joan Cárdenas

The HP-32Sii will be a lot more available, and at a lower price, than will the -42S.

A good compromise would be to use the -32Sii (while trying to obtain one or two more), and keep the -42S at home.

Re: Question to Ron

Message #4 Posted by [Ron Ross](#) on 20 May 2002, 8:06 p.m.,
in response to message #1 by Joan Cárdenas

Yes, I share your problem, and my solution is a 48g on my desk at work (good keyboard, lots of conversions, just like a desk reference). I to like my 42 best, but for my desk calculator I use a 48. If I travel, then I have to decide whether to take a 32 or THE 42. Depending upon the travel, if for leasure and/or no field work, I take the 42. If I am going to be on a factory floor, a 32.

The 32 is really a good calculator, but the 42 (especially with the 32K RAM I have installed (Thanks to Paul Brogger for the write up)) with its complex and matrix features make it far superior for my electrical engineering calculations. However, I normally do not need this horsepower, but it is a nice security blanket.

I play with the 49 and it is an amazing device, but for general use the 48 is what I keep on my desk. If I could bear the loss of the 42, I like its style and size better, but the 48 has an HP layout and is easy to use also. The 32sII has most of the conversions you would use for daily use. I like the 32 line also (actually, I like the 32sII better, but most people seem to like the older 32s).

Just my humble thoughts on the matter. Thanks for asking.

How stable is the 32K HP42S??

Message #5 Posted by [Iqbal](#) on 20 May 2002, 9:46 p.m.,
in response to message #4 by Ron Ross

Hi Ron, a friend from the UK once told me of someone who installs the extra RAM chip to convert the 42S to 32K RAM. But is it stable, or are there regular 'memory reset/memory clear'?

Re: How stable is the 32K HP42S??

Message #6 Posted by [Ron Ross](#) on 21 May 2002, 7:07 a.m.,
in response to message #5 by Iqbal

My particular 32K chip seems to be even better and its battery drain specs are better than the original. I suspect that this is common since the newer 32K RAM should have better behavior than the older 8 K RAM. But this is just my experience.

The sad truth is though, that with no real I/O, the 32K is overkill since no matter how much you program, you can lose on a bug or memory clear and have to start key-punching all over again.

Still my 32K seems as or more stable than my original 8 K.

Re: How stable is the 32K HP42S??

Message #7 Posted by [Ex-PPC member](#) on 21 May 2002, 9:59 a.m.,
in response to message #6 by Ron Ross

Ron Ross wrote:

"The sad truth is though, that with no real I/O, the 32K is overkill since no matter how much you program, you can lose on a bug or memory clear and have to start key-punching all over again."

If you're considering those 32K to be used just for storing programs, that's so. But obviously RAM is also used for data, even if temporary, and 32K RAM thus mean you'll be able to work with more and larger matrices at a time, which given the excellent matrix capabilities of the 42S, it's a definite bonus.

For instance, the barebones 42S can work with **one** 25x25 real matrix, or so. The 32K-enhanced 42S can work with **four** such matrices at a time, or a single matrix up to 64x64 !! When using matrix operations to compute correlations and forecasts, or to fit data to a model, being capable of handling matrices as large as possible is a definite asset.

In short, go for it !

Re: How stable is the 32K HP42S??

Message #8 Posted by [Karl Schneider](#) on 22 May 2002, 4:23 a.m.,
in response to message #7 by Ex-PPC member

I recently got a good 1989 42S on eBay, and am quite impressed with its extensive functionality, implemented with user-friendliness in a light, compact package. In that sense, it is far better than the 48xx products.

However, I have to agree that a 32kB RAM upgrade is indeed overkill without direct hardwire I/O. If one had a genuine need to work with the amount of matrix data you describe, a far better tool would be Matlab installed on a PC. I can't imagine that any student in the classroom, or engineer in the field, would ever be expected to tackle such problems using a portable handheld device, given limited time.

That having been said, I would like to join the ranks of those who would like to see HP re-introduce the 42S, with the following improvements:

1. Add hardwire calculator<->PC file transfer 2. Improve LCD in following ways: - increase resolution that of the 48G - ability to view display at an angle (#\$*&!) - larger to accommodate x and y registers plus menu 3. More RAM (iff #1 is also implemented) 4. Make keys a little softer and not so slippery 5. Ensure retention of RAM contents during battery swap

A veteran employee in my office has a 42S, but complains about #4 and #5. Recently, I showed him how to rebuild the battery pack on his HP-21 based on info in MOHPC. He is quite pleased, and has reverted to "old faithful".

Re: How stable is the 32K HP42S??

Message #9 Posted by [Ex-PPC member](#) on 22 May 2002, 5:35 a.m.,
in response to message #8 by Karl Schneider

Karl Schneider wrote:

"However, I have to agree that a 32kB RAM upgrade is indeed overkill without direct hardwire I/O. If one had a genuine need to work with the amount of matrix data you describe, a far better tool would be Matlab installed on a PC. I can't imagine that any student in the classroom, or engineer in the field, would ever be expected to tackle such problems using a portable handheld device, given limited time."

Your opinion is most respectable, but you'll have to admit that the mere fact that you can't imagine it does not imply that the necessity doesn't exist. The 42S instruction set was developed with engineering needs in mind, not students', IMHO.

If it were intended primarily for students, it would have those fancy symbolic algebra and graphic plotting features which are pretty useless for engineers on the field and which would be best tackled with a Mathematica-like program on a PC.

But for real engineers doing real field work, matrix handling and complex numbers are the order of the day, and I'm talking real field work, i.e., in the wilderness, with extremely bad weather and temperatures below freeze point. A 42S or a 71B are the most useful computing devices on these circumstances, as many people doing Geophysics will certify.

Myself, I use either a 42S (32 Kb) when size and weight must be kept to an absolute minimum (because I'm already overloaded) or else a 71B (401.5 Kb) when data acquisition and on-the-field processing must be maximal. Further, the 71B has the obvious essential advantage that you can later pass the data on to a PC for further processing and presentation.

Re: How stable is the 32K HP42S??

*Message #10 Posted by [Karl Schneider](#) on 23 May 2002, 3:06 a.m.,
in response to message #9 by Ex-PPC member*

Incognito "Ex-PPC member" wrote:

"Your opinion is most respectable, but you'll have to admit that the mere fact that you can't imagine it does not imply that the necessity doesn't exist."

I think the condescending tone is a bit uncalled-for. There were two qualifying phrases in my statement:

1. "...without direct hardwire I/O" The memory upgrade would not be very convenient to the average user (you may be a rare exception) without the ability to easily download the stored data or re-load big programs, without error electronically, as Ron Ross pointed out. If and only if that capability were added, then by all means, 32kB or more would be an enhancement.

2. "..given limited time" Those who visit remote sites while packing lightly, probably have ample time and patience to hand-enter up to 4000+ floating-point numbers on a small keypad. However, under ordinary circumstances, when time is important and modern facilities are available, hardly anyone would have the need or inclination to do so. To the vast majority of users, the extra memory would usually be employed for programs, for which the direct I/O lacking in the standard 42S would be essential.

Re: How stable is the 32K HP42S??

Message #11 Posted by [Ex-PPC member](#) on 23 May 2002, 4:32 a.m., in response to message #10 by Karl Schneider

Mr. Schneider wrote:

"I think the condescending tone is a bit uncalled-for."

There's no 'condescending' tone whatsoever in my reply, sir, I simply state the fact as it seems to me. As a proof of your alleged limited imagination, you continued:

"Those who visit remote sites while packing lightly, probably have ample time and patience to hand-enter up to 4000+ floating-point numbers on a small keypad" ssential."

It's obvious that your imagination only goes as far as to assume that 32 Kb are only useful for data if said data implies entering 4000 numbers from the keyboard, which justly seems to you as a nightmare scenario.

But entering that many numbers manually is far from the only possibility. Those 4000 numbers can be computed internally from very few input data, then used in subsequent calculations.

For instance, to fit a set of as few as 60 empirical data pairs to a suitable polynomial curve which will pass through all of them, you first need to enter just said 60 data pairs, for a total of only 120 numbers entered by the user. But then the program needs to construct a 60x60 matrix (i.e: 3600 numbers) and solve the corresponding linear system, the final result being just another set of 60 numbers, the coefficients of the polynomial.

So you see, here we have a problem (and a very typical one, at that) where you just input 60 numbers and after a while you get another 60 numbers as a result. Yet you need to deal with 3600 numbers internally, and you'd better have the memory available when the need arises. See my point ?

That said, please accept my sincere apologies if you felt my comments were derogatory to you in any way.

Please! Which RAM-IC to use?

Message #12 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 21 May 2002, 12:02 p.m., in response to message #5 by Iqbal

Hello, Iqbal; (howdy, pall?)

I'm a lot interested on changing the 8K RAM for the 32K in my HP42S. But I would like to know if there is a list of replacement IC's (at least the ones that have already been used and proved beeing good choices).

If there are 42's owners that could post the IC's ID they have used for upgrading, please, post them here. I'll try finding them and upgrade mine.

Thanks and best regards.

Re: Please! Which RAM-IC to use?

Message #13 Posted by [Paul Brogger](#) on 21 May 2002, 1:22 p.m., in response to message #12 by Vieira, Luiz C. (Brazil)

I think I give some hint as to which RAM to use in the upgrade article:

MoHPC – Articles Forum -- [#199: Increasing HP-42s Memory to 32K](#)

Good luck!

Re: Please! Which RAM-IC to use?

*Message #14 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 21 May 2002, 3:27 p.m.,
in response to message #13 by Paul Brogger*

Thanks, Paul;

I was not knoww about the upgrade.

Best regards.

Oh! THAT Ron!

*Message #15 Posted by [Ren](#) on 22 May 2002, 10:10 a.m.,
in response to message #4 by Ron Ross*

B^)

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the nasa - ebay conspiracy theory

Message #1 Posted by [db\(martinez,california\)](#) on 20 May 2002, 3:29 p.m.

there was a thread a while back about a fictional "industrial buyer". maybe he wasn't so fictional; is nasa buying up all the mint 41's to use as backup landing and antenna targeting computers? and maybe they are the ones that bought the \$2000 hp65, just in case they revive the apollo-soyuze program. not. but here is the article anyway.

NASA SEARCHES WEB FOR SHUTTLE PARTS By Corinne Podger BBC science reporter May 13

The American space agency (Nasa) has begun trawling the internet for spare parts for its shuttles, according to United Space Alliance, the company that runs the shuttle fleet. The shuttles, first launched in 1981, often rely on computer components that are so out of date, they are no longer made. The orbiters even use a type of computer disk drive that was outmoded by the end of the 1970s. Nasa is hunting internet sale and auction sites like Yahoo and e-Bay for shuttle parts that are so antiquated, they would be unrecognisable to the average computer user today. The agency is particularly short of a type of Intel computer chip known as the 8086. A chip similar to this was used to power the first personal computers made by IBM in 1981 - the same year as the first shuttle launch. 'Scavenger hunt' The shuttle operators also need eight-inch floppy disk drives that went out of fashion nearly 20 years ago, and have long since been replaced by much smaller disk drives and CD-Roms. Nasa is looking for stockpiles of old parts it can buy in bulk to repair old machinery, as well as keeping some spare for future use. The internet search has been described as "a scavenger hunt" by Jeff Carr, spokesman for the Houston-based United Space Alliance. However, the parts will be needed for at least the next 10 years, with the shuttle due to remain in service until 2012 - and there is a possibility of that being extended to 2020.

Re: the nasa - ebay conspiracy theory

Message #2 Posted by [thibaut.be](#) on 21 May 2002, 3:16 a.m.,
in response to message #1 by db(martinez,california)

Bursting into laughter ! Really, just imagine this a bit seriously...

Re: the nasa - ebay conspiracy theory - could be true

Message #3 Posted by [Tom \(UK\)](#) on 21 May 2002, 7:16 a.m.,
in response to message #1 by db(martinez,california)

Yes I can beleive it. Even if NASA never sent the second-hand stuff into space they still need units to train people on or to use in simulators. Wether this is only for computer gear or extends to old HP calculators I don't know, I thought they used the HP48GX (did the French Concord use the HP41? I think I recall some-one asking a question on this forum about that.)

I used to work in a section looking at obsolete parts and although we never resorted to buying second-hand items we did scan all sources for items. Like NASA I guess no company orders enough parts to truely cover the expected life span of products.

The consequences of not having a small part could mean that whole sections of computer gear would have to be redesigned at a high cost just to stand still.

Re: the nasa - ebay conspiracy theory - could be true

Message #4 Posted by [Thibaut.be](#) on 21 May 2002, 8:05 a.m.,
in response to message #3 by Tom (UK)

So XEQ [LANDME] is more than a legend ?

Re: the nasa - ebay conspiracy theory - could be true

Message #5 Posted by [Ellis Easley](#) on 22 May 2002, 8:38 a.m.,
in response to message #3 by Tom (UK)

Now, I think there was another running classified ad in the Computer Shopper classified ads, looking for a certain 8 inch floppy drive. I think it might have been a Percsi (sp?) model that was a dual drive that used the same motor to spin both disks.

Re: the nasa - ebay conspiracy theory

Message #6 Posted by [Ellis Easley](#) on 21 May 2002, 2:20 p.m.,
in response to message #1 by db(martinez,california)

There used to be a magazine called Computer Shopper which started out as a thin pulp that was largely classified ads for all brands of computers. I found some of my most unusual things there, like my Western Digital Pascal Microengine for which I would sure like to find someone who has a working system and could provide me with a boot disk!

But in those classified ads, for all the time that I subscribed, there was an ad looking for some Burroughs displays, it sounded like a large Nixie-type display. Every month the ad was there. I always figured it was a business looking for out of production components to keep a system up.

I noticed it mainly because I was always looking for a "Panaplex" 16 digit plasma display for my Compucorp calculator (finally found a complete one, swapped the display, and finally learned my original one was working!)(Once I found a Monroe that had the 12 or 14 digit version)(One day, I mean to adapt the original Compucorp to LEDs)

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HP-33C Pr Error

Message #1 Posted by [Victor](#) on 20 May 2002, 2:02 p.m.

I got an HP-33C that was in terrible shape; there was major corrosion damage to much of the internal components, and not much was salvagable. I also got an HP-38E that was totally non-functional, but looked OK inside. Both calculators were the type where the chips were not soldered to the circuit board, but were held in place by a backbone.

I took the 2 main chips (probably ACT and RAM) from the HP-33C and transplanted them to the circuit board of the HP-38E. I then put the boards into the case of the HP-33C. Now the calculator always says "Pr Error" when I power it up, but it otherwise works perfectly. Functionally, it is the equivalent of an HP-33E!

Is there anything I can do to have the calculator save its memory when I power it down, such as adding or replacing a capacitor? Thanks!

Re: HP-33C Pr Error

Message #2 Posted by [David Smith](#) on 20 May 2002, 5:22 p.m.,
in response to message #1 by Victor

The power supply board was different between the "E" series and the continuous memory "C" series machines. The main difference was the "C" series provided the back up power to the RAMs. There was probably also some minor differences on the main board so that the backup voltage made it to the RAM chip. There is probably a fairly easy way to get the backup voltage (I think it was just the battery voltage, maybe protected by a zener diode) to your RAMs, but I have never had a need to work on Spice series power supplies.

Re: HP-33C Pr Error

Message #3 Posted by [Tony Duell \(UK\)](#) on 20 May 2002, 6:05 p.m.,
in response to message #1 by Victor

IIRC the 2 chips in a 33C are a combined CPU/keyboard interface/display interface and a combined ROM/RAM chip. Something like that anyway. The main PCB (the flexiprint with the keyboard on it) is the same in all Spice models (-E and -C) that I've worked on, so there's no problem there. But the PSU board (the little soldered PCB) is different on the -C models. Basically, the power pin on the 'top' memory chip is wired to a special pin on the PSU board. The -E PSU just links that to the main power line, the -C PSU provides a low-current supply there to maintain the RAM contents when the machine is off. IIRC the difference is a couple of diodes and a 10k resistor, but due to the physical size it's not easy to modify one into the other. Is it possible to salvage the -C PSU board from the broken machine?

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Compile my programs in userRPL

Message #1 Posted by [Erico Costa](#) on 20 May 2002, 11:07 a.m.

Hello, I have a simple program in UserRPL, <<5 3 +>>, for example, and i need to compile that for assemble. I used compilers than jazz, RPLcomp,HPASMGX, but I can't make run. My problem is: I have a UserRPL program. Could you please describe me the steps to create an executable code, using HPASM 1.1, or something like it, in a GX48?

Re: Compile my programs in userRPL

Message #2 Posted by [HPhreaker](#) on 26 May 2002, 11:13 p.m.,

in response to message #1 by Erico Costa

Hi. Learn ML first. You can't simply convert RPL to ML. It is like trying to convert from HP-Basic(User-RPL) or "HP-Forth"(Sys-RPL) DIRECTLY to Assembly.

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9825A printer

Message #1 Posted by [Achim](#) on 20 May 2002, 5:02 a.m.

Has anyone experience in repairing the 9825A build in thermal printer? In one of my machines some material on the driving solenoid has become sticky and as a result the paper is not transported. I have already removed the printer from the machine and would appreciate some further disassembly instructions and hints for replacement material.

Thanks, Achim

Re: 9825A printer

Message #2 Posted by [Tony Duell \(UK\)](#) on 20 May 2002, 6:12 p.m.,
in response to message #1 by Achim

I've taken the 9825 printer totally apart (and the 9815 one which is essentially the same). IIRC, you remove it from the machine, and take it off the metal bracket (you've done that, right?). Then Undo a screw at each side to release the rectangular metal bar that holds the springs (in metal cups) that press the printhead against the paper. Watch out, this is spring-loaded!. Then remove the bar, cups and springs. Remove the printhead and its heatsink carefully (it's a delicate ceramic hybrid circuit that you will _not_ find a replacement for). Take off the paper-out sensor next (PCB on top, 2 screws). Then take off the right hand sideplate (screws on the side -- again watch out for a spring -- this time the return spring for the solenoid armature). Remove the platten/armature assembly and the solenoid. I think you can remove part of the paper guide by undoing some screws on the left, but it's rarely needed. The manual feed knob pulls off the end of the platten (carefully!) which releases the armature. Don't do this unless you have to -- there's a delicate plastic ratchet inside. The normal trouble is that the damping foam on the armature turns to glue. Clean it off. It isn't essential to the operation of the printer, but you can replace it with any thin foam if you want to. If it still sticks, try sticking a piece of thin paper on the face of the armature to prevent residual magnetism from holding the armature to the solenoid.

Re: 9825A printer

Message #3 Posted by [Achim](#) on 21 May 2002, 3:23 a.m.,
in response to message #2 by Tony Duell (UK)

Tony, thank you very much for your advice. Yes, I've already unmounted to printer but being aware of the spring-problem I didn't want a disassembly ending up in a mess of parts flying around. I'll try to disassemble the printer according to your description.

Re: 9825A printer

Message #4 Posted by [W. Bruce Maguire II](#) on 21 May 2002, 4:29 p.m.,
in response to message #2 by Tony Duell (UK)

Tony:

I've just been too busy to keep up with the MoHPC forum, but I did glance today and I saw your response regarding disassembling the 9825A printer.

If it weren't so trite, I'd say "You're the man!" But I won't say that... How about this: you are 50% Spock and 50% Scotty! Incredibly deep knowledge with the right amount of good-ol' engineer thrown in! ;-)

Bill and Dave would be proud!

Bruce.

Re: 9825A printer

Message #5 Posted by [Tony Duell \(UK\)](#) on 21 May 2002, 6:37 p.m.,
in response to message #4 by W. Bruce Maguire II

Thanks for the compliment! I hope everybody realises, though, that that 'deep knowledge' came from good old engineering as well. I've never worked for HP, I don't have access to 'secret HP manuals'. Instead I take apart and investigate just about everything I own. The reason I can tell you how to take a 9825 printer apart is because I've taken mine apart (and reassembled it). The reason I can tell you the differences between a 33E and 33C PSU board is because I've had both on the bench and I've compared them. While some of you look for 'new in box' calculators, I scrounge all the broken and beat-up ones I can to take to bits. Even 'modern' ones that I don't have a hope of fixing (and for which the first attempt at dismantling is likely to do more damage -- that's why I grabbed a 48 with cracked display recently...)

Re: 9825A printer

*Message #6 Posted by [Achim](#) on 22 May 2002, 5:19 a.m.,
in response to message #5 by Tony Duell (UK)*

Yes, you are right. It makes most of the thrill to get a damaged, ugly looking machine up running and looking rather like new. I made this experience last year when I got three heavily damaged 9810A. After 'reanimating' my whole knowledge of the '70s about TTL logics, consulting old TI Pocket Guides, and studying the schematics in the patent describing the 9810A, I succeeded in repairing about 10 logic boards and brought two machines back to life. What a moment after some ten hours of work! Achim

Re: 9825A printer

*Message #7 Posted by [Achim](#) on 21 May 2002, 5:41 p.m.,
in response to message #2 by Tony Duell (UK)*

Tony, I disassembled the printer according to your excellent instructions and replaced the foam with some 1mm thick self-adhesive felt material. After reassembly I connected the printer to the calc and made some test prints. I noticed that the spacing between each line of dots is about double as normal, which results in about double high characters. Could this be a cause of the damping material or an electrical problem? THX, Achim

Re: 9825A printer

*Message #8 Posted by [Tony Duell \(UK\)](#) on 21 May 2002, 6:05 p.m.,
in response to message #7 by Achim*

It's unlikely to be an electrical problem. Most likely the new damping material is thinner than the original, so the armature can move further. The pawl then moves back by 2 teeth on the ratchet and pulls the roller round twice as far when the solenoid is energised. On most of these printers there's an adjustable back stop for the armature. On the front, at the right hand side, look for a screw-slotted pin which carries a stop for the armature. Screw this in a bit -- if you screw it in too far then the printer won't feed paper at all. Experiment a little with it.

Re: 9825A printer

*Message #9 Posted by [Achim](#) on 22 May 2002, 5:07 a.m.,
in response to message #8 by Tony Duell (UK)*

Tony, yes, I also thought that the cause is in the thinner material. There is also a back stop screw which presses against another foam block glued on the plastic part of the armature. This foam block is not sticky degraded but partly irreversable compressed. Maybe I have to replace this one also. Achim

Re: 9825A printer

*Message #10 Posted by [Achim](#) on 23 May 2002, 5:17 p.m.,
in response to message #8 by Tony Duell (UK)*

Tony, after I replaced the foam block behind the back stop the paper transport works like it should. I took a piece of 4mm thick self adhesive foam.

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battery

Message #1 Posted by [Faradji](#) on 19 May 2002, 2:32 p.m.

Dear Sir Could you please provide me the part number and charateristics of the HP-31E calculator battery Regards F.Ghazi

Re: battery

Message #2 Posted by [David Smith](#) on 19 May 2002, 4:22 p.m.,
in response to message #1 by Faradji

The battery is basically just two AA NiCad cells connected together at one end. Part of the gap between the cells is filled in on one side and completely on the other to make it hard to install backwards.

Re: battery

Message #3 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 20 May 2002, 11:42 a.m.,
in response to message #2 by David Smith

Hi;

just to add some info: all spices (30-series: 31, 32, 33, 34, 38) share the same battery pack, so, interchanging is always possible. The plastic + metal holder used in the original pack can (and should) be used to compose the new, rebuilt pack.

Cheers

Re: battery

Message #4 Posted by [Victor](#) on 20 May 2002, 1:12 p.m.,
in response to message #1 by Faradji

Check here:

<http://www.hpmuseum.org/collect.htm#batts>

and here:

<http://www.hpmuseum.org/batts/battery.htm>

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HP 67, 97, 41CV

Message #1 Posted by [R. Dupod](#) on 19 May 2002, 1:23 p.m.

Question?? How does one find the value of these calculators? All excellent condition with extras.
Thanks

Re: HP 67, 97, 41CV

Message #2 Posted by [Victor](#) on 19 May 2002, 8:03 p.m.,
in response to message #1 by R. Dupod

Try looking up the item on eBay, especially under "show completed items." This will show you what they recently sold for.

Re: HP 67, 97, 41CV

Message #3 Posted by [Thibaut.be](#) on 21 May 2002, 3:49 a.m.,
in response to message #1 by R. Dupod

41CV in excellent condition, complete in box with manuals, all poprt covers, battery pack, ...

Fullnut : \$100 to \$180 Halfnut : \$80 to \$160

HP 97 : it's utopic to find it boxed, so this price is for a complete machine with working printer and card reader, with adapter, manuals, in excellent to mint condition : \$ 120 to \$250

HP 67 : same remark as 67, but with manuals and all working items : \$ 100 to \$ 200

Of course, i'm the only responsible for these quotings.

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Online (www.hp.com) Manuals

Message #1 Posted by [Glen Kilpatrick](#) on 19 May 2002, 11:27 a.m.

Having individually advised several others of some of the following, why not make it a general post?
All are listed as English unless otherwise noted:

[6S] http://www.hp.com/cposupport/manindex/hp6ssolarc30831_eng_man.html (both English & Hungarian)

[10Bii] http://www.hp.com/cposupport/manindex/hp10biibus30834_eng_man.html

[12C] http://www.hp.com/cposupport/manindex/hp12cfinan81575_eng_man.html

[30S] http://www.hp.com/cposupport/manindex/hp30sscien30829_eng_man.html

[39G] http://www.hp.com/cposupport/manindex/hp39ggraph30819_eng_man.html

[49G] http://www.hp.com/cposupport/manindex/hp49ggraph24252_eng_man.html

And I've seen other (less official :) manuals on various at <http://www.hpcalc.org/>. So go forth and enjoy.

gk :)

Re: Online (www.hp.com) Manuals

Message #2 Posted by [paul w](#) on 20 May 2002, 3:18 a.m.,
in response to message #1 by Glen Kilpatrick

thanks glenn

i will download it and try to work out how to use it.

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17BII: Bond yields different from NYT tables?

Message #1 Posted by [Peter Lampione](#) on 19 May 2002, 2:59 a.m.

I must be using the 17BII in the wrong way: I get a discrepancy between the bond yields reported by the New York Times, and those computed by the 17BII. For instance, here is some data I got from today's NYT:

Treasury bonds, from NYT Table:

- Month: Mar 03
- Rate: 5.5
- Bid/Ask: 102.23/102.24
- Yld: 2.23

I entered:

- Type: actual/actual, semi-annual
- Settlement: Mar 17, 2002
- Maturity: March 31, 2003 (*should I have used March 1, 2003 instead? It makes only a minor difference*)
- CPN% = 5.5
- CALL = 100
- PRICE = 102.23

And I get YIELD = 2.89, which is more than the yield listed by the NYT.

If I use PRICE = 102.23 - ACCRU = 101.52, I get YIELD = 3.7%.

Where is my mistake? Why do the two rates, computed by me and reported by the NYT, differ?

Thanks,

Peter

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1976 Book, Calculator Users Guide and Dictionary

Message #1 Posted by [Renato Toi](#) on 19 May 2002, 12:11 a.m.

I just got a 1976 book about calculators: "Calculators Users Guide and Dictionary", by Charles J. Sippl. Matrix Publishers, 1976. Has descriptions of calculators manufactured by Adler, Burroughs, Canon, Casio, Biolator, Chromerics, Commodore, Compucorp, Fondilifier, Hanimex, HP, IBM, Litronix, Lloyds, Master specialties, Melcor, Monroe, Mostek, Olivetti, Olympia, Optel, National Semiconductor, Ricoh, Rockwell, Sharp, Sinclair, Tektronix, Telesensory, TI, Time computer inc, Underwood, Unitrex, Victor, Wang. HPs described are: 65,25,21,35,45,22,80,81, 55,27,91,46,9805,9825a,9810,9815a,9030

Introduction says: "Calculator industry specialists estimate that another 50 to 70 million calculators will be sold to North Americans from mid-1976 to mid-1978. The rate of sales jumped from a few million per year in the early 1970s to about 20 million in 1975. Exports of Japanese calculators to the US in December 1975 alone totalled 1,550,521, according to the Japanese Finance Ministry. The Japanese shipments to the US for 1975 totalled 11,074,779 (of the 32 million Japan and Far East produced). The US produces and sells about 7 to 9 million, the majority of them being the more expensive or high-end of the market. The retail prices of all units range from \$5 to \$10,000 - from shirt pocket simple arithmetic units to very large calculator systems with practically all the power, peripheral and versatility of medium-to-large computer-communications systems. Users range from 5-and-6-years-olds to atomic and space scientists and practically everybody in between."

My intention is to keep it - I think it is a "photograph" of 1976 situation. Anyway, if anybody is keen of books like this, I would trade it for some HP related stuff.

Renato (Brazil)

Re: 1976 Book, Calculator Users Guide and Dictionary

Message #2 Posted by [Dave Shaffer](#) on 19 May 2002, 1:05 a.m.,
in response to message #1 by Renato Toi

Renato,

Can you check your book for a scientific calculator made by (I think !) Compucorp.

Pertinent to the discussion a few days ago by someone thinking they had used an HP 35 in 1969, I was trying to recall the scientific calculator I used when in graduate school. I borrowed it from one of the Profs - it was definitely a scientific calculator - and I think it was even programmable! When you mentioned Compucorp, a bell seemed to ring. This had to have been in 1971, 1972, or 1973, with '71 or '72 seeming most likely. I can not say for sure it preceeded the HP 35, but I had my own '35 by early 1973 (after borrowing my Father's prior to that) so I would not have borrowed this calculator after I had my own. Since I finished my thesis late in Summer 1973, my use certainly had to be earlier.

This calculator was about the size of a decent book: perhaps 9 or 10 inches tall, 6" wide, and 2" thick. I don't remember whether it had batteries or ran from a separate power supply. I also have no idea what it cost, but figured it was like the proverbial boat: if you have to ask, you can not afford it! (at least for graduate students. I got my '35 just at the time of the first price reduction, from \$395 to \$295. That was more than a month's salary for a student at that time.)

Thanks for any info you can find,

Dave

Re: 1976 Book, Calculator Users Guide and Dictionary

Message #3 Posted by [Renato](#) on 19 May 2002, 2:24 a.m.,
in response to message #2 by Dave Shaffer

Dave, Compucorp 326, also sold as Monroe 326: - over 100 preprogrammed functions - cassette tape storage for programs and data - 160 program steps plus 12 data registers - dimensions: 5"x2"x9", 3.5 lbs No info on launch date, but 1976 price was \$795 Renato

Compucorp

Message #4 Posted by [Tony Duell \(UK\)](#) on 19 May 2002, 2:38 p.m.,
in response to message #2 by Dave Shaffer

It might have been a Compucorp 322 or 324 'Scientist' -- AFAIK the only difference between those was that the 324 had twice as much program memory and had a switch on the keyboard to select between 2 'programs' (there was no way to have 1 large program, though). It is programmable, but only just. It will remember a sequence of keystrokes and 'replay' them. When it gets to the end it starts again at the beginning automatically. There is a Start/Stop key (much like the R/S key on an HP) so you can enter values and display results. The only other way to halt a program is to have an error (like dividing by 0). There are no GTOs or conditionals. And it uses infix notation, not RPN :-(. It runs off 4 D cells (you're advised to use NiCds -- it'll drain a set of primary alkaline cells (like Duracells) in about 2 minutes). There's also a socket for a charger/mains adapter. Inside it's 4 PCBs containing custom chips (made by TI), RAMs and a few smaller components. It's also got a pretty basic set of scientific functions (trig, logs, a^x , sqrt, $1/x$, and not much more). But I guess it is an early programmable calculator. One turned up at a radio rally in the UK a couple of years back. It wasn't very expensive, so of course I bought it. But to use I much prefer the HP65 or something...

Re: Compucorp

Message #5 Posted by [David Smith](#) on 19 May 2002, 4:27 p.m.,
in response to message #4 by Tony Duell (UK)

Actually the 322?, 324, and 326 were identical inside. The only difference was the switch TOPS to enter program mode and select programs were not installed (the switches themselves were). Compucorp charged an arm and a leg for different machines that only had 10 cent key tops installed on the slide switches as their only difference.

Re: Compucorp

Message #6 Posted by [katie](#) on 19 May 2002, 10:41 p.m.,
in response to message #5 by David Smith

The 322 and 324 were basically the same machine, but the 326 was totally different in function (not form). It was a "real" programmable machine with branching, subroutines and even (optional) tape storage. Alex Knight has an excellent write up on this series:

<http://desktop.calcmuseum.com/>

Re: Compucorp

*Message #7 Posted by [Ellis Easley](#) on 20 May 2002, 11:54 p.m.,
in response to message #5 by David Smith*

I discovered that on mine! I thought it might have been a fluke.

Re: Compucorp

*Message #8 Posted by [Ren](#) on 21 May 2002, 10:10 a.m.,
in response to message #7 by Ellis Easley*

No, I don't think Fluke made calculators, just Test Equipment. Maybe it is easy to confuse HP and Fluke as they both made good Test Equipment.

B^)

Re: Compucorp, Fluke, data cassettes

*Message #9 Posted by [Ellis Easley](#) on 21 May 2002, 2:35 p.m.,
in response to message #8 by Ren*

No, I knew it was a Compucorp, I just thought it was a fluke (a mistake that slipped through) that under the keyboard cover, I found all the switches from the higher model.

BTW, Fluke made some very computer-like dataloggers, I found a couple on Ebay and had to have them. They have CRT displays with touch screen input and 40 MB SCSI hard drives. These, and the Xerox Versatec electrostatic plotter that I bought in the only real face-to-face auction I ever attended, are the only products I've ever seen based on the TI 9900 microprocessor.

One other Fluke fact - I recently bought some Fluke mini data cassettes because they looked just like HP tapes for the HPIL tape drive in the photo on Ebay. They are just like the HP tapes except they have less tape (based on the number of turns of the hub to move all the tape). This is a warning to others but also a request: does anyone know if these tapes will work in the HP HPIL tape drive? I haven't tried them yet, I assume they will fail initialization unless maybe there is an undocumented command to alter the initialization, like the one that makes a 9114B format a single sided, 630K diskette.

Re: Compucorp

Message #10 Posted by [David Smith](#) on 19 May 2002, 4:29 p.m.,
in response to message #4 by Tony Duell (UK)

Most of the Compucorp/Monroe/Sumlock etc machines can be found on Ebay for (usually) pretty reasonable prices... like less than \$100.

Re: Compucorp

Message #11 Posted by [Dave Shaffer](#) on 19 May 2002, 10:39 p.m.,
in response to message #4 by Tony Duell (UK)

Tony et al.,

The real question is "When did this/these machines appear?"

In other words, again a propos the discussion a few days ago about who was first, did these predate the HP35? I have a suspicion that they did. If that is the case, are there any other contenders for the first scientific calculator.

As I remember, I used it for trig and log/exp functions.

Dave

Re: 1976 Book, Calculator Users Guide and Dictionary

Message #12 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 19 May 2002, 6:30 p.m.,
in response to message #2 by Dave Shaffer

Just to say I had almost surely seen such Compucorp calculators in Buenos Aires around 1972-1973; but never from close enough to learn features nor use. The more detailed messages that followed in the thread will help you more than this vague memory...

Re: 1976 Book - Olivetti Programma 101?

Message #13 Posted by [Ellis Easley](#) on 20 May 2002, 11:58 p.m.,
in response to message #1 by Renato Toi

Renato, Does your book have anything to say about an Olivetti Programma 101?

Re: 1976 Book - Olivetti Programma 101?

Message #14 Posted by [Massimo Gnerucci\(Italy\)](#) on 21 May 2002, 1:51 a.m.,
in response to message #13 by Ellis Easley

You can find quite a lot of info about it searching through the web:

<http://www.silab.it/frox/p101/>

<http://www.science.uva.nl/faculteit/museum/Programma101.html>

<http://www.computermuseum.it/docs/programma-101.htm>

<http://www.retrocomputing-world.com/biblio/computer/Olivetti/101/p101.htm>

http://www.ulib.org/webRoot/Books/Saving_Bell_Books/Computer_Structures:_Readings_and_Examples/00000257.htm

<http://www.digidome.nl/olivetti.htm>

Enjoy!

Massimo

Re: 1976 Book - Olivetti Programma 101?

Message #15 Posted by [Ellis Easley](#) on 21 May 2002, 2:05 p.m.,
in response to message #14 by Massimo Gnerucci(Italy)

Thanks, Massimo! I'd never tried a general search for this one, my mistake. Your links look like all I could want on the Programma 101.

Do you know of any links for the Western Digital Pascal Microengine? This is from the late 1970's. I've searched and searched for this one, found a couple of mentions but nothing that ever panned out.

Re: 1976 Book - Olivetti Programma 101?

Message #16 Posted by [Massimo Gnerucci \(Italy\)](#) on 21 May 2002, 10:13 p.m.,
in response to message #15 by Ellis Easley

You have new mail.

Greetings,
Massimo

Re: 1976 Book - Olivetti Programma 101?

Message #17 Posted by [Renato](#) on 21 May 2002, 8:46 p.m.,
in response to message #13 by Ellis Easley

Olivetti P 101 function summary: base price:\$1,695.00 language used: keyboard full instruction, number of storage registers: 10, storage capacity: 11 digits, program memory: shared, 120 instructions, type of display: impact printer.

Could not find anything about programming.

Re: Thanks guys!

Message #18 Posted by [Ellis Easley](#) on 22 May 2002, 9:15 a.m.,
in response to message #17 by Renato

Especially Massimo! I so glad the original post made me think to ask about these machines. My Programma 101 is in good shape except the two belts on the printer are worn out and one of the mating nylon gears is split. I put on heavy rubber bands and the system worked a little before the rubber bands gave up. The system is so mechanical, every keypress must ultimately be acknowledged by a "print complete" signal or it just lights the error light - as I recall - it's been a couple of years since I fooled with it. At the time, I had plans to emulate the printer mechanics with a spare computer. Now that I have programming information, I will be more motivated to get back to it.

When you hit a key - or maybe just the function keys - the machine initiates a print operation by releasing a stop, allowing the print hammer to start moving across the paper using rotary motion from one of the two belts. In the meantime, the other belt is turning the print drum which includes a toothed magnet which induces timing pulses in a coil which are sensed by the electronics. The timing pulses tell the electronics when to activate the print hammer solenoid to print the right character. The series of pulses is repeated for each character location across the paper. When the print hammer gets to the far side of the paper it activates a switch (I think the switch might have been reversed at the start of the print operation) and this switch triggers the electronics to do something mechanical that returns the print hammer to its starting location. As is often the case, one big stumbling block is coming up with mating connectors for the original cable harnesses, because I don't want to cut any wires, so when one day I manage to fix the printer, I can put it all back as it started.

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CalcPro

Message #1 Posted by [John K. \(US\)](#) on 18 May 2002, 8:41 p.m.

Has anyone out there dealt with CalcPro recently? If so (and if you have an opinion), please contact me directly at the e-mail address above. Thanks!

Re: CalcPro

Message #2 Posted by [Dwight Myers](#) on 21 May 2002, 1:45 p.m.,
in response to message #1 by John K. (US)

I have purchased three calculators in 2 years from them. I got good service on both orders. I currently have an order in to them for supplies, sent about May 15th, haven't received it yet. I assume it's on the way.

Re: CalcPro

Message #3 Posted by [John K. \(US\)](#) on 21 May 2002, 9:41 p.m.,
in response to message #2 by Dwight Myers

My order went in on April 22 and I have yet to hear back from them, though I know for a fact that they received my order. They don't return phone calls or e-mail. I'm just wondering if anyone else has experienced this, or if it is just an aberration.

Does anyone out there live in Corvallis and feel like knocking on a door...? :^)

Re: CalcPro

Message #4 Posted by [John K. \(US\)](#) on 22 May 2002, 8:59 p.m.,
in response to message #3 by John K. (US)

And then (wouldn't you know it?) the package with my order arrives today, just as I was working up to a fine head of righteous indignation...

Re: My experiences with CalcPro

Message #5 Posted by [Frank Travis](#) on 28 May 2002, 1:23 p.m.,
in response to message #4 by John K. (US)

I have bought many items from CalcPro (HP48G+, HP32SII, books, HP 48 PC Connectivity kit, and more). I have received good service. Its manager, Paul Nelson, told me that he is essentially running the operations by himself (once in a while he gets some part-time help). He has a lot of items on back order (such as RAM cards and HP 48G series Advanced User's Guides). Lately, when I send him a check it may take a few weeks till he gets the items. But he always sends me the items. I know you gentlemen may experience some inconvenience. But, Calcpro has some items that are hard to find elsewhere (e.g. Office Depot no longer sells the HP 48GX; the HP 32SII has been discontinued, and is not even available on HP's website, manuals that can be purchased separately from the calculator itself). Paul Nelson told me that he has had website problems lately, that is to be worked on. Leave him a message on his voice mail 1 (541) 752-8414.

Re: My experiences with CalcPro

Message #6 Posted by [John K. \(US\)](#) on 28 May 2002, 5:57 p.m.,
in response to message #5 by Frank Travis

Thanks for the input. I ended up receiving the order about a month after I placed it. When I left voice mail, it wasn't returned, and nobody was answering the phones during their listed hours. And e-mail was bouncing.

If you talk to him again in the near future, you may want to mention to Mr. Nelson that he probably shouldn't be charging cards prior to shipping orders (and certainly not three weeks before shipment) -- he could lose his merchant account for doing so.

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looping or something like that

Message #1 Posted by [patman](#) on 18 May 2002, 3:53 p.m.

how do you get the hp to run 2 programs at the same time from the same variable and get 2 different answer.... i know this is possible,, but just don't know how to do it..

Re: looping or something like that

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 18 May 2002, 4:07 p.m.,
in response to message #1 by patman

Hi;

which calculator? Forgive-me if I am wrong, but I don't know any available model that can run more than one program at the same time. Is the HP49 able to do it?

This is something I would like to know, too.

Cheers.

Re: looping or something like that

Message #3 Posted by [patman](#) on 18 May 2002, 5:56 p.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)

the T I has the ability to run 2 programs at once by using the goto arrow instead of the equal sign,,, i am hoping that the hp has the same ability

Re: looping or something like that

Message #4 Posted by [Chris Randle](#) on 19 May 2002, 9:28 a.m.,
in response to message #3 by patman

I don't think any HP calc can run two programs at the same time. I think it would need a multi-tasking OS. If they were to share data, you'd need some sort of semaphore mechanism to resolve concurrency conflicts.

Or did you mean that you can store more than one program and choose which to run? Perhaps storing multiple programs in one program and jumping in a certain point to simulate multiple programs? That's possible on most. Each program can share global data via registers or named variables. More modern HP RPL calcs can define data local to a procedure or program, too.

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Crosspostings in "Classified Ads"

Message #1 Posted by [Matthias Wehrli](#) on 18 May 2002, 2:22 p.m.

I'm annoyed when I read the classified ads today finding so many "I have a HP-xx on ebay... ". I think either I sell my items through MoHPC or I sell them through ebay. There are sellers that have dozens of items on ebay. Imagine what would happen if each of them would post each link in classified ads. A real collector fully researchs ebay and MoHPC anyway, so there is no sense in crosspostings.

I would prefer a forum in which crosspostings are not welcome. What do you think?

Re: Crosspostings in "Classified Ads"

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 18 May 2002, 4:14 p.m.,
in response to message #1 by Matthias Wehrli

Agree!

I think (if Dave allows to and can do it for us) a separate place for the itens available elsewhere to be offered. I agree with Matthias, it's annoying. And Dave, or anyone, could remove those wrong announcements. I remember I offered (some time ago) a programs-translation job for as many times as I could post, cause I did not understand the policy of the Classified Adds. At that time, Dave explained it again and I stopped doing that, but I did not mean to bother others. I believe if this place exists, people will use it more often.

Best regards.

Re: Crosspostings in "Classified Ads"

Message #3 Posted by [Glen Kilpatrick](#) on 19 May 2002, 10:58 a.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)

I agree, reading these ads that say they've available on eBay majorly tick me off, and ensure that I won't waste further thought on that seller.

This is a small, mostly friendly community here, nice people, ones I feel I can mostly trust, definitely not like the shark-infested waters of eBay. You can bet these same folks that sell on eBay would prefer to buy here. So I ask you, is that fair to our community?

Dave, I realize you've already got a full-time job with this, but would you consider either a manual removal of such, or automation that excludes posting of ads with certain "keywords" (or if that doesn't work, flags the email address, and that person can no longer post, period)?

Re: Crosspostings in "Classified Ads"

Message #4 Posted by [Mike Sebastian \(Texas\)](#) on 19 May 2002, 11:42 a.m.,
in response to message #3 by Glen Kilpatrick

Dave experimented with removing certain keywords when he was prototyping the current Classified Ads forum. It was fairly easy to circumvent the keyword suppression in the prototype. Given the nature of the people in this community, a simple request to not post eBay notices would probably be sufficient.

Besides, eBay keyword suppression might make this forum less interesting!

Re: Crosspostings in "Classified Ads"

Message #5 Posted by [glynn](#) on 19 May 2002, 4:43 p.m.,
in response to message #3 by Glen Kilpatrick

Hmm... seems you are not mad that the crossposting is taking place... but that people are using eBay.

To Matthias, who may or may not share your disappointment in eBay selling (after all, he seems to study the listings):

I think far worse is the MoHPC listing that does not SAY it is an (AUCTION). To hide that fact well into the body of the message is truly annoying.

If that alone were "enforced"-- meaning WE, not Dave, but US would send a "hey! don't

you know how to use the classified listings?"... whenever we encountered an irritatingly misrepresented listing, THEN it would soon become a simple matter to scroll past all "auction" listings and only deal with the "meat" of the Classifieds, if that is your desire.

But obviously, there are folks interested in getting their message out to you collectors. To ban them doesn't really seem to be a service to collectors, now does it? "No, you can't see THAT, that's on that nasty eBay-- if you wanted one of those so badly, you'd have been poring over the listings-- no, this is the pristine "user-to-user" pool."

Or to segregate sellers into two groups provides only a NEW, less practical place to advertise. Now maybe IF you promise that, as a real collector, you will now fully research eBay, the MoHPC Classifieds AND the new MoHPC Auction Links page, I am sure they will dutifully keep to our lines of demarcation. LOL

In other words, Dave Hicks structured the MoHPC Classifieds section in a practical way-- but it has to be utilized in a manner consistent with its structure. Those that abuse it make us angry for wasting our time. I'm totally with ya on that.

Glen: each of us in our little community, consisting as it does of buyers, sellers, users, collectors and lord-knows-who-else, WANTS and NEEDS as many options as can be provided in coming together and being exposed and transacting to our mutual benefit-- and exclusivity, one-way streets and fences should only be considered in the case of a clear harm being done-- as I am sure you would agree. But eBay represents to you a danger.

Now I have had a few really disappointing experiences on eBay myself, and I have only ever BOUGHT there, but I would submit to you that if you refuse to deal with eBay as a collector, you are really missing a lot of good that comes with it. You may lament the sharks, and they are there. But you'd be surprised perhaps to find how many of our own good folk are there, too-- not sharks. I've bought stuff from people here VIA eBay as well as one-to-one via MoHPC. I'm even fairly sure I've bought stuff via MoHPC connection that the seller had once bought via eBay, maybe from a shark. My comfort level in dealing with the seller is higher when I know him/her. That is what makes me prone to look at the MoHPC classifieds... but if the seller is on eBay, and I know him/her, the merchandise and transaction are much the same. The ONLY difference is often the price-- and that's where I suspect much of eBay resentment and envy lies. But MOST of the people bidding against me on eBay are ALSO here... and those that aren't soon will be. And, ultimately, it is the price inflation of a world marketplace that increases the monetary value of any collector's collection. Would I deny my fellow collectors the use of any tool to buy and sell for the best profit?

Pretend I'm selling your average, run-of-the-mill red-dot. I want to get the maximum

exposure I can to the community that appreciates it most. Ha, I betcha thought that line was about YOU!! (apologies to C.Simon)-- but in terms of potential return, a SPECULATIVE market offers potential returns far in excess of you people who already KNOW what the thing is worth to you.

So, if I am getting rid of my special toy, I have two choices: sell it for virtually certain moderate prices to a known "good home", a collector who will take good care of it; OR put it FIRST on a venue where "wild" and emotion-driven prices are known to abound, keep a reserve price just in case, and THEN alert MoHPC people--- so I can hopefully sell it for an Outrageous price to a known good home. Hey, isn't this, after all, the behavior you are observing, or what?

The eBay seller is not choosing a strategy to advertise his product ONLY to collectors. If he was, it would (possibly) make sense to use MoHPC as the sole venue. But he's listing on eBay, knowing you are both here and there, and trying to reach you both ways. He WANTS you, but not in the rarified air of a protected, insulated-from-the-rabble environment; he wants you to come out and play-- in the big seller's marketplace that is eBay.

Indeed, you collectors likely "shop" on eBay all the time. So what you are saying is that a "real" collector will never wish to be annoyed with the redundancy of seeing an auction listing posted here as well as on eBay. He will already KNOW of the listing, since he makes it his business to be informed of HP listings, so any "heads up" to our community is merely a waste of our time (heehee, UNLIKE the dozen or so semi-weekly searches you are doing on eBay's engine to find things worthy of your attention)... um, yeh, in the interests of personal efficiency you could make that case.

But advertising (and yes, that's what classifieds are) THRIVES on redundancy. The more "efficient" thing when advertising something is to reach the most people who would be interested, with the least expenditure or effort. If you happen to reach a target twice or more in that process, so be it.

As MoHPC's classified section is decent bang for zero buck, it makes perfect sense for a seller to want to provide a link from it, to his just-written auction page.

As long as the advertiser tells you in the first title line, (AUCTION), so you may scan past them in your search for (FSOBO)s, how is that different than (WTB)s or anything else in there that also competes for your eye?

Re: Crosspostings in "Classified Ads"

Message #6 Posted by [Matthias Wehrli](#) on 19 May 2002, 6:31 p.m.,
in response to message #5 by glynn

I also thought about a new posting header type like "(Au)" for "auction".. but I think it doesn't make sense, because we only produce a lot of data on Dave's server.... I still propose a non-written law of not posting links to ebay...

To Glynn: I do not want to stop discussions about ebay, just sellers links.

Re: Crosspostings in "Classified Ads"

Message #7 Posted by [Dave Hicks](#) on 19 May 2002, 7:39 p.m.,
in response to message #6 by Matthias Wehrli

I could add an additional URL, similar to the "daily view" of this forum that would filter out anything that was posted with the AUCTION classification. Would that help?

I don't understand the idea of an (Au) vs. (Auction) header.

As for people misclassifying – is that happening often? I haven't been watching for this myself. I just did a quick search and only noticed [this one](#) that was misclassified. Are there more?

no, it's an occasional thing

Message #8 Posted by [glynn](#) on 19 May 2002, 7:56 p.m.,
in response to message #7 by Dave Hicks

... and I like to see it spelt out *(AUCTION)* rather than (AU)... so I don't think of Austria, Australia or Gold. ;-)

Okay Dave: a programming challenge

*Message #9 Posted by [glynn](#) on 19 May 2002, 8:23 p.m.,
in response to message #7 by Dave Hicks*

I think any attempt to "filter" eBay postings would result in more misposting, wouldn't you figure so?

But there is an alternative-- IF you can arrange it, and I am loathe to ask you for more work-- but what IF:

You ask for "ad Type" already. Presumably, this is a category of data that could be searched or sorted on. So, what if we had a set of buttons "Sort by:" with WTB, AUCTION, FSOBO, etc. So all WTBs, say, could be brought to the top of our stack. As I am not a techie type, I may not be making good programming sense, so feel free to correct my misapprehensions...

But THEN, I could look at all the listings by the time they come in, as before, or only the FS, or only the AUCTION, and so on... is that a possibility?

--g.

Re: Crosspostings in "Classified Ads"

*Message #10 Posted by [Ren](#) on 20 May 2002, 10:03 a.m.,
in response to message #7 by Dave Hicks*

For Internet newsgroups, it is standard procedure to mark an auction posting by pre-fixing "FA:" (For Auction) to the Subject: line. For example...

Subject: FA: HP-6S calculator on Ebay!!!!!!!!!!!!MINT!!!!!!!!!!!!

(p.s. I deliberately misspelled calculator B^) Personally I think people who crosspost auction items to newsgroups (or fora) are greedy scum. And those who neglect to mention that their posting is an auction link are lower than scum.

Re: Crosspostings -- How 'bout link to eBay "Search" feature?

Message #11 Posted by [Paul Brogger](#) on 20 May 2002, 11:17 a.m.,
in response to message #7 by Dave Hicks

How about a simple "Search" link to eBay, available on the appropriate MoHPC page(s). An "MoHPC standard search" that should always get currently-available HP stuff. (E.g., I generally use "HP* calculator*").)

Then, whenever anyone posts a pointer to eBay, EVERYONE could remind the poster that if s/he merely includes "HP" and "calculator" in their eBay ad, the MoHPC link will locate their item for those who wish to know what's available . . . (A convenient link to a "reminder" form letter might be a nice feature, too, to facilitate gently bringing about compliant practice!)

Re: Crosspostings in "Classified Ads"

Message #12 Posted by [Frank Glitz](#) on 20 May 2002, 7:30 a.m.,
in response to message #1 by Matthias Wehrli

I fully agree with Matthias. These dozens of "rare PANAME module for sale on Ebay" ads _are_ annoying. And 71Bs or 41Cxs aren't _that_ rare that it would be necessary to announce Ebay auctioning for these here. It's just another means to drive prices.

I'm interested in HP stuff for using, analyzing or repairing it, not for collecting and waiting 'til the value increases. HPs are fascinating devices and it's fascinating to _use_ them or to understand how they work. They are _no_ stamps.

I still remember times when you could find 35s or even 70s in thrift stores or at flea markets for "5 for a buck". These times are over, "thanks" to Ebay. While I paid just a few bucks for almost all the handhelds I have, I've got to pay a hell of a lot of dollars for the desktops I bought this year, just 'cause I missed on them somehow to date. I'm still looking for 9100s, but the "free for the asking" times are over. Everyone here will surely know.

Everyone who's seriously looking to find HP stuff will look here _and_ at Ebay anyway. I've a lot of search patterns stored at eBay and receive mails whenever an interesting part is put up for auction. That's sufficient I think. I don't need the "AUCTION" information here. But that's just my humble opinion of course.

I'd even remove the "AUCTION" category. It's a leftover from days where you could make good bargains on Ebay and not everyone knows about how easy it is to make tons of bucks there by selling HPs.

hpmuseum.org should remain (or, to say it more provocative) become a forum for interested collectors, not for money makers.

Greetings to everyone here, Frank

Re: Crosspostings in "Classified Ads"

*Message #13 Posted by [Chris Catotti \(Florida\)](#) on 20 May 2002, 5:51 p.m.,
in response to message #12 by Frank Glitz*

Wow! I have been scum and did not know it! I am guilty of "crossposting" ebay ads on the classified ads. I am also guilty of crossposting links to the HP Museum on my ebay "About Me" page, and ebay item listings if it will help educate. I do not want to be scummy, and so unless anyone wants me to crosspost on the Classified Ads, I will stop.

Am I guilty of being greedy ...? I would like to maximize the revenue for a sale so that I can afford another item. Loosley stated, my collection goal is to collect one of every document, in every language available for the models of HP Calculators I like (especially the HP-41 and HP-IL). I would rather trade items for items, but cash seems to be the common denominator, especially between USA and Europe.

Also I would like to collect one of every software module for the HP-41. I have overpaid on ebay many times, but it seems like a place to find some of the less common things. I wish I could "post" my Excel spreadsheet that lists everything I have so I could trade extra items for want items.

Re: Crosspostings in "Classified Ads"

*Message #14 Posted by [Frank Glitz](#) on 21 May 2002, 7:07 a.m.,
in response to message #13 by Chris Catotti (Florida)*

Chris,

I think you posted your response to the wrong thread. I didn't call anyone scum, greedy or even greedy scum.

I'm just annoyed with - IMHO often "artificially" - high driven prices on Ebay. No HP-35, 65, or whatever is worth about \$2,000.

I don't like supporting "Ebay Money Makers" more than necessary. Nothing else. And nothing against collectors like you if course. But who is able to distinguish if it's a serious ad or the one of a "money maker"?

This _excellent_ site shouldn't be abused.

Regards, Frank

Re: Crosspostings in "Classified Ads"

*Message #15 Posted by [Ren](#) on 21 May 2002, 10:07 a.m.,
in response to message #14 by Frank Glitz*

Frank, I'm the one who started the name calling...(see my letter above).

Chris, I understand anyone wanting to maximize their profits, but I see crossposting as an expense that is placed on the non-buyers. They have to identify/delete the postings that are irrelevant to them. And they have to download (some of us still use modem connections) at their expense of time for something they have no interest in. If I want to buy an HP calc on eBay, then I'll GO to eBay and look for it. I don't need it shoved in my face on some newsgroup or forum. And by the seller assuming that I'm too stupid to do a search on eBay for an item I'm interested in, and that they feel they need to point it out to me, puts them in my 'negative' category. I view eBay crossposts with the same vitriol as I do any other SPAM!

Yeah, I can really talk big when I'm hiding behind a keyboard on the 'net...(sigh)

Re: Crosspostings in "Classified Ads"

*Message #16 Posted by [Ellis Easley](#) on 21 May 2002, 2:41 p.m.,
in response to message #14 by Frank Glitz*

Regarding the recent \$1900 HP-35 "NIB" - which I still don't understand why it didn't include the hard case - I don't think you can blame the seller, I love the way he told in the ad that he got the unit for free - unless you know that some shilling took place.

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Need help, why my HP-41CV do not work?

Message #1 Posted by [Amedeo Muscelli](#) on 18 May 2002, 11:06 a.m.

Greetings I have two HP-41CV that not was used in the last 14 years, I placed the 4 N-cels 1.5 volt each in one of the calculators and it display "MEMORY LOST" and a sound but not do any more, I can not turn on or off and after some seconds display ">- " in program mode. The second calculator done the same but now not display anything. I not have the manuals. Please can somebody help me?
Regards, Amedeo Muscelli.

Re: Need help, why my HP-41CV do not work?

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 18 May 2002, 4:04 p.m.,
in response to message #1 by Amedeo Muscelli

Hello; (where are you?)

Please, I did not spell check this post; forgive my mistakes... >-(

There are many reasons for this behaviour, but as you saw "MEMORY LOST", let's take it as a good reaction. The beep worries me a bit, but... <8-

The best shoot would be DUST. Can you open the calculators?

After opening them, you should check for dust (mostly from leaking batteries, but as you mentioned they were stored, I guess the batteries were not in place. Is it correct? :-)). There is an assembly that contains batteries contacts and I/O access; this is the first one to be checked. Remove it and have a look in the contactcs made with the keyboard's PCB. If needed, use some non-agressive cleaner (alchool is an acceptable choice at first) and remove, carefully, as much dust as you can. Avoid excessive material, so it will not leak into the keys' contacts.

There are two basic types of 41's: one that contains a separate PCB with all electronics (some integrated circuits) except display drivers: they are named FullNut (or coconut) and, in this case, the PCB should be CAREFULLY removed and the contacts inspected and, if needed, cleaned. The other type is named Halfnut and does not have this secondary PCB. The single

PQPF IC in the middle of the keyboard is the processor, as memory chips are built in the display assy (Wow! I learnt a lot reading the messages at this forum...). The halfnuts will not have other places to be cleaned.

BE CARE WHEN OPENNING THE CALCULATORS FOR THE FIRST TIME! The halfnuts have their beepers built in the botton half of the calculator's box, and the wires connecting it to the circuit are somewhat thin. Avoid tracting them! :-(

Job done, reassemble the babes and tell us the good news! 8-D

Success!

(If you have no good response at the first time, it is good practice to shorten the terminas of the two large electrolytic capacitors, ALWAYS begining with the big one and then the smallest; this way, all previously trash stored in memory will be history, and your calculator will not be locked because of a software condition)

Re: Need help, why my HP-41CV do not work?

*Message #3 Posted by [Amedeo Muscelli \(Venezuela\)](#) on 19 May 2002, 11:29 a.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)*

Hello Luiz, I really are confused, I opened both calculators, all the contacts are very clean, not have a minimal sign of leakage, stain or dust and are all very bright, I also tested the continuity, and all work well. I short circuit the capacitors and settle the circuit on a conductive foam to discharge any current remained. One of the calculators was repaired for the HP, 12 years ago, and worked well. Why now, after all those years, stored in a dry box and without the batteries it not work? The other calculator was used a few times and also was stored in a dry and clean desk and without the batteries, when I put the fresh batteries it run, done a sound, displayed some things in the display ("gggggggggggg" but sight turn) and immediately not done any more. I think, that electrolytic capacitors have made with aluminium and paper impregnated with a chemical liquid. May be in those years the chemical liquid is drying? Regards, Amedeo Muscelli

Re: Need help, why my HP-41CV do not work?

Message #4 Posted by [Vieira, Luiz C \(Brazil\)](#) on 20 May 2002, 6:48 a.m.,
in response to message #3 by Amedeo Muscelli (Venezuela)

Hello, Amadeo;

It is for sure possible. The biggest electrolytic cap is basically to sustain voltage drop so you can change batteries without losing memory contents (MEMORY LOST). The other one I'm not sure about. You should also check for the keyboard itself; conductive dust in there will also freeze the calculator and will allow the repeating characters to appear, as you mentioned.

You see, I have the PCB for one 41CV that no longer works. I don't know why, I tried everything for now. I'm just waiting for the time to mix its internals with an old 41C that barely works: it freezes, goes to MEMORY LOST everytime, sometimes running a program or an internal math function (the most time-consuming, like trigs, logs).

Our babes sometimes turn our night s into days... right?

Success, and sorry not helping that much.

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Help fixing HP-25 keyboard

Message #1 Posted by [Richard Halliwell \(Australia\)](#) on 17 May 2002, 6:02 a.m.

I need help to fix a faulty key on my HP-25 (owned since 1976). The '4' key does not work, except very rarely if used repeatedly. It has a normal tactile feel. I have taken the calculator apart and tried to clean the key's contacts by spraying with electronic contact cleaner through the holes under each key (this cleaner worked well on the rest of the PCBs). Unfortunately, the keyboard can not be taken apart as it is heat-welded together (whereas I think the classics could be unscrewed).

The only other problem, which I will have to live with, is that the registers and program memory don't work. I understand this is due to RAM chip damage when it was charged with failed Nicads. I have replaced the batteries with high capacity NiMH AA (1700mAh), so I hope each charge will give 10 hours of use.

Hoping someone has a clever solution.

Thanks

Richard

Re: Help fixing HP-25 keyboard

Message #2 Posted by [Frank](#) on 17 May 2002, 12:33 p.m.,
in response to message #1 by Richard Halliwell (Australia)

Try at your own risk: I have had success with a strand or two of fine wire brush wire (radio shack solder brush) inserted into the contact pcb hold under the key, pressing the key lightly and burnishing the contact by moving and rotating the brush, do a little at a time then test, so you do not remove too much plating.

Re: Help fixing HP-25 keyboard

*Message #3 Posted by [Richard Halliwell \(Australia\)](#) on 18 May 2002, 6:35 a.m.,
in response to message #2 by Frank*

I will give it a try - I guess I can hardly make it any worse. Thanks for your prompt reply, shows how worthwhile this forum is!

Richard

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Voyager series power supply...

Message #1 Posted by [WigglePig](#) on 17 May 2002, 5:38 a.m.

Hi there...

Looking at my newly acquired HP15c, my mind recalls a discussion on this list (some while ago) where the power supply of the 48/49 was discussed; these calcs have a ?charge-pump? voltage step-up to run the Saturn/Yorke off three AAA batteries.

Is there a similar arrangement in the Voyager series calcs? If so, then it must be incredibly efficient as my 15c only just requires its first new set of batteries (calc made wk 33 1985)!

regards

WigglePig

Re: Voyager series power supply...

Message #2 Posted by [Ellis Easley](#) on 17 May 2002, 6:01 a.m.,
in response to message #1 by WigglePig

I don't remember a discussion about voltage converters in the 48 or 49. What frequently comes up is that the PMOS machines (Classics, Woodstocks, ?Spice?) all have blocking oscillator-transformer DC-DC converters (not unlike the vibrator supplies in vacuum tube car radios!) that generate +6V and -12V for the logic and (I think) +4V for the LED display or drivers. I know there isn't anything on the Voyagers that looks like a charge pump, like an IC with several caps attached. Nowadays, "regular" CMOS runs at 3V and I think I've seen special purpose CMOS chips specified to run at 1V (maybe rather slowly?) I've been under the impression that NMOS and CMOS chips have internal charge pumps to generate "substrate bias".

I was amazed, while rebuilding my HP67 card reader, to find that the motor only draws 13 mA (no load) from the 3.75V battery.

Re: Voyager series power supply...

Message #3 Posted by [Spice_Man](#) on 17 May 2002, 1:34 p.m.,
in response to message #2 by Ellis Easley

Did HP manufacture the motors for the card readers?

HP 67 card reader motor

Message #4 Posted by [Ellis Easley](#) on 17 May 2002, 2:53 p.m.,
in response to message #3 by Spice_Man

Mine says "escap (R) - Swiss Made"

Re: HP 67 card reader motor

Message #5 Posted by [Dave Hicks](#) on 17 May 2002, 3:09 p.m.,
in response to message #4 by Ellis Easley

There's a bit more info [here](#).

Re: Voyager series power supply...

Message #6 Posted by [Tony Duell \(UK\)](#) on 17 May 2002, 5:40 p.m.,
in response to message #1 by WigglePig

AFAIK there is no charge pump (or other step-up PSU circuit) in any Voyager. Certainly the voyagers I've worked on don't have one, and it appears that the 2 chips in early Voyagers (Nut CPU and R2D2) run directly off the battery. In fact there are only 3 discrete components in such machines -- the LC 'tank' circuit for the CPU clock and a capacitor connected across the battery terminals to preserve the memory while you're changing the batteries. Also, I seem to recall reading that the Nut CPU in the voyager differs from the one in the HP41 in that (amongst other things) the one in the Voyager is designed to run off a lower supply voltage (which would seem to be the battery voltage).

Re: Voyager series power supply...

*Message #7 Posted by [WigglePig](#) on 31 May 2002, 4:08 a.m.,
in response to message #6 by Tony Duell (UK)*

Aha, that answers my question...thanks for that. I had wondered how the \$%^£ HP had managed to make some sort of volt-converter that was so darned efficient that the batteries last for such a long time.

Regards, and thanks for your time...

WigglePig

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HP calculator sighting (sort of)

Message #1 Posted by [Ellis Easley](#) on 17 May 2002, 2:26 a.m.

... hearing of a mention, actually, and I'm afraid it's not a good one. A local radio talk show host was buying tickets online for the new Star Wars movie and had made some disparaging remarks about the fanatics who were standing in line overnight (or longer) to get tickets. Several people from the station were going to see the movie together on Friday morning and one of them asked which theater they would be going to. The host said he didn't dare name the theater because they would be "flogged to death with Hewlett Packard calculators" by fans who might have heard his remarks.

On Thursday night Conan O'Brien told a joke on the lines of the worst thing about the new Star Wars movie was sitting next to someone who had been in line for three days.

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almost forgot

Message #1 Posted by [Scottp1](#) on 16 May 2002, 12:57 p.m.

Its a desktop, 850mhz, Pavilion 8756.

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HP 8756- help!!!

Message #1 Posted by [Scottp1](#) on 16 May 2002, 12:53 p.m.

Ok, I've got a friend who has an HP8756, and her hdd crashed. Not a problem, I replaced it, no sweat. The problem I AM having is that I cant seem to find in the documentation she has or anything else, what type of modem her Pavilion has. Therefore, when I installed Win2k for her(her Win ME kept crashing, go figure) apparently the driver database on the OS didnt have them, so its just showing up as '14.4 dial up modem'. Obviously thats not the case, I'm sure it was just Windows saying 'we cant find em, but this the closest we CAN find'. Can ANYONE tell me what type of dial up modem these Hp Pavilion 8756 carry, and/or where the drivers are located? I cannot find them on this site, and I'd really like to help her get back on the net, but as of right now, no modem tones, nothing. Thanks!

Re: HP 8756- help!!!

Message #2 Posted by [aruid](#) on 16 May 2002, 4:38 p.m.,
in response to message #1 by Scottp1

The manual for the HP Pavillion 8756 modem is located here

http://www.hp.com/cposupport/manindex/hppavilion25728_eng_man.html

I use a Rockwell HCF PCI driver on my 8595c Computer

You could also try unistalling and reinstalling the device

ARUID

Re: HP 8756- help!!!

Message #3 Posted by [Scottp1](#) on 16 May 2002, 4:48 p.m.,
in response to message #1 by Scottp1

I know, I uninstalled it, but again, Windows doesnt seem to have the correct drivers, generic or otherwise, for the modem. Any possibility you know where I can get said drivers? Please?

Re: HP 8756- help!!!

Message #4 Posted by [Scottp1](#) on 17 May 2002, 12:41 p.m.,
in response to message #3 by Scottp1

Does anyone have any info on this by chance? I am willing to try and use a generic driver (Haines, etc) but I dont have the tower in front of me so I dont know if its one of those HP's that have the integrated sound card/modem.

I just need some drivers, I cant believe this is that difficult, but its driving me mad:\ Sometimes being helpful doesnt pay off it seems:)

Re: HP 8756- help!!!

Message #5 Posted by [Ellis Easley](#) on 17 May 2002, 3:05 p.m.,
in response to message #4 by Scottp1

This isn't a quick solution, but I have found that HP customer service will send you the latest software for things for free - at least, they sent me the CD for a digital camera that I bought from a discount store as a display model without any accessories. I bought some other items for the camera from the HP parts online store that came surprisingly cheaply. The online store policy is that there is never a shipping charge as it is built into the price. I think this is why most things cost at least \$6 - things like the Voyager slip covers and even some individual screws! The camera items I ordered included one booklet for \$1, another booklet for \$0.50, a cable for \$6, and the wrist strap (important because it includes a little tool used to pull the memory card out) for \$0.11! Then everything came in separate big padded envelopes.

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Travels, Part II: Uicro Minutes & BBC Current!

Message #1 Posted by [barry](#) on 16 May 2002, 10:50 a.m.

once again, in my travels i have come across some more docs: this time a folder that contains - 1)a small stack of: Uicro Minutes, Newsletter of the HP Micro-Computer Interest Group; datecodes about 1980, this was a group of HP employees who banded together in the early days whose common interest was the desktop computer; some of these are merely lists of members, others have some small info on their various projects. 2)more interesting: a small hand-drawn schematic, entitled "68K-P Clock Logic", no other info 3)three page docs on "BBC Current Source", including three larger foldout OFFICIAL HP blueprint schematics "BBC Test Current Source"

any one knowledgable about any of this? The Uicro Minutes group was a SF bay area HP employee group (probably Sunnyvale or SJ?). tnx, barry carson city, nv

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Jornada as the next collectible?

Message #1 Posted by [Ken Farges](#) on 16 May 2002, 12:49 a.m.

Just read that as the result of the HP - Compaq merger, the Jornada series of handheld PDAs will be discontinued. So what do people think, will these become collectable someday the way the HP calculators have? Maybe it's time to buy up a 565 or a 720 and leave it on a shelf new in box for a few years.

Re: Jornada as the next collectible?

Message #2 Posted by [Spice_Man](#) on 16 May 2002, 4:03 a.m.,
in response to message #1 by Ken Farges

I don't think they will be as collectible as HP calculators... HP calculators were the "cadillacs" of calculators...engineering marvels...precision instruments... whereas there's nothing special about Jornada's compared to the other PDAs.

Re: Jornada as the next collectible?

Message #3 Posted by [Ion Abraham \(New Mexico USA\)](#) on 16 May 2002, 9:30 a.m.,
in response to message #1 by Ken Farges

Partly in response to this comment, I've been meaning to mention for a while that I recently acquired a 660LX palmtop, and I am very pleased with it. It does not replace my calculators, but the ability to sync my email and tasks/calendar with my desktop, and still have a reasonable keyboard to add things is awesome. Of course, in this whirlwind world HP is now in, you can't even get accessories for it any more, being the generation before the Jornada. Talk about customer support.

It will be interesting to see what HP comes up with after the merger with Compaq. I think Compaq will swallow them up. It will be just like the last time around, after a few years. Anybody remember DEC? One day the competition to IBM, the next day part of Compaq and gone. Anybody remember when Compaq was a "portable" PC the size and shape of a sewing

machine?

Well enough of this, (I've just had my birthday,(36) and I'm feeling it).

Best regards to all,

Ion Abraham Albuquerque, New Mexico

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programming

Message #1 Posted by [patman](#) on 15 May 2002, 10:05 p.m.

i borrowed a program from the TI calc. and trying to use it in the hp

it start with "distance between ind." input g - "enter front foot" input f - "enter rear foot" input r -
"enter a indicator" input a - "enter b indicator" input b

then it has 2 different equations that work using the variables inputted,,, question how do you get the
hp to show the sentences,,, then accept the inputs,,, the biggest question how do you get the hp48gx
to work 2 equation at the same time from the same variables, and get 2 different answers

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HP 9121--3 1/2 floppy drive

Message #1 Posted by [Fred Ellers](#) on 15 May 2002, 1:56 p.m.

I have a HP9121 3 1/2 inch floppy drive that is cabled to an HP87XM computer. It seems to be operational but will not recognize the current discs. This floppy drive does not show up in any HP source I have found. Can anyone guide me to the specs on this unit and the discs it was designed to use?

Re: HP 9121--3 1/2 floppy drive

Message #2 Posted by [David Smith](#) on 15 May 2002, 2:08 p.m.,
in response to message #1 by Fred Ellers

If it is like the 9114B HP-IL drive you need to use either single density disks (very hard to find) or standard disks with the small rectangular density select hole covered up with opaque tape.

Re: HP 9121--3 1/2 floppy drive

Message #3 Posted by [Steve \(Australia\)](#) on 15 May 2002, 8:03 p.m.,
in response to message #2 by David Smith

And the drives themselves are worth treating with TLC.

Any hint at hesitancy when you press the eject button should be dealt with quickly before you (accidentally) one day rip the heads off it.

Seems to only affect the single sided drives, and only where they've been in hot (and possibly dusty) environments.

Re: HP 9121--3 1/2 floppy drive

Message #4 Posted by [Vassilis Prevelakis](#) on 15 May 2002, 9:32 p.m.,
in response to message #1 by Fred Ellers

I'll give a summary here, but search the archive for Tony Duell's postings on 9114 drives, the mechanism of the 9121 is similar to that of the 9114A with the exception that the 9121 is SINGLE sided.

Unlike modern floppy drives, it takes DOUBLE density diskettes (rather than quad density). QD diskettes have a hole across from the READ-ONLY tab. The 9121 has a "floppy present" sensor over that spot, so if you insert a QD floppy it will not be detected by the drive. According to Tony this is a good thing as QD floppies have different properties from DD floppies, so they are not really interchangeable. So you should look for DD floppies on eBay rather than try to use QD diskettes from your PC.

Having said that, you can generally get away with QD diskettes if you block the hole with a piece of tape. Since the sensor is mechanical, transparent tape works.

To format the diskette try

```
INITIALIZE "label", ":D700"
```

for the left hand drive and

```
INITIALIZE "label", ":D701"
```

for the right hand drive ("label" can be any string up to 6 characters long)

To copy a file from one diskette to the other, try

```
COPY "name:D700" TO ":D701"
```

note that if the source diskette has volume name label1 you can also use:

```
COPY "name.label1" TO ":D701"
```

To copy ALL files use:

```
COPY ":D700" TO ":D701"
```

**vp

Re: HP 9121--3 1/2 floppy drive

*Message #5 Posted by [Fred Ellers](#) on 20 May 2002, 1:09 a.m.,
in response to message #4 by Vassilis Prevelakis*

Thanks for the guidance. I tried blocking the rectangular hole opposite the no overwrite hole on the 3 1/2 inch floppy disc but it still gave the disc error message-also tried the initialize command with same result. I guess the best answer is to go to the want ad section and see if anyone can supply what I believe is a single density, single sided 3 1/2 inch floppy.

Re: HP 9121--3 1/2 floppy drive

*Message #6 Posted by [Ellis Easley](#) on 21 May 2002, 12:09 a.m.,
in response to message #5 by Fred Ellers*

Actually, it's double density, and double sided is OK and probably all you'll find. www.microcenter.com, which a couple of months ago only offered a bulk package of 500 DSDD diskettes for \$50, no longer has that offer but now has a couple of 10 packs of Imation brand pre-formatted (Mac 800K, PC 720K) DSDD diskettes for \$3.99.

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Future of Omnibooks and Jornadas?

Message #1 Posted by [Masao Kinoshita](#) on 15 May 2002, 1:09 p.m.

According to an article on Carly and the merger in the latest Newsweek, it looks like the new HP will go with Compaq notebooks and handhelds. Does anybody know what role calculators, or even Corvallis, will play in the new HP?

I just bought an HP 17Bii as my backup for my HP 32Sii (sn 3218S17651). Since I used to use an HP 27S, the 17Bii makes a lot of sense for me. And I've still got my HP 48GX, when I need THE POWER (like playing chess :-)).

<http://hometown.aol.com/btsbrighteyes/HP48-CGB.html>

Re: Future of Omnibooks and Jornadas?

Message #2 Posted by [Fred](#) on 15 May 2002, 4:46 p.m.,
in response to message #1 by Masao Kinoshita

None, HP is exiting the calculator business

Re: Future of Omnibooks and Jornadas?

Message #3 Posted by [olivier croissant](#) on 15 May 2002, 6:19 p.m.,
in response to message #2 by Fred

Translation :

The HP as we have known it, as we liked is dead....

Re: Future of Omnibooks and Jornadas?

Message #4 Posted by [Glen Kilpatrick](#) on 18 May 2002, 12:15 p.m.,
in response to message #3 by olivier croissant

My understanding is that HP isn't designing any new calcs, and hasn't since the ACO days. But manufacturing continues (for a time anyway), and has entirely moved to China.

Re: Future of Omnibooks and Jornadas?

Message #5 Posted by [ColinC](#) on 19 May 2002, 4:31 a.m.,
in response to message #4 by Glen Kilpatrick

All Calc design at ACO was stopped in Oct 2000 and were directed to design a cheap Linux/Java PDA "Jornada X25" (since cancelled). The Manufacture of Calc's were moved to China by ACO back in 2000. I would not hold my breath for a new HP calc comming out.

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Voyager series Aluminum bezels

Message #1 Posted by [Erik Wahlin](#) on 15 May 2002, 12:23 p.m.

I was wondering if anyone knew what kind of coating was applied to the Al bezels of the voyager series (HP 10C, HP-15C...) It seems to be a plastic coating of some sort. Has anyone ever restored one of these that has a lot of scratches and found a suitable replacement? I am wondering if a clear paint would work, or make the bezel appear real glossy.

Re: Voyager series Aluminum bezels

Message #2 Posted by [Spice_Man](#) on 16 May 2002, 3:27 a.m.,
in response to message #1 by Erik Wahlin

From what I understand, its some sort of clear metal varnish.

Re: Voyager series Aluminum bezels

Message #3 Posted by [Britt Snodgrass](#) on 16 May 2002, 12:13 p.m.,
in response to message #1 by Erik Wahlin

Is there any source of replacement bezels other than another calculator? I have a beat-up, but functional, HP-15C that a relative gave to me. It has his name deeply etched on the bezel so I'd like to replace it.

Britt

Re: Voyager series Aluminum bezels

Message #4 Posted by [Ellis Easley](#) on 17 May 2002, 1:15 a.m.,
in response to message #1 by Erik Wahlin

This was discussed recently (past few months, anyway) and someone (I think David Smith but I'm not sure) described a method used in general modeling to get that kind of finish. Involved a sheet of glass and wet sandpaper.

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HP41CX weird behavior

Message #1 Posted by [Mark Glusker](#) on 15 May 2002, 11:26 a.m.

I found a 41CX at a thrift store for the princely sum of \$2. It seems to work for basic operations, however, it has weird problems with certain functions. For example, if I try "CAT 1" it doesn't allow me to enter the number portion of the command. Trying "RCL 01", it allows me to enter the "0", but the "1" changes the command to a "ST+". I took the batteries out for several months, and when I put them in again the screen displayed "EMORY LOST G". In PRGM mode, there appears to be something still in the program memory, because when I try "GTO . ." it assumes it is program step 08. Hitting "BST" just locks the whole calculator up.

Any suggestions on how to fix this calculator?

Re: HP41CX weird behavior

Message #2 Posted by [Spice_Man](#) on 15 May 2002, 1:56 p.m.,
in response to message #1 by Mark Glusker

Internal contacts probably need to be cleaned.

Re: HP41CX weird behavior

Message #3 Posted by [David Smith](#) on 15 May 2002, 2:11 p.m.,
in response to message #1 by Mark Glusker

I would recommend first resetting the machine by holding down the gold shift key and the pressing and releasing the "ON" switch. You should see "MEMORY LOST".

If problems persist you will need to clean the internal contacts between the keyboard and the battery assembly and CPU cards.

Re: HP41CX weird behavior

Message #4 Posted by [Mark Glusker](#) on 15 May 2002, 9:18 p.m.,
in response to message #1 by Mark Glusker

Thanks to those who responded. I cleaned all the internal contacts with DeOxit and the calculator works much better.

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I had a HP35 in 1969

Message #1 Posted by [Steve Goldman](#) on 15 May 2002, 2:23 a.m.

Your museum page says that the HP35 was not introduced until 1972 but I received one for a high school graduation present in the Fall of 1969 and was the first one at Georgia Tech to have one. As I recall it cost around \$500. Can you explain this apparent contradiction?

Re: I had a HP35 in 1969

Message #2 Posted by [Raymond Hellstern](#) on 15 May 2002, 3:49 a.m.,
in response to message #1 by Steve Goldman

Are you sure about the dates you gave, or if it really was an HP-35?

Would you mind sending photos of the calculator, and some where the serial number is visible?

I had an HP42S in 1953. was(Re: I had a HP35 in 1969)

Message #3 Posted by [The Traveller](#) on 15 May 2002, 9:30 a.m.,
in response to message #1 by Steve Goldman

I lived in a suburb of Pittsburgh in 1953 and at my grade school 8th grade graduation party that year I received an HP-42S from my eccentric old Uncle Walter, a Ham Radio Operator and (so he claimed, ha ha) a time traveller. It was unlike anything available at the time. Most kids couldn't afford even a slide rule, let alone a microprocessor-controlled advanced scientific calculator. Yet here I had something that only fictional characters like Dick Tracy or Walter Mitty were supposed to own. It was great. Most kids really got excited about the two-line LCD dotmatrix display, though the LCD hadn't been invented yet, and I didn't have the heart to tell them. The teachers in high school the next couple years wouldn't let me use it on tests though, the shortsighted bastards. Uncle Walter used to bring me a lot of other really cool stuff from his workshop out in the woods, back behind where he kept the old DeLorean parked. One time he brought me something he called a "cellphone," back in 1958. It didn't work when he gave it to me, and I put it on a shelf, but then many years later, in the 90's, I brought it out again, dusted it off, and lo and behold it actually worked. Go figure.

Wow! Back to the real world,...

Message #4 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 15 May 2002, 12:25 p.m.,
in response to message #3 by The Traveller

Despite all inspiration The Traveller showed us here, I'd be back to Steve Goldman. and ask him about the 35. At the time I was 8 (1969), I remember moon landing was the mankind's biggest concern. So, my question is : did HewPack have the technology to build a pocket electronic calculator at that time (I still do not have the interrogation signal here...) Based on the answer, I believe there is a possibility they - HP - have offered something like this as internal research. Not impossible! Have you heard about the Xpander(interrogation sign) What if nobody knows about it now and it becomes available in two or three years (interrogation sign) Anyone who claims having it in hands three years before releasing will be in Mr. Goldman's same position.

So, what if...

Cheers.

Re: Wow! Back to the real world,...

Message #5 Posted by [Ron Ross](#) on 15 May 2002, 12:33 p.m.,
in response to message #4 by Vieira, Luiz C. (Brazil)

The story is that Bill Hewlett had the idea of putting a scientific in your pocket when everyone else was building desktop scientifics. Also according to the story, Hp put it together and had it in production in less than a year.

1972 - 1 year = 1971. A full two years after this amazing widget is to be.

I suspect a corrupted memory error.

Re: Wow! Back to the real world,...

Message #6 Posted by [Frank](#) on 17 May 2002, 12:29 p.m.,
in response to message #5 by Ron Ross

A few weeks ago in another thread, we introduced the calculator from the future with the time (travel) function, perhaps that has something to do with these rifts in time related to calculators.

Re: I had an HP42S in 1953. was(Re: I had a HP35 in 1969)

Message #7 Posted by [Massimo Gnerucci \(Italy\)](#) on 15 May 2002, 1:06 p.m.,
in response to message #3 by The Traveller

I hope that Uncle Walter, back from one of his travels, gave you some LR44 too. ;)

Re: I had a HP35 in 1969

Message #8 Posted by [warren](#) on 15 May 2002, 1:26 p.m.,
in response to message #1 by Steve Goldman

I'll let "The Traveller's" fanciful response pass without comment. While it may be possible, as Luiz suggests, that a prototype was available in 1969, it does not seem that would have been a likely gift for a graduating high school student. As Ron suggest, it appears that the only explanation for the apparent contradiction is that you are mistaken. The date of introduction of the HP-35 is well established as 1972, by all sources including HP itself:

http://www.hpl.hp.com/features/calculator_anniversary.html

Also, the introductory price has always been stated as \$395, which while quite expensive for that time is not really that close to \$500. I would not presume that you do not recall when you graduated from high school, but it sure seems that you mis-remember when you got the 35, or mis-remember what calculator you received in 1969. The problem is that it does not appear that any hand-held calculators were available in 1969. According to the book "The Complete Collector's Guide to Pocket Calculators" by Guy Ball and Bruce Flamm, the earliest portable (not necessarily hand-held or pocket-size) calculators were introduced in the US chronologically as follows:

Sharp QT-8B, July 1970

Dictaphone 1680, October, 1970

Sharp EL-8, February 1971

Sanyo ICC-0081, March, 1971

Canon Pocketronic, April 1971

These were all four function calculators. The first scientific with transcendental functions was by all accounts the HP-35, in February 1972.

So, is it possible that you received that HP-35 as a birthday present in 1972 and were still the first with such device at Georgia Tech? I hope you won't take any of the above personally, it just appears from all evidence that you are mistaken.

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Should I buy a new 49G?

Message #1 Posted by [Chris](#) on 15 May 2002, 12:00 a.m.

After being out of school for about 10 years, I'm looking to take a professional engineering examination for licensing.

I have a 28S that helped me get my BSEE.

I'm using it mostly for complex numbers and matrix operations (solving simult. linear equations).

Is there any reason I should shell out \$150 for a 49G? I don't need it for graphing. But I was wondering if it is really any better for what I need it to do. Thanks

Re: Should I buy a new 49G?

Message #2 Posted by [Ernie Malaga](#) on 15 May 2002, 1:13 a.m.,
in response to message #1 by Chris

My personal opinion is that the 49G isn't worth the packaging it comes into, and that the 28S will still serve you well for what you want to do.

I feel that the 49G is just too cluttered with features -- no doubt the result of some engineer suffering from terminal expertosis and a firm belief that "more is always better."

I have a 28C (not 28S) myself, and wouldn't part with it for the world, even though its RAM capacity is a cruel joke. The 28S, with its larger RAM, is probably what the 28C should've been like from the very beginning.

Good luck.

-EM

Re: Should I buy a new 49G?

Message #3 Posted by [Jeff_G](#) on 15 May 2002, 7:36 a.m.,
in response to message #1 by Chris

I just took the April 2002 Electrical PE exam with two HP-48's; an HP-48SX as my main calculator and an HP-48S as my backup.

The HP-49 is a fine machine provided you take the time to be fully acquainted with it. Both the HP-49 and the HP-48 are well suited to the problems you'll encounter on the exam. There is less of a learning curve on the 48 due primarily to the excellent Users Manual provided with the calculator. The 49 on the other hand has terrible documentation and this will limit its usefulness.

My advice for the PE exam is to bring with you two similar calculators that you are very familiar with. I would recommend one new HP-48GX and perhaps one used HP-48S.

Jeff

Re: Should I buy a new 49G?

Message #4 Posted by [Ron Ross](#) on 15 May 2002, 8:42 a.m.,
in response to message #1 by Chris

Hp's evolution of graphics was the 28-48-49. All are very similiar and you just get an increase in capability with each step up. I suggest you buy an Hp48 whatever (probably a + version would suite you best). It is a nice step up, but the keypad layout of the 28 can't be matched by the later 40 series. However the serial port more than makes up for this with the amount of Free software available for EASY download, something the 28 lacks. 32K RAM is plenty for keystroke entry, but gets cramped when you can download all sorts of good FREEBIE software, and that is why you should buy a 48G+ or GX version.

You would probably be disappointed with the 49G (even with its better OS simply because of the Hardware (rubber keys are not as nice as the older 48 or 28 keyboards).

I would buy a 48 NOW and get familiar with it. It will serve you better than an Hp28, though that will also do, it is just that if anything should happen in the next couple of months, 48's are readily available to replace vs. a 28 may take a couple of weeks to replace (which at the last moment would be disasterous).

Re: Should I buy a new 49G?

Message #5 Posted by [olivier croissant](#) on 15 May 2002, 9:36 a.m.,
in response to message #4 by Ron Ross

Sorry guy,

I am going to be controversial here, I think that you should buy a 49G . why ? because it the finest calculator around here.

I have followed the classic path 67-41CV-41CX-48GX-49G

Initially I did not want to buy the 49G, I was thinking that it a shame for hp to issue a claculator with such an external look (keyboard,...) it was like a blasphem to it configured algebraic out ofthe box, an so on. Then, I tried to understand whether Texas Instr. has finally won the 20years+ war. and let me tell you what I discovered.

Hp49G is the story of huge internal fight that happened inside HP. , between the dev guys who wanted to issue the next hero that would have smashed the competition and the marketing guys commanded by execs who do not understand the business (Hp is going to get out of the businsness very soon). So the dev guys have managed to put formidable features inside the box, but had to comply with "marketing decisions" that determined the shape of the calc and imposed the algebraic external apparence. At the end , the dev guy did not even have the ressource to finish the development, they issued in catastroph the machine, even without a decent manual. They are functions in the manual that are wrongly described by people who do not understand what they are writting. Ok but what a machine, if you accept its actual physical apparence, if you change a few flags, to restore its initial and fundamental state, it becomes again the hero that it should have been.

olivier

Re: Should I buy a new 49G?

Message #6 Posted by [HPhreacke\[r\]](#) on 26 May 2002, 11:33 p.m.,
in response to message #4 by Ron Ross

Buy an 49G and an 48GX with a 2mb expansion card. Why?

- HP49G quality is rising, there is plenty of RAM, many software, but 48GX is more "supported". BTW, i have an 39G... great piece of hardware... ;-)

Re: Should I buy a new 49G?

Message #7 Posted by [Chris](#) on 15 May 2002, 10:00 p.m.,
in response to message #1 by Chris

Wow - lots of good opinions. Thanks for all of them.

Having just bought a house and all the repairs that go with it, I don't want to spend the money yet if I don't have to.

The HP28S is a great calculator. The design is also 12+ years old. I was hoping that after twelve years (which is a hundred years in "electronic" years), there would be incredible improvements. It sounds seems like the display is where the biggest improvement has been made.

Unfortunately, I can't find a store around me that has a 49G I can try out.

I'll probably wait and see what they come out with next.

Re: Should I buy a new 49G?

Message #8 Posted by [ColinC](#) on 15 May 2002, 11:36 p.m.,
in response to message #7 by Chris

You will be waiting a long time. There is no next hp calc to come out. All new calc development stopped when the xpander was cancelled in Oct 2000. And as you can see the existing calcs are getting harder to obtain as they are discontinued one by one. If you want a 49G I would get it while you can.

Re: Should I buy a new 49G?

Message #9 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 16 May 2002, 9:15 a.m.,
in response to message #8 by ColinC

I agree.

Re: Should I buy a new 49G?

Message #10 Posted by [WigglePig](#) on 17 May 2002, 5:44 a.m.,
in response to message #1 by Chris

Nope. Stick with the 28.

I have a 48G (good calc, quite like it), a 49G (horrible, biggest waste of £120 I ever made) and a 15c (just got this after _years_ of seeking, love it).

I'm probably getting rid of the 48 & 49 and sticking with the 15c but, whatever else happens, I'm never going to recommend the 49 to anyone.

Regards

WigglePig

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Dust under 42S display

Message #1 Posted by [John Swenson](#) on 14 May 2002, 7:08 p.m.

I'm sure this is discussed somewhere on the web, but has anyone ever successfully disassembled a 42S to clean out accumulated dust between the LCD and the window?

Any other nifty techniques (maybe blast compressed air into the battery compartment, etc) to dislodge the dust under the lens?

I like that the 42S is small enough to be a true pocket calculator, but I guess years of dust and lint in my pocket is finally catching up to it.

Re: Dust under 42S display

Message #2 Posted by [Randy Sloyer](#) on 14 May 2002, 7:26 p.m.,
in response to message #1 by John Swenson

Sure it can be done. But if it's only dust.... I wouldn't want to see it die in process. The "pioneer" series was never designed to be serviced - they went in the trash at HP and they sent you a new one. But thats old history and that doesn't happen any more (new HP, new game, thanks Carly?).

If you are very brave and don't mind paying \$150 and upwards for a replacement if things go bad, see Paul Brogger's article in the articles forum:

Pioneer "Observational Internals"

PS: I disassembled mine for the first time a few weeks ago due to an unfortunate accident. It wasn't that hard to do once you decide to take the plunge. It is now relegated to the "parts only" status since I was unable to repair it. It is still apart and I could take some photos to help you along if you have any questions. Pauls article is very clear but is text only.

Re: Dust under 42S display

Message #3 Posted by [CJ](#) on 15 May 2002, 8:55 p.m.,
in response to message #1 by John Swenson

<Any other nifty techniques (maybe blast compressed air into the battery compartment, etc) to dislodge the dust under the lens?>

I would suggest against this. I tried this with a 41C and only made matters worse.

Good luck.

Christopher

Re: Dust under 42S display

Message #4 Posted by [David Smith](#) on 16 May 2002, 4:53 p.m.,
in response to message #1 by John Swenson

I have cleaned dust from under many a '41 and '42 display using canned compressed "air". Never use a standard compressed air line as they almost always spew water and oil along with the air.

Place the tube from the can into any available orifice near the display (the card reader latch holes on a '41 or the battery compartment of a '42) and pulse the valve on the can a few times. Usually the offending scuzz go flying away... but sometimes it stays (try another hole) or even something new shows up... try again.

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Help! How to remove the Hewlett-Packard Front Label

Message #1 Posted by [Andreas Stockburger \(Germany\)](#) on 14 May 2002, 2:52 p.m.

Hi,

I have two HP 35. One in excellent condition, one in non-working, VERY bad condition. BUT the "Hewlett-Packard" -front-label of the bad one is excellent. The excellent calculator has NO front label :-(Here is the idea: Removing the label from the bad and putting it to the good ... But how ? Do you think an hair-dryer can help ?

Best regards

Andreas Stockburger

Re: Help! How to remove the Hewlett-Packard Front Label

Message #2 Posted by [David Smith](#) on 14 May 2002, 4:51 p.m.,
in response to message #1 by Andreas Stockburger (Germany)

Most HP calculator front labels have one end that is slightly lifted. This was caused by the finger oil of whoever stuck it on affecting the glue over the years. If yours does not then maybe a hair dryer or razor knife can be used to lift one edge.

Once you have a free edge, then you can use a strong thread like to slide down under the label and slice through the adhesive. If you have a product called "UnDu" or UnDo (it is just the solvent heptane, also found in some rubber cement thinners) it helps to wet the thread with it. It will cause any adhesive to temporarily lose its stick. A hair dryer may also help.

The label will probably come off slightly curled. It can be straightened by placing it on a piece of paper release backing from an adhesive label, laying it on a smooth slightly resilient surface and gently rubbing it, etc.

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How to clean the keyboard of a Woodstock

Message #1 Posted by [bert oberholz](#) on 14 May 2002, 5:11 a.m.

Hi there,

I'm just trying to clean the keyboard (or better: the surface between the keys) of my woodstocks (25 and 27).

No matter how I try, I end up with stripes and "crossings".

I found out that the material does not stand the tissues I use to clean my glasses. The tissue turned olive ...

Any idea of techniques without having to dissassemble the keyboard?

-- Mit freundlichen Grüßen / Kind regards Bert Oberholz

www.AllIEverWanted.de +49(0)171/209 4711

Re: How to clean the keyboard of a Woodstock

Message #2 Posted by [Ellis Easley](#) on 14 May 2002, 5:17 p.m.,
in response to message #1 by bert oberholz

I haven't done this with a calculator, but I have used this method for other things that have openings, which I want to clean without letting a lot of water in:

Hold the item with the surface to be cleaned facing down. Use a brush with short (approximately 1 cm), soft bristles over a large area. Fill the brush with thick foam from a soap and water solution with as little extra water as possible. Move the brush in small circles across the surface from below. Think of the tips of the bristles dislodging the soil, which then becomes suspended in the foam. Then you can shake out the excess foam from the item or even remove it with a vacuum (since it is quite dry). Then you can rinse the brush and shake out the water until it is only barely damp and use it (again from below) to rinse the surface. You might want

to do the rinse several times to get all the soap off, since the brush is fairly dry.

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Update: reproduction parts

Message #1 Posted by [barry](#) on 13 May 2002, 2:54 p.m.

in a thread below i mentioned we were considering manufacturing some HP41 repro parts (module port covers & battery port covers firstly); well, the moldmaker wanted \$2K+ (doubleouch!!) for each mold; this is way too expensive to even consider using this method that its out of mind; trying to figure another method of making a mold directly from the part that would be usable w/ the injection machines but its possibly impractical. we will still attempt to try to figure a method that might be usefull, and i will post if we come up w/ anything. tnx to all who responded! barry carson city, nv

Re: Update: reproduction parts

Message #2 Posted by [Iqbal](#) on 13 May 2002, 4:05 p.m.,
in response to message #1 by barry

I wonder if it would be possible to make fiberglass parts? That should be much easier, shouldn't it?

Re: Update: reproduction parts

Message #3 Posted by [barry](#) on 13 May 2002, 4:32 p.m.,
in response to message #2 by Iqbal

yes iqbal, i will be looking into various other methods of making parts, including fiberglass - but 'glas will be hard to do w/ these smaller parts. tnx, barry carson city, nv

Re: Update: reproduction parts

Message #4 Posted by [David Smith](#) on 13 May 2002, 5:21 p.m.,
in response to message #1 by barry

I think your only practical alternative is laser stereolithography. A laser beam is scanned over a vat of photo setting polymer and the part is built up as a tray is automatically lowered into the vat.

Re: Update: reproduction parts

Message #5 Posted by [Andreas Stockburger \(Germany\)](#) on 14 May 2002, 2:51 a.m.,
in response to message #1 by barry

Hi,

A college of mine is a specialist for r/c ship models. He told me to make such things from "resin". He showed me some parts he made. They where absolutly great !!!

Perhaps this can help you !

Best regards

Andreas

Re: Update: reproduction parts

Message #6 Posted by [Y K Wong \(Singapore\)](#) on 14 May 2002, 7:25 a.m.,
in response to message #5 by Andreas Stockburger (Germany)

One of the common problem with the 41's is the Battery I/O Assy - especially the flexiable PCB, can that be reproduced? I am sure many of us would need a replacement.

Regards,

Y K Wong.

Re: Update: reproduction parts

Message #7 Posted by [barry](#) on 14 May 2002, 9:33 a.m.,
in response to message #5 by Andreas Stockburger (Germany)

yes, this will be the next method to check out; it could prove useful!

Re: Update: reproduction parts

Message #8 Posted by [Mark Glusker](#) on 14 May 2002, 11:31 a.m.,
in response to message #1 by barry

\$2K for a injection molding tool for the HP41C port cover isn't unreasonable. A tool for the battery holder should be much more expensive. There are ways to cut costs on injection molds - was the quote for a steel or an aluminum tool? Epoxy tools are also possible, provided you don't need that many parts.

You really want to end up with a part that has a reasonable color and texture match, and that also has a reasonable chance of snapping in properly. I have experience with other prototyping methods (stereolithography, selective laser sintering, rubber molds to make urethane parts) and they could work, but they will need sanding and painting. You will also need to generate an STL file from a solid modeling CAD package such as Pro/Engineer.

Re: Update: reproduction parts

Message #9 Posted by [barry](#) on 15 May 2002, 12:11 p.m.,
in response to message #8 by Mark Glusker

this was for a steel mold, and that was w/ us supplying the mold base itself; the \$2K isn't unreasonable, but when u figure in how many parts you would have to sell to even make back your investment, it just ain't feasible (if you want to keep the price of a port module cover in the \$5.00 range). Basically, standard production methods will involve too much expense to make it worthwhile, you aren't going to sell 300 or 400 port module covers; unless you were the moldmaker yourself (and were running the shooting, too!) the math just doesn't work out. Figure you would sell MAYBE 100+ covers, so it just isn't going to work out via injection molding.

Re: Update: reproduction parts

Message #10 Posted by [Jeff](#) on 15 May 2002, 11:39 p.m.,
in response to message #9 by barry

One way to help cut cost would be to make several different parts in the same mold rather than making several molds. The math still doesn't add up.

Re: Update: reproduction parts

Message #11 Posted by [barry](#) on 16 May 2002, 10:31 a.m.,
in response to message #10 by Jeff

the cost isn't in the mold base (which we have many of), but in the reverse engineering in making a print of the part to be manufactured, then CNC'ing the base, including all necessary passageways needed to flow liquid plastic correctly, draft angles for correct part removal, etc. there is much more to it. when u realize what these tool & die makers charge/hour it becomes expensive, especially for a knowledgable one. look at a port module cover as if u had to machine one and the problems become apparent. barry carson city, nv

Re: Update: reproduction parts -- How 'bout recahargable battery packs?

Message #12 Posted by [Paul Brogger](#) on 16 May 2002, 11:10 a.m.,
in response to message #1 by barry

I haven't read all the posts in response to this one, so maybe my two bits won't be very original, but here goes:

I wonder whether someone with hardware savvy could come up with "plug-compatible" battery pack replacements -- maybe lithium-ion high-capacity units that deliver the proper voltage, serve as the appropriate load (when necessary), and have recharging jacks built into integral battery covers?

For instance, a "3-N" package for the HP-28 calculators would be great -- less-frequent battery changes might help the battery-door-to-case attachment points live longer.

Or a "4-C" replacement for the HP-97? (I mention that 'cause I haven't gotten round to rebuilding my 97's battery pack.)

It would be great for those of us who occasionally USE some models to have long-life rechargables that would help extend the calculators' useful lives.

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Stick It!

Message #1 Posted by [doug](#) on 13 May 2002, 12:45 p.m.

Got a question from a person. Wants to know what epoxy or glue was originally used to attach a logo to the bezel on an HP voyager calculator. Anyone ever know what they actually used? Also what would be the best metal-to-plastic bonding glue made today if the original isn't available.

Thanks much.

Re: Stick It!

Message #2 Posted by [Ellis Easley](#) on 13 May 2002, 4:53 p.m.,
in response to message #1 by doug

I have received replacement logos from HP customer service and later, from EduCalc. The one from HP and one of the two from EduCalc came with a square of double sided foam tape attached, the last logo came without any adhesive. The foam tape that came with the logos is quite thin, maybe 1/32 inch. I haven't been able to find anything thinner than 1/16 inch in any store. You might try browsing 3M's website, they used to be pretty good about supplying generous samples of their products. I looked there some time ago without success. The problem is that 3M makes so many things and their product lines aren't (or weren't) organized by product type but rather by the industries they serve. As far as I know, the adhesive itself is called "acrylic" and is what is used on all kinds of self-adhesive items. You can buy it from 3M in a form called "transfer adhesive" which is just the sticky part stuck on a release liner on a roll. It comes in at least two strengths - low tack and high tack - and different thicknesses. You press it onto the back of your substrate material and then cut the sandwich to size with a die, and you have a self-adhesive item with release liner ready to be handled for distribution. You could get some of this transfer adhesive and try to build up a stack of it to work with the logo (the thicker transfer adhesive is about .01 inch) only the stuff is difficult to work with before you attach it to something.

Re: Stick It!

Message #3 Posted by [Richard Garner](#) on 13 May 2002, 5:48 p.m.,
in response to message #1 by doug

The last time I had a logo fall off I used a silicon glue, Shoe Goo. It is use to repair worn or torn areas on shoes and rubber boots or to seal rafts, tents and other items that need to be watertite. It can be found at most stores that have sporting goods. Wal-Mart will have it in both the shoe and sporting sections. It comes in a toothpast type tube and runs about \$5.00.

Re: Stick It!

Message #4 Posted by [doug](#) on 25 May 2002, 4:28 p.m.,
in response to message #1 by doug

Just a thought, could some substance like cotton be soaked in glue and used under one of the logos to fill the space yet bind the logo to the aluminum?

Re: Stick It!

Message #5 Posted by [Ellis Easley](#) on 26 May 2002, 5:14 p.m.,
in response to message #4 by doug

It is interesting to me that you say "bind the logo to the aluminum" - on my units the logo fits in a hole in the aluminum bezel and sticks to the plastic case underneath.

I have new logos as I said, but I've never stuck them on - somehow it was enough knowing I have them! Also, why stick them on just to have them fall off again? My 12C that I found in the street - I don't remember if I ever had the original logo. I do remember that the first thing I found (after the button cells that attracted my attention in the first place) was the bezel, it had come completely off. Also I seem to recall that the plastic had a layer of transfer adhesive under the entire bezel and the logo and it may be that HP relied on just having the edges of the logo adhere. The high-tack version of transfer adhesive is amazingly strong - but the idea that my 12C had it is inconsistent with the way the entire bezel popped off. Currently, my 12C has no logo and the bezel and the LCD window are held in place with scotch tape. I just took a look at my 15C though - I still have the original (to me - I got the calculator at a sidewalk sale) logo which is loose and scratched up. It is also held in place with scotch tape. I lifted it to see how it had been attached and there is a neat quantity of what appears to be RTV in there. I say a neat quantity meaning it looks like it might have been done at the factory - just enough glue as if done by metered equipment. I think the human tendency (I know it's mine) is to use too much. This makes me feel better about Shoe Goo, which sounds like an extra-strong kind of RTV.

Maybe HP only supplied the thin double sided tape with the replacement parts that customer

service sent out, to save people the trouble of finding and applying the correct adhesive.

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HP 9100B Desktop Calculator

Message #1 Posted by [Roy Engelen](#) on 13 May 2002, 10:16 a.m.

Hi everybody,

I recently got hold of a HP9100B calculator in an excellent condition.

As I want to sell it, and I'm not particularly familiar with this machine, I would like to know how I can check all (or a great many) of it's functions. It appears to be fully functional, but I would like to test this!

Thank you very much in advance! Roy Engelen R.A.B.Engelen@zonnet.nl

Re: HP 9100B Desktop Calculator

Message #2 Posted by [Ellis Easley](#) on 13 May 2002, 5:00 p.m.,
in response to message #1 by Roy Engelen

The HP service manual includes a test program which is supposed to exercise all the programmable functions. Part of the manual is on the MOHPC CD-ROMs. The magnetic cards are hard to find and there is a very good chance that the card reader's rubber drive wheel has turned gummy.

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hp 97 with hot resistor

Message #1 Posted by [martin](#) on 13 May 2002, 5:32 a.m.

hallo,

i am new here. may be you discussed such problems before, but i did'nt find any entry, helping me.

from a friend i received a not working hp 97 (newer version; made in brazil; only the upper led in the display is working). the tall resistor (visible after opening the back cover)was seperated. fixing it again, nothing changed, but this resistor is getting real hot (that's why it fell out). of course this is not a sufficient description, but may be this problem did happen to other hps resulting from a common cause. any advise (e.g. where to read more about such things) is welcome...

- thank you

[martin](#)

Re: hp 97 with hot resistor

Message #2 Posted by [David Smith](#) on 13 May 2002, 5:16 p.m.,
in response to message #1 by martin

You most likely have a bad transistor or two or three or four or five or six in the battery charge circuit. The HP97 service manual with schematics is available on the HPMUSEUM CDROM set.

Re: hp 97 with hot resistor

Message #3 Posted by [Ellis Easley](#) on 13 May 2002, 5:18 p.m.,
in response to message #1 by martin

I'm new to the HP97 myself. There is a complete service manual on the MOHPC CD-ROMs and also a user's manual for either the 97 or the 67, which works almost identically. As I recall from opening my 97, the only large resistor is the one that limits the charging current. There is also another resistor in series that is shorted out when the power switch is on, to allow the AC adapter to provide current for both charging and running the calculator. I just examined my machine, there is a 4.7 ohm 2W wirewound resistor next to the large chip (1820-1751) visible by just removing the bottom of the unit. Then on the keyboard PCB (visible when you unplug the circuit boards and remove the middle assembly), there are two large resistors. One is an 8.2 ohm 2W wirewound which I found is the one shorted out when the power switch is "on". There is also another 4.7 ohm 2W wirewound but it measures less than 1/2 ohm, it must be across a coil. I'll look at my MOHPC CDs later.

Re: hp 97 with hot resistor

Message #4 Posted by [Tony Duell \(UK\)](#) on 13 May 2002, 7:33 p.m.,
in response to message #1 by martin

The HP97 (and all other Topcats AFAIK) includes a circuit to protect the machine from overvoltage if the battery pack goes open-circuit. This works by detecting if the input voltage is higher than Vss (the +ve supply to the chips) and if so, it uses a transistor and resistor to load the supply (the HP charger is designed to have a high internal resistance so this works) until the input voltage is less than Vss. The problems start if the PSU converter circuit doesn't run. Then Vss is a little less than the input voltage (1 diode-drop IIRC), so this protection circuit tries to pull the input voltage down to 0V. Needless to say it gets rather hot trying (I've had Topcats draw over 1A from my bench supply when then happens). Check the oscillator transistor in the power converter circuit (the one connected to the little toroidal transformer on the logic board. It often fails. A 2N3904 -- but not just any NPN transistor -- works here. As others have mentioned the service manual for the 97 (including schematics and PCB layouts) is on the MoHPC CD-ROMs.

Re: hp 97 with hot resistor

Message #5 Posted by [martin](#) on 14 May 2002, 10:56 a.m.,
in response to message #1 by martin

thank you for your helpful contributions,

the interior of my hp-97 is looking like this: <http://www.hpmuseum.org/97intern.jpg> (large resistor top right) obviously it was operated with the hp-power-adapter 3va, 8v, which i received with the calc. this might be not suitable for this hp-97 (input voltage is not shown on it)

martin

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Hand Held Products Portable EPROM for HP-41

Message #1 Posted by [Chris Catotti \(Florida\)](#) on 13 May 2002, 2:28 a.m.

I have a unit with no directions or instructions. Does anyone know how this was/is programmed? Do you recognize the collection of programs installed now? I have a list of programs and functions in it now. 'PROGRAMS are written in user code, and 'FUNCTIONS are written in mcode. I also have three pictures of it. The locations were determined using the CCD Modules CAT function.

http://images.andale.com/f2/115/106/3428179/1021270165956_Hhp_pe_1.jpg

http://images.andale.com/f2/115/106/3428179/1021270165500_Hhp_pe_2.jpg

http://images.andale.com/f2/115/106/3428179/1021270164846_Hhp_pe_3.jpg

```
----- -- port 2 lower ----- 'INPROP 'MT 'Z 'ARGT 'RT '30
----- -- port 2 upper ----- 'P13 'UD 'KTH 'PLT 'PROP2 'DES 'MUW
'OUT 'PX345 'PX34 SI43 SI243 ----- -- port 4 lower ----- 'DM 'DPT
'EREQ 'FK 'FSET 'NPMLH 'PROP 'QUAD 'P31 'P01 'P14 'P45 'H7 'H10 'CB12 'CP 'GPM 'NP
'SWAP 'DPCHA 'DCD 'POP 'DPFC 'DP 'DPA 'FP 'PERF1 'PERF2 'REDIS 'RFM 'UT 'PX13 'PX463
'PX1700 'PX1152 'PX850 'PX807 'PX258 'PX27 'PX130 'BPO ----- -- port 4 upper -----
----- 'DPCK 'MDP 'RPT 'FILM 'MEW 'T2 'AM10 'AX30 'A20B 'AM20 'A15B 'A10B
'CB25 'P2 'IN GETKEY REGMOVE REGSWAP X<>F DATA1 DATA2 'AD 'AU 'LGO
```

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HP11C repair

Message #1 Posted by [Charles Galloway](#) on 11 May 2002, 9:45 p.m.

My 11c has started to misbehave after a mere 18 years. The problem appears to be with the keyboard which either does not respond, switches into PRGM mode or just changes the number typed in into something completely different.

The self test (x/on) is ok and initially so was the keyboard test but recently it has started to show "error 9" on the "1/x" or "CHS" keys. I have taken out the batteries for a day and shorted across the terminals but not seen any improvement.

I suppose that the next step is to open it up but I don't know what to look for next. Does anyone have any experience or solutions to this type of problem ?

Regards Charles Galloway

Re: HP11C repair

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 13 May 2002, 9:50 a.m.,
in response to message #1 by Charles Galloway

Hello;

The voyagers (10-series, say, 10C, 11C, 12C, 16C and 16C) have two different internals: the first series had a separate flex-PCB with all IC's plus LCD, and a separate keyboard. The second production offered a single all-built-in PCB, with IC's, LCD and keyboard. I have a non-operating (for now; I'll find the time to go for it) HP15C and another full-operative unit, both different. It is easier to repair the earlier models, but as it seems you have some problem with the keyboard, it would be hard in both cases.

You can open the unit by unscrewing four screws under the four rubber feet. PLEASE, take care with two small springs inside the calculator. They keep contact between both aluminum plates (decorative and keyboard labels) and the bottom plate (general information). They are for ESD protection and must be safely stored (one beside batteries compartment and the other at the

lower right, between third and fourth rows).

If there is only one big PCB from top to bottom, yours is a new model; if there is a separate assy under (built under) the LCD, yours is an earlier model. In the second case, you can remove the IC's/LCD assy and check if there is any sort of dust between the assy and the keyboard's PCB. (PLEASE, also take care with 8 (eight) small shock-absorber foams; the LCD assy is built on four posts, and there are 2 foams for each, top and bottom. Keep them in a safe place.) There is a small conductive foam between the assy and the keyboard.

If yours is a new type, you should check if there is anything wrong with the rightmost IC: this one reads the keyboard, and I have once replaced a 16C's for an 11C's (they were the same in those units). If you believe you'll have to look at the other side of the PCB to check for problems, then there is a big job ahead: removing it. All plastic posts are used to retain the PCB, so they all must be carefully worked. After that, removing the PCB is easy (lookout for the keys...).

Well, cleaning the unit's guts is the next step. Let us know if you are getting success for now.

Cheers.

(PLEASE, FALKS! Allow me to write in a better way. If there is something written in here that is wrong or could be better expressed, let me know. I usually learn fast... Thanks.)

Re: HP11C repair

*Message #3 Posted by [doug](#) on 13 May 2002, 12:46 p.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)*

One the PCB is removed on a single PCB unit, how would you put it back on since the plastic post caps are gone?

Re: HP11C repair

*Message #4 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 13 May 2002, 3:19 p.m.,
in response to message #3 by doug*

Hi;

I have experienced that the posts may have their upper part carefully removed without removing the post completely, say, they act as thermal rivets and only their upper parts need to be removed. When carefully worked, you can place the PCB back to the calculator's box and rework some of them (about half of them) with epoxy glue. This way, it's gonna be easy to open the unit again, if needed.

The last time I did that was in 1990, and I remember I had a mix of different glues I found to be the best, non-destructive ones for the job. Maybe we can find something better for these days... I thought about silicon-based glue.

Hope this clarifies. Cheers.

Re: HP11C repair

*Message #5 Posted by [doug](#) on 13 May 2002, 9:03 p.m.,
in response to message #4 by Vieira, Luiz C. (Brazil)*

I have thought about glues. And I went on the websites and searched. I am now trying to find a college that has a glue Degree so I can only spend four years learning so I can make the right choice. (;O)

Re: HP11C repair

*Message #6 Posted by [Spice_Man](#) on 13 May 2002, 10:33 p.m.,
in response to message #5 by doug*

Actually, you can get a degree in chemical and mechanical engineering with an emphasis on adhesives... in fact many have done Ph.D. theses on glues.

On a more serious note, the heat stakes can be quickly bonded using UV cure epoxy. Of course, you'll need a UV light source of proper wavelength for the particular epoxy...

Re: HP11C repair

*Message #7 Posted by [doug](#) on 13 May 2002, 11:06 p.m.,
in response to message #6 by Spice_Man*

OK, I have to ask. Why an epoxy that is activated by UV rays?

Does it finish more like a glue or like a latex rubber?

The reason I brought all of this up is this. Since the post tops are gone, what is anything going to bond to except the very tiny top of the plastic stakes to the PCB itself? In other words the substance has to fill up the place around the stake and PCB and be thick enough and strong enough to make a pseudo stake top to hold the pressure of the keystrokes. Especially from heavy key bangers, and they do exist.

People could actually try to melt plastic and drip it onto the stakes but that is risky, and wouldn't be very nice odor to endure. Also if you have a hot iron for just a second and drip to hot of plastic or simply touch it on the stake to flatten it out and the whole stake could easily and quickly disappear.

Re: HP11C repair

*Message #8 Posted by [Spice_Man](#) on 14 May 2002, 2:09 a.m.,
in response to message #7 by doug*

> Why an epoxy that is activated by UV rays?

Because it will bond in seconds exposed to intense UV rays, rather than air-dry epoxy which will take hours to harden.

This prevents you having to use some sort of clamp contraption to keep the board in place while it hardens. If you don't put pressure on the board into the stakes while it hardens, the keys won't feel right.

The epoxy actually does a pretty good job of bonding together the tops (and slight bit of the side of) of the heat stakes to the board.

Re: HP11C repair

*Message #9 Posted by [doug](#) on 14 May 2002, 1:27 p.m.,
in response to message #8 by Spice_Man*

Resonable reasons Good answers. Great explanation. Thank you.

Do you have a brand name, actual product name, vendor name, url, price, for the epoxy and the UV light also?

Re: HP11C repair

*Message #10 Posted by [warren](#) on 14 May 2002, 7:15 a.m.,
in response to message #7 by doug*

Just empahsizing a point made in passing by Spice_Man: when trimming off the heat stakes, remove only the part that is "mushroomed" over. Do not remove the shaft of the heat stake that protrudes above the level of the circuit board. That will leave a much better place for any glue or other adhesive to grip.

Re: HP11C repair

*Message #11 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 14 May 2002,
9:25 a.m.,
in response to message #10 by warren*

Hi;

I can explain that in Portuguese; now I know how to do it in English (this is the English that is not taught at the Language Schools).

When you say "Do not remove the shaft of the heat stake that protrudes above the level of the circuit board" you mean exactly what I could not express in a better way than "All plastic posts (...) must be carefully worked".

Thanks and best regards.

Re: HP11C repair

*Message #12 Posted by [doug](#) on 14 May 2002, 1:30 p.m.,
in response to message #10 by warren*

I have discussed this with others. I use to try to crimp the mushroom sections with needle nose pliers. That does not do very well. I then used the standard sharp cutters, like for solder. They cut smooth and even but pretty flush to the PCB. What method do you do to just get the fanned out area of the plastic?

Re: HP11C repair

*Message #13 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 14 May 2002, 3:18 p.m.,
in response to message #12 by doug*

Hello;

Hope I can find the right words (in English) to explain.

I once (upon a time) found an old mini-stereo pin that I disassembled. The common contact (outer) is a hollow metal pipe and, by carefully using a drawler, I could sharpen the edges of one of its extreme holes. This way, I could build a cutter that could cut in hole format. It was easy to cut only the excessive plastic of the stakes and leave the protuberous (got that!) part intact.

If it is not so easy to understand, I can add some drawings (I'll have to build another one, cause I lost my old tool).

Best regards.

(I'm using a terminal with no interrogation symbol available at the keyboard...)

Re: HP11C repair - Just an add-in

*Message #14 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 14 May 2002, 3:32 p.m.,
in response to message #13 by Vieira, Luiz C. (Brazil)*

I did not take the time to revise what I wrote, so please, remove

"excessive plastic of the stakes and leave the protuberous part intact"

and place:

"mushroomed part of the heat stake and leave the protruding shaft".

Thanks.

Re: HP11C repair

*Message #15 Posted by [David Smith](#) on 14 May 2002, 4:55 p.m.,
in response to message #12 by doug*

You can get thin wall brass tubing of just about any size at most hobby shops. You can sharpen the edge of one end with sand paper and use it as a circular knife to cut off the edges of the heat stakes.

Re: HP11C repair

*Message #16 Posted by [Ellis Easley](#) on 14 May 2002, 4:57 p.m.,
in response to message #12 by doug*

I have disassembled a 12C and a 15C and reassembled the 15C. I cut the spread plastic with an Exacto knife between the plastic and the PCB. Sometimes I cut off the top but sometimes only the outer ring of plastic popped off.

When I reassembled the 15C, I used some regular cyanoacrylate superglue that had thickened over time. I understand you can buy superglue that is made thick to fill gaps. My concern about regular thin superglue would be that it might run all over the contacts. I glued one post at a time and held the assembly tightly with my fingers until the glue set (I had a few hours to waste!) Before I reassemble the 12C, I'm going to build a fixture with a number of metal rods to provide pressure, so I can glue everything at once and have more choice of glues. (I think epoxy would be good.) In the meantime (since approximately election day 1988, when I found the 12C in the street where it had been run over) I have a pad inside the 12C made by stacking pieces of duct tape ("the handyman's secret weapon"!) which does a pretty good job of pressing the keyboard against the bezel. Of course, the feel of the keys is somewhat spongy.

I would like to find some tiny screws with relatively broad heads to thread into tiny holes drilled into the tops of the posts (with a drill press, to make sure I don't drill through!).

Re: HP11C repair

*Message #17 Posted by [Erik Wahlin](#) on 14 May 2002, 6:48 p.m.,
in response to message #16 by Ellis Easley*

I have used a sharp tipped solder iron to do the repair. You can re-mushroom the heatstake post to some degree.

Re: HP11C repair

*Message #18 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 15 May 2002, 6:42 a.m.,
in response to message #16 by Ellis Easley*

Hi;

I have also tried to find these tiny screws that I have seen in many minicalcs made in somewhere else. Those subminicalcs have subminiscrews that would do the job. Does anybody know where to find them? I have some (less than 8) that would be of no help at all, but I once tried using them. After opening a tiny hole (irregularly drew), I got success screwing in, but after removing it, the remaining thread was too weak that it could not retain the tiny screw back there.

Cheers.

Re: HP11C repair

*Message #19 Posted by [Ellis Easley](#) on 17 May 2002, 1:52 a.m.,
in response to message #18 by Vieira, Luiz C. (Brazil)*

I learned (working at a Tandy computer factory) that there are some tricks to using screws in plastic: first, there are special types of screw threads for the purpose, one trademark is Plastite. These screws look like a sheet-metal screw except they usually have a rather blunt tip (not pointed, anyway), if you look at the thread end-on, you see that there is a triangular profile to the outer extremes of the thread. Also, a very critical thing is the size of the hole which must be just right for the particular thread size. I wonder if the small parts warehouse website might have

this kind of thing (you would think so!)

Re: HP11C repair - Extended

*Message #20 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 17 May 2002, 7:58 a.m.,
in response to message #19 by Ellis Easley*

Hi;

thanks for the tips, Ellis. As you may have noticed, here, in some regions of my country, we do not have an easier access to some sort of good stuff. Take this: I lost (or do not remember where did I put) those big screws that hold the upper side of the 41's box, top and bottom parts, lined with the BATT/IO assy, you know? I was told, after looking for them almost everywhere closed to the city I live, that those were kind of special screws, and that it would not be easy to find something like them. After some days of searching, I found nothing but the small screws. Well, there is a little HP41C waiting for those to be revived.

About the HP11C (and all voyagers), I know the screw you're talking about. It seems that the little tip acts like a cutter, creating a path prior to the thread itself. For sure this is the actual screw for the job. I'll try to find something like them. Well, after finding those screws, there is also a question: will the posts (stakes) be strong enough to hold the screws? As you mentioned, there are some tricks using screws on plastic, and the thickness of the remaining material, the stakes, is also critical, isn't it?

Thanks.

Best regards

Re: HP11C repair - Extended

Message #21 Posted by [Ellis Easley](#) on 17 May 2002, 4:04 p.m.,
in response to message #20 by Vieira, Luiz C. (Brazil)

Luiz, you wrote: Well, after finding those screws, there is also a question: will the posts (stakes) be strong enough to hold the screws? As you mentioned, there are some tricks using screws on plastic, and the thickness of the remaining material, the stakes, is also critical, isn't it?

That's why the size of the hole is so critical. Also with very tiny screws, I think the torque would have to be limited very carefully (a cautious hand should be enough). The screws are self tapping but while sheet metal screws can go into a tiny hole (with their sharp point) and then count on the sheet metal to deflect outward away from the screw as the diameter increases, a screw threading into a plastic post will split it if the hole is too small, and will fail to cut a reliably deep thread if the hole is too large. Each screw size has a recommended hole diameter which might depend somewhat on the material and the ultimate wall thickness. As I recall, the posts on the Voyager are about 0.05 inch in diameter. Without knowing the actual limits, I would guess that the hole should be no larger than 1/3 of the diameter or about 16/1000 inch - less than 1/2 mm. I just looked at smallparts.com, they don't list any screws specially made for plastic. The smallest sheet metal screws they have are #000 which is .0341 inch diameter and cost \$26 for 10! They are flat headed and would require the corresponding #000 flat washer - .040 ID, .090 OD, 10 for \$6.50 but this size is too big anyway. In machine screws, there is a set of sizes called "Unified National Miniature" (UNM, not to be confused with the University of New Mexico, my parents' alma mater!) which goes down to 0.5 mm diameter, .06 and .12 inches long - that's how they are described in the catalog, two different units -

they cost \$6.85 each!! (10 for \$47.50). I don't find any washers to go with these screws and the catalog doesn't say how big the heads are - it just says they are "slotted, fillister" head.

Re: HP11C repair - ACK

*Message #22 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 18 May 2002, 9:25 a.m.,
in response to message #21 by Ellis Easley*

Hi;

thanks, Ellis; your explanations clarify A LOT, mam! As you mentioned, you were indeed in the business.

After that, I believe heat or epoxy glue will be the best choice to hold the voyagers' keyboards. Anyway, I have now some more knowledge about plastics, screws and the like.

Thanks again and best regards.

Re: HP11C repair

*Message #23 Posted by [warren](#) on 15 May 2002, 7:31 a.m.,
in response to message #12 by doug*

The one time I performed this dis-assembly, I used an exacto knife as Ellis Easley suggested. Just hold the blade perpendicular to the keyboard, and slice down through the mushroomed portion. It of course takes several slices around the circumference of the shaft, and you don't necessarily end up with a perfect circle, but it is fairly simple (although quite time consuming) to do.

Regarding re-assembly, I must admit that I have not tried this yet. Something that would be easy to apply, set quickly, hold tightly, yet be removable if needed for future repairs is all that is needed. One technique I heard was to use hot glue from a glue gun. Just push down on the board next to a stake or two, put a drop of glue on, and hold until it cools. Like I said, I haven't put mine back together, so I don't know how well this would work or how easy it would be to do. There has been discussion in this Forum in the past of some sort of glue used to repair or otherwise glue the tires

on radio controlled cars. My recollection is that it is sort of a semi-solid black glue. This might hold well and be easier to apply than hot glue, but then the clamping and holding issue remains. A jig to hold everything together sounds like a good idea. Let us know if you try any of these things and if you have any success, good luck.

Re: HP11C repair

*Message #24 Posted by [David Smith](#) on 15 May 2002, 2:06 p.m.,
in response to message #23 by warren*

The glue is IC-2000 tire cement. It is a cyanoacrylate super glue that has been rubberized by the addition of some black goo. Works very well and does not set up brittle like most CA glues. One thing you should be aware of with any CA is that it will outgass for quite a while after apparently setting up. If you close up your machine before it has totally cured then it can deposit a thin (non-conductive) scuzz inside the machine. This can cause problems with key contacts.

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Battery chargers in need of repair

Message #1 Posted by [Alfredo Bezara](#) on 11 May 2002, 8:02 p.m.

I have two inoperative battery chargers for my HP models 45 and 55. The model number is 82002A. Does anyone know where to get these chargers repaired?

Also any of you know what usually goes wrong with them?

Thanks for any help.

Re: Battery chargers in need of repair

Message #2 Posted by [David Smith](#) on 12 May 2002, 5:00 p.m.,
in response to message #1 by Alfredo Bezara

I would say 90 percent of HP classic charger problems are broken wires in the plug. 7 percent are bad filter caps. 2 percent are dirty voltage selector switch contacts, 1% are other.

If you are careful you can slice the top off of the plug, rerpair the broken wires, and glue it back together again.

Re: Battery chargers in need of repair

Message #3 Posted by [Tony Duell \(UK\)](#) on 12 May 2002, 5:16 p.m.,
in response to message #1 by Alfredo Bezara

The 'classic series' charger provides separate outputs for charging the battery (constant current -- 55mA or so) and for running the machine (constant voltage -- 4.2V). So 'inoperative' can mean 'Will run the machine, but won't charge a battery' or 'will charge a battery but won't run the machine' or 'does neither'. Inside the charger there are 3 main parts to the circuitry : an unregulated PSU (transformer, rectifier, smoothing capacitor), a constant current regulator (2 transistors) and a constant voltage regulator (zener + transistor). Fairly obviously, the unregulated PSU needs to be working for anything else to work, but one of the regulators can fail and only affect one of the outputs. The most common problem, though, is broken wires in the calculator cable, particularly inside the moulded socket connector that fits into the

calculator. You can check this with an ohmmeter (check for continuity between the contacts on the socket and the wires inside the charger itself) and you can sometimes repair it by slicing open the socket. Other common problems are the smoothing capacitor (400uF electrolytic), the internal picofuse (if fitted, it rarely seems to be!), and occasionally one of the transistors fails. I think you can get a schematic from the CUCPS web site (do a google search for CUCPS and look around) if you want to try fixing it yourself.

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HP19Bii manuals?

Message #1 Posted by [Christof \(US\)](#) on 10 May 2002, 6:50 p.m.

Do these exist online somewhere?

-C

Re: HP19Bii manuals?

Message #2 Posted by [Ellis Easley](#) on 10 May 2002, 7:06 p.m.,
in response to message #1 by Christof (US)

This is not online, but the MOHPC CD-ROMs include "HP-27S/19B Technical Applications" which I have used to learn about the undocumented looping function of the 17BII.

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HP-41cx

Message #1 Posted by [Darrell](#) on 10 May 2002, 4:01 p.m.

Being almost totally illiterate with my 41CX, and after having searched for the answer, I hope someone can answer this quickly and easily.

Since my calc didn't come with a manual, could you give me the keystrokes or instruction on setting modes.

The unit was fine and then one day I see it set for radians modes and all I want to use it for is standard calc functions.

I know, dumb question but it still needs answered. Thanks for the help.

Re: HP-41cx

Message #2 Posted by [Ernie Malaga](#) on 10 May 2002, 7:42 p.m.,
in response to message #1 by Darrell

To change angular modes:

[XEQ] [ALPHA] DEG [ALPHA] [XEQ] [ALPHA] RAD [ALPHA], etc.

To change display format:

[shift] [FIX] 0..9 to set it to fixed decimal point. [shift] [SCI] 0..9 to set it to scientific notation.
[shift] [ENG] 0..9 to set it to engineering notation.

There are other modes, but they are not as important as these two. As you can see in the first case, there are functions available in the machine that are nowhere in the keyboard. You can browse the complete list of functions by pressing [shift] [CATALOG] [3].

Have fun.

-EM

Re: HP-41cx

*Message #3 Posted by [Spice_Man](#) on 10 May 2002, 11:31 p.m.,
in response to message #1 by Darrell*

Try holding the clear button ("<-" button) and turning it on. It should clear everything to defaults.

Re: HP-41cx

*Message #4 Posted by [Johnny](#) on 11 May 2002, 11:44 a.m.,
in response to message #3 by Spice_Man*

Yes, and also remove any programs the guy have in the calculator. A MEMORY LOSS is seldom the correct answer to anything.

If he by "modes" means angular modes, or numerical presentation, then Ernie already gave the answer.

In addition, flags 28 and 29 control if comma or period is used for decimals, and wether you have 1000-goupings.

Re: HP-41cx

*Message #5 Posted by [Spice_Man](#) on 13 May 2002, 2:55 a.m.,
in response to message #4 by Johnny*

MEMORY LOST is a correct answer to his question, as he mentioned that "all I want to use it for is standard calc functions."

Re: HP-41cx

Message #6 Posted by [Thibaut.be](#) on 13 May 2002, 8:28 a.m.,
in response to message #5 by Spice_Man

Well, UMHO, ON / -> does solve the described problem but might cause some irreversible damage, even more prejudicious that the user apparently does not master his calculator. On my side I would recommend this operation only if other tries have been unsuccessful.

I would recommend this setup (than can also be stored as a program) to "reset" the machine as standard use :

where @ is the [ALPHA] toggle and f the gold shift key

XEQ @SF@ 28 (or @CF@ 28) - . decimals (or , decimals) XEQ @DEG@ XEQ @CLST@ f FIX 4

Of course many flags can be set/cleared to resume the intial state of the calculator, but I guess this short sequence solves most of the common problems.

Re: HP-41cx

Message #7 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 13 May 2002, 10:10 a.m.,
in response to message #6 by Thibaut.be

Hi;

just to remind that CF and SF are also available at the keyboard. Make sure the USER annunciator is off (press [USER] key one or two times to be sure it lits and goes off) and then the sequence [SHIFT] [SF] 28 or [SHIFT] [CF] 28 will work the same. [SF] is available at the [7]-key and [CF] is available at the [8]-key.

I believe ON/-> and MEMORY LOST are harmless. The fact is that EVERYTHING (except for time/date settings) is lost. Is that what is meant by prejudicious? I use ON/-> a lot, but if it has some potential damage influence, I would really like to know.

Cheers.

Re: HP-41cx

*Message #8 Posted by [Thibaut.be](#) on 14 May 2002, 5:51 a.m.,
in response to message #7 by Vieira, Luiz C. (Brazil)*

Yes, that's right, thanks Luiz !

Re: HP-41cx

*Message #9 Posted by [HPhreacke\[r\]](#) on 26 May 2002, 11:16 p.m.,
in response to message #8 by Thibaut.be*

But this abuse of ON <- may cause damage to memory. I had an organizer and it died because of much clears.

HP-41cx irreversible damage from [<-] [ON]

*Message #10 Posted by [Spice_Man](#) on 13 May 2002, 10:35 p.m.,
in response to message #6 by Thibaut.be*

I frequently use [<-] [ON] on the 41C series that I have... what sort of irreversible damage could this cause?

Re: HP-41cx irreversible damage from [<-] [ON]

*Message #11 Posted by [Johnny](#) on 14 May 2002, 4:51 a.m.,
in response to message #10 by Spice_Man*

No, ON/<- will not cause any physical damage.

It will just make you loose your memory, but if you don't use the calculator for anything more than just adding numbers it sure don't matter.

For people who really use the calculator, however, causing memory loss can be considered equivalent of causing permanent damage, since you can loose stuff you have written that you really don't want to loose.

It does beg the question, though. Why use a HP-41 if you're only interested in a plain calculator? A HP-15 should do the trick just fine for you.

Re: HP-41cx irreversible damage from [<-] [ON]

*Message #12 Posted by [Ren](#) on 14 May 2002, 1:02 p.m.,
in response to message #11 by Johnny*

"Johnny" wrote: It does beg the question, though. Why use a HP-41 if you're only interested in a plain calculator? A HP-15 should do the trick just fine for you.

Actually the HP-15C IS programmable and with its "Constant Memory" will retain user programs after power down. Now, I'm not implying that a 15C does HALF the stuff a 41 does. But that it is more than just "plain". Someday I'll have to get around to fixing the posts on my 41CV and start comparing it to my 15C...

Re: HP-41cx irreversible damage from [<-] [ON]

*Message #13 Posted by [Ellis Easley](#) on 14 May 2002, 4:25 p.m.,
in response to message #12 by Ren*

I think a 41C/CV/CX is probably easier to find and cheaper than a 15C. (though I did see a 41CX go for about \$350 the other day) But even if the 15C is more expensive, you might make up the difference in batteries!

Re: HP-41cx irreversible damage from [<-] [ON]

*Message #14 Posted by [Johnny](#) on 15 May 2002, 4:37 a.m.,
in response to message #12 by Ren*

I was not trying to defame the -15, I was just trying to name a calculator with fairly advanced mathematics, while still being a bit simpler than a -41.

I don't know if you can find any HP which isn't programmable, unless you go really far back. (And I'm talking calculators now). The same goes for continous memory.

Another option would have been to mention the -11, but that one is also programmable. However, if someone is interested in using it for mathematics, the -11 **might** not have everything you want.

Re: HP-41cx

Message #15 Posted by [Ion Abraham \(New Mexico USA\)](#) on 12 May 2002, 11:42 a.m.,
in response to message #1 by Darrell

Hi,

It looks like you got most of your questions answered with the previous messages. I just thought I'd add that the manuals are available (sort of) on the Museum CD. I say sort of because the C/ CV manuals plus Extended Functions and Time Module manuals give you about 99% of the capabilities of the CX (no CAT 6 for example).

Have fun,

Ion Abraham Albuquerque, New Mexico

Re: HP-41cx

Message #16 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 13 May 2002, 9:56 a.m.,
in response to message #15 by Ion Abraham (New Mexico USA)

Hi;

Ion is completely right, but I should suggest there is about 90% of the CX covered by the C/ CV material, mostly when we consider the new functions (more than a dozen), the three new catalogs (CAT 4, 5 and the mentioned 6) and the ED (text EDitor), not so much referred to, but a great add-in for those who deal with ASCII files.

The CX is THE calculator. For the time it was offered till today. Ion is right again: you WILL have fun indeed; just let the babe show what "she" can do.

Cheers.

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41's batteries contacts corroded

Message #1 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 10 May 2002, 10:28 a.m.

Hi;

I don't know if it happens with any 41's owner, but let's expose the browse: BAT/IO assy's oxidation.

Besides the fact that it is hard to find N-size cells in here (rechargeable? NiMH? People haven't even told about it...), the available ones tend to leak and corrode the terminals, what is by no means desirable.

I am trying to find out a solution for this, if there is one. I am about to wrap the exposed parts of the batteries' contacts with a thick piece of aluminum paper (what is the actual name for this in English?) but I do not know what sort of chemical reaction would result from this, say, golden-plated copper and aluminum in physical contact. Is there any other procedure to avoid contacts' corrosion? Can anyone tell me if wrapping the contacts this way will lead to good results?

Thanks for any answer..

Re: 41's batteries contacts corroded

Message #2 Posted by [Ellis Easley](#) on 10 May 2002, 5:40 p.m.,
in response to message #1 by Vieira, Luiz C. (Brazil)

The term is "aluminum foil" in the U.S. One thought that occurs to me is that aluminum is easily attacked by alkaline solutions (alkaline batteries contain a strong solution of sodium or potassium hydroxide) so aluminum might not be a good choice to contain a leak.

I was told that the reason alkaline batteries tend to leak (why they seem not to be getting better) is that in the competition for the highest storage capacity, manufacturers have reduced the wall thickness of the steel container (which I think is actually the positive electrode, unlike carbon-zinc cells where the zinc can is the negative electrode). So now the steel can is more likely to corrode through (although I am not sure the steel can is consumed by the necessary chemical

reaction as the zinc can is) or less able to maintain the seal at the other electrode. The seal needs to be able to withstand the pressure of accumulated hydrogen until it can be converted to water (either by reacting with or being catalyzed by manganese dioxide). Hydrogen is produced in proportion to the current drain, so I don't understand why cells will leak maintaining the constant memory in a 41C or a 71B. It seems to me that the better alkaline cells have a more extensive seal at the negative terminal which is composed of a circular crimp and a heavy ring of insulating material around the flat button of the negative terminal.

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hp48 and hp-il

Message #1 Posted by [andy](#) on 9 May 2002, 6:28 p.m.

Is there an HP48 program which allows it to interface with hp-il devices via its serial port?

Andy

Re: hp48 and hp-il

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 10 May 2002, 8:26 a.m.,
in response to message #1 by andy

Hi;

this subject has already been rounding around here some time ago. Do you have the compatible HW to connect both HP48 and the HPIL device? What you need is only the program?

I'm not sure, but there is something about it [here](#), you should look for it a bit.

Success (and forgive not helping that much...)

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New "Vertu" mobile phone

Message #1 Posted by [Michael \(South Texas\)](#) on 9 May 2002, 1:27 p.m.

This may be a bit off topic, but has anyone seen the new vertu mobile phone? www.vertu.com It seems to be an attempt at a new direction in mobile phone handsets. It sports such features as jeweled bearing buttons, display with sapphire crystal, ceramic back cover, etc, etc, all for a mere 6,000 euros (of course this is the base model trimmed in stainless steel with no accessories, the top of the line platinum trimmed model is only 18,000 euros more).

I guess the reason I bring this up is this is similar to a thread here a while ago where a watch-like calculator was described with ceramic case, sapphire crystal, etc. Granted, I assume that the market for a "Cadillac"/status cell phone is much greater than that of an unnecessarily fancy calculator (although I would imagine that if this is successful, an absurdly fancy PDA or similar device can't be far off), but some market studies somewhere have suggested that there are enough people who are willing to pay \$25K for a cell phone that it has justified this endeavor.

While best of kind objects really intrigue me, I still can't get over the gall of marketing a \$25,000 cell phone. This truly is the ultimate symbol of a civilization with way too much disposable income (and don't get me wrong, I love to blow money on unnecessary things - I guess that's one of the reasons I'm amazed that I am so galled by this product).

Dave, if you don't feel this thread is germane, please feel free to take it down - I just wanted to see what others' thoughts were.

Re: New "Vertu" mobile phone

Message #2 Posted by [Paul Brogger](#) on 9 May 2002, 1:55 p.m.,
in response to message #1 by Michael (South Texas)

In the US at least, the list price is not actually significant with cell phones.

The Platinum model will be offered "free" if you sign up for 200 years of service . . .

Re: Also off topic - Affordable Cell phone fro a guy who does not have loads of cash to burn

Message #3 Posted by [Eric](#) on 9 May 2002, 2:07 p.m.,
in response to message #1 by Michael (South Texas)

I will visit the United States next month and as many people know, in other parts of the world they use GSM 900 & 1800Mhz, while in the states (for historical reasons) 1900Mhz is used. Since I do not have triband telephone, my daily cell phone will be useless in the US.

If I want to buy and use a phone for a couple of weeks and it should be able to work in several states (Dallas Texas, Arizona, Florida, Washington D.C, New York etc) which phone should I buy and what subscription would be most affordable. I will not spend hours on the phone but use it when necessary (something which I may think will influence the choice) I have no idea how the market works over there but maybe somebody have a hint or can lead me in the right direction?

Also, is it possible to get "free" internet access (where only local telephone charges apply) for ordinary telephone lines in the US. What I mean is, can I go to a web address right now and sign up and get a username-password & local-telephone number, which I will be able to connect my laptop with when I get there without any problems? Any advice appreciated. Eric

Way off topic - Affordable Cell phone fro a guy who does not have loads of cash to burn

Message #4 Posted by [glynn](#) on 9 May 2002, 10:57 p.m.,
in response to message #3 by Eric

In discount stores around here, like K-Mart and WalMart, and I think Radio Shacks, you can find cellular phones that retail for about 49 dollars, which have a small prepaid amount of "minutes" of airtime. If you run out of airtime, you can "charge up" (literally, for they accept MC/Visa/AMEX) your phone by calling in to a special number and following their instructions-- which ultimately send a code to your cellphone and give it the minutes you pay for.

Obviously, they don't come out as "cheap" cell-minutes, but then, the darn thing doesn't involve you in a forever subscription decision. And you have a nice memento paperweight that looks like a Nokia 5200-series to take home with you...

The "free" access Internet services have pretty much shaken out of the market-- most failed like Juno etc. I have not looked hard at this, but I have a month-to-month account with my ISP anyway, since DSL is supposedly coming to my neighborhood "any day now" (for the last two years). So look for a no-setup-fee, month-to-month service in your location of

interest.

Alternately, there is the nationwide AOL, which I think still offers free trials, at the cost of messing up your hard drive with their special install of IE-- and it's almost, not quite, worth avoiding it, EXCEPT that it IS nationwide-- no matter where in the US you are, you'll log in "locally".

Have fun.

Re: Way off topic - part two

*Message #5 Posted by [glynn](#) on 10 May 2002, 12:39 a.m.,
in response to message #4 by glynn*

It is maddening for me sometimes to be away from my own computer, my own internet, etc.-- especially when awaiting some key email.

But many Kinko's Copy Centers, as well as a few motel chains, office stores, libraries etc, have Internet computers for hire. (Even a couple of "Internet cafe" houses). But I could never check my own email-- until I signed up-- for free!! at Yahoo's mail site.

I set up Yahoo's mail account with a pointer to my own ISP's POP3 account. So when I am away from home, I log into Yahoo mail, click on "Check other Mail", and it puts into my Yahoo Inbox any mail that has come in to my ISP's mailbox that I haven't yet read.

It does this, by the way, without indicating to my home account that the mail has been retrieved-- so I can get my mail twice, once at the house (I read and file it when I get home) and once at Yahoo (I read it while "on the road" and then "flush" it away). I think you can set this as a particular preference, or else have it mark the mail as received.

Now-- at the local library, for security, though I don't really have much to hide, I find that I must "clean up" after myself on their terminals-- by selecting and deleting whatever's in the Temporary Internet folder as the last thing I do after I am done there. At the Kinko's, they have a system that performs the purging automagically when I sign off.

So... at least for email, there IS a way of keeping in touch no matter where you are, as long as you have Web access, by using Yahoo mail to port over the mail coming to your POP3 account...

And Hey! As an added bonus, you have a Yahoo Mail address you can give to people you don't necessarily want to hear from, and they won't sully your "real" InBox. Or the

2nd address and a different credit-card number-- thats all you need to be on eBay bidding against yourself with a new ID. ;-)

Are there other "tricks" out there for "road warriors" in the U.S.?

Re: Way off topic - part one cont.

*Message #6 Posted by [glynn](#) on 10 May 2002, 1:51 a.m.,
in response to message #4 by glynn*

Just checked-- and on eBay are several Nokia "Tracfone" models, and a few ATT "Free2Go" phones. And literally zillions of folk selling Minutes Cards for them. As these are nationwide prepaid services, I'd think you could be ready to call your friends as soon as you step off the plane!

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Value of ERAMCO 64KB RAMBOX

Message #1 Posted by [Daniel Diggelmann](#) on 9 May 2002, 6:51 a.m.

I've never seen a RAMBOX for sale here or on eBay. I find this the most useful accessory for the HP-41. So I wondered how much you'd rate the value of the ERAMCO 64KB RAMBOX for the HP-41. Any suggestions? Thanks Daniel

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It seems my e-mail address is being used by someone else

Message #1 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 8 May 2002, 6:28 p.m.

Hi, people;

please, forgive-me you all (mostly Dave) if any of you received any strange e-mail supposedly sent by me. As many of you post your e-mails and we are serious enough respecting this "sanctuary" (no pun intended at all), many others can get in and read everything in here.

I received the following e-mail today:

I got a blank e-mail from you. Was it related to my search for an HP 48SX calculator
or the HP32SII I have for sale?

On Tue, 07 May 2002 08:20:48 -0400 (EDT) lcvieira
<lcvieira@quantica.com.br> writes:
>

I never sent that that e-mail. At first, I suspected a virus, but I did not have the receiver e-address in my computer. Coincidence: he had announced some personal interest about HewPack calculators (I don't know if it was at Museum's Classified Ads), and I was not aware about it, but my name (and eventually my e-mail address) has been around here.

This is also to let you know about it.

Cheers. And be care.

Re: It seems my e-mail address is being used by someone else

Message #2 Posted by [db\(martinez,california\)](#) on 8 May 2002, 11:00 p.m.,
in response to message #1 by Vieira, Luiz C. (Brazil)

luiz; so that wasn't a picture of you on all fours, buck nekid except for a doggie collar? i'll disregard it then. that explains why the person in the photo wasn't good looking enough to be an hp user....or brazilian!

Re: It seems my e-mail address is being used by someone else (What the h...)

Message #3 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 9 May 2002, 7:02 a.m.,
in response to message #2 by db(martinez,california)

Hy!

Mam, you here sometimes take my breath away. When I began reading that, I felt breathless... Is it for real? Ahn? Please, tell me you're joking...

Cheers.

Re: It seems my e-mail address is being used by someone else (What the h...)

Message #4 Posted by [db\(martinez,california\)](#) on 9 May 2002, 9:23 p.m.,
in response to message #3 by Vieira, Luiz C. (Brazil)

yes i was joking. there's a saying in english: "ask a question, get an answer". is there one like that in portugese?

Re: It seems my e-mail address is being used by someone else (What the h...)

Message #5 Posted by [Vieira, luiz C. \(Brazil\)](#) on 10 May 2002, 7:17 a.m.,
in response to message #4 by db(martinez,california)

Yes, we have some... but the best suited for this is:

"Perguntou, tomou!" (~ you asked, you took!)

Best regards.

(Doggie collar? Mam...)

Re: It seems my e-mail address is being used by someone else (What the h...)

Message #6 Posted by [db\(martinez,california\)](#) on 11 May 2002, 12:01 a.m.,
in response to message #5 by Vieira, luiz C. (Brazil)

cool. i might have even guessed it from it's similarity to spanish had i read it first, but not if i had heard it. my ear is not that good. i wonder if they have a "preguntaste, tomaste."

Re: It seems my e-mail address is being used by someone else

Message #7 Posted by [Renato Toi](#) on 9 May 2002, 9:37 a.m.,
in response to message #1 by Vieira, Luiz C. (Brazil)

Luiz, This can be a Klez virus - not at your computer. Klez sends email from a infected computer, signed with entries from this computer's address list. In other words, some infected computer has your address listed and Klez used it. Abraços Renato Toi

Re: It seems my e-mail address is being used by someone else

Message #8 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 9 May 2002, 9:53 a.m.,
in response to message #7 by Renato Toi

Thanks! Where are you?

(Valeu; você está onde?)

Re: It seems my e-mail address is being used by someone else

Message #9 Posted by [Renato Toi](#) on 9 May 2002, 10:03 a.m.,
in response to message #8 by Vieira, Luiz C. (Brazil)

I'm in Campinas,SP. E você ? Renato

Re: It seems my e-mail address is being used by someone else

Message #10 Posted by [Ty Rogers](#) on 9 May 2002, 4:13 p.m.,
in response to message #7 by Renato Toi

<http://securityresponse.symantec.com/avcenter/venc/data/w32.klez.removal.tool.html>

Re: It seems my e-mail address is being used by someone else

Message #11 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 10 May 2002, 7:25 a.m.,
in response to message #10 by Ty Rogers

Thanks, Ty;

I scanned my net (four computers) and no one is infected by Klez. Fortunately.

Cheers and thanks.

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HP 49G / 48 link cable

Message #1 Posted by [aruid](#) on 8 May 2002, 1:25 p.m.

I have a HP 49G and it came with a link cable that allows you to link 2 HP 49Gs it also came with 2 adapters that connect to this link cable, one adapter is to connect the 49G to a computer and the other is to connect the 49G to a 48. My question is if I use both adapters can I connect a HP 48 to a computer? or would I damage something.

I know I can do these

[HP 49G]-----[PC_Adapter]---[PC]

[HP 49G]-----[48_Adapter]---[HP 48]

Can I do this?

[HP 48]---[48_Adapter]-----[PC_Adapter]---[PC]

Thanks

ARUID

Yes

Message #2 Posted by [Ron Ross](#) on 8 May 2002, 2:08 p.m.,
in response to message #1 by aruid

Yes, and I have done it!

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9100 question

Message #1 Posted by [andy](#) on 8 May 2002, 1:10 p.m.

I am trying to troubleshoot a semi-working 9100A. It can +,-,*,/ and the pi button works, but when you try to take exp(1) the CRT goes blank and never comes back with an answer. Interestingly, if you toggle th power switch, it sometimes re-powers with 2.7183 on the CRT.

Also, the trig functions do the same thing.

Any suggestions?

Thanks,

Andy

Re: 9100 question

Message #2 Posted by [Tony Duell \(UK\)](#) on 8 May 2002, 7:48 p.m.,
in response to message #1 by andy

It sounds like a problem with the main ROM assembly. You're not getting data from some locations, and the machine is locking up waiting for it (essentially). I had a similar problem on one of mu 9100Bs, but the machine didn't do anything (no display at all). Testing revealed no activity on the ROM data outputs. Msot likely one of the address driver transistors has failed. These are on the ROM PCB itself -- the 'middle' PCB in the assembly. Open up the case, remove the keyboard and card reader units. Unplug the PSU cable from the top of the left sideboard, undo the screws (9?) holding the processor chassis in place. Pull it forwards to free the I/O connector from the case, then flip it over (take care, there's still the mains cable for the switch linking the processor chassis to the rest of the machine). Take off the sideboards (3 screws each). then undo the 4 screws holding the ROM to the chassis (2 at the back, 2 at the front -- these screws come down from the top of the processor). Take off the complete ROM assemblu. The PCB across the back is the address decoder, those down the sides are the data sense amplifiers, while the ROM itself is in the middle. On that middle board you'll see a handful of transsitors. Check them all, at least for having good junctions. Take _great_ care

soldering on this PCB -- if you damage the inter-layer vias, it can't be repaired (the track routing is how the data is actually stored in the ROM, so patching between components on the surface of th PCB won't help). Most likely one of the transistors (probably one of the TO5 (larger) ones is open-circuit. Replace it, but note that these transistors are critical, and you'll have to experiment to find one that works. If that's not the problem, check the 512 diodes at the front of the ROM PCB (under the metal cover) and then suspect a fault on the address decoder PCB.

Re: 9100 question

*Message #3 Posted by [Ellis Easley](#) on 9 May 2002, 10:06 p.m.,
in response to message #2 by Tony Duell (UK)*

Tony, I tried counting the transistors in my 9100B but stopped at 600. BTW, how's that ascii-art schematic of the 9100 coming?!!!

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HP Three Wheeled Graphing Calculator

Message #1 Posted by [B. Cohen](#) on 8 May 2002, 1:08 p.m.

During the early 80's, I remember reading an article about HP working on a motorized calculator that held a plotter pen and literally drove over the sheet of paper while drawing the plot. They actually had a working prototype. I think the main reason for killing the project was that most people didn't have pool tables in their offices. Can you imagine the number of warranty claims stating that the calculator drove itself off the edge of the desk!

I think this article was in one of the HP Journals in a group of articles discussing their new moving paper plotters.

Bruce

Re: HP Three Wheeled Graphing Calculator

Message #2 Posted by [rsenzer](#) on 12 May 2002, 7:33 p.m.,
in response to message #1 by B. Cohen

That's the solution to HP's calculator marketing problem. Produce one of these and package it with a small hang glider. Now that would sell to the student market. What a way to learn about RPN and graphing! Not to mention appealing to the kinesthetic learner. ...

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Dalton adding machine question

Message #1 Posted by [David Engle](#) on 8 May 2002, 7:34 a.m.

I picked up a Dalton adding machine this past week. Can anyone tell me about the one I have or point me in the direction to gain more information. All I can tell you is that the Pat. # on the front says 1912 and the number on the small plate on the back is 69541.

Please email me at VWandSTUDEBAKER@rocketmail.com with any information.

Thanks, David

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HP-49G programming in BASIC

Message #1 Posted by [Jeff_G](#) on 8 May 2002, 7:32 a.m.

I've read that the HP-49G is capable of being programmed in BASIC but none of the documentation included with the calculator mentions this.

Where can I get tools and instructions on programming the HP-49G in BASIC?

Thanks,

Jeff

Re: HP-49G programming in BASIC

Message #2 Posted by [Ex-PPC member](#) on 8 May 2002, 8:04 a.m.,
in response to message #1 by Jeff_G

Regrettably I can't point you to any on-line docs but a "caveat-emptor" advice is adequate here: so-called HP49G "BASIC" has almost *nothing* at all to do with the usual BASIC dialects, such as the one implemented on the HP-71B for instance, or even the ones found on Sharp (TRS) Pocket computers, rather it's more like a pretty pathetic front-end over the underlying RPL language.

As such, you'll probably find it awkward in the extreme, and unsuitable to enter and run typical run-of-the-mill BASIC programs, even vanilla ones.

Re: HP-49G programming in BASIC

Message #3 Posted by [Tom \(UK\)](#) on 8 May 2002, 8:34 a.m.,
in response to message #1 by Jeff_G

The HP advertising that I saw for the HP49G said the calc could be programmed in BASIC / RPL / Assembler. However I think the 'manuals' only covered the 'BASIC' in a very scant way and although further programming info was promised to be included in the 'Advanced User Guide' it was missing. Did HP pull the plug on the technical support once it was launched?

Is BASIC a standard language? Is describing a product as having a feature but not supporting it OK? Was HP breaking the law in describing what the HP49G had? Probably they could argue that BASIC is such a loose standard they could release anything and call it BASIC.

Oh well I've learnt that HP don't care once they have launched the product and taken your money. I suppose their buisness model is to withdraw product funding once it has hit the shops.

Re: HP-49G programming in BASIC

Message #4 Posted by [Vieira, luiz C. \(Brazil\)](#) on 8 May 2002, 9:17 a.m.,
in response to message #3 by Tom (UK)

Hi;

I am not sure about Consumer Rights in USA, but I guess you (and we out here, maybe) should press (charges?) so HewPack would disclose all information avaiable for the users, EXCEPT those involving industrial internals (does it exist?).

Just an idea.

Cheers.

Re: HP-49G programming in BASIC

Message #5 Posted by [Ex-PPC member](#) on 8 May 2002, 10:21 a.m.,
in response to message #3 by Tom (UK)

Tom wrote:

"Probably they could argue that BASIC is such a loose standard they could release anything and call it BASIC."

Loose !?

As a well-stablished language, good ol' BASIC has its full ration of standardization, see for instance ANSI Standard for Full BASIC (X3.113-1987), which supersedes the obsolete ANSI Standard for Minimal BASIC (X3.60-1978)

Whether commercial firms implement or follow these standards in all or in part, or as a superset, it's quite another matter. HP did in the past, mostly.

Re: HP-49G programming in BASIC

Message #6 Posted by [James M. Prange](#) on 12 May 2002, 4:15 a.m.,
in response to message #1 by Jeff_G

Actually, HP's site says that it's programmable in "HP Basic", not "BASIC". As far as I've been able to figure out, "HP Basic" in the context of the 49G means programming with the calculator in ALG mode, and has nothing to do with any variation of the BASIC programming language.

My recommendation is to put the 49G RPN mode and avoid the default ALG mode like the plague.

Regards, James

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adult supervision for me & my 35

Message #1 Posted by [db\(martinez,california\)](#) on 8 May 2002, 1:57 a.m.

i found a 35 in a thrift shop yesterday after work. it works fine on the charger but it does not work off a good battery. it also will not charge a battery using a known good a.c. adapter. i took it apart and saw no loose wires or leaky battery mess crossing any contacts, nothing obviously fried. i know nothing about electronics but i may be able to ask a neighbor to test something if i knew what to test and what it should read. any ideas?

Re: adult supervision for me & my 35

Message #2 Posted by [David Smith](#) on 8 May 2002, 5:44 p.m.,
in response to message #1 by db(martinez,california)

I have seen this happen lots of times. It is usually caused by hidden corrosion on the battery contacts in the calculator or similar contact related problems. The contacts touch the battery pack via their curved top EDGES, not the little bump on the end of the contacts. Sand the edges with very fine sandpaper. You can check if this is the problem first by connecting a known good battery pack to the contacts with clip leads.

Re: adult supervision for me & my 35

Message #3 Posted by [Tony Duell \(UK\)](#) on 8 May 2002, 7:56 p.m.,
in response to message #1 by db(martinez,california)

The only battery-related circuitry in the HP35 (or in other classics) are connections between the battery contacts and 2 pins on the charger connector. And a spring contact in the bottom case that connects the outside 2 pins of the charger connector together when the charger is not plugged in, and thus connects the battery to the rest of the calculator. So, with the back case off, check for continuity (very low resistance) between the rear (display-end) -ve battery contact and the middle pin on the charger connector, and between the front battery contact and the outer charger connector pin that's not on the side of the machine where the on/off switch is (this is the clearest way I can think of to describe it). If either connection is open, remove the logic PCB (it just pulls off the pins, but handle it by the edges to avoid static damage), unscrew the chassis plate, and check/replace the wiring on the back of the chassis. If the connections check out fine,

make sure the battery contacts really are clean. The connection to the battery pack is made via the 'sides' of the contacts and small amounts of corrosion/dirt can cause problems

thanks for the adult supervision

*Message #4 Posted by [db\(martinez,california\)](#) on 9 May 2002, 12:57 a.m.,
in response to message #3 by Tony Duell (UK)*

first off i scotch bried the battery tabs and put a little more sproing in the spring contact, then i held it together and it works. next time i'll clean first and ask later. you guys are the greatest!

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today in my travels i found . .

Message #1 Posted by [barry](#) on 7 May 2002, 8:41 p.m.

a looseleaf containing the following: 1)HP67/97 User's Library Catalog of Contributed Programs, Addendum #1, July 1977 2)HP67/97 User's Library Catalog of Contributed Programs, Addendum #2, April '78 3)HP67/97 User's Library Catalog of Contributed Programs, Addendum #3, Nov '78 4) Catalog of Contributed Programs for the HP41C, HP67 & HP97 (marked 5955-8602 ADDENDUM on the back cover) 5)Catalog of Contributed Programs for the HP41C, HP67 & HP97 (marked Nov 1979 on the inside front cover) 6)Contributor's Guide for the HP41C, HP67 & HP97 (marked 5953-1933 on the back cover). the first three are merely standard paper groups, the last three are manuals comparable to a Users Library style manual

historical importance? informative importance? tnx in advance, barry carson city, nv

Re: today in my travels i found . .

Message #2 Posted by [Ren](#) on 8 May 2002, 7:53 a.m.,
in response to message #1 by barry

Just WHERE do you travel anyway? It sounds interesting...

Re: today in my travels i found . .

Message #3 Posted by [barry](#) on 8 May 2002, 9:06 p.m.,
in response to message #2 by Ren

sometimes i ask myself that same question! really, i live in a fairly small city (55K) compared to some of the previous larger cities i lived in; but wherever i go, i always am on the prowl for paperwork/docs/manuals/etc. i'm the guy at flea markets, swap meets, garage sales, etc thats digging thru the boxes to the bottom, looking for those items everyone else missed. <http://home.att.net/~btuttleman/barrysite.html>

Re: today in my travels i found . .

Message #4 Posted by [Ellis Easley](#) on 9 May 2002, 10:19 p.m.,
in response to message #1 by barry

From what I have read about the user's library, the catalogs would be tantalizing but frustrating because the library archive itself has been lost - or lost track of. One possible benefit might be to use the catalogs as references to re-assemble the library by making the contents of the catalogs available publicly (with HP's permission, of course) and then asking people who might have copies of the library programs to submit them to a collection point.

Re: today in my travels i found . .

Message #5 Posted by [barry](#) on 9 May 2002, 11:29 p.m.,
in response to message #4 by Ellis Easley

who's best to handle this? i don't have the time, is this a job for david? dave, if you read this i am going to the foothill college swap (los altos, i think you're in the SF bay area, aren't you?), and want to deal w/ this, let me know ASAP, as i leave friday night about midnite to make it to the swap! tnx, barry carson city, nv

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Who made the first handheld graphing calculator?

Message #1 Posted by [aruid](#) on 6 May 2002, 9:03 p.m.

Does anyone know who sold the first graphing calculator? Was it Sharp, HP, Casio, Or TI? I think TI's earliest graphing calculator was the TI 81 made in 1990. I think HP's earliest is the HP 28C in 1987. is there an earlier graphing calculator?

ARUID

Re: Who made the first handheld graphing calculator?

Message #2 Posted by [Mike Sebastian \(Texas\)](#) on 6 May 2002, 10:41 p.m.,
in response to message #1 by aruid

Casio made the first graphing calculator, the fx-7000G. See US Patent 4794553 (note that the foreign priority date of May 24, 1985, is 1 1/2 years before introduction of the HP-28C).

Re: Who made the first handheld graphing calculator?

Message #3 Posted by [Ron Ross](#) on 6 May 2002, 10:43 p.m.,
in response to message #1 by aruid

I think it was Casio, then followed by the Hp28C by a few months later. I am thinking either a Casio fx-6000 series or the Casio fx-7000.

The HP41C was able to "graph" ... (in a fashion)

Message #4 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 7 May 2002, 5:19 p.m.,
in response to message #3 by Ron Ross

I used to made crude graphs in the HP41C. One kind divides the function values in three ranges, and graphs more or less as:

-- _ - _ - ' ' -

The other uses "black" density of a character to suggest value (often called Schmoo Plots in the 1980s), a typical display would be:

- - + - * * - +

The HP41 also was able to PLOT when connected to the 82143 printer...

Re: The HP41C was able to "graph" ... (in a fashion)

Message #5 Posted by [Tony Duell \(UK\)](#) on 7 May 2002, 10:21 p.m.,
in response to message #4 by Andrés C. Rodríguez (Argentina)

And of course the HP41 could drive the HP7470 (Opt 003 -- HPIL) plotter. There's even a 'Plotter ROM' for the HP41 which includes a program to plot a function on the plotter. But the 7470 plotter is hardly a handheld device...

Re: Who made the first handheld graphing calculator?

Message #6 Posted by [Ex-PPC member](#) on 8 May 2002, 11:35 a.m.,
in response to message #1 by aruid

It depends on how one defines 'graphing calculator'. If you mean a large graphical screen with medium to large resolution, you are probably right.

But if it is defined to mean a handheld calculator with an LCD dot-matrix display where the dots are individually addressable, you could consider the HP-71B, which has a one-line, 132x8 display, and the Sharp PC-1500 (aka TRS 80 PC-2) which has a 156x7 display, though the Sharp PC-1350, a later model (though still vintage) qualifies better as it has a much larger 150x32 graphical display while being smaller and much lighter than either the HP-71B or the Sharp PC-1500.

Re: Who made the first handheld graphite calculator?

Message #7 Posted by [Paul Brogger](#) on 8 May 2002, 2:45 p.m.,
in response to message #1 by aruid

You have to go way back -- I strongly recommend "The Pencil -- A History of Design and Circumstance" (or something like that) by Henry Petroski . . .

Ohhh! You asked about graphing calculators . . .

Re: Who made the first handheld graphing calculator?

Message #8 Posted by [Fred Lusk \(CA\)](#) on 13 May 2002, 2:21 a.m.,
in response to message #1 by aruid

The HP42S (c.1987) can graph on its two line display. HP even included a program in the user's manual to do it.

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Whaddya mean, PYRAMID scheme?

Message #1 Posted by [Paul Brogger](#) on 6 May 2002, 4:14 p.m.

I did the math on my calculator -- I'm sending my money in today!

And I'm still waiting for my HP-4/01 (or whatever it was)!

[;^}

Re: Whaddya mean, PYRAMID scheme?

Message #2 Posted by [Philip \(Houston, TX\)](#) on 6 May 2002, 5:58 p.m.,
in response to message #1 by Paul Brogger

No only that, I do believe the US Postal Service does consider this illegal. My neighbor tried it and the postal service contacted them and told them to stop or face charges. If it's too good to be true, it probably is. I don't doubt some folks are making money on these things but why take the chance.

Re: Whaddya mean, PYRAMID scheme?

Message #3 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 7 May 2002, 9:05 a.m.,
in response to message #2 by Philip (Houston, TX)

Hello;

try to figure that out: if all people around the world accept to participate on a Pyramid, who will the last participants send the Pyramid scheme to? Everyone else had already been there, so no one will accept going twice, three times, four times... That's the big question: am I in the last row? If so, I'm sending money to someone and no one will send me any money. And you sent the money for your own, so no one can be blamed.

Simple as that...

Hey folks this is 2002

Message #4 Posted by [Mike](#) on 7 May 2002, 10:24 a.m.,
in response to message #1 by Paul Brogger

Anyone that gets ripped of in a pyramid scheme, deserves what they get.

Doesn't everyone by now know that they are a SCAM. Either you are the SCAMMER or you are SCAMMED.

Those are the only two choices.

Re: Hey folks this is 2002

Message #5 Posted by [Frank](#) on 7 May 2002, 12:13 p.m.,
in response to message #4 by Mike

I can only speak for myself, but I work pretty hard to stay exactly between those two on the "business" spectrum. Hard work to not get scammed, however I would agree, even realizing it can be a problem. Besides, it is scamming or just great marketing with lack of delivery? Does the FTC investigate?

Re: Hey folks this is 2002

Message #6 Posted by [Ron Ross](#) on 7 May 2002, 12:28 p.m.,
in response to message #5 by Frank

Often I receive such wonderful offers via email. I wrote to the US postal service about how it would handle this email, if I so kind-heartedly printed it out and mailed to them via the US mail. Since it sounded like such a wonderful deal, I did not want to see my local post office left out. Never heard from them one way or the other. I certainly did not want to participate in such a great offer, only to have the Federal authorities put the cuffs on ME!

Re: Whaddya mean, PYRAMID scheme?

Message #7 Posted by [Ellis Easley](#) on 7 May 2002, 12:24 p.m.,
in response to message #1 by Paul Brogger

What happened to the beginning of this thread? I don't know what you're talking about!

Re: Whaddya mean, PYRAMID scheme?

*Message #8 Posted by [Frank](#) on 7 May 2002, 1:07 p.m.,
in response to message #7 by Ellis Easley*

Dave Hicks likely and quite wisely deleted the original posting from a Pyramid Scheme poster. He also deleted my message teasing him about being asleep at the mouse! ;+}

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82161A cassette drive

Message #1 Posted by [Johnny](#) on 6 May 2002, 6:02 a.m.

Augh! I'm having a problem with my cassette drive. I cannot read any tapes anymore. Looks like read errors all over.

The setup is a 41CX, HP-IL, Casette driver and video unit.

The IL is working fine. The video unit is working fine. The cassette driver is responding fine to commands. I've tried NEWM a cassette. Doing a DIR shows that it is empty, but trying to save something, or creating a file gives me MEDM FULL. Trying to DIR a cassette with known contents give me lots of junk entries. These entries have junk characters, and shows file sizes in excess of 3000.

I've tried cleading the heads with isopropanol with no success. I've disassembled the drive, cleaned things and reassembled it again. No change.

I had the thing lying without power for a couple of years, and a tape in place. I wonder if that could have damaged something.

Does anyone know a way of fixing this? Anyone seen something like it?

Re: 82161A cassette drive

Message #2 Posted by [Luis](#) on 6 May 2002, 6:25 a.m.,
in response to message #1 by Johnny

Hi Johnny,

Since you left it with a tape inside for years and considering all things you've already checked, I would say the Head itself is damaged (magnetized) due to the tape being next to it. This is only a possibility, as I'm not an expert to that cassette drive and I'm sure there will be more help from someone. Hold there and you'll see. Cheers,

Luis

Re: 82161A cassette drive

Message #3 Posted by [db\(martinez,california\)](#) on 6 May 2002, 10:16 a.m.,
in response to message #1 by Johnny

i did the same thing to mine; i left it unused from 12/96 to 5/99 unused with a tape in it. i could only see part of the directory and could access nothing. i demagnetized the head using a wand type demagnetizer and it would do a newm on a new tape and works fine now, accessing and reading everything. but the old tape was useless.

one warning; someone who used to post here a lot offered to try to transfer my old programs onto a new tape using some 71b function. i sent him the old tape, a new tape, a disk, and money to ship the tape back to me. i never heard from him again and he did not answer my email. so d.i.y.

good luck.

Re: 82161A cassette drive

Message #4 Posted by [Tony Duell \(UK\)](#) on 6 May 2002, 8:08 p.m.,
in response to message #1 by Johnny

Others have suggested demagnetising the head. which would probably be what I'd do next. Actually, I'd clean the head again as well, just to be sure. However, one thing seems odd to me. Although the HP41 is getting garbled data, the drive is not reporting any errors. This suggests to me that the drive is reading the tape correctly, the checksum is matching, but the data is somehow getting mangled. Now, there are 3 main chips in the digital part of the 82161. A microcontroller (containing an HP custom program), an HPIL chip, and a RAM. Most likely the microcontroller is fine -- the drive will respond to commands so it's doing something. Ditto for the HPIL chip. But maybe the RAM is faulty. IIRC it's a 1K*4 device, like a 2114, and those

are notoriously unreliable. Try replacing it -- it's the 18 pin chip on the board _not_ on the drive mechanism itself.

Re: 82161A cassette drive

*Message #5 Posted by [Johnny](#) on 7 May 2002, 6:48 a.m.,
in response to message #4 by Tony Duell (UK)*

Hi, Tony. Seems like we have several shared interests. :-)

Is that ram pin-compatible with a 2114, or should I check out what it really is before I find a replacement.

Also, I hope the checksum calculation is done within the control logic without involving the RAM in that case, since otherwise replacing it won't help.

How do I de-magnetize heads by the way? I say someone mentioning a wand. What exactly is that?

Re: 82161A cassette drive

*Message #6 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 7 May 2002, 9:28 a.m.,
in response to message #5 by Johnny*

Hi;

a demagnetizer (also a Degausser) can be made by building a coil with some turns of insulated cooper wire. I once built one to demagnetize audio heads on tape recorders. I just build the coil with a few turns (about 20-30) of wire over a carton paper base in the shape of a small box, where the head would be inserted in. To energize it, I used the secondary of a small 6+6 transformer with a 47ohms series resistor.

The trick is switching the Degausser ON while the coil is far from the head; then you get the coil closer to it until it is around the head; move the coil slowly far away from the head (as far as possible) ad switch the apparatus OFF.

When dealing with audio heads, I disconnected them from the circuit and shorted their terminals previous to demagnetize them. THIS IS MANDATORY for audio equipment, cause current flow through the internal head coils when degaussing is A LOT HIGHER then the microamps generated by the magnetic tape.

I would expect some other suggestions before trying, cause I do not know and even have (how I wish...) an HP82161A. Not even an HP82160... Hey, do any of you trade one

HP82160 for a working HP31 plus case plus charger plus Owner's Manual (Portuguese)? Oops, sorry... Classified Adds, Yes, I know...

Success.

Re: 82161A cassette drive

*Message #7 Posted by [Tony Duell \(UK\)](#) on 7 May 2002, 10:17 p.m.,
in response to message #6 by Vieira, Luiz C. (Brazil)*

FWIW, I've demagnetised many heads in audio, video and computer data drives. Not once have I disconnected them and shorted the terminals, and not once have I damaged any components in the read amplifier. I've also never seen a service manual that states you have to disconnect the head before demagnetising it. Maybe the 82161 is particularly fragile, and the R/W chip is HP custom, but I doubt it. Most chips will stand the full supply voltage (+5V in this case) or slightly more on any pin without damage (see the 'absolute maximum ratings' in a data sheet). I'd be very surprised if you could induce 5V in a head winding using a normal demagnetiser.

Re: 82161A cassette drive

*Message #8 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 9 May 2002, 7:26 a.m.,
in response to message #7 by Tony Duell (UK)*

Hi, Tony;

thanks for the info.

The first degausser I saw was built as a little black holder (coil inside it) with a thin metal tube built in. The tube's end was covered with a plastic layer, so it would not scratch the head. Its owner showed me how to use it: wave it in front of the head and allow the plastic layer to gently touch the head's gaps.

After building my own degausser, I tested it in a low-end tape player and the first-stage preamplifier burned out. The B-E junction of the BC550C became opened.

I know this could happen for many reasons (maybe the transistor was already burned out, I did not test it before); also, magnetic heads are just transformers. Coincidence or not, I decided never to use my degausser that way, and all other heads I demagnetized from then on were successful. If I am using a conventional degausser, I'm sure that would not happen, but I felt as if careless procedures resulted in the damaged transistor. And when dealing with HP

products, this is a one-way street.

I would like to thank you for your (as always!) valuable information. Based on them, I've been learning a lot more.

Best regards.

Re: 82161A cassette drive

Message #9 Posted by [Tony Duell \(UK\)](#) on 7 May 2002, 10:07 p.m.,
in response to message #5 by Johnny

To take your points in order : Yes, we do seem to share several interests -- like PDP11s, HP calculators, etc :-). The RAM is an 1818-0643, which my equivalents list gives as P2114A-6. So it's not just pinned out like a 2114. It is a 2114 :-). Do be warned that if you attempt to trace out the circuitry of the 82161, it's a bit odd. The microcontroller has no external memory bus, so the HPIL chip and the RAM are linked up using a couple of the controller's I/O ports. And since the RAM has 10 address lines and 4 data lines but the HPIL chip has 8 data lines and 3 address lines, one port is used for the HPIL data and (most of) the RAM address lines while another set of port lines are used for the HPIL chip address lines and the RAM data lines. It sounds crazy, but as everything is software driven, it can work. I have no idea how the checksum is done. It might be done on the data in the RAM (in which case you might have a microcontroller failure), or it might be done 'on the fly' as I suspect. However, as the RAM is a standard part, and as I've had a lot of trouble with defective 2114s, it would make sense to check this first before attempting to find another dead drive to raid a microcontroller from. To demagnetise the heads you use a demagnetiser (aka 'degausser' or 'defluxer'). This is basically an electromagnet that's connected to an AC supply (normally the mains). You turn it on, bring the pole piece up to the head face, move it around a bit, draw it away slowly (to at least arm's length) and turn it off. At one time every shop that sold tape recorders sold demagnetisers (along with other useful things like splicing tape and jigs). I have one from that era, so I have no idea where you'd get one now. But surely they're still being made.

Re: 82161A cassette drive

*Message #10 Posted by [Johnny](#) on 8 May 2002, 4:34 a.m.,
in response to message #9 by Tony Duell (UK)*

Well, I got to hand it to you. You did pinpoint the problem.

It is defective ram. Once you got me starte thinking about it I jkust figured I'd write a small diagnostic program to check it, and sure enough, two out of four bits are stuck.

Writing all zeros to the buffers reads back as 0xCC.

Having the Extended I/O module helped. :-)

Now I'll just have to get a memory chip, and do some soldering. Thanks a lot!

Re: 82161A cassette drive

*Message #11 Posted by [Tony Duell \(UK\)](#) on 8 May 2002, 8:03 p.m.,
in response to message #10 by Johnny*

Now that's what I call a lucky guess :-). Actually, you'd still better hope that the problem is the RAM and not (say) a port pin on the microcontroller. But I think the latter fault would cause HPIL problems too as the the microcontroller wouldn't be able to communicate with the 1LB3 properly. Anyway, given the unreliability of 2114s, I think it's likely that the RAM is the problem and that I ahve another example of a dead 2114 to add to my list...

Re: 82161A cassette drive

*Message #12 Posted by [Johnny](#) on 9 May 2002, 1:37 p.m.,
in response to message #11 by Tony Duell (UK)*

Considering the fact that I could communicate perfectly fine with the drive, and just saw that two bits out of four are stuck (the other two responds just fine), makes it very unlikely that there is any kind of HPIL problem.

However, I'll not get the 2114 until monday, so I can't replace it and verify before the middle of next week.

Re: 82161A cassette drive

*Message #13 Posted by [Johnny](#) on 15 May 2002, 1:35 p.m.,
in response to message #12 by Johnny*

Okay. I can now confirm that it was the 2114 that had fried. I've changed it, and the drive works like a charm again. Thanks to all of you!

Re: 82161A cassette drive

*Message #14 Posted by [CJ](#) on 7 May 2002, 6:39 a.m.,
in response to message #1 by Johnny*

<The setup is a 41CX, HP-IL, Casette driver and video unit.>

Maybe the cassette drive is too close to your monitor. I have found this to be a problem. Move the drive as far away from the monitor as possible and try the drive again.

Christopher

Re: 82161A cassette drive

*Message #15 Posted by [Johnny](#) on 7 May 2002, 6:43 p.m.,
in response to message #14 by CJ*

Nope. That is definitely not the problem.

I also ran without the video unit, and not even close to any other electrical equipment. :-/

Re: 82161A cassette drive

*Message #16 Posted by [David Smith](#) on 8 May 2002, 5:51 p.m.,
in response to message #1 by Johnny*

I searched long and hard for a tape head demagnetizer. I finally found one made by TEAC at the Mars Music store in Dallas on Walnut Hill. They special ordered one for a guy, and got in a case of them. When I asked about one, I got strange and baffled looks. Then a passing clerk said "Oh, yeah... we have some stashed in the back. Nobody knows what they are for. You are the first person to want want in a couple of years"

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how many hp have been sold ?

Message #1 Posted by [jouenne noel](#) on 6 May 2002, 5:26 a.m.

How many HP 65, 67 and 41 have been sold over the world ? Please, were I can find this ? Thanks
Noël

Re: how many hp have been sold ?

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 6 May 2002, 12:16 p.m.,
in response to message #1 by jouenne noel

Hello;

please, have a look [here](#); each calculator's link will lead to almost all info about it, even # of
units delivered.

Hope it helps.

Cheers.

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"Late" vs. "Early" HP-34C's?

Message #1 Posted by [Karl W. Schneider](#) on 6 May 2002, 3:41 a.m.

Spice gurus --

Would anyone know when the changeover occurred (in terms of date or serial #) between "early" HP-34C's with pressed-in chips and display leads vs. "late" units with soldered-in components?

All the recent auctions seem to be early units from 1981 or earlier. I would suspect that sales HP-34C's dropped off precipitously following the 1982 introduction of the 15C; the 34C was discontinued in 1983. (Interestingly, new, probably-leftover 34C's were still available in November 1983, when I bought my 15C after comparing it side-by-side with the 34C.)

Thanks.

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HP 41CV

Message #1 Posted by [Dennis](#) on 6 May 2002, 12:00 a.m.

Hello!!

My father is a civil engineer and he bought his HP 41CV back in the 80's. He also bought some civil and surveying software along with the unit. He has been using it since then and it seems that time has finally caught up with. Can someone help me find him a new calculator that is similar to the one he have? Maybe a successor model that is still available? I guess that the most important thing for him would be the applications (surveying and engineering) that he can use with it. (I am planning to give this as a birthfay present).

Thanks in advance!!

Re: HP 41CV

Message #2 Posted by [Karl Schneider](#) on 6 May 2002, 3:32 a.m.,
in response to message #1 by Dennis

Dennis --

You might take a look at the thread of 3 May titled, "HP 41CV-what is the replacement".

Personally, I recently bought a 41CV and 42S, both of which I plan to keep. The 42S, discontinued in 1995, is not expandable as the 41's were, but is more user-friendly with softkey menus and more memory.

-- Karl

Re: HP 41CV

*Message #3 Posted by [Dennis](#) on 6 May 2002, 5:34 p.m.,
in response to message #2 by Karl Schneider*

Hi Karl!

Thanks for the quick response!! I really appreciate it. I read the discussion thread that pointed out.

I guess, I really want to buy my father a new device that would actually replace his old calculator (although it would really be hard for me to convince him to switch because he really likes it) with a new one. I guess what I am looking for now is a device that runs a similar SURVEYING application.

Thanks so much for your help!!

Re: HP 41CV

*Message #4 Posted by [David Smith](#) on 6 May 2002, 5:43 p.m.,
in response to message #1 by Dennis*

What is the problem with the one he has? It is a rare '41 machine indeed that cannot be repaired... usually just by opening it up and cleaning the contacts under the I/O assembly and CPU card. And possibly fixing cracked case posts or screw bosses. Or fixing corroded battery contacts if you left the batteries in.

Re: HP 41CV

*Message #5 Posted by [Dennis](#) on 7 May 2002, 12:03 a.m.,
in response to message #4 by David Smith*

Hi David!

Thanks for your reply! I have advised my father to do just what you told me. I will keep you posted if everything works out.

Thanks again!!

Re: HP 41CV

Message #6 Posted by [Dave Huff](#) on 7 May 2002, 12:41 a.m.,
in response to message #1 by Dennis

Well, the obvious would be to find at LEAST one more 41 :) But, since I'm a Surveyor and Dad is the Civil engineer, I'd say for basic survey needs (coordinate geometry, curve calculations etc.) that the TDS (Tripod Data Systems) basic COGO card that works with the HP48GX would be the ticket. Best price I have seen is with Hayes Instrument in TN (ask for Eddie and tell him I sent ya) (www.hayesinstrument.com) and you can probably find the 48 at the local office depot---about \$125 for the card and another \$150 for the calculator. Light years ahead of the 41 as far as menus go, but you'll have a hard time weaning him off the 41. It's inherent with the breed!

Re: HP 41CV

Message #7 Posted by [Dennis](#) on 7 May 2002, 10:56 a.m.,
in response to message #6 by Dave Huff

Hi Dave!

Thank you so much for your response! I am familiar with the terms that you've used and I think that this is what my father really wants! You are right when you said that it would be hard for me to wean him from his HP41! =)

I will check out the website that you've recommended and advise my father about it. I currently have a Palm OS PDA. I searched some engineering and surveying applications and found some commercial products. As I am not an engineer (I am a computer analyst/deisnger)and I really can't tell if those applications would be better compared to what he has or what you were recommending. I found some LAND SURVEY applications, COGO for land surveyors, Mechanical Engineering Applications, Hydrolics, etc. These are the applications that he currently used with his HP41. What do you think? Is this the best way to go right now?

Thanks in advance God bless!

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HP 42S COMB bug?

Message #1 Posted by [Ken Garges](#) on 5 May 2002, 6:45 p.m.

I discovered what I think is a bug in my HP 42S.

Suppose you want to figure the number of Combinations of 8 things taken 5 at a time. But you mistakenly enter the arguments in opposite order:

5, ENTER, 8, COMB

You get an "Invalid Data" error message. Fine. So you press X EXCHANGE Y to put them in the right order. The display confirms 8 in the Y register and 5 in the X register. But if you press COMB you still get the "Invalid Data" error!

In fact the calculator seems to get stuck in a mode where ANY inputs to COMB give "Invalid Data" error. Clearing X, the whole stack, power cycling don't get it out of this mode. The only way I've found to get back to normal is to perform some arithmetic.

For example, multiply the 5 in the X register by 1:

1, MULTIPLY, COMB

then gives the correct answer of 56.

Anyone else seen this?

Re: HP 42S COMB bug?

Message #2 Posted by [Peter Lampione](#) on 5 May 2002, 6:59 p.m.,
in response to message #1 by Ken Garges

Yes, it is a classic bug. I saw it documented on some article, perhaps in the Forum.

Peter

Re: HP 42S COMB and PERM bug.

*Message #3 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 5 May 2002, 7:28 p.m.,
in response to message #2 by Peter Lampione*

Yes, it is a well known bug, and affects COMB and PERM the same way.

Re: HP 42S COMB and PERM bug.

*Message #4 Posted by [Karl Schneider](#) on 6 May 2002, 3:24 a.m.,
in response to message #3 by Andrés C. Rodríguez (Argentina)*

Ken, Peter and Andres --

I can't replicate the error you describe on my 1989 HP-42S (serial # 2939S33496). Simply re-executing COMB or PERM through the PROB menu, after pressing X<>Y following the "Invalid Data" message, gives me the correct answers. Was this error characteristic of late or very early units?

Re: HP 42S COMB and PERM bug.

*Message #5 Posted by [Iqbal](#) on 6 May 2002, 10:42 p.m.,
in response to message #4 by Karl Schneider*

I checked 5 HP42S and only one didn't display the bug. That one was made in the USA in 1988. The other four made between 1993 to 1999 all displayed the bug. If I had to guess I would say it only occurs in the later models.

Re: HP 42S COMB and PERM bug.

*Message #6 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 7 May 2002, 5:10 p.m.,
in response to message #5 by Iqbal*

I had a 1990 model which I service-exchanged in 1999, and both displayed the bug.

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Starting from scratch...

Message #1 Posted by [Chris Roccati](#) on 5 May 2002, 6:17 p.m.

... Or, the revenge of the four-banger RPN calculator...

I was asking to myself if anyone in this forum ever toyed with the idea of building a simple (or even not so simple) RPN calculator using a simple calculator as "body" and an atmel or microchip microcontroller as "brain" ???

Re: Starting from scratch...

Message #2 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 5 May 2002, 7:30 p.m.,
in response to message #1 by Chris Roccati

While lacking the tactile feedback and the battery life, a software emulator running on a Palm or PocketPC seems the current trend. There are many, some of them free, and you can design your own.

Re: Starting from scratch...

Message #3 Posted by [Chris Roccati](#) on 5 May 2002, 8:37 p.m.,
in response to message #2 by Andrés C. Rodríguez (Argentina)

The idea of implementing a "real" hardware device was intended to address the user interface issues: from the software point of view, even the smallest microcontroller has far more computation power than any "classic" hp calculator, and in a modern PDA you could well run a reasonable version of "Mathematica", but the look and feel of a real calculator is a whole different thing...

Re: Starting from scratch...

Message #4 Posted by [Vieira,Luiz C. \(Brazil\)](#) on 5 May 2002, 10:27 p.m.,
in response to message #1 by Chris Roccati

Hi;

I've posted a proposal on this about eight or nine months ago: building a complete RPN calculator.

I'm gonna find the starting point (about the end of 2001) when some sort of experiment involving reles, external switches and extra wiring in an HP42S (so it could be externally programmed) was also proposed.

Pavel Korensky is already dealing with ATMel controlers, and I believe HrastProgrammer is closer to a virtual machine. If we have a derivative of this virtual machine and the HW to be controled by it, adding a keyboard, LCD, case and batteries is not that hard.

Should we try rolling it over?

Cheers.

Re: Starting from scratch...

Message #5 Posted by [Chris Roccati](#) on 6 May 2002, 3:47 p.m.,
in response to message #4 by Vieira,Luiz C. (Brazil)

Well, the issue is the user interface...

A simple bcd based (12 digits mantissa and 2 1/2 digits exponent) floating point arithmetic library is trivial on an atmel processor -- I have it working since a very long time, in fact I was looking for a "china-style" four banger, strong enough to be opened and closed again to work as a donor for the keyboard and the LCD.

Will you disclose this information?

Message #6 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 9 May 2002, 7:33 a.m.,
in response to message #5 by Chris Roccati

Hello;

will you post an article here about it? (HW/SW)

AHN?

Re: Will you disclose this information?

Message #7 Posted by [Chris Roccati](#) on 9 May 2002, 5:11 p.m.,
in response to message #6 by Vieira, Luiz C. (Brazil)

Currently there's no hardware: the software runs on a bare atmel evaluation board, and uses serial i/o to communicate. Currently I've only implemented the basic four operations, but I was investigating the possible algorithms to be used to implement logarithmic and trigonometric functions...

Re: Will you disclose this information?

Message #8 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 9 May 2002, 6:17 p.m.,
in response to message #7 by Chris Roccati

Hello, Chris;

is there any e-place where I can download info about this evaluation board? There are many things I'd like to try, and I am A LOT interested on sharing information. By now, my ideas must be typed out already. And I believe starting with updated platforms is the first right step.

Thanks for your answer. I'll keep this forum updated as I get results, too.

Cheers.

Re: Will you disclose this information?

*Message #9 Posted by [Chris Roccati](#) on 10 May 2002, 4:32 p.m.,
in response to message #8 by Vieira, Luiz C. (Brazil)*

You can buy AVR evaluation boards in most of the online electronics shops, like rs-components, digi-key etc... If that fails, you can check atmel's site (www.atmel.com) -- I think they have software based emulators freely downloadable.

Re: Will you disclose this information?

*Message #10 Posted by [Chris Roccati](#) on 12 May 2002, 7:32 a.m.,
in response to message #8 by Vieira, Luiz C. (Brazil)*

Talking about atmel's product, the recently released MARC4 (4 bits) architecture, provides a very good foundation for a BCD based calculator:

<http://www.atmel.com/atmel/products/prod57h.htm>

The development kit is forth based, and most of the forth words are directly mapped to cpu instruction...

Re: Starting from scratch... Look here!

*Message #11 Posted by [Vieira,Luiz C. \(Brazil\)](#) on 5 May 2002, 10:40 p.m.,
in response to message #1 by Chris Roccati*

Hi;

have a look [here](#) and try [this post](#). There is some more stuff about it...

Cheers.

Re: Starting from scratch...

Message #12 Posted by [rsenzer](#) on 6 May 2002, 12:09 p.m.,
in response to message #1 by Chris Roccati

Hi Chris,

Based on a number of postings on a variety of calculator boards including this one, there is a need for a non-programmable simple scientific at the very least. It seems that a lot of instructors will not permit programmable scientific calculators or calculators that can store equations or expressions during tests.

I believe that there would be a market for an RPN calculator comparable to an HP-32SII without equation storage and without programmability, but with all other features. [Of course there would be no need for integration and solver functions since there would be no equation storage and no programmability.] It might be expedient to use numbered storage registers in such a calculator for the sake of simplicity and to avoid another instructor complaint, alpha-numerics. Of course, you would still want to be able to display hex digits, all you would need is the 7 bar display such as the display on the HP-20S.

I wouldn't mind a non-programmable algebraic HP-20S type of machine with fraction capability [I hear the jeers already!]. That is, with the full set of features of the HP-20S including multiple memories and the "2-level? last stack" -- NOT the hp-6s. Note that fraction capability is essential in today's market.

I would like to see programmable versions as well, but the above units might be a good starting point. Some additional points -- I would like to see 3 digit exponents and a level of accuracy comparable to the HPs. I would like to see solar power with battery backup with the batteries easily replaceable, i.e., a battery compartment so you don't need a screwdriver to take the calculator apart in order to replace the batteries, and clearly, continuous memory for the memory registers as well as the stack, although the latter is not entirely essential.

Also, it would be nice to have buttons for standard scientific constants, e.g., Avogadro's Number, etc. -- See e.g, the TI-36X. And of course, add the "Persnickety Professor" key -- CLEAR EVERYTHING, because some instructor will insist that you use such a key before the big test. The display should produce an "ALL CLEAR" message, of course.

What would really be nice is such a calculator that is switchable between algebraic and RPN, but which uses an algebraic entry system when in algebraic mode that is similar to that of the "HP-71B". However, that is probably beyond the scope of a simple wish list.

Meanwhile ...

Re: Starting from scratch...

Message #13 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 6 May 2002, 12:59 p.m.,
in response to message #12 by rsenger

Hi;

may I?

I agree with all points mentioned as operating adds, but allow me to express my feelings as a teacher.

I teach Math, Computer Science, Telecommunication (Basics, Switching Networks and Switching Systems), Interface Design (basic logic level, HW simulation, parallel/serial connection - IBM PC compatibles, Linux/Windows platform), Algebra Theory (Urgh!), among others (remember: I'm in Brazil, I must survive...) and I do not only allow students to use any calculator as I show them a better way to use them. If you can learn how to program, you will not waste time turning the calculator into a Formula Storage Place. I have seen students trying to figure out a solution only to program the calculator! That's amazing.

What I don't understand is prohibiting students to use calculators. I prefer teaching them how to use it in an instructive way. I believe this is the major reason the HP38 did not find its place here in Brazil. Neither professors nor students are acquainted with calculators in mid or high school.

My daughter is 10 YO and I gave her an HP6S cause the HP32SII is no longer easily available. I'm teaching her how to achieve results with pencil and paper, and I cause some errors so she needs to be care with wrong results. After being sure of the answer, I ask her to reproduce the calculus in the calculator. She sees the machine as something funny, and she asks me almost everytime: "Is the calculator's result right?". She trusts more in her pencil and paper development.

I believe there is a lack between learning and using a tool to learn. Forgive-me if I am wrong, but I'll bet.

Back to the calculator design: I agree (you didn't ask for someone's opinion, but I would like expressing it, too) with easy, fast-using RPN or Algebraic machines, and programmable feature available to the big ones. But I would like to know: do you believe a brief research on which features people would like to see in RPN (or algebraic) calcs would help defining goals?

Best reegards.

Re: Starting from scratch...

Message #14 Posted by [Ren](#) on 6 May 2002, 1:53 p.m.,
in response to message #13 by Vieira, Luiz C. (Brazil)

Luiz, It sounds like you are a good teacher. You are teaching the students to use tools/resources that are available to them to solve problems. There are some formulas that should be memorized, such as converting C to F degrees or Miles/inches to Km/cm. But IRL (In Real Life) most workers have access to formulas in texts. So, it has little value for a student to memorize anything just for a test if it will be forgotten, but easily looked up, after the test. I prefer to think of life as "an open book test", as most of the problems we encounter that require the use of a complex formula/algorithm can be found in a nearby book. But a student must know the relationship between the problem and the result to properly use any formula. As in the earlier example of C to F, the student needs to know that they have a different baseline (zero degrees) and which unit is larger than the other to get the correct result. One speaker put it this way..."Many schools have an algebra class that has students figure the height of the flagpole by measuring its shadow and the angle of the sun. But how many also suggest that asking the janitor may get the right answer sooner?"

One of my biggest frustrations as a student is when I'm being taught to know something (for a test) and not told when/where this information is useful in real life. So many teachers are removed from the "real world" they don't even know where their course applies outside of the classroom. One of the best electronics teachers I had, worked in a transistor factory during his summer break. He was able to teach us both transistor "theory" and transistor "fact".

A couple of years ago I took a Discrete Mathematics course. Much of the material was new to me, and I had a difficult time learning it. The teacher and text failed to teach practical applications of the formulas (formulae?). Since then, I have seen these formulas used in other courses, and ask myself "Why didn't they say back then, this is what it is useful for?" Matrix calculations come to mind. I did not see any use for them until a programming class showed that you can "resize" a graphic using a matrix calculation, then the "reason" for a matrix started to make sense.

Again, I did not see why RPN would be a "better way" to do math, until I read the webpages here at hpmuseum.org explaining the working of the stack.

what I want in a calc

Message #15 Posted by [Christof \(US\)](#) on 7 May 2002, 3:45 a.m.,
in response to message #14 by Ren

wishlist time:

non programmable: RPN, fractions, deep enough stack to work through larger equations (12 levels should be adequate), sci, eng, deg, rad.

programmable: clamshell (or another good keyboard interface), graphic area approx that of the 48 series, 512k ram onboard plus MMC (or similar) interface for additional flash. 2-4 rs232 ports for data acq. and sharing. RPN, RPL, some decent onboard assembler/compiler. Solver, CAS, software libraries.

(the grey areas of an actual tcp/ip stack are kinda beyond what people think of as a "calculator", but I'd rather have 802.11b in my 28/48/49 than in my Visor. I can use both to check email, in theory, but most of what I want do do beyond email/text browsing/downloads/messaging involves programming and calculator functions. So, if it's a true "wish" list, gimme a pc card slot and a tcp/ip stack. but- keep it a calculator at the root.)

-C

Breaking into the market ...

Message #16 Posted by [rsenzer](#) on 7 May 2002, 2:19 p.m.,
in response to message #15 by Christof (US)

Hi Christof,

My ealier wishlist was related to a minimal QUALITY scientific calculator that would be marketable at a reasonable price and would provide a foothold in the market. It was not intended for the high end of the market.

In addition, as stated elsewhere, such a calculator would serve as an introduction for a high quality calculator and/or calculator company in the market. The hope is that the introductory audience would eventually purchase higher end calculators. I believe that the maximum price point would have to be in the \$30 range or cheaper. [Maybe there isn't even such a market, because students are more likely to purchase an \$11 Casio fx-260, an HP-6S, a TI-30, or similar.] Needless to say, students would not be the only market. Nevertheless, they would probably be the primary market, initially.

Re: what I want in a calc

Message #17 Posted by [Chris Roccati](#) on 7 May 2002, 4:32 p.m.,
in response to message #15 by Christof (US)

No... Not that at all. In the end you want mathematica for a PDA, whereas my idea is just the opposite: a dead simple -- nearly like the classic "four bangers" -- rpn calculator, something that anyone can build, and maybe modify to suit his needs, not the ultimate pda-calculator-cell phone-videogame-terminal-clock-media player...

What you want in a calc

Message #18 Posted by [Nenad Vulic \(Croatia\)](#) on 11 May 2002, 12:30 p.m.,
in response to message #17 by Chris Roccati

Chris,

if the HP 6S existed in an RPN version (say HP 6S RPN), disregarding other features which are not in line with the well known HP quality (at least in the past), would it be a calculator that we are talking about?

Re: What you want in a calc

Message #19 Posted by [Chris Roccati](#) on 11 May 2002, 3:23 p.m.,
in response to message #18 by Nenad Vulic (Croatia)

Yeah. That would be the idea, like a non programmable HP-10C (besides, I suppose that the marginally programmable 10C could be considered non-programmable, by today's standards)...

have youall seen "retrocalc"

Message #20 Posted by [db\(martinez,california\)](#) on 7 May 2002, 9:34 a.m.,
in response to message #12 by rsenzer

i can't get the site to come up today but some guy is building a pretty basic red led rpn using off the shelf parts and has/had documented it on his web page. i used to check in ocasionaly by finding "retrocalc" on google.

Re: have youall seen "retrocalc"

Message #21 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 7 May 2002, 10:13 a.m.,
in response to message #20 by db(martinez,california)

Hi;

I found [this](#), but I cannot open it. Can anyone check for local providers? Maybe I'm in congestion time in here...

Cheers.

Re: have youall seen "retrocalc"

Message #22 Posted by [doug](#) on 7 May 2002, 1:06 p.m.,
in response to message #20 by db(martinez,california)

Is this the site you made reference to?

<http://pub8.ezboard.com/fhpcccalculatorclubgeneral.showMessage?topicID=19.topic>

Re: have youall seen "retrocalc"

Message #23 Posted by [Chris Roccati](#) on 7 May 2002, 4:29 p.m.,
in response to message #20 by db(martinez,california)

The idea is somewhat similar, but my point was to use an existing calc body (say a TI105?) with new "guts": building a decent case, a decent display and a decent keyboard without ending up with something that looks like a brick (or a borg cube) is not easy...

Re: have youall seen "retrocalc"

Message #24 Posted by [db\(martinez,california\)](#) on 7 May 2002, 8:57 p.m.,
in response to message #23 by Chris Roccati

yes, those addresses are the right guy and area but the pictures / updates page is still not loading.

hey chris - if it turns out looking like a borg cube remember; marketing is everything nowadays. the box can have that borg queen babe with those "think bubbles" that hp uses on their new packages saying "RESISTANCE IS FUTILE. BUY ME!"

Re: Starting from scratch...

Message #25 Posted by [J.Manrique](#) on 7 May 2002, 2:24 p.m.,
in response to message #1 by Chris Roccati

Hello,

Maybe it is out of the "dreams" you have.. But, have you seen giac/xcas project from Bernard Parisse? I am helping him in Spanish translation and some other minor things.. The idea is desinging a C++ CAS that could be embedded in any system.

Nowdays it works in linux and m\$ windows. But the reason to post it here is that it works in linux handhelds too. I am using it in an iPaq3100 (same price than a hp49, more or less) with Familiar distro on it (<http://www.handhelds.org>). I hope someday we could see it in a specific machine (an advanced handheld calculator)..

More info in: <http://www-fourier.ujf-grenoble.fr/~parisse/giac.html>

Of course, the project is under GPL license.. so it is free!

Cheers, J.Manrique

Re: Starting from scratch...

Message #26 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 10 May 2002, 7:32 a.m.,
in response to message #25 by J.Manrique

Hi;

I didn't dare so deeply, but there is something in your post that called my attention: the iPaq3100.

Should I guess it's a Compaq? The same Compaq that is about to merge with HP? So, should we think Compaq also has its own portable division? Not only notebooks, but PDA's and the like?

Should we guess Compaq, with HP, would head back to calculator development? Maybe **this** is a daring dream...

Well, I don't have knowledge enough (at least for now) to go so deeply by myself. But emulating CAS in a Linux environment is fancy. Under C++? Wow!

Good knowing about it. Best regards.

Compaq PDAs, Linux, "Itsy" ...

*Message #27 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 10 May 2002, 8:21 a.m.,
in response to message #26 by Vieira, Luiz C. (Brazil)*

While Compaq has had no calculator line or anything close, it used to have HP-like quality at its beginnings (look for info about the LTE 386sx, around 1990, for example). Their current PDA line, called iPaq, is rather good and successful, and it may replace the HP Jornadas (just guessing).

By the way, Compaq was founded by three ex-TI engineers...

While their current PDAs are Windows CE based, both HP and Compaq showed prototypes of Linux based PDAs.

In particular, you can search for info about a Linux based, prototype/concept model from Compaq, nicknamed "Itsy", which replaces some of the usual buttons with an internal accelerometer. Moving the PDA towards or apart of the user, or swinging it sideways, or turning it around in your hand produce zooming or paging actions... neat concept!!

Re: Compaq PDAs, Linux, "Itsy" ...

*Message #28 Posted by [J.Manrique](#) on 10 May 2002, 9:02 a.m.,
in response to message #27 by Andrés C. Rodríguez (Argentina)*

Well,

You can get more info about linux in Compaq, oops, I mean, HP Ipaq handhelds in:

<http://www.handhelds.org>

And, yes, Jornada ("old" HP handhelds) have been discontinued, to let new HP iPaq be the main "new HP" handheld.

Have fun,

J.Manrique

PS:Anyway, I have hear that new calculators will come from Asia next January ...
Have anybody hear it?

Hey you, people interested in designing a RPN device!!

Message #29 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 11 May 2002, 7:43 p.m.,
in response to message #28 by J.Manrique

I strongly suggest to you all to take a look to Compaq-HP "ITSY". Any search engine will point you to articles about it, but in Compaq Reserach Labs website you can download (well, ask for an email link for later download...) hardware specifications (I have not received them yet), firmware and Linux port information.

Itsy is an interesting concept, and may include nice ideas which we don't need to reinvent by ourselves. A RPN calculator should be an easy port for some of the Linux-Java usual visitors of the MoHPC, for instance porting the already excellent HP25 emulator shown here (with permission to be asked for and obtained from the author, and due credit given, of course!)

The information from HP-Compaq is supposed to include bill of materials, printed circuit board design, case manufacturing information, etc. Itsy is conceived as PDA, based on Intel StrongArm SA110, currently used in Compaq iPaq PDAs, has a monochrome display (240 x 320) and a Li-Ion battery. Alas, as a PDA concept, it DOES NOT include a physical keyboard the way any HP calculator fan would like to have; but I suppose it could be designed in as an option.

Before receiving the information there are legal-license conditions that anybody willing to work on this should examine and accept. Only after accepting such conditions the specifications will be available for you to download...

I have not seen many such "semi-freebies" coming from well established manufacturers, it seems to be something to look at.

(Well, I must admit I have a soft spot for both HP AND-OR Compaq. Fortunately, as my soft spot is NOT for HP XOR Compaq, I am as well as before with them going together)

URL for Itsy, missing from previous message

*Message #30 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 11 May 2002, 7:51 p.m.,
in response to message #29 by Andrés C. Rodríguez (Argentina)*

<http://research.compaq.com/wrl/projects/itsy/>

Re: Starting from scratch...

*Message #31 Posted by [J.Manrique](#) on 10 May 2002, 9:06 a.m.,
in response to message #26 by Vieira, Luiz C. (Brazil)*

Hello,

The people that research linux for "old compaq" handhelds are "old compaq" engineers.. they work for the "new HP" right now. Maybe their kownledge could be usefull for future linux embedded handhelds.. who knows..

And giac/xcas doesn't emulate a CAS, it is a real C++ CAS.. and much more (interactive geometry, progammable, RPN and algebraic input,..)

Have fun, J.Manrique

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HP71 roms?

Message #1 Posted by [HPhreaker](#) on 5 May 2002, 5:00 p.m.

I want HP71 roms for Emu71. Where to get it? I want to make tests with an functional HP71(the emulated) and an problematic HP71(physical). I don't have HP-IL :-(

There should be instructions

Message #2 Posted by [Jim L](#) on 5 May 2002, 5:21 p.m.,
in response to message #1 by HPhreaker

that came with it for extracting ROMs. The ROMs are copyrighted so you need to get them from your own HP71.

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No serial nr. at hp-45

Message #1 Posted by [Ralf Saalfeld](#) on 5 May 2002, 4:02 p.m.

i have a hp-45 but there is no serial-number on it. what does it means. is it good for me or not.

Re: No serial nr. at hp-45

Message #2 Posted by [Jim L](#) on 5 May 2002, 5:23 p.m.,
in response to message #1 by Ralf Saalfeld

Perhaps it just fell off or was removed during a repair? On the HP-45 it was just a sticker.

Re: No serial nr. at hp-45

Message #3 Posted by [Dave](#) on 5 May 2002, 5:24 p.m.,
in response to message #1 by Ralf Saalfeld

Early HP calcs had serial numbers on metal foil either inside battery compartment or on back between lower rubber feet. These are easily removed, replaced, or forged so the value in authenticating a calculator is questionable.

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eBay now or hold on?

Message #1 Posted by [klipspringer](#) on 5 May 2002, 7:36 a.m.

What with eBay prices on HP calcs going through the roof, it occurs to me I might want to auction off some of my wee HP collection. I mean, we could be at the bursting point of some speculative bubble and the best money is to be made now. Or else, of course, it's to be made a year down the road, two years, three... What'd'yall think? Is this the best time or is the balloon likely to double in size over the next little while or so?

Re: eBay now or hold on?

Message #2 Posted by [Frank](#) on 5 May 2002, 8:56 a.m.,
in response to message #1 by klipspringer

As a collector, I would not look at the "money making" side too seriously, If I get back out what I have in them, it's OK, a more is OK too and it helps me get other things, but I do not buy and resell hoping to make money (though as many have proven this opportunity is there), I enjoy the calculators. I have probably over collected again right now and have some other wants so I may just have to sell down now myself. For rarities, keep them if you like them and can afford to do so. Prices and the economy varies, as do collectors desire to have. I'm sure there are other opinions and would welcome them.

Re: eBay now or hold on?

Message #3 Posted by [Holtzenburg Carouac](#) on 5 May 2002, 3:35 p.m.,
in response to message #1 by klipspringer

Nope. You should hold. They will only increase in value. A year from now a mint 41Cx will top \$1000. A mint PCC ROM will full docs will have a "fixed" price of nearly \$6000.

The inside scoop is that there are two or three top-level private buyers out there trying to buy up stock, corner the market, then see what happens. They only buy the best stock, cost no object.

H Carouac

Re: eBay now or hold on?

Message #4 Posted by [Chip Stevens](#) on 5 May 2002, 3:52 p.m.,
in response to message #3 by Holtzenburg Carouac

Yes. That is mostly correct. It is a private fund managed North of The Gate. It has "big institutional money" backing, and warehouse facilities for the equipment.

Chip

Re: eBay now or hold on?

Message #5 Posted by [Institutional Buyer](#) on 5 May 2002, 7:19 p.m.,
in response to message #4 by Chip Stevens

Sell all you have now on EBay. I'd be happy to take them off your hands at "Institutional" pricing. I'm trying to corner the market on used HP calculators.

I am the infamous Super Wealthy Institutional HP Calculator Buyer.

NOT!

Re: eBay now or hold on?

Message #6 Posted by [David Smith](#) on 5 May 2002, 4:07 p.m.,
in response to message #3 by Holtzenburg Carouac

Wanna buy my PPC ROM... I'll part with it for only five grand... it'll give you a 20 percent return in a year.

Re: eBay now or hold on?

Message #7 Posted by [Chip Stevens](#) on 5 May 2002, 4:17 p.m.,
in response to message #6 by David Smith

Thanks, but I'm not running the fund. I only have heard about it. And 20% to those types is a nice weekly return.

And if you can answer that

Message #8 Posted by [Jim L](#) on 5 May 2002, 5:24 p.m.,
in response to message #1 by klipspringer

then why didn't you tell me when to dump all my tech stocks???

Re: eBay now or hold on?

Message #9 Posted by [HP Freakonomics](#) on 5 May 2002, 6:01 p.m.,
in response to message #1 by klipspringer

hold on to 'em. Unlike beanie babies which could be manufactured cheaply and easily and in whatever number required, there are only a fixed number of old classic HP calculators available. The only economic value comes from scarcity. The old classic HPs are scarce, in time more will break or be thrown away, and collectors will hoard the rest. They will become more and more scarce hence more valuable. Speculative bubble or no, time is on your side. Even if HP starts manufacturing HP-41C's again, they won't be in the right serial number range and the value of the oldies will stay high. The only thing that keeps me awake at night is wondering if there is some guy in Corvallis with a WAREHOUSE FULL of thousands of new old stock HP-16C's in boxes (no shrink wrap), waiting to dump 'em on ebay ten or twenty at a time.

Re: eBay now or hold on?

Message #10 Posted by [Christof \(US\)](#) on 6 May 2002, 1:58 a.m.,
in response to message #9 by HP Freakonomics

And you know how much this *sucks* for those of us who want to USE calculators?

I'd be really, really, really happy if someone did start making hp41cv clones and modules. (and the hp28-s especially if they put the insides of a 48gx in a clamshell.)

-Christof

Re: eBay now or hold on?

Message #11 Posted by [Frank](#) on 6 May 2002, 8:04 a.m.,
in response to message #10 by Christof (US)

Another point is that a good bit of the market goes away as we do. There are exceptions and in top condition rare will be rare for historical value, however folks that used them in the 70's and later, do for the most part seem to be the majority "consumers" in the market. Will younger generations collect these en masse, I know a few do?

Re: eBay now or hold on?

*Message #12 Posted by [Fred](#) on 6 May 2002, 12:21 p.m.,
in response to message #11 by Frank*

How many people buy or even look at HP calc's on ebay ? Maybe a few hundred at the most ? Stories about people stockpiling 32SII's and the like are just that - stories. My tip is this - with the money you intend to spend on old calculators, buy HewPac shares instead and watch them grow.

Re: eBay now or hold on?

*Message #13 Posted by [David Smith](#) on 6 May 2002, 5:32 p.m.,
in response to message #10 by Christof (US)*

There is not really much need for anyone to make 41CV machines right now. Even at Ebay prices, they are readily available for much less than a new one could be sold for. Same for modules (well, most of them at least).

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RAM chip on HP 25

Message #1 Posted by [Laurent Damay](#) on 4 May 2002, 8:56 a.m.

Hello and sorry for my poor english

I'm the owner of a later HP 25 (SN : 1805S24041). My calculator had two problems :

Bad keyboards reponses for some numericals keys but it's not very important because all keys seems work.

More important : all statistical functions, memory operations and programmation sequences don't work.

For exemples : On program mode : the screen allway display 13 00 (GTO 00) Memory operations : 12 STO 0 CLX RCL 0 the HP 25 display 0

All mathematical functions and stacks operations are working very good.

I think the RAM chip is corrupted. Perhaps it's only a bad connection.

Can people help me ?

Thanks

Laurent Damay

Re: RAM chip on HP 25

Message #2 Posted by [Ellis Easley](#) on 4 May 2002, 10:25 a.m.,
in response to message #1 by Laurent Damay

I have had the same problem with several HP-25's which I bought in unknown working condition. Some were like that from the start, another was like that after I got it to work at all. Finally I bought one from a collector that was known working. When I received it, I found its memory was a little flaky, I would enter a program and sometimes it would change a little. I discovered that the capacitor in the clock circuit had been changed, apparently to speed up the calculator. I can't remember whether I figured this out by comparing the component values on the several units I had by then, or if I measured the frequency and found it different from another unit or from something I read in the Museum, but I remember that when I found the difference, it was obvious that the capacitor had been changed. When I put the correct capacitor value in, the memory became stable. Also, along the way I figured out which chip was the RAM chip by brute force - from one of my bad-memory units, I removed chips one at a time till I found one that made no difference! Later I read the Museum Technology article for Woodstocks which explains how the functions are divided among the different chips. While I don't have my notes in hand, my memory (also somewhat flaky!) says that if you hold the circuit board component side up with the place where the keyboard attaches at the bottom (same orientation as if you were using the calculator), the RAM chip is the vertically oriented 18 pin chip (0.3 inch wide) to the left of the larger, horizontally oriented 22 pin chip (0.4 inch wide) which is the CPU (I think it is called the ACT). On my newest working unit, the part number of the RAM chip is 1818-0154. Also on this unit, the clock components, which are the capacitor and inductor connected in parallel and to pins 13 and 14 of the 22 pin chip, are a 330 pf capacitor (marked "331") and an inductor with the following bands (I've never learned how to read inductors properly): wide silver, brown, green, brown, narrow silver. (I guess that's actually a pallindrome.) My recollection is that the wide first band signifies an inductor (rather than a resistor) but I thought the first band was one of the significant digits, and silver can't be a significant digit, it can mean 10^{-2} multiplier or 10% tolerance. The other bands, if it were a 5% or 10% resistor, would mean 150 ohms, so maybe this is a 150 microhenry inductor. 150 microhenries and 330 picofarads would have a resonant frequency of about 715 kHz, which sounds about right.

Because I found several units with this problem, I thought it might be a well-known problem and I have asked in this Forum if others have had the same problem, but I've never heard from anyone who has found this to be the case. There was a recent thread about another Woodstock that has a frequent failure and there is an article in the Museum Articles page about it, but I believe in that case it is a chip specific to that model that fails.

It is my understanding that several of the Woodstocks use the same RAM chip, I suppose any model with 8 data memories and 49 program steps would. The 25 is the only Woodstock I have, although I think I now have six of them (2 completely working).

The problem is, you have to find another calculator to take the chip out of, but unless that calculator is working substantially completely, how do you know if the memory chip is working? If you were lucky enough to find another 25 that worked except for a bad display digit or a bad keyboard, then you could replace your main circuit board with the one you found, this is very easy as the modules plug together.

One theory, at least, of why the memory chip goes out while the rest of the calculator is working, has to do with the weakness in the way HP designed the battery charging circuit. If the connections between the NiCad cells and the calculator develop a high resistance (such as when the cells leak and corrosion occurs), the voltage from the charging circuit at the calculator battery terminals, which is the power source for the calculator, rises to a higher voltage than normal. In other words, HP designed the battery circuit with the NiCad cells providing voltage regulation as well as power storage. The 2.5 volts from the battery is converted to +6 volts and -12 volts for the MOS chips (when the calculator is on), so when the battery voltage rises, the converted voltages rise proportionally. One theory is that the design of the RAM chip makes it more sensitive to a higher supply voltage, so it fails first.

Re: RAM chip on HP 25

*Message #3 Posted by [Laurent Damay](#) on 4 May 2002, 11:28 a.m.,
in response to message #2 by Ellis Easley*

Thanks for all yours explications

Regards

Laurent Damay

Re: RAM chip on HP 25

*Message #4 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 5 May 2002, 10:31 a.m.,
in response to message #2 by Ellis Easley*

Hi;

I have two questions:

- would it be good idea to solder a Zenner diode (say, 2.7 Volts), inside the calculator, in paralell with the batteries' contacts? This way, voltage would never go over 2.7 Volts

- Program an Registers' memory are fully shared in new calculators (10-series, 41 series, and so); it did not happen in the earlier ones (woodstock-series); do they have the same chip containing both program and register memory circuitry? If so, how can a program be

recorded and a register cannot hold data? Is it an specific chip?

I just found it interesting, mostly cause I have an HP25C (the 25C has an extra fourth IC) that has the following problem: cannot execute any functions EXCEPT memory manipulation, say, stack and STO/RCL. Any attempt to perform other operation (a single [+], or [sin], or else) results in a 'zero's full-filled display. In other hand, it saves program steps and register data, no trouble. I understand it lost its ROM, and I am also looking for a solution. If someone can help...

Cheers and thanks.

Re: RAM chip on HP 25

*Message #5 Posted by [David Smith](#) on 5 May 2002, 4:04 p.m.,
in response to message #4 by Vieira, Luiz C. (Brazil)*

Yes, it is probably a bad ROM chip, although it could be the ACT chip. If you have a donor HP25, you can use chips from it. They are identical (or compatible) with the 25C. Only the RAM chips are different.

The HP25 has ROm code in two chips, the vertical one on the left side of the circuit board next to the ACT, and the ROM0 display anode driver chip under the LED module. Most likely one to fritz is the ROM0 chip.

Re: RAM chip on HP 25

*Message #6 Posted by [Ellis Easley](#) on 7 May 2002, 11:54 a.m.,
in response to message #5 by David Smith*

Then is the RAM in the HP25 the 16 pin chip sitting parallel to the ACT? If so I gave Laurent bad info!

Re: RAM chip on HP 25

*Message #7 Posted by [David Smith](#) on 7 May 2002, 5:24 p.m.,
in response to message #6 by Ellis Easley*

Depending upon the revision the RAM can be either parallel (on top) of the ACT, vertically to its right, or (for the small capacity RAM chips) both positions. There is also a 100K resistor that is different between the single and dual RAM chip versions.

Re: RAM chip on HP 25

*Message #8 Posted by [Ellis Easley](#) on 10 May 2002, 6:52 p.m.,
in response to message #7 by David Smith*

I examined all my HP25's and realize I gave bad information regarding which chip is the RAM, sorry Laurent!

Regarding the display anode driver ROM0 chip - is this the one on the left or the right under the display? On my units the one on the right is always an HP-made chip, so I'm guessing that if HP went to Mostek and AMI for the ACT, the RAM and the other ROM, then the ROM0 is the one on the left. Here's an interesting relationship: of my 6 HP25's, the two with working RAM chips (which I now understand is the 16 pin chip above the ACT on all my units, P/N 1820-1564) both have Mostek ROM0 chips. The four units with bad RAM chips have AMI ROM0 chips. Of the working RAM chips themselves, one is Mostek and the other is AMI. By any chance, is this the failure mode of the ROM0 chip - does it cause the RAM to appear to be defective, possibly by responding when the RAM is addressed?

And how about this piece of irony: my original good RAM unit now won't go into program mode! The switch is fine as are the connections to the ACT. In the RUN setting the switch connects ACT pin 4 to ACT pin 1, which is the +6V connection. Then in the PRGM setting, the switch is open and pin 4 is driven to 0V (equal to the negative battery terminal or ACT pin 12) internal to the ACT on a good unit, but on my formerly all-good unit, pin 4 only drops to +4V. Both supplies are working, I measure +6.37 on ACT pin 1 and -12.47 on ACT pin 2, relative to ACT pin 12. If I tie ACT pin 4 to ACT pin 12, the unit goes into program mode but doesn't work correctly (in this case pin 4 sources from 3 to 11 mA, changing all the time - probably shorted to an active signal). I guess I better look for an external short before I jump to the conclusion that the ACT is bad, but if it is bad, at least I have several to replace it with!

Regarding the other chip under the display, which on my units is always black with HP molding, P/N 1820-1382 (is this possibly the display cathode driver?) - the second line of text on these parts, which I would think would be datecodes, vary quite widely. One is illegible, one is "7539-C" which seems in line with the other chips on the board, one is "1535K" which looks like a reasonable HP-style (1960+) datecode, but the others are "8768-D", "8861K" and "C-8074-K". Is it possible these units were reworked by HP into the late 80's?

One final thing: all my ACTs are P/N 1820-1523 except one, which is 1820-1741. This is in my oldest S/N unit (1601S) although the chip datecodes are the newest of all my units, 7608 to 7635. I guess this unit had its board swapped. Similarly, all my ROM0 chips (if it is the one on the left under the display) are P/N 1818-0168 except one, which is 1818-0153. Is anything in particular known about these different chip P/Ns? My RAM chips are all 1820-1564 and my other ROM chips are all 1818-0154 (the 18 pin chip I had said was the RAM).

Re: RAM chip on HP 25

*Message #9 Posted by [Laurent Damay](#) on 11 May 2002, 3:02 a.m.,
in response to message #8 by Ellis Easley*

Thanks for yours greats documentations

Regards

Laurent

Re: RAM chip on HP 25

*Message #10 Posted by [David Smith](#) on 11 May 2002, 3:19 p.m.,
in response to message #8 by Ellis Easley*

The ROM0 chip is the smaller one on the left.

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Anyone know who can repair an 11C?

Message #1 Posted by [Tony David Potter](#) on 4 May 2002, 12:32 a.m.

I am looking to get my 11C repaired.

Had it for eleven years, finally gave me problems (intermittent shutting down when punching keys, very frustrating.)

Anyone with ideas of people who do repairs?

Thanks in advance. Tony David Potter

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Article about HP Collectors

Message #1 Posted by [Paul Brogger](#) on 3 May 2002, 7:21 p.m.

Have you folks seen [this](#) yet? (Maybe I missed an earlier post?) I haven't even read it yet, but thought I'd pass it on . . .

I'm honored

Message #2 Posted by [Dave Hicks](#) on 4 May 2002, 12:00 p.m.,
in response to message #1 by Paul Brogger

to have my website called one of the two things on the net that make sense! :-) Thanks for the comment and the link!

Re: Article about HP Collectors

Message #3 Posted by [John K. \(US\)](#) on 5 May 2002, 8:38 a.m.,
in response to message #1 by Paul Brogger

Hmm. Lacey, huh? What a coincidence; I live up in Bremerton.

Congratulations, you both!

Message #4 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 5 May 2002, 10:01 a.m.,
in response to message #1 by Paul Brogger

Hey, guys;

you (both) deserve it and a lot more.

I believe this is one of the few things that money cannot buy (nowadays).

Hope I can see this many more times.

Cheers.

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HP 35 "RED DOT" Serial Numbers?

Message #1 Posted by [Spice_Man](#) on 3 May 2002, 7:17 p.m.

When looking at a "Red Dot" HP35 for authenticity, is there a way to tell by the serial number (other than 1143A) whether it is a "Red Dot" or not?

Is there a known range of serial numbers for the "Red Dot" HP 35's?

Re: HP 35 "RED DOT" Serial Numbers?

Message #2 Posted by [David Smith](#) on 3 May 2002, 7:27 p.m.,
in response to message #1 by [Spice_Man](#)

The red dot machines have a distinctive serial number label on the back of the machine near the bottom where the later machines have the HP "made-in"/power requirements label. The serial number label has a dark background with a silver center section with the serial number.

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Opening a printer- collecting vs. using.

Message #1 Posted by [Christof \(US\)](#) on 3 May 2002, 7:11 p.m.

Today I just got a NIB 82240a printer. I got it for about 1/3 of what i would pay for a new b series- and less than what I'd pay for a b series used on ebay.

The serial number is: 2910s10022

Now, I did buy this to use, but seeing the condition of the box with the serial numbered hp paper and shrinkwrapped batteries, I'm a bit leery of just popping off and using it.

I *do* use all my claculators and am not generally worried about this NIB thing, but I could change my tune. Especially if this HP calculator collecting craze doesn't die down.

Anyone know the production runs of this printer?

-Christof

Re: Opening a printer- collecting vs. using.

Message #2 Posted by [Ellis Easley](#) on 4 May 2002, 11:02 a.m.,
in response to message #1 by Christof (US)

No, but I seem to have discovered the resemblance between the 82240 printers and the HP-56 design model (<http://www.hpmuseum.org/designs/ds563q.jpg>), I think this historical connection could be used somehow to increase the value of the printers as collector's items. It could also form the basis of a light entertainment ghost-story movie, maybe starring the Olsen twins (if they're not too old for that sort of thing).

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HP 92 Repairs

Message #1 Posted by [Dr. Norm Faiola](#) on 3 May 2002, 8:14 a.m.

I am looking for a qualified person to repair my HP92.

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Demo version of HP-41X Extended MicroCode Emulator is available for download!

Message #1 Posted by [HrastProgrammer](#) on 3 May 2002, 7:30 a.m.

<<http://hrastprogrammer.tripod.com>>

Just scroll to the bottom of the page for download ...

Re: Demo version of HP-41X Extended MicroCode Emulator is available for download!

Message #2 Posted by [Massimo Gnerucci\(Italy\)](#) on 3 May 2002, 8:27 a.m.,
in response to message #1 by HrastProgrammer

Thank you!
Massimo

Re: Demo version of HP-41X Extended MicroCode Emulator is available for download!

Message #3 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 3 May 2002, 10:34 a.m.,
in response to message #1 by HrastProgrammer

Hi, HrastProgrammer;

thanks for sharing the valuable info.

I'm contacting you soon, cause there is a lot more to be cleared over the HW machine.

Cheers.

Re: Demo version of HP-41X Extended MicroCode Emulator is available for download!

Message #4 Posted by [Daniel Diggelmann](#) on 3 May 2002, 5:48 p.m.,
in response to message #1 by HrastProgrammer

Hi HRASTPROGRAMMER,

Mayn thanks for sharing your very nice HP-41 emulator with us. I'll sure buy the full version once it's available. Keep up the good work!

Best Regards from Switzerland Daniel

Re: Demo version of HP-41X Extended MicroCode Emulator is available for download!

Message #5 Posted by [HrastProgrammer](#) on 6 May 2002, 4:36 a.m.,
in response to message #1 by HrastProgrammer

There is a new demo version of HP-41X on my homepage (<http://hrastprogrammer.tripod.com>) with more features than previous one. CCD ROM, HEPAX and ZENROM modules are not provided and the whole data/program memory is cleared every time the emulator is started (port memory is left intact) but all other features from the final version are present.

Best regards.

The final version of HP-41X is available!

Message #6 Posted by [HrastProgrammer](#) on 14 May 2002, 3:22 a.m.,
in response to message #1 by HrastProgrammer

Details on how to get it are on my homepage <<http://hrastprogrammer.tripod.com>>. Just scroll to the bottom of the page ...

Best regards.

Re: The final version of HP-41X is available!

Message #7 Posted by [Wayne Brown](#) on 14 May 2002, 8:02 a.m.,
in response to message #6 by HrastProgrammer

Your web page says this for the 49G. Will it work in a 48GX? If not, do you have any plans to port it to the 48?

Re: The final version of HP-41X is available!

*Message #8 Posted by [Massimo Gnerucci \(Italy\)](#) on 14 May 2002, 9:24 a.m.,
in response to message #7 by Wayne Brown*

This version doesn't work on a 48 but Hrast just ordered a couple of them to see if the port is feasible.

Stay tuned!
Massimo

Re: The final version of HP-41X is available!

*Message #9 Posted by [HrastProgrammer](#) on 14 May 2002, 10:17 a.m.,
in response to message #7 by Wayne Brown*

The HP-48GX version is on the run. In fact, there are just a few things to be ported ... expect to see a demo for HP-48GX in a week or two. I am very busy at the moment ...

Re: The final version of HP-41X is available!

*Message #10 Posted by [Wayne Brown](#) on 15 May 2002, 8:15 a.m.,
in response to message #9 by HrastProgrammer*

Great! I'm looking forward to it.

HP-41X Extended MicroCode Emulator for HP-48GX is finished!

*Message #11 Posted by [HrastProgrammer](#) on 17 May 2002, 4:44 a.m.,
in response to message #7 by Wayne Brown*

Demo version is available for download from <<http://hrastprogrammer.tripod.com>> ...

You will need at least one 128K free memory card (installed in slot 1) in order to install and use the emulator. If you have a memory card in slot 2 then HP-41X can be installed into a covered port, too.

Re: The final version of HP-41X is available!

Message #12 Posted by [Massimo Gnerucci \(Italy\)](#) on 14 May 2002, 9:20 a.m.,
in response to message #6 by HrastProgrammer

A really good job Ž... sorry, HrastProgrammer ;)

After testing the full RC version during last week I can say that I found no serious bug (actually I found no bug at all). It is indeed a very usable and stable 41C "emulator"; the only drawback is about the keyboard: it takes a little to get used to the remapping...

This library perfectly mimics the original and improves on it in many ways (i.e. the possibility to load much more ROMs) this way you won't miss neither the time module nor ED. I love the way printer and card reader are implemented.

This thing is much faster than a real 41 but when speed could be a concern (i.e. a CATalog display) Hrast slowed it down to match the original.

Having 3391 registers available is disconcerting at first and if you add the Hepax module to this...

I think that all we nostalgic 41 users should thank you: we are now waiting for a 48GX version to have the perfect hardware for this masterpiece ;)

Massimo

Re: The final version of HP-41X is available!

Message #13 Posted by [Dale Richmond](#) on 16 May 2002, 5:50 a.m.,
in response to message #12 by Massimo Gnerucci (Italy)

I have made a keyboard map for the 41X which is about 95% correct. Actually it is from Hrast Programmers previous 41 emulators. The only obvious errors are on the "Enter" keys shifted alpha characters. If anyone would like it I would be happy to send it. KEY: Yellow - unshifted key actions White - shifted key actions Red - a combination of shifted and unshifted alpha assignments Dale Richmond

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HP 41CV-what is the replacement

Message #1 Posted by [Edward Lee](#) on 3 May 2002, 12:39 a.m.

I own a HP41CV since 1983 and I love it very much. It was one of the greatest calculators I have ever used. Now, after 19 years' usage, it shows a bit wear and tear and last week it lost all the programmes that I have input into it over the years. I bought the HP 49g last month but it is too complicated to learn and use. I am desperately in need of a replacement for my HP 41CV, please offer any suggestion & advice.

Re: HP 41CV-what is the replacement

Message #2 Posted by [Andreas Stockburger \(Germany\)](#) on 3 May 2002, 2:23 a.m.,
in response to message #1 by Edward Lee

Hi,

why not buying a new one on ebay ? With some time and some luck you can get an 41CX for ~ \$100.

Andreas

Re: HP 41CV-what is the replacement

Message #3 Posted by [Dave](#) on 3 May 2002, 10:49 a.m.,
in response to message #1 by Edward Lee

There is no current replacement for the 41, either buy 41/42S used or use a PALM or Pocket PC replacement program.

Re: HP 41CV-what is the replacement

Message #4 Posted by [HrastProgrammer](#) on 3 May 2002, 11:11 a.m.,
in response to message #3 by Dave

Or you can use an HP-41 emulator - see the above post ...

Re: HP 41CV-what is the replacement

*Message #5 Posted by [Dave](#) on 3 May 2002, 12:37 p.m.,
in response to message #4 by HrastProgrammer*

Yep, if only it was easy to relabel keys...

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hp75 i/o rom

Message #1 Posted by [andy](#) on 2 May 2002, 4:22 p.m.

Can anyone supply me with some information on the HP75 i/o rom? (like what it does, what programs are on it, etc)

Thanks,

Re: hp75 i/o rom

Message #2 Posted by [Ellis Easley](#) on 3 May 2002, 3:11 p.m.,
in response to message #1 by andy

All I can tell you is that I looked for one for a long time without success. It provides keywords to let you write programs to do general HPIL I/O (other than printing and file I/O). I finally found some LEX files that let you do some of what the ROM does, which is good enough to get by. At this point in the conversation, I am obliged to point out to you that if you really want to use HPIL, you should stick with the 71B which has the best HPIL support of all.

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Old Packages

Message #1 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 2 May 2002, 12:51 p.m.

Hello; (please, forgive-me if this is not the place to post...)

I own 12 HewPack calcs, and I use them all (I'm not a collector, I just have the best tools for the job...). This is the reason I have some old packages for some HewPack calculators. They are not EXACTLY as new, but I believe they can be of use for actual collectors. If there is a trading proposal, I'll send them. If you are interested on this, e-mail me so I can send pictures (please, be patient cause I can send them only in the weekends).

Should I post this at the Classified Adds? I would like trading them with the very well known guys in here, not with a stranger...

Thanks.

Re: Old Packages

Message #2 Posted by [Ren](#) on 2 May 2002, 1:31 p.m.,
in response to message #1 by Vieira, Luiz C. (Brazil)

Thanks for mentioning it in the forum, but I think any more info (such as which models they came from) should be placed in the classified ads and put WTT (Want To Trade) in the subject line. My personal opinion (you didn't ask for it) is to KEEP them. You already have more models than I have (a mini-collector), so you're WAY ahead of me in "the game".

I spent 10 days with my wife in Sao Paulo and Rio in March 2001. We had a great time and hope to someday return. The people we met were very hospitable.

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Re: is the 32SII really gone?

Message #1 Posted by [Christof \(US\)](#) on 2 May 2002, 11:54 a.m.

Interestingly, the university had *one* hp48gx in the old style box which has disappeared in the past 3 days. (At 149.99, it wasn't exactly a screaming deal) They have a half dozen GXs in blisterpack now, I'm curious to see how long that lasts. (and in this case, I think I'd rather find a good used one before they cost as much as a 71b)

Looking at California educational materials (ag programs and university literature), the only place hp calculators are still mentioned much is business and accounting courses.

(off topic, I wonder about calculator development in general. the ti stuff is not new- the 89 is a test-legal 92+ and the 83+silver is only a sped up 83. Casio has released some actual *new* product since 2000, but I don't know their history well.)

Looks like eventually I'll be stuck with some pen based pda software.

-Christof

Is the 83+ Silver a worthwhile development target?

Message #2 Posted by [Paul Brogger](#) on 2 May 2002, 4:03 p.m.,
in response to message #1 by Christof (US)

I looked into TI calculators recently -- the 83+ Silver has quite a bit of flash ROM and a free development kit available. I wonder whether an RPN interface would be hard to insert betwixt the keys and the functions?

Has anyone else looked at this?

Re: Is the 83+ Silver a worthwhile development target?

Message #3 Posted by [aruid](#) on 2 May 2002, 4:49 p.m.,
in response to message #2 by Paul Brogger

The TI-89 does have a special add-on program available free on from the internet that creates a stack much like that of the HP 49g

ARUID

Re: Is the 83+ Silver a worthwhile development target?

Message #4 Posted by [Christof \(US\)](#) on 3 May 2002, 12:13 a.m.,
in response to message #3 by aruid

I've seen this for the TI83 and the 89/92 machines. It's a rather nice way to put rpn on the TI. I still have issues with the TI keyboard, serial, lack of ir, and implementation of basic.

-Christof

Re: Is the 83+ Silver a worthwhile development target?

Message #5 Posted by [Tom \(UK\)](#) on 3 May 2002, 3:32 a.m.,
in response to message #4 by Christof (US)

Christof

Christof said: "I still have issues with the TI keyboard, serial, lack of ir, and implementation of basic."

Were you talking about the TI or the HP49G? q:^^)

Tom.

How about hplike palms?

Message #6 Posted by [Christof\(US\)](#) on 3 May 2002, 12:19 a.m.,
in response to message #2 by Paul Brogger

I've occasionally used an rpn calc on the visor called "RPN". I'd like to see (or find, if they are there) some kind of workalike to the 41, 32sii, and even (wouldn't it be nice?) the 28s.

Is any of this out there?

-Christof

Re: How about hplike palms?

Message #7 Posted by [Holger Veit](#) on 3 May 2002, 3:35 a.m.,
in response to message #6 by Christof(US)

There are some RPN emulators for the palm, however, they are either not worthwhile, or in the case of "Coconut", effectively unavailable shareware. Particularly for the Coconut which free crippleware version looks promising, I haven't been able to buy it at Palmgear - the author does not react to any email to send me the license code for the ordered version. I eventually canceled the order and withdraw the already billed credit card payment. So, if anyone tries to order there be aware that this author is completely unreliable and unresponsive.

Re: How about hplike palms?

Message #8 Posted by [Dave](#) on 3 May 2002, 10:52 a.m.,
in response to message #7 by Holger Veit

Hardly my experience where I got real quick registration codes and several personal replies to my queries. Though a bit slow I highly recommend this program as a neat 41 emulator.

Re: How about hplike palms?

Message #9 Posted by [Chris Roccati](#) on 3 May 2002, 5:27 p.m.,
in response to message #7 by Holger Veit

If you need an HP41 emulator for the PalmOS platform, I'd recomend P41CV (<http://www.palmgear.com/software/showsoftware.cfm?prodID=40123>), It only emulates a 41CV, and does not have all the fancy function you can find in Coconut, but it's far faster (slightly faster than the real HP41, on my 505) and slightly cheaper.

Re: How about hplike palms?

*Message #10 Posted by [Holger Veit \(DE\)](#) on 4 May 2002, 3:21 p.m.,
in response to message #7 by Holger Veit*

In a followup to my own post, I think it is necessary to add an apology. Due to the post, the author of Coconut has meanwhile contacted me and we are going to negotiate terms of payment and delivery again. Apparently, there have been some email transmission problems between me and him, hard to track afterwards, but I definitely have to withdraw my opinion resulting from the failed transaction and the observed unresponsiveness in the followup. Mr. Abel is definitely not unreliable - there has been just some kind of misunderstanding and/or repeated e-mail connection faults which caused the problem.

My opinion that Coconut is quite a good piece of work (depending on my experiences with the freeware version) of course remains valid. Again, my apology, Mr. Abel.

A classic case of a great HP user group when HP quits designing!!

*Message #11 Posted by [Frank](#) on 3 May 2002, 11:43 a.m.,
in response to message #2 by Paul Brogger*

We talk about the dregs that are left!!

Re: A classic case of a great HP user group when HP quits designing!!

*Message #12 Posted by [Paul Brogger](#) on 3 May 2002, 1:21 p.m.,
in response to message #11 by Frank*

True enough. Compared to the legendary, fondly-remembered HP quality, "dregs" probably applies. But if you're looking for a discrete, customizable, currently-manufactured, shirt-pocket device with (halfway decent) buttons, the TI-83+ Silver may be hard to beat:

1.5M Flash ROM,

Z-80 processor,

Zilog assembly language development environment (free),

a Windows emulator/debugger (free) from TI, and

500+ pages of PDF documentation (free).

I'm reexamining just exactly why I'd like to play around at that level in my spare time (rather than right-brain stuff like, say, practice guitar or try Chinese brush calligraphy). But if making a connectible shirt-pocket device "sing my tune" is really what I want to do, I think (as of now) I'd be heading in this direction.

Don't do it Paul!

*Message #13 Posted by [Ron Ross](#) on 3 May 2002, 2:33 p.m.,
in response to message #12 by Paul Brogger*

At least step up to a Ti-86 or Ti-89. Actually a Ti-86 is cheaper than the Ti-83 silver. The Ti-83 series has a few draw backs.

Perhaps you should read this:<http://www.rskey.org/buyguide.html>

I admit it is dated, but I feel you would be better served by a somewhat higher model. I admit the Ti-83 is probably better than a Casio or Sharp for programming, but it lacks what I feel are key elements for a super deluxe calculator such as:

No units conversions built in No Hex,Dec,BIN conversions Only single letter variables 24K RAM limit for programs (though not a big drawback for most applications at the calculator level)

The first two are overcome by third party software, BUT WHY didn't the calc just come with this?

The single letter 27 variable limit is impossible to overcome. Yes, it is fast, and you can store lots of programs, but why not buy a Ti-89 for a few dollars more? Or save a few bucks and buy a Ti-86 which may be somewhat slower but has more capability aside from the Statistics package of the Ti-83 (Which is better than any Ti and perhaps even better than the Hp49). Ti has made statistics a Free download for all calculators higher than the Ti-83.

Just my opinion.

Re: Maybe Paul will do it!

Message #14 Posted by [Paul Brogger](#) on 3 May 2002, 3:25 p.m.,
in response to message #13 by Ron Ross

Single-letter variables and 24K RAM may be limitations for TI-Basic, but if one goes the Z-80 Assembler route, the 83 gives most of its 1.5Mb of Flash ROM to play with.

The lack of units conversions is truly puzzling, but if one wants to convert it to a keystroke-programmable RPN machine, adding units conversions should be relatively simple.

The only reason to go to TI and not stick with HP is in the hope of ongoing availability of similar devices. [Of course, with TI's traditional level of durability, that's an absolute REQUIREMENT! ;-)]

The only reason to mess with it at all is to experiment with simpler small-environment programming interfaces -- perhaps *graphical* representation of program constructs and hyperlinks to code blocks. As powerful as RPL is, it sure looks ugly on the small screen!

Whatever -- if I bother with this at all, I'll be looking for supported functionality in a small package. If HP has chosen not to provide it, better to get past the whining and move on.

Re: Don't do it Paul!

Message #15 Posted by [Christof \(US\)](#) on 3 May 2002, 5:41 p.m.,
in response to message #13 by Ron Ross

Isn't that review for a ti83 and not the plus silver?

And, as far as TI goes, the pure utility of the 83+sil seems to beat the 89. The 89 is bigger and better, but the keyboard bites big time.

The fact that both fall short of the *usability* of my 28c (aside from the lack of rs232) would be easier to live with if i could get a 28c upgraded to reasonably modern specs. :p

Give me nice buttons, dedicated a-z keys, memory and comms, and RPL and I won't care WHO makes it.

Re: Don't do it Paul! (89 does look interesting . . .)

Message #16 Posted by [Paul Brogger](#) on 7 May 2002, 8:55 p.m.,
in response to message #13 by Ron Ross

Mr. Ross:

Your [buying guide](#) is nicely done. Thanks.

Apart from the memory, functional, and (TI-Basic) variable-naming differences to which you allude, I think the most interesting difference in the two is that the TI-83+ is Z-80 based (with only Z-80 Assembler available) while the TI-89 is Motorola 68000-based (!) with both an Assembler AND a C compiler in its SDK.

While it has half the Flash ROM of the 83+ Silver, it offers more RAM, and a higher-resolution LCD. (Not to mention, the 83+ Silver is double-plus unpretty!)

You seem quite knowledgeable in this area. Tell me what you think: Could either of these be modified to behave as if it was a "native" RPN machine? Could it do so on "power-up", or would one start a never-ending application that would handle most/all possible keystrokes? (Maybe that would amount to the same thing.)

If I had your email address I'd take this offline. (Maybe I should ask these questions on one of the TI Developers' Boards?)

Thanks for your interest and thoughtful response so far.

Re: Don't do it Paul! (89 does look interesting . . .)

Message #17 Posted by [Matt Kernal \(US\)](#) on 8 May 2002, 6:51 p.m.,
in response to message #16 by Paul Brogger

I picked up a used TI89 to see what all the fuss was about (and mainly because it was only \$40!). I was curious about the speed, Flash, and general "TI" user interface. Except for the speed, I pretty much hated EVERYTHING about it. Within a day or so, I was about to get rid of it.

That is, until I downloaded Lars Frederiksen's RPN program for the TI89. It actually transformed the TI into something that is now quite fascinating: a truly FAST RPN calculator that has very nice running history stack on the

left edge of screen. Until I loaded this program, I didn't realize how 1) slow calculations (ie. "garbage collection") were actually taking on my 48G/49G. And 2) the history stack really does help you "see" the RPN calculations as you have always known how the stack worked "in your head".

I am a dyed-in-the-wool HP RPN calculator fan, but this very nice implementation of RPN on the "enemy's" machine is something to see. So far, I've only used the TI as a four-banger RPN calculator.

The RPN program for the TI89 can be downloaded from Lar's website:

<http://www.perez-franco.com/symbulator/download/rpn.html>

Just my observations, Matt

Re: A classic case of a great HP user group when HP quits designing!!

Message #18 Posted by [Frank](#) on 3 May 2002, 4:48 p.m.,

in response to message #12 by Paul Brogger

Had a few ti-89's, just never kept one. Maybe a 89+, faster with more mem and better display (hear that TI, probably not!) will be a keeper. Traded the last new 89 with conectivity kit I had planned to keep and maybe use a little for *two* perfect 49G with manuals on the traders suggestion, he needed it for a class. Would anyone else here have *not* done that trade?

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Re: is the 32SII really gone?

Message #1 Posted by [Ren](#) on 2 May 2002, 10:05 a.m.

Hmmm, Wagon Photo has pulled the 32SII from their webpage as well...

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is the 32SII really gone?

Message #1 Posted by [Christof \(US\)](#) on 2 May 2002, 5:34 a.m.

There's *one* at the university bookstore, for a little less than the ebay auctions. (I asked, they don't appear to be getting more, but can't be sure)

Of course, is it worth buying it rather than one of the older production 32SIIs used? (quality of production vs ebay)

I haven't seen it for sale anywhere else locally- and this is a UC campus area. On line, I've seen similar prices (basically about \$60-70 after shipping). Most of the places online that I'm getting search results for don't even have them in stock....

-Christof

Re: is the 32SII really gone?

Message #2 Posted by [John Swenson](#) on 3 May 2002, 3:26 p.m.,
in response to message #1 by Christof (US)

I just ordered one (5/2/2002) through Yahoo! Shopping, from Interdiscount Mall for \$59.95 plus shipping.

Gotta have a RPN backup if my 42S ever dies...

John

last of the 32SII

*Message #3 Posted by [Christof \(US\)](#) on 3 May 2002, 5:50 p.m.,
in response to message #2 by John Swenson*

Yeah, I bought the one here at the bookstore. I can't justify it for a backup- I've got a 48s and 49g on the way, and i'm using my 28c. But I'd *hate* to have to pay \$100 for one in a couple years.

And sometimes, you can't use a "programmable" but can get away with a "scientific".

(For the rare tests where I am limited to a 4 banger, I have my trusty computex mark V with 4 C type batteries).

I do wonder how long they will last, and how high the price is going to go.

-Christof

Re: last of the 32SII

*Message #4 Posted by [Frank](#) on 4 May 2002, 9:25 a.m.,
in response to message #3 by Christof (US)*

It will take awhile for the "Glut" to be absorbed I would think. I had a few new ones laying around and still bought a few more, now I have too many really for personal use and probably need to sell a few at cost, most the older ones I will keep most likely, some are not in box. One report indicated one place sold 500 new ones at once. My forecast is for NOS of the original 32sII to be up to or over 100\$ by year end, while new recolored ones in plastic package will be maybe 70-80. \$200 for original NOS is possible in a couple years perhaps.

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Are people making "Conspiracy Theory" a-la Mike about sheating om E-bay, well I dont think so!

Message #1 Posted by [HP-Freak](#) on 1 May 2002, 2:06 p.m.

This is the Story of how an E-bay seller blew his cover:

This happened to me last month:

Story Begin

I bought several items from this guy in the US (Seller-A). Without being aware of it at first I also bought things from another seller (Seller-B) living in the same town. I don't know why, but I started to get suspicious and when I checked past auctions including my own I saw that those two guys (well actually a female and a male) was repeatedly bidding on each other auctions. Also noticed that they were ALWAYS bidding early and also making many bids in the same auction spread over several days. (Having been on E-bay for a few years I know that to start a bid war is a very good way of teasing others to bid higher.) Also noticed that they most of the times came as runners up or lower. Another important observation was that they NEVER bid in the last minute. (Mind you, they actually bid in the last minute when they bought things from other e-bayers in other parts of the US) (E-bay Observation: Last minute bid will increase your probability of acquiring an item at a reasonable price. Bidding early will only make you win if you are willing to pay several times the expected value or in the rare case the item was overlooked by others because of spelling mistakes in the listings.)

Further investigation made it probable that five(5) E-bay user names was being used in this scam. I could confirm that three of the user names were from the same town. The other two was repeat bidders but I could not confirm their location. But one funny thing is that one of these unconfirmed location bidders was buying a very rare collectable of which I had observed one of the first sellers (Seller-A) buy! I have never seen anybody else buy these things before so I found that increasingly suspicious.

{if you already are equipped with a healthy skepticism to obstinate people}

then Go to Story-Continued

Digression: From my past history here in Europe (going back 10-20 years) people of different political opinion felt themselves being kept under surveillance (harassed in many ways, phone being bugged, followed around, secret house searches, ...) During that time everybody that brought up these suspicions to the public eye were ALWAYS being attacked by certain people as being PARANOID and making all these CONSPIRACY THEORIES and all. TODAY we know the truth. Because they left so much information in their archives that they were not able to get rid of it before it was too late. The surveillance conducted against people of different opinion went far beyond their imagination. Many people have been able to look in to their "SECRET" files and were absolutely choked by the detail of the information. Some found that people they were close to had been constantly reporting on them. And who do you think up through the years were the ones calling other people paranoid. THEY WERE THE ACTUAL PEOPLE RESPONSIBLE FOR ALL THE ILLEGAL SURVEILLANCE.

Based on the E-bay story above MR Mike (ipscone@msdsite.com) here would call these facts share coincidences and refer to me as paranoid. Sure he can call and refer to me with whatever he likes but I would simply refer to him as an E-bay SELLER.

Story-Continued:

Some weeks ago it happened so that one of the items in a batch of several (from Seller-A) was misplaced and he had to send an extra package nearly two weeks later. (Be aware that for each item I buy on E-bay I put a unique personal identification code for easier handling) It so happens that to my great surprise Seller A had mixed things up and ACTUALLY put the code used for an earlier transaction made for an item bought from Seller-B.

THIS IS A 99.99% CONFIRMATION THAT SELLER-A and SELLER-B (operating with two different addresses but in the same city) IS THE SAME PERSON AND ALSO BIDDING ON HIS/HER OWN AUCTIONS.

I am sure this proof is once in a e-bay usertime (/lifetime) and I will never again get a confirmation of cheating as obvious as this.

Story End.

Moral: I want people to question those people that scream up against others being paranoid. On the other side you should NEVER accuse anybody of cheating unless you can prove that your suspicions are true. In most cases (95%?) you will not be able to prove foul play.

I also believe that E-bay should use more money and resources on the protection of the buyer. A SELLER SHOULD NEVER BE ALLOWED TO LEAVE FEEDBACK AFTER THE BUYER. That

should help a lot for a starter.

As for myself I am happy with more than 90% of the transactions made on E-bay USA and have met some really nice & friendly guys over there. And not to forget, I LOVE THE HP-MUSEUM!!!!

This completes my post from a faraway country. Buy for now! ;-)

Re: Are people making "Conspiracy Theory" a-la Mike about sheating om E-bay, well I dont think so!

Message #2 Posted by [Tom \(UK\)](#) on 1 May 2002, 2:40 p.m.,
in response to message #1 by HP-Freak

This is(was) always possible with ebay, criminals are not always stupid! My highest bids for what I consider realistic prices for HP calculators are well below ebay 'market values' now so I simply have not bought anything from ebay for ages. Who actually enjoys paying top dollar for HP calcs anyway?

This is old advice (and I think Dave has put some of this on this site) but this is what I follow on Ebay and I've only been half caught out once:

The ONLY way to protect yourself on pricing is to set your own limit on what YOU want to pay and STICK to it. This way, even if there is a scam, you have not spent any more than you were prepared to spend (it's still criminal to push prices up by bidding against yourself and you could try to claim back some money but this way your limiting your losses).

Early on make sure you ask at least one question if the item is likely to be expensive (sensible anyway ir it's only to confirm a detail). The style of the answer can be as revealing as the answer itself sometimes.

NEVER bid early as this only pushes up prices and lends confidence to others who are thinking of bidding (as if one guy is convinced it's a good buy then I'll join in too). Bid as late as you can, you can then see what bidding tactics have been going on and what the price is rather than being drawn in to bidding up and up because you like to see your name at the top.

If ANYTHING looks fishy DON'T BID, there are plenty of items on Ebay, just wait for the next one to come around. Things to look out for are reluctant answers, stolen photo of item, vague discriptions etc.

Be VERY careful if the seller contacts you after the end if you are not the highest bidder with either a 'I've found another item' or 'the highest bidder pulled out' story to try and sell to you. As they may have bid against you with a 'false' id to see how high your top bid was. What little protection ebay gives to the buyer does not apply if you are not the highest bidder

The feedback system is not a very good indicator of what really goes on, so don't rely on 300+ good feedbacks as a guarantee of a good trader.

Hope this helps, Tom.

Re: Are people making "Conspiracy Theory" a-la Mike about sheating om E-bay, well I dont think so!

Message #3 Posted by [Frank](#) on 1 May 2002, 2:50 p.m.,
in response to message #1 by HP-Freak

Please email the detailed info if you can. I have had similar experiences but ebay has not been interested in investigating. Before they locked out email addresses, they were easier to detect, I could find one a week I was billing on with clear shill bidding, let alone indirect which as you indicated is harder to find. Ebay did take action when I had them red-handed on an auction I was bidding on at that time. Friends in other cities and countries would be even tougher to detect.

I would report this entire story to eBay

Message #4 Posted by [Mike](#) on 1 May 2002, 3:33 p.m.,
in response to message #1 by HP-Freak

You have far more proof than is necessary. eBay will cancel both bidder accounts. I'd bet on it.

About a year ago I got about 80 accounts deleted on ebay

Message #5 Posted by [Dave Hicks](#) on 1 May 2002, 3:35 p.m.,
in response to message #1 by HP-Freak

Basically, I saw 10 accounts running dozens of auctions with the same style and language and they were all bidding on each other's auctions. Ebay replied that yes, indeed, it was blatant and they cancelled all his accounts.

A few days later, I looked again. Identical auctions being run. 10 different user names all bidding on each other (all with above-zero feedback by the way.). Contact ebay again – same result.

Repeat 6 more times.

A few days later, looked again. Identical auctions – 10 more user accounts. At this point I

figured he had more energy than I did and eBay really shouldn't require my free services to track down such obvious cases so I stopped.

By the way, besides the shilling, his auctions were all fraudulent. A typical auction title would be something like "HP Makes the BEST Calculators" with pictures and specifications for an HP49G all in huge colorful fonts. Down at the bottom in a tiny tiny font in light grey it said something like "10fx". 10fx turned out to be the model number of some 4 banger that sold for \$7.95 at Target. Another ad would make you think you were bidding on a 21" NEC monitor but in fine print was the OEM model number of a Korean 14" monitor.

Oddly enough it was only the fraud in his auction descriptions that made me look around and find out he was shilling himself. The guy was actually pathetically bad at covering his tracks. He could have easily eluded me with some differing description styles and somewhat less cross-shilling. It made me realize how fragile ebay could be if someone was actually good at this.

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Calculator book?

Message #1 Posted by [Christof](#) on 1 May 2002, 12:42 a.m.

Two books are listed in the books section that would be of interest to me, but the contact email for the first bounces.

A Guide To HP Handheld Calculators and Computers W. A. C. Mier-Jedrzejowicz, Ph.D., Wilson/Barnett Publishing, Tustin CA, 1996. ISBN 1-888840-00-5

Customize your HP-28 W. A. C. Mier-Jedrzejowicz, Ph.D.

Is there a new email address or contact info?

thanks- Christof

Re: Calculator book?

Message #2 Posted by [Iqbal](#) on 1 May 2002, 5:55 a.m.,
in response to message #1 by Christof

You could contact Wlodek at :

wlodek@hpcc.org

I'm sure he could help you.

Re: Calculator book?

Message #3 Posted by [Todd G. \(Conn., USA\)](#) on 1 May 2002, 6:34 p.m.,
in response to message #1 by Christof

FWIW, the HP-28 book is no longer in print as far as I know. Copies may be available from the author, or eBay. The author should have copies of the Guide to HP Calculators book.

Todd

Re: Calculator book?

Message #4 Posted by [Christof \(US\)](#) on 2 May 2002, 2:05 p.m.,
in response to message #3 by Todd G. (Conn., USA)

But, what is the preferred contact method of the author?

Re: Calculator book?

Message #5 Posted by [Julián Miranda \(Spain\)](#) on 2 May 2002, 2:44 p.m.,
in response to message #4 by Christof (US)

You can e-mail him at the address Iqbal gave you wlodek@hpcc.org

He hadn't any "Customize your HP28" left but perhaps he has managed to get some.

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HP-41CV extended memory

Message #1 Posted by [jim](#) on 30 Apr 2002, 11:58 p.m.

Hi all,

I just picked up a near new 41CV to replace the one I lost about 15 years ago. I loved the calculator then and I still do. Can I extend the memory for a 41cv? If so which HP part # do I need? The manual says you can't but I seem to remember that there was an extended function/memory module for the 41CV.

Thanks,

Jim

Re: HP-41CV extended memory

Message #2 Posted by [Karl W. Schneider](#) on 1 May 2002, 1:21 a.m.,
in response to message #1 by jim

Jim --

Hello, bro'! About a month ago, I bought a 1986 HP-41CV in near-new condition in order to have one for the first time -- just couldn't afford the \$300 as an 18-year-old in 1981.

While the built-in regular main memory is indeed maxed out (319 registers) on the -CV and -CX, you can add to the -CV (and -C) "extended memory" with required "extended functions" using the "X Functions" Pac (ROM module) HP82180A. The "X Memory" Pac (HP82181A) provides additional extended memory. My unit has both these modules (sorry, not for sale!).

Data is stored in this extended memory in the form of files with types "program", "data", and "ASCII". The "X Functions" utilities are used to download information stored in extended memory to main memory for access and use.

The -CX came with built-in functionality of the "X Functions" and Time (HP82182A) Modules

and a text editor.

Additional info is available at this MOHPC website www.hpmuseum.org/hp41.htm

Re: HP-41CV extended memory

*Message #3 Posted by [jim](#) on 1 May 2002, 1:35 a.m.,
in response to message #2 by Karl W. Schneider*

Thanks Karl. I don't need the memory yet but will keep an eye out for the two modules.

Jim

Re: HP-41CV extended memory

*Message #4 Posted by [Johnny](#) on 6 May 2002, 5:27 a.m.,
in response to message #3 by jim*

Note that you *need* the X-func module to be able to use the X-mem modules. The X-func module provides 124 X-mem registers, and each X-mem module adds another 238, for a maximum of 600 (unless my memory fails me). (Max might be 620 or something perhaps?)

Re: HP-41CV extended memory

*Message #5 Posted by [db\(martinez,california\)](#) on 7 May 2002, 3:15 p.m.,
in response to message #4 by Johnny*

yep; it's 600 of which 598 are usefull. if you only have one file then two registers are taken up by the header. thats 298 coordinate pairs for a surveyor. i remember when that much memory seemed endless.....

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HP-55 Programming Pads

Message #1 Posted by [Michael Holley](#) on 30 Apr 2002, 9:55 p.m.

I have two 50 sheet HP-55 Programming Pads that I got for use with my HP-25 (in 1975). I have not seen these pads on the "Museum of HP Calculators" site.

You can see (and download) the images of the pad here.

http://swtpc.home.attbi.com/hp55/hp55_pad.htm

I have 300 dpi scans available.

Michael Holley

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82104A Card Reader Service Manual

Message #1 Posted by [Ty Rogers \(Texas\)](#) on 30 Apr 2002, 6:58 p.m.

Anyone know where I can get a 82104A Card Reader Service Manual?

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HP-25 Bugs

Message #1 Posted by [Michael Holley](#) on 30 Apr 2002, 11:14 a.m.

I have taken my HP-25 out of the drawer and after some new batteries it works fine. This is a very early unit, serial number 1509A13072. (Second week of production?) After I bought this unit I got a recall notice from HP about a defect in the calculator. I did not take them up on the repair.

I don't remember details but if you were using a stored program and saved a value (1×10^{-25} or something) in some memory location then switched to program mode, the calculator would crash. (It helped if you were standing on one foot.) I was able to reproduce the error back then but I don't remember the exact sequence now.

Does anyone have any information on this? I will be here pressing keys until I reproduce it.

Michael Holley

Re: HP-25 Bugs

Message #2 Posted by [Ellis Easley](#) on 30 Apr 2002, 4:25 p.m.,
in response to message #1 by Michael Holley

There is an HP-25 bug listed in the "Collecting and Using" "Bugs" section of the Museum that might be what you are talking about. Here is a [link](#). The HP-25 link is about half way down the page.

Re: HP-25 Bugs

Message #3 Posted by [David Smith](#) on 30 Apr 2002, 5:50 p.m.,
in response to message #1 by Michael Holley

If you store a number from 1e-10 to 1e-20 or do a trig operation that is within that range and then switch to PROGRAM mode, the display will go blank. Switch to RUN and it will say ERROR. I think that is the proper range. I know 1E-14 does it... I discovered this bug during an EE exam and reported it to HP. A couple of months later they sent me an addendum card (but no offer to fix my machine).

The defective code for this bug lies in the ROM0/display driver chip located under the LED display module. Its part number changed when the code was fixed in later machines.

Re: HP-25 Bugs

Message #4 Posted by [Ellis Easley](#) on 1 May 2002, 12:44 p.m.,
in response to message #3 by David Smith

Is it the fact that the display driver chip also contains a program ROM that is responsible for the random flashing display during program execution?

Re: HP-25 Bugs

Message #5 Posted by [David Smith](#) on 1 May 2002, 6:00 p.m.,
in response to message #4 by Ellis Easley

In a way... HP purposely flashes the LED display during program execution so that you know a program is running. They typically blank then unblank the display with each program step (this is discussed in an HP65 Key Note). I think the reason that the display (anode) driver chip also contains a firmware ROM is just to save packages. The chip package already had the required pins and the die was big enough to contain the ROM.

I originally thought that the ROM0 chip only contained display related firmware, but I have an early HP22 that is built on an HP21 circuit board (based upon its 00021-xxxxx part number) that is identical to an early HP25 circuit board in all respects except for the ROM0 chip. I also had an HP25 with a bad anode driver (ROM0) chip. When I swapped the chip with a different one, the machine developed a case of the ROM bug.

Re: HP-25 Bugs and "running" display

Message #6 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 1 May 2002, 9:16 p.m.,
in response to message #5 by David Smith

While I don't have my HP25 anymore (sigh!), I remember that the display patterns during the run of a program are not 100% random. Changing modes (such as FIX-SCI-ENG or DEG-RAD-GRAD) make the leftmost digit to show faint 2-1-0 values...

If somebody has a HP25 at hand, please experiment a little and report his/her observations.

Also "shaking" my HP25 produced a "rorE" display instead of the normal "Error"

Re: HP-25 Bugs and "running" display

Message #7 Posted by [Ellis Easley](#) on 3 May 2002, 1:55 p.m.,
in response to message #6 by Andrés C. Rodríguez (Argentina)

All scanned displays except LCDs make interesting patterns if you move either the source or your head. I think what you are describing with "Error" happens because as you move the calculator through space, the machine is energizing the digits one at a time, so the lit digits are not located relative to each other as HP intended. LCDs don't exhibit this because while they might be scanned, their response time is so slow that they don't return to "off" between refreshes. My battery ran out while I was trying your suggestion, so I'll try again later. But I've noticed that sometimes I see "my" numbers flashing by on the display during program execution. If I remember correctly, TI calculators always display "X" or whatever they call it, I think I remember one of their models recommended to include the "=" sign repeated different numbers of times to produce variable length "pause" displays (I don't see how that would work in conjunction with the constant feature, "=" should repeat the last operation?)

Re: HP-25 Bugs and "running" display

Message #8 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 3 May 2002, 5:34 p.m.,
in response to message #7 by Ellis Easley

The "rorE" display appeared AFTER shaking the calculator (perhaps a false contact produced a un-sync somewhere), but remained there with the calculator not in movement anymore.

As per some digits (positions) showing faint "2", "1" or "0", I remember it had to do with display and angular modes. What I remember after more than 20 years may be incomplete, and also my English may be not the best to describe the phenomenon, but I think it was (more or less) as follows:

Mode.....Running Display

FIX.....-2#####-##

SCI.....-1#####-##

ENG.....-0#####-##

Something similar happened with the angular mode, but I am not sure about the particular position of the not-so-random digits. Or it may be the other way around...

The "program" to show such display is just an endless loop:

01.....13 01 (GTO 01),

and you should set the display and/or angular mode before running it.

Re: HP-25 Bugs and "running" display

Message #9 Posted by [Ellis Easley](#) on 4 May 2002, 5:25 p.m.,
in response to message #8 by Andrés C. Rodríguez (Argentina)

Here's what I found: FIX -> "2" in rightmost digit, SCI -> "1" in rightmost digit, ENG -> "0" in rightmost digit, DEG -> "-" in leftmost digit, RAD -> "1" in leftmost digit, GRD -> "0" in leftmost digit.

Re: HP-25 Bugs and "running" display

Message #10 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 5 May 2002, 7:40 p.m.,
in response to message #9 by Ellis Easley

Ellis: Thank you for verifying this, I do recall the behaviour but cannot remember the exact relationship between displayed "noise" and calculator modes. By the way, also thank you for a very detailed explanation about HP25 memory chips (other thread).

Re: HP-25 Bugs and "running" display

Message #11 Posted by [Ellis Easley](#) on 4 May 2002, 5:25 p.m.,
in response to message #8 by Andrés C. Rodríguez (Argentina)

Here's what I found: FIX -> "2" in rightmost digit, SCI -> "1" in rightmost digit, ENG -> "0" in rightmost digit, DEG -> "-" in leftmost digit, RAD -> "1" in leftmost digit, GRD -> "0" in leftmost digit.

Re: HP-25 Bugs and "running" display

Message #12 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 5 May 2002, 7:40 p.m.,
in response to message #11 by Ellis Easley

Ellis: Thank you for verifying this, I do recall the behaviour but cannot remember the exact relationship between displayed "noise" and calculator modes. By the way, also thank you for a very detailed explanation about HP25 memory chips (other thread).

Re: HP-25 Bugs

Message #13 Posted by [Matthew Riehl](#) on 3 May 2002, 1:58 p.m.,
in response to message #5 by David Smith

I would like to read the HP-65 Key Note that has to do with the display output during a running program. Do you know where I can find it? I am working on something where this would be very useful.

Matt Riehl

Re: HP-25 Bugs

*Message #14 Posted by [Ellis Easley](#) on 3 May 2002, 2:07 p.m.,
in response to message #13 by Matthew Riehl*

Get Jake Schwartz's PPC CD-ROM set. It's a great bargain on a par with Dave Hicks' set. The link on the Museum's Resources page is slightly incorrect, the correct one is <http://www.waterw.com/~jakes/index.html>.

Re: HP-25 Bugs

*Message #15 Posted by [Michael Holley](#) on 30 Apr 2002, 9:42 p.m.,
in response to message #1 by Michael Holley*

Thanks for the links and responses. I was thinking about the 10e-11 to 10e-20 storage bug. Mine still has that defect, 20 years in a drawer didn't cure it.

Michael Holley

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Rebuild the Rechargeable Battery HP 82120A of the HP 41 series

Message #1 Posted by [William Tomaselli](#) on 30 Apr 2002, 9:01 a.m.

I have an HP 82120A Rechargeable Battery (HP 41 series) that needs to be professionally rebuilt. Could somebody tell me how can I rebuild the HP 82120A Battery pac?

Thanks a lot

William Tomaselli from Italy

Re: Rebuild the Rechargeable Battery HP 82120A of the HP 41 series

Message #2 Posted by [Ellis Easley](#) on 30 Apr 2002, 9:45 a.m.,
in response to message #1 by William Tomaselli

That is one of the most popular topics here. Read past discussions, including the archives.

Re: Rebuild the Rechargeable Battery HP 82120A of the HP 41 series

Message #3 Posted by [Ty Rogers](#) on 30 Apr 2002, 11:14 a.m.,
in response to message #1 by William Tomaselli

<http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/articles.cgi?read=254>

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28C, other bits.

Message #1 Posted by [koyote](#) on 30 Apr 2002, 4:25 a.m.

New to this forum, here goes:

Well, I've been collecting (in a lowbrow and low budget sort of way) various handhelds since my first TRS-80 PC1. I really am more of an oddball user, though- I tend to carry my machines around and subject them to things like -gasp- keypressing. ;)

So, I'm "back" in college. (Why is it that just because I'm 31 and an undergrad it is assumed that I'm "back" in school instead of having spent 12 valuable years living before finding a desire to go?) I've recently acquired- been strong armed into buying, actually- a ti89. Very nice machine for some things, though I grew up on tandy/sharp keyboards and shifting constantly to type letters is incredibly annoying.

I also recently acquired an hp-28c. Guess which gets used more? This 28 is fantastic! Granted- plotting is painfully slow, and a lot of calculations take entire seconds. This has already generated a few laughs from people the age of the calc. RPL is a joy compared to tibasic, or tandy basic for that matter. I think the elisp warped my brain.

For current purposes, I think a lot of what I need can still be covered by this wonderful beast- though I can't imagine what hp was thinking not allowing for external data storage.

So, is it worth tracking down a 28s?- even with a 48gx (I'd be tempted to trade the 89 on a gx with printer or some other addons) I think the 28 would see plenty of daily use. And, how do I find more manuals without insane ebay prices? I saw 4 manuals go for over \$50 a couple days ago! (I've got stats, users guide, and ref.)

Cheers, Christof

Re: 28C, other bits.

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 30 Apr 2002, 7:04 a.m.,
in response to message #1 by koyote

Hi, Christof (Koyote?)

There are some application books and other relative literature that can be found [here](#). Plenty of good stuff, believe me.

About the 28S: it has more memory (32K against the poor 4K available at the 28C), but still does not allow external storage to be recovered. I mean that if you have an IR receiver and decoding SW, you can "print" your programs and data to an external device, but you'll only be able to handle this data, not to send it back to the calculator (I know you know that...). I use a program (INPRT) that allows the HP48 to receive data from other HP calculators, so I save all my 28 stuff as recorded and printed data.

The HP28S has some few operating differences that allow it to be more friendly in use, but both share the same arith and algebraic power.

And the HP48... Well, there is so much to say about them that I invite you to read some posts in here. In a few words: a great piece of something.

Cheers.

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RPN

Message #1 Posted by [fred](#) on 30 Apr 2002, 2:47 a.m.

Hello !!! I'm searching for an algorithm of transcription from algebraic to Reverse Polish Notation (Visual Basic or Pseudo code). Someone can help me , please ?

Re: RPN

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 30 Apr 2002, 7:12 a.m.,
in response to message #1 by fred

Hi;

about four years ago I worked with something realated to this, say, a syntax error-checking for algebraic expressions. It was written in (gasp!) C++, but there is something in ML or CLEAN (I worked only in C++). I prefer C++, but must admit ML and CLEAN final codes are faster and lighter.

Anyway, I'll have to look for them in my (gasp!-II) nine HD's (>150 GBytes)! Time to seek for lost stuff...

Cheers.

Re: RPN

Message #3 Posted by [Holger Veit \(DE\)](#) on 30 Apr 2002, 11:04 a.m.,
in response to message #1 by fred

Parse the algebraic expression into a tree - easily done with a parser generator like YACC - and traverse the tree in postfix order. Stuff one usually writes down from scratch in half an hour. Basic stuff from almost any algorithmic CS course, usually asked for as a homework.

Re: RPN

Message #4 Posted by [Keith](#) on 2 May 2002, 12:02 p.m.,
in response to message #1 by fred

The rules below are a rewrite of those given in old Burroughs large systems manuals. They have worked for me in both Algol and Cobol. I do not know what "simplified" means.

Burroughs large computer systems (starting in the early 1960's) and their Unisys successors are true stack machines. All arithmetic (and other) operations are done on the top of the stack. RPN is native to the machines.

The system manuals used to (they no longer do) describe the process for converting to RPN because this approach was novel to most users. Since a user cannot program the stack directly (no assembler), but only via compilers, this process was just background information for most users.

Simplified Rules for the Generation of a Polish String:

Tokens are pulled from the algebraic expression from left to right.

Tokens are placed in the Polish string from left to right.

The delimiter list is a last in, first out stack.

Apply the following rules until the end of the algebraic expression is reached.

1. Pull a token from the algebraic expression.
2. If the token is a variable or a constant, then place the token in the Polish string and go to step 1.
3. If the token is a "(", then place it in the delimiter list and go to step 1.
4. If the token is an arithmetic or boolean operator and the last-entered delimiter list token is an operator of lower priority, or a "(", or the delimiter list is empty, then place the token in the delimiter list and go to step 1.
5. If the token is an arithmetic or boolean operator and the last-entered delimiter list token is an operator of equal or greater priority, then remove the token from the delimiter list and place it in the Polish string. Continuing to consider the operator token from the algebraic expression, go to step 4.

6. If the token is a ")", then remove tokens from the delimiter list and place them in the Polish expression until the matching "(" in the delimiter list is encountered. Discard the "(" from the delimiter list and the ")". Go to step 1.

If there are any tokens remaining in the delimiter list, remove the tokens from the delimiter list and place them in the Polish string.

The Polish expression is complete.

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Value of HP 200A audio oscillator??

Message #1 Posted by [jake wimberley](#) on 29 Apr 2002, 10:06 p.m.

Hello... I am a student in EE at Mississippi State, and a licensed radio amateur. Here on campus we have a ham radio club, which we are in the process of rebuilding after three years of downtime. The other day we were moving all of our equipment, along with lots of antique radio and test gear, from storage to our new station. I found an old HP 200A oscillator [HP's very first product] in good condition, at least cosmetically...I didn't test it to see if it worked. We are hoping to sell all the old stuff and use the money to buy some solid-state equipment to use instead. I told everyone I would try to see how much the HP 200A was worth... I figured it might be somewhat valuable, at least to an HP fanatic. If anybody has any idea how much it might be worth, please email me at: jcw141@msstate.edu.

Thanks, Jake Wimberley, K4ZAU

Re: Value of HP 200A audio oscillator??

Message #2 Posted by [Andreas Stockburger \(Germany\)](#) on 30 Apr 2002, 4:45 a.m.,
in response to message #1 by jake wimberley

Hi,

Perhaps this helps ...

[http://www.vaxxine.com/phil/scopes/HP\\$.htm](http://www.vaxxine.com/phil/scopes/HP$.htm)

Andreas

Re: Value of HP 200A audio oscillator??

Message #3 Posted by [Ren](#) on 30 Apr 2002, 9:32 a.m.,
in response to message #1 by jake wimberley

Can I have it?

Can I? huh?

Oh, please, Please, PLEASE give it to me! I'll take real good care of it. I'll clean it up, I'll test the capacitors and tubes and get it working just like new. Then I'll convince my wife that it BELONGS on the mantelpiece, and I'll dust it every week and polish its knobs. I'll even pay for packing and shipping! (and shrink wrap- don't forget the shrink wrap B^)

Seriously, I'd be interested, but I probably couldn't afford it. Do a web search for "boatanchors", that is what aficionados of tube type equipment call their passion. There is also a newsgroup to ask on. I think it is called rec.antiques.radio+phono just check the antique newsgroups for the proper spelling. There may also be a boatanchors newsgroup under the rec.radio.* hierarchy, oh yeah, you're in a ham radio club, so I assume you've already asked on those newsgroups?

Re: Value of HP 200A audio oscillator??

Message #4 Posted by [Ellis Easley](#) on 30 Apr 2002, 9:34 a.m.,
in response to message #1 by jake wimberley

I was interested in one on Ebay several years ago that had been modified - an additional control had been added to the front panel. It was listed as an antique and sold for about \$150. I would try to play up the "end of an era" angle - maybe get a testimonial from one of the family heirs - and have a high reserve price, relisting as many times as necessary to find AT LEAST TWO sentimental old fools (or young ones). Find an image of the college thesis that its design is based on to include in the auction listing. Throw in a copy of the movie "Fantasia" since it is part of the legend.

update on 200A

Message #5 Posted by [jake wimberley](#) on 1 May 2002, 11:54 p.m.,
in response to message #1 by jake wimberley

I was at the station again today, and realized it's actually a 200C, not a 200A, although it seems to be the same product. My bad. I would assume this makes it somewhat less valuable.

Thanks, Jake K4ZAU

Re: update on 200A

*Message #6 Posted by [Ren](#) on 2 May 2002, 1:21 p.m.,
in response to message #5 by jake wimberley*

I own an HP-200C (or D), and I saw a photo of the 200A in an article in Electronics Now a few years back. The 200A had square corners and was about twice the front panel area of my "newer" model. I bought mine for \$35, though I've seen \$100 asked. I donated one of my older HP signal generators (a sister model to the one I have now, but with a slightly different frequency range) to a grade school about 3 years ago. (So they could hook a speaker to it and make siren sounds).

Re: update on 200A

*Message #7 Posted by [Ellis Easley](#) on 3 May 2002, 2:49 p.m.,
in response to message #5 by jake wimberley*

The 200A has the controls on the broader side of the cabinet with the big frequency dial in the middle and the range and output level controls on either side. I'm familiar with the 200CD which is the model that was in production till the 80's and a similar model 201C which had a narrower frequency range (20 Hz - 20 kHz in three ranges vs. 5 Hz - 600 kHz in 5 ranges for the 200CD), better frequency accuracy (I guess because the dial only covers 10X vs. 12X), less hum, more power output and a better output attenuator. Both of these have the controls on the smaller side of the cabinet with the big frequency dial on top and the range and output level controls below. Which of these styles describes your 200C?

There is a picture of an HP-200A in "Analog Circuit Design", edited by Jim Williams of Linear Technology. It is on page 44 in an article by Williams about how he tried to improve the design with modern semiconductors on a rainy day. The article also has excerpts of William Hewlett's 1939 Stanford thesis. This is a great book for anyone interested in electronics. It's not a textbook but a collection of articles by people who have worked in a number of areas of electronics design. One of my favorites is by Bob Pease of National Semiconductor, who started out at Philbrick, he explains why nobody was able to copy the Philbrick P2 operational amplifier module successfully. Pease has his own great book, "Troubleshooting Analog Circuits". Both books are published by EDN.

I saw a 200CD in a scene in a recent TV series, "Total Recall 2070". It was in a makeshift lab where the ultimate android was developed, presumable around the year 2070. I believe these oscillators will still be working then! (only the leather handles will have disintegrated)

Re: update on 200A (HP Audio Signal Generator)

Message #8 Posted by [Ren](#) on 3 May 2002, 3:26 p.m.,
in response to message #7 by Ellis Easley

Ellis, it has been a couple years (or more) since I fired up my HP Signal Generator, so I'm not sure of the Model Number. Going by your definition, I have the 200CD, it was a 200C that I donated to a grade school. I was moving at the time and had to cut back on some of my "stuff". I paid \$35 each for both at a college auction. Thanks for correcting me. Now what was the even smaller solid state model? 201CD?

Re: update on 200A (HP Audio Signal Generator)

Message #9 Posted by [Ellis Easley](#) on 3 May 2002, 4:56 p.m.,
in response to message #8 by Ren

I had spent some time writing one of my exhaustive treatises in response to you, then after previewing it and seeing a error, I hit the back button and all my work had dissapeared! I quickly hit the forward button and Windows or IE or someone informed me that the page had expired! Probably did us all a big favor! Short answer - I think you mean the 204C or the 204D or the 209A, these are all small, solid state, and the same size and style as the 403B AC voltmeter, apparently HP frequently sold them in pairs.

I should have remembered to copy the text I had written in case what happened, happened, since it has happened before.

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information overload

Message #1 Posted by [jr\(italy\)](#) on 29 Apr 2002, 3:09 p.m.

See the sellers comments on this 42s <http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1349071709> does it work or not??

v/r

jr

Re: information overload

Message #2 Posted by [Frank Glitz](#) on 29 Apr 2002, 4:54 p.m.,
in response to message #1 by [jr\(italy\)](#)

Nothing about "working or not" said there. It's just a "cut and paste" copy of the description at hpmuseum.org. If it's not authorized by Dave, I'd consider it kind of copyright violation!

Frank

Re: What the seller said

Message #3 Posted by [Your Name](#) on 29 Apr 2002, 9:43 p.m.,
in response to message #1 by [jr\(italy\)](#)

I just asked him and he said that the picture was taken from one of the calculators. He is selling two HP-42S. How about that!!!

QUESTIONS ASKED: Can you tell me anything about the condition of this calculator? Is the picture of the actual calculator? In that case is it MINT, Very Good, Good condition? If not, describe Front, Back & Display with respect to scratches, scuffs and marks etc.. Does it have any accessories like manual and charger etc. Does it come with the original box?

SELLER WROTE: QUOTE "I have two of the calculators listed, and I used the same photo for both auctions. It is one of the actual calculators. They both come with the brown plastic sleeve type case. There is nothing else included. They are in remarkably good shape, and I would consider them mint." UNQUOTE

Re: What the seller said

*Message #4 Posted by [glynn](#) on 29 Apr 2002, 10:23 p.m.,
in response to message #3 by Your Name*

Pretty darn nice of that seller, to display the same exact contents in the registers, so that we may compare his calculator EXACTLY with the one we see here at the museum. ;-)

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HP 35 on Ebay - clear record

Message #1 Posted by [Anonymous](#) on 29 Apr 2002, 11:57 a.m.

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1347923299>

Re: HP 35 on Ebay - clear record

Message #2 Posted by [Annoying mouse](#) on 29 Apr 2002, 1:37 p.m.,
in response to message #1 by Anonymous

Perhaps, but Ebay has so much potential for scams who knows?

Re: HP 35 on Ebay - clear record

Message #3 Posted by [Ellis Easley](#) on 29 Apr 2002, 2:11 p.m.,
in response to message #1 by Anonymous

I saw this before the auction ended, I forget what the price was at that time. What I wondered was that I thought the Classics always came with a hard case. Is this a warranty replacement unit (packed with leather case, AC adapter and pocket guide only)? I notice it is a type 4 - did HP drop the hard case as a standard accessory later in the program? I wonder if the seller is going to report his \$1900 capital gain?!

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New eBay Record ? HP-16C

Message #1 Posted by [John Smith](#) on 29 Apr 2002, 9:28 a.m.

I saw this eBay auction a few days ago, and though I'm fairly used to eBay prices, this one took me by surprise:

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1345429808>

Now, after thinking about it, several questions come to mind, and I thought I would like to know your opinions, namely:

- 1) Is this a new record for an HP-16C on eBay, or have any of you ever seen even more preposterous prices ?
- 2) Is it for real, or may it be part of an elaborate scam, where the seller buys its own item at such extremely high price only to sell it again a few days later, hoping people will recognize it was the one sold for so much and then be happy for winning it at half that money, yet still two times its normal price ?
- 3) I guess part of its high price is the announced fact that "... It is still in the original box with the original shrink wrapping, i.e. it has never been opened." If this is so, should it be assumed that opening it would immediately devalue its value ? If so, when the buyer wins it, he/she must not open it lest it will instantly get devaluated, and so must accept on faith or nearly so that inside there actually is a new, working HP-16C ?
- 4) What if the buyer opens the shrink-wrapping only to find it all is a scam and the calculator inside is not what it purported to be ? How can he effectively complaint to the seller ? The seller can simply answer that that one isn't his calculator, and the buyer is trying to deceive him by getting a refund for another calculator instead.
- 5) If the seller hasn't ever opened the shrink-wrap, how can he know anything about the calculator inside, its cosmetics, its working order, anything ? How can he say that the one being returned is or isn't the original one inside ?

6) If the buyer cannot open the shrink-wrap without devaluating the item, does he have to sell it to another buyer also 'on faith' ? Shall all people ever selling or buying this item blindly trust there's a mint, working HP-16C inside, without ever looking ?

It really puzzles me ! Thanks for your wise opinions on the subject.

Re: New eBay Record ? HP-16C

Message #2 Posted by [Andreas Stockburger \(Germany\)](#) on 29 Apr 2002, 10:34 a.m.,
in response to message #1 by John Smith

Hi,

See this: I Thought the 500 Euro I was willing to pay were crazy ...

<http://cgi.ebay.de/ws/eBayISAPI.dll?ViewItem&item=2018338402>

We have a expensive hobby ...

Best regards

Andreas

Re: New eBay Record ? HP-16C

Message #3 Posted by [doug](#) on 29 Apr 2002, 10:37 a.m.,
in response to message #1 by John Smith

Yes they sell higher than that. But if you categorize that as preposterous, what is this? Insane? \$583 more for an HP-67. Not \$583 for an HP-67 but in addition to what the HP16C sold for.

<http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=1331462967>

Nothing wrong if that is what they really wanted. Ever seen anyone pay \$75,000 for a 57 Chevy. The car isn't worth that ever. Some sell for multi-millions. None of them are worth that. It is like I wrote on this forum before, none of these calculators are really worth more than \$4.95. That is what the components are actually worth. But that has nothing to do with this, or a \$75,000 57 Chevy. It is what it took to get the other person to let go of what they had that they wanted. That is what it is always about. A piece of canvas with paint on it isn't worth anymore than \$0.50. None of them. Don't care who painted it. But it just takes millions to get someone to let go of a genuine Rembrandt.

Re: New eBay Record ? HP-16C

Message #4 Posted by [Ren](#) on 29 Apr 2002, 12:53 p.m.,
in response to message #1 by John Smith

In regards to shrink wrap... Shrink wrap equipment is available in any small city that has a manufacturer. It would be easy enough for any dishonest person to put a new shrink wrap on something that has been opened but will go for a higher price if it is advertised as "still in shrink wrap". I don't know, but I suspect you could buy used shrink wrap equipment on Ebay. If you are interested I could sell you any CD-R I've burned or failed to burn, "Still in shrink wrap"! b^)

Re: New eBay Record ? HP-16C

Message #5 Posted by [Richard Garner](#) on 29 Apr 2002, 4:42 p.m.,
in response to message #1 by John Smith

I hope this person is getting what they are paying for. Out of all the HP calculators, add-ons and peripherals, I have bought new and off the shelf in stores, they never came shrink wrapped. Did HP ever shrink wrap?

Re: New eBay Record ? HP-16C

Message #6 Posted by [Raymond Hellstern \(Germany\)](#) on 29 Apr 2002, 6:20 p.m.,
in response to message #5 by Richard Garner

Hi,

I bought many new HP calculators during the last 22 years. Nearly none of the calcs themselves were shrink-wrapped, except for some of the clamshell models, where the inner plastic form holding the calc & acc's was shrink-wrapped indeed.

But many of the manuals for the calcs were shrink-wrapped when I got them, and many still are;-)

Raymond

I think you've watched "Conspiracy Theory" one too many times

Message #7 Posted by [Mike](#) on 29 Apr 2002, 10:07 p.m.,
in response to message #1 by John Smith

What's with all the wasted time specualting on these conspiracy theories?

\$1900+ [Red Dot](#)

\$1900+ [HP-35 Version 4](#)

\$1000+ [Stainless HP-01](#)

\$1200+ [Gold HP-01](#) And it's not even over

There are lots of people out there that have plenty of money to get what they want.

It's much better to consider [occam's razor](#), than develope a bunch of conspiracy theories, don't you think.

BTW, regarding shrinkwrap. Whenever you see shrinkwrap, that does not guarantee that it is even original. You need to be sure to ask. Many companies and and do apply shrinkwrap after something has already been opened.

I have received shrinkwrapped books and manuals that were obviously opened before.

Re: I think you've watched "Conspiracy Theory" one too many times

Message #8 Posted by [John Smith](#) on 30 Apr 2002, 4:40 a.m.,
in response to message #7 by Mike

Mike wrote:

"What's with all the wasted time specualting on these conspiracy theories?"

Being a seller, it's plain that you're taking my humble opinion as "yet-another-attack-on-innocent-eBay-sellers", like yourself, but that's not the case.

You don't seem to get the point. It's not that I suspect any conspiracy at all, it's simply that the 'shrink-wrap' nature of the beast makes me suspicious.

Why ? Because I've bought many, many HP calculators new, at the shop, since the times of

the HP-65 onwards, and never, even once, did they come shrink-wrapped. The manuals, yes. The calculators, never. And this applies specially to the Voyager series, HP-16C included.

Have any of you purchased one, directly from the shop, where the calculator was indeed shrink-wrapped ? I would like to know.

And anyway, regardless of it being a scam or not, my questions originally dealt with the theoretical case of what should you do if you buy such a 'shrink-wrapped' item, whether opening it or not, and what the consequences are in either case.

Re: I think you've watched "Conspiracy Theory" one too many times

Message #9 Posted by [Luca Passaggio](#) on 30 Apr 2002, 9:07 a.m.,
in response to message #8 by John Smith

I have purchased several new HP calculators in the last 20 years in Italy and they never were shrink-wrapped.

Regards,

Luca

Re: I think you've watched "Conspiracy Theory" one too many times

Message #10 Posted by [Frank](#) on 1 May 2002, 2:58 p.m.,
in response to message #8 by John Smith

I'd swear the HP16c I bought from Office Depot in the early-mid 90's for \$35 or so dollars (last one), in the box which seemed complete had the calculator and manual all shrinkwrapped together in the box, unlike the 15c I bought new in the early 80's which was in pink foam bag. Too long ago on the 16c, however and some chance Office Depot re-wrapped.

Are you sure?

Message #11 Posted by [Dave Hicks](#) on 1 May 2002, 3:18 p.m.,
in response to message #10 by Frank

The 16C was in production until 1989 and it seems like a rather specialized calculator to be selling at Office Depot.

Although I suppose that could be why they still had one in stock years later.

Re: Are you sure?

Message #12 Posted by [Frank](#) on 1 May 2002, 3:33 p.m.,
in response to message #11 by Dave Hicks

Yep, sure about where I got it, store is still on *University* drive here in Huntsville, a few blocks from the Univ. of Ala. in Huntsville which has a large Engineering and Grad School. Huntsville has the largest per capita Ph.D. Pop purportedly by some media in US due to MSFC, Redstone and Contractors and Univ. One of my better buys by the way in addition to a HP25 for 10\$ working with case and charger at a major Flea Market in Miss. in the mid 80's, the 16c was a very fast grab out of a wired cart up front at OD! Frank (one of those piled higher and deeper!)

Piled Highers

Message #13 Posted by [David Smith](#) on 1 May 2002, 5:46 p.m.,
in response to message #12 by Frank

Actually Los Alamos, NM has the highest per capita of PHD's, while those in Santa Fe get higher...

Re: Piled Highers

Message #14 Posted by [Frank](#) on 2 May 2002, 8:31 a.m.,
in response to message #13 by David Smith

Yes, I beleive the local media reports the highest in several areas of the country, like here depends on the specific measures and Geo area. Is there a national source with a table for comparison?

A classic example

Message #15 Posted by [Mike](#) on 1 May 2002, 3:40 p.m.,
in response to message #10 by Frank

Like I said, many stores have their own shrinkwrap machines to repackaging returns. Your 16C might have just been a return and the store did not know whether it was shrinkwrapped so probably ran it through their machine.

Re: A classic example

*Message #16 Posted by [Frank](#) on 2 May 2002, 8:33 a.m.,
in response to message #15 by Mike*

Could be, though it was squeaky clean new. Sold it on the old usenet group handhelds in fall of 94, course I opened it in the couple of years I had! That does make at least 2 however! Frank

Not at all

*Message #17 Posted by [Mike](#) on 1 May 2002, 3:38 p.m.,
in response to message #8 by John Smith*

I did not take this as an attack on sellers. I simply meant that is a lot of conjecture for no good purpose. It is always better to take the "simplest" correct supposition.

I have an engineering. I see technicians and young engineers (all the time) trying to come up with exotic reasons for problems pr exotic glamorous solutions to problem. I always tell them, just look for the simple solution. It will usually be right.

That's all I was trying to say.

Re: I think you've watched "Conspiracy Theory" one too many times

*Message #18 Posted by [Ren](#) on 30 Apr 2002, 9:14 a.m.,
in response to message #7 by Mike*

Maybe you were replying to me and not John Smith... In that case, I've only seen parts of "Conspiracy Theory" and never the entire movie. As I grew up I enjoyed getting a chance to read "Mad" magazine. And if there is only ONE socially redeeming aspect of that magazine, it is this. It teaches kids to be aware/suspicious that people/advertisers/television-movie-magazine producers (including themselves) are out to take advantage of you, so always look for what is in it for them, and what other meanings/motives may be hidden in their words/actions. One of my favorite examples was an interpretation of abbreviations used in Classified Ads...in a Real Estate ad, it said "2 car gar att", Mad graciously pointed out that COULD mean "2 carloads of garbage in the attic" B^ So, it helped teach me to view eBay write ups with suspicion. My wife and I are looking at buying a house. As we inspect a property, she is often reminded of the verse in Billy Joel's "Piano Man", "(Name forgotten) is a Real Estate Novelist...". <taking a bow, then stepping off soap box>

Re: I think you've watched "Conspiracy Theory" one too many times

Message #19 Posted by [Frank \(Knight\)](#) on 1 May 2002, 2:54 p.m.,

in response to message #18 by Ren

Which once again brings up the point who is John Smith. Seems like he said his name was something else, unless we have a new real one. Will the real "John Smith" please stand up?;+}

Mike!, think whatever you want! but people are being cheated on E-bay everyday!

Message #20 Posted by [HP - Freak](#) on 1 May 2002, 1:58 p.m.,

in response to message #7 by Mike

How about this Story:

This happened to me last month:

Story Begin

I bought several items from this guy in the US (Seller-A). Without being aware of it at first I also bought things from another seller (Seller-B) living in the same town. I don't know why, but I started to get suspicious and when I checked past auctions including my own I saw that those two guys (well actually a female and a male) was repeatedly bidding on each other auctions. Also noticed that they were ALWAYS bidding early and also making many bids in the same auction spread over several days. (Having been on E-bay for a few years I know that to start a bid war is a very good way of teasing others to bid higher.) Also noticed that they most of the times came as runners up or lower. Another important observation was that they NEVER bid in the last minute. (Mind you, they actually bid in the last minute when they bought things from other e-bayers in other parts of the US) (E-bay Observation: Last minute bid will increase your probability of acquiring an item at a reasonable price. Bidding early will only make you win if you are willing to pay several times the expected value or in the rare case the item was overlooked by others because of spelling mistakes in the listings.)

Further investigation made it probable that five(5) E-bay user names was being used in this scam. I could confirm that three of the user names were from the same town. The other two was repeat bidders but I could not confirm their location. But one funny thing is that one of these unconfirmed location bidders was buying a very rare collectable of which I had observed one of the first sellers (Seller-A) buy! I have never seen anybody else buy these things before so I found that increasingly suspicious.

{if you already are equipped with a healthy skepticism to obstinate people}

then Go to Story-Continued

Digression: From my past history here in Europe (going back 10-20 years) people of different political opinion felt themselves being kept under surveillance (harassed in many ways, phone being bugged, followed around, secret house searches, ...) During that time everybody that brought up these suspicions to the public eye were ALWAYS being attacked by certain people as being PARANOID and making all these CONSPIRACY THEORIES and all. TODAY we know the truth. Because they left so much information in their archives that they were not able to get rid of it before it was too late. The surveillance conducted against people of different opinion went far beyond their imagination. Many people have been able to look in to their "SECRET" files and were absolutely choked by the detail of the information. Some found that people they were close to had been constantly reporting on them. And who do you think up through the years were the ones calling other people paranoid. THEY WERE THE ACTUAL PEOPLE RESPONSIBLE FOR ALL THE ILLEGAL SURVEILLANCE.

Based on the E-bay story above MR Mike (ipscone@msdsite.com) he would call these facts share coincidences and refer to me as paranoid. Sure he can call and refer to me with whatever he likes but I would simply refer to him as an E-bay SELLER.

Story-Continued:

Some weeks ago it happened so that one of the items in a batch of several (from Seller-A) was misplaced and he had to send an extra package nearly two weeks later. (Be aware that for each item I buy on E-bay I put a unique personal identification code for easier handling) It so happens that to my great surprise Seller A had mixed things up and ACTUALLY put the code used for an earlier transaction made for an item bought from Seller-B.

THIS IS A 99.99% CONFIRMATION THAT SELLER-A and SELLER-B (operating with two different addresses but in the same city) IS THE SAME PERSON AND ALSO BIDDING ON HIS/HER OWN AUCTIONS.

I am sure this proof is once in a e-bay usertime (/lifetime) and I will never again get a confirmation of cheating as obvious as this.

Story End.

Moral: I want people to question those people that scream up against others being paranoid. On the other side you should NEVER accuse anybody of cheating unless you can prove that your suspicions are true. In most cases (95%?) you will not be able to prove foul play.

I also believe that E-bay should use more money and resources on the protection of the buyer. A SELLER SHOULD NEVER BE ALLOWED TO LEAVE FEEDBACK AFTER THE BUYER. That should help a lot for a starter.

As for myself I am happy with more than 90% of the transactions made on E-bay USA and have met some really nice & friendly guys over there. And not to forget, I LOVE THE HP-MUSEUM!!!!

This completes my post from a faraway country. Buy for now! ;-)

Of course they are

*Message #21 Posted by [Mike](#) on 1 May 2002, 3:47 p.m.,
in response to message #20 by HP - Freak*

I was not trying to say that people don't get cheated. I've been cheated myself.

My point was that if one is trying to come up with an explanation (solution) to a problem **AND**

has no reason to choose one solution over another, that the simplest explanation is most likely the correct solution.

How about the Hyacinth Bucket theory

*Message #22 Posted by [Dave Hicks](#) on 30 Apr 2002, 12:46 a.m.,
in response to message #1 by John Smith*

of ebay buying? Where spending more money gives you more bragging rights?

Re: How about the Hyacinth Bucket theory

*Message #23 Posted by [Ellis Easley](#) on 30 Apr 2002, 8:50 a.m.,
in response to message #22 by Dave Hicks*

But Hyacinth wasn't "best pleased" when she learned that her prize kitchen counter top was free for the taking at the dump! (The episode with the salesman played by "Mr. Lucas" from "Are You Being Served?") I love that the seller of the recent \$1900+ HP-35 version 4 gave the provenance in the auction listing. BTW, how come that HP-35 ("NIB") doesn't include the hard case?

Re: How about the Hyacinth Bucket theory

Message #24 Posted by [Frank](#) on 1 May 2002, 3:27 p.m.,
in response to message #22 by Dave Hicks

Well, I'd rather blow money going into space, well OK, orbit anyway, than having the calculators that went there!

Re: How about the Hyacinth Bucket theory

Message #25 Posted by [Thibaut.be](#) on 2 May 2002, 9:02 a.m.,
in response to message #22 by Dave Hicks

Well, as long as Sheridan likes it...

Re: How about the Hyacinth Bucket theory

Message #26 Posted by [Ellis Easley](#) on 3 May 2002, 2:00 p.m.,
in response to message #25 by Thibaut.be

Yes! I got hooked on the series hoping to catch a glimpse of Sheridan! Someone should make a spinoff about Sheridan - he needn't appear, just a different group of people to deal with him by telephone.

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PC editor for HP-48/49

Message #1 Posted by [Jeff_G](#) on 29 Apr 2002, 7:49 a.m.

I've been transferring equations and programs from my HP-48 to my PC and back again. My problem is that I'm using Notepad as mu PC editor and many of the HP-48 symbols aren't represented within Notepad.

Is there a PC editor designed to handle all the ASCII characters on the HP-48? Ideally, I'd like to write my equations and programs on the PC and tranfer them to the calculator later.

Thanks,

Jeff

Re: PC editor for HP-48/49

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 29 Apr 2002, 8:24 a.m.,
in response to message #1 by Jeff_G

Hi;

there is a translation code that allows you to select if the calculator (HP48) will convert some 1-character code into 3 codes (say, right-arrow into /->) when downloading (HP48->PC) and back when uploading (PC->HP48). This feature is available at the IO Menu. Look for it - Translation Code - in the HP48 Owner's Handbook (mine is not in hands, now), and in the Advance User's Guide (AUG). Anyway, if you download any file and load it back using Notepad, I'm almost sure it will not convert ASCII-codes inadvertently.

Hope it helps.

Cheers

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HP-38C + NiMH Batteries: Bad Idea?

Message #1 Posted by [Richard W. Smith](#) on 28 Apr 2002, 8:30 p.m.

Having a nice 38C with no battery I tried the AA alkaline with aluminum foil "trick" with the cells in the correct polarity position. Worked fine. Got too ambitious and tried the same with a pair of 1650mah NiMH batteries. Correct polarity again. They charged up nicely and ran the calc with no problems. For a while that is. After about an hour the display froze. Turned the calc off then on. Nothing. Even the double alkaline does not work. Have I fried some internal component? Simple thing like a resistor? Or have I baked something that can't be replaced.

Thanks

Re: HP-38C + NiMH Batteries: Bad Idea?

Message #2 Posted by [David Smith](#) on 28 Apr 2002, 9:34 p.m.,
in response to message #1 by Richard W. Smith

The batteries are not the problem... I have used NiMH cells for years in all my HP calculators. You can get over 1800maH cells in the AA package. They can take three times as long to charge as the originals, but run for three times longer.

Re: HP-38C + NiMH Batteries: Bad Idea?

Message #3 Posted by [Richard W. Smith](#) on 29 Apr 2002, 12:01 a.m.,
in response to message #1 by Richard W. Smith

After sitting for 24 hours, the 38C with alkaline batteries seems to work OK. Don't know what happened. Still would like to know if NiMHs are ok for this calc. David Smith has indicated no problems. Are the Spice Continuous Memory calcs an exception?

Re: HP-38C + NiMH Batteries: Bad Idea?

*Message #4 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 29 Apr 2002, 8:22 a.m.,
in response to message #3 by Richard W. Smith*

If possible, it is VERY MUCH advisable to charge the NiMH outside your HP38, with an external (NiMH specific) charger.

The recharge cycle for NiMH is different than for NiCd, and you will also avoid the risk of "frying" some internal parts of your calculator if anything goes wrong with the internal charging circuit. A simple dirty contact or momentary misconnection will allow more than 8 volts inside the calculator, and the chips will be damaged irreversibly.

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Misc HP calculators

Message #1 Posted by [Gus](#) on 28 Apr 2002, 7:39 p.m.

Dear hp group,

I had a good friend of mine who recently passed away. He had an extensive collection of hp calculators and items that he has left to my discretion. I plan to keep some of the more conventional items for my own use, yet I do notice there are some duplicates and some older models that are more collector's items and not really useful to me in my engineering applications. What is the best way to receive a fair price or trade for items? Can that be accomplished here or at some auction site like ubid or ebay?

Gus

Re: Misc HP calculators

Message #2 Posted by [Richard Garner](#) on 28 Apr 2002, 11:30 p.m.,
in response to message #1 by Gus

eBay is going to be your best bet. I have been cleaning out alot of my HP calcs and add-ons, and it has been well worth it. Even after splitting the fees and profits with a friend that does all of the posting, collecting money, and mailing work, I have come away with a tidy little sum. You will get more if you have manuals and original boxes. Watch eBay for about a week or two and jot down the starting and ending prices and use those as a basis for what you could be receiving as profit. Always remember that it is not going to always work out the first time up and depending on how much you will be putting up at one time and the time it is bid on, (7 days seems to work out best), it will take about 20 to 30 days for things to really get rolling.

Re: Misc HP calculators

Message #3 Posted by [btokarczyk](#) on 29 Apr 2002, 2:00 a.m.,
in response to message #1 by Gus

I agree with Richard, the prices on e.bay should get you the market-price version of your posting with minimal efforts, especially if you don't have much info on the older items. In addition to homework on e.bay prices, I would also check the hp site collector's corner to set some minimums (in the bidding process). The members here may also be of some assistance as to the worth of some less available units on auction sites (the hp site values generally reflect these valuations also).

Do you have any 41 series calculators?

Bryan

Re: Misc HP calculators

Message #4 Posted by [Ron Ross](#) on 29 Apr 2002, 7:53 a.m.,
in response to message #3 by btokarczyk

One other consideration. Do you have a good ebay record?

I don't bid very high on someone with less than a 5 feedback record. You might only offer 3-5 items to start with and then get a feedback history before you just dump all your stuff on ebay. Just a hint to get your top dollar. However, that will take 2-3 weeks to establish, since time between your auction and feedback will be about that.

Re: Misc HP calculators

Message #5 Posted by [gus](#) on 29 Apr 2002, 7:53 p.m.,
in response to message #1 by Gus

Thanks everyone,

I'll try to figure out some details here soon. If we decide to list them on ebay, I'll notify you here, too. Also, thanks to all the offers, I'll try to get back to everyone as far as offers or trades.

What is the best alternative for any models that seem new yet are obviously older calculators? What are the differences (if any) with the c, cv, and cx designations on a hp41 (and should they actually go for the price differences I see on ebay)?

Does anyone have any more suggestions?

Thanks again, Gus

Re: Misc HP calculators

*Message #6 Posted by [Spice_Man](#) on 30 Apr 2002, 7:15 a.m.,
in response to message #5 by gus*

> What is the best alternative for any models that seem new > yet are obviously older calculators?

I think the alternatives are the same, whether they seem new or not. Sell them to the highest bidders here, or on EBay, clearly noting its condition and providing good digital images. Bidders here will bid higher for mint condition equipment (as will EBay bidders).

>What are the differences (if any) with the c, cv, and cx >designations on a hp41 (and should they actually go for >the price differences I see on ebay)?

Answer is right here: <http://www.hpmuseum.org/hp41.htm>

"Differences between the C, CV, CX and Option 001 The HP-41CV was the same as the HP-41C except that it had four memory modules built in for a total of 319 registers. (With the four ports still available to add other modules.) The HP-41CX was the same as the HP-41CV but added the Time module (stopwatch plus clock with alarms), an Extended Functions / Extended Memory module, a text editor, and some additional functions. The Option 001 version of the HP-41C had no labels on the upper rows of keys or on the surrounding keypad. This version was meant to be heavily customized by the buyer. "

Since these are for the most part being purchased as "collectibles," the more rare versions will fetch a higher price.

Lots of useful information on this page: <http://www.hpmuseum.org/collect.htm>

Re: Misc HP calculators

*Message #7 Posted by [Ren](#) on 30 Apr 2002, 9:20 a.m.,
in response to message #1 by Gus*

Gus, hang around this forum a while longer, and you may not want to part with ANY of those precious beasts! You can look up the features/prices of most of the older HP calcs right on the [hpmuseum.org](http://www.hpmuseum.org) website. So keep those babies around a while longer, if they don't grow on you and get you addicted, then sell 'em on eBay!

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How to dry out a 42S

Message #1 Posted by [Randy](#) on 28 Apr 2002, 6:55 p.m.

My 42S got a rainwater bath in the car 'cuz stupid me left the window down. Completely soaked it (keyboard side - of course!). I took the batteries out and let it dry for a day. It seemed dry so I tried it - aghhhh - completetly dead. Batteries are okay.

I looked for help on trying to get it open - it didn't seem like a good idea! I thought maybe any moisture at all could cause problems with the CMOS guts....

Anybody have suggestions of what to try next?

Thanks!

Re: How to dry out a 42S

Message #2 Posted by [Spice_Man](#) on 28 Apr 2002, 7:01 p.m.,
in response to message #1 by Randy

It might take more than a day to dry it out. You can also try a hair dryer to speed up the processs, but be careful not to get it too hot.

Re: How to dry out a 42S

Message #3 Posted by [Randy](#) on 28 Apr 2002, 7:57 p.m.,
in response to message #2 by Spice_Man

Thanks. I put it in my utility closet with the boiler. It's about 90-95° in there. I was going to give it a few days before I tried it again... Hopefully the conductivity of the water wasn't enough to do any damage. I sure would hate to lose this puppy. First my 25C croaked with funky result errors, now this! Sigh.

Re: How to dry out a 42S

Message #4 Posted by [Jeff](#) on 28 Apr 2002, 8:31 p.m.,
in response to message #3 by Randy

This may sound strange, but I have heard of using rubbing alcohol to dry out electronic parts. You flush away the water with the alcohol and then the alcohol dries/evaporates much faster. My only concern with this method is not knowing whether any of the painted parts could withstand it.

Has anyone else heard of this method before?

Re: How to dry out a 42S

Message #5 Posted by [David Smith](#) on 28 Apr 2002, 9:39 p.m.,
in response to message #1 by Randy

I have had to fix a couple of HP42 units that were flooded and soaked in mud for several days. I ran them through three cycles of distilled water in an ultrasonic cleaner, then dried them out for a couple of days in an oven on LOW (like less than 140 F). Came back to life with no problem.

Alcohol may stain the keyboard background or cloud the plastic over the display, but I have used it in dire situations.

Re: How to dry out a 42S

Message #6 Posted by [Randy Sloyer](#) on 29 Apr 2002, 9:38 p.m.,
in response to message #5 by David Smith

Dave, since you've had the good fortune of repairing some 42Ss - Can you tell me if they can be opened? That is, in a reversible way. I'm not ready to call it dead yet as it has only been about 36 hours of drying time. But I figure if I can open it and get all traces of moisture out of the keyboard membrane and pc card I might have better chance than leaving residue inside.

Any chance?

Thanks

Re: How to dry out a 42S

Message #7 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 30 Apr 2002, 8:11 a.m.,
in response to message #6 by Randy Sloyer

It is not easy, but look for articles by Paul Brogger here at the MoHPC (Articles Forum)

Re: How to dry out a 42S

Message #8 Posted by [Ellis Easley](#) on 30 Apr 2002, 9:05 a.m.,
in response to message #6 by Randy Sloyer

I know this seems like a step in the wrong direction, but it might have been a good idea to flush the unit with distilled water before drying it out. Even rain water has things dissolved in it (heard of acid rain?). I guess I wouldn't do it now that it is almost dry, and it was rain water which should have less stuff dissolved in it than tap water. Take a close look at any exposed internal surfaces, such as inside the battery compartment, for signs of corrosion that would indicate the water was contaminated.

Re: How to dry out a 42S

Message #9 Posted by [David Smith](#) on 30 Apr 2002, 6:06 p.m.,
in response to message #6 by Randy Sloyer

Paul Brogger's article is the best source of opening the machines. It is semi-reversible. Once closed back up the machine can be easily re-opened... sometimes too easily. It sure beats the method of prying off the keyboard bezel... which will always get messed up in the process.

The HP42 and HP48 series machines were never designed to be serviced. If anything went wrong, it went into the trash at HP. Also, there is very little inside them than can be repaired anyway. The main chip is permanently attached to the CPU card. There is a RAM chip and a few discrete parts (they almost never go bad).

The keyboard is also heat staked to the case (like the HP41). Taking it apart is almost sure to cause more problems than it fixes. I have used to distilled water/ultrasonic cleaner/oven trick to bring a couple of otherwise dead machines back to life.

Re: How to dry out a 42S

*Message #10 Posted by [David Dance](#) on 30 Apr 2002, 8:01 p.m.,
in response to message #9 by David Smith*

I am a field surveyor and have dropped my 42s in water several times.

The best way I have found to remove the moisture is to place it in an airconditioned room overnight, then replace batteries.

Re: How to dry out a 42S

*Message #11 Posted by [yani](#) on 1 May 2002, 6:54 p.m.,
in response to message #1 by Randy*

I think that these people may be able to help!

http://www.salmondays.tv/downloads/3_minutes_on_high.mpg

be careful what you put in there!

*Message #12 Posted by [Ellis Easley](#) on 1 May 2002, 7:16 p.m.,
in response to message #11 by yani*

I heard on the radio today of a woman charged with child abuse because she had hidden a gun in her microwave oven (for safekeeping) and then a child (I think her grandchild) turned on the oven, causing the gun to fire and (at least) injure the child (maybe worse).

Re: Creative Microwavery

*Message #13 Posted by [Paul Brogger](#) on 2 May 2002, 11:45 a.m.,
in response to message #11 by yani*

You are all encouraged to try CD-ROM discs and glass "ball" Christmas ornaments. The metal layer gets quickly (but not instantly) eaten up by a beautiful, crawling array of blue sparks and arcs. Really impressive (and inexpensive) home entertainment!

Re: Creative Microwavery

Message #14 Posted by [Ren](#) on 2 May 2002, 1:34 p.m.,
in response to message #13 by Paul Brogger

Hmmm, now that is something those AOL disks would be good for! I wish they'd go back to sending the floppies, those were much more useful...

Re: Creative Microwavery

Message #15 Posted by [Ellis Easley](#) on 3 May 2002, 3:00 p.m.,
in response to message #13 by Paul Brogger

Finally! something to do all the CD's that come in the mail!

oops!

Message #16 Posted by [Ellis Easley](#) on 3 May 2002, 3:02 p.m.,
in response to message #15 by Ellis Easley

This has been a message from the Department of Redundancy Department.

Re: Creative Microwavery

Message #17 Posted by [Dave Shaffer](#) on 4 May 2002, 1:22 a.m.,
in response to message #13 by Paul Brogger

I love it - tried several AOL CDs already. This really does make a great light show. Even my wife (another astronomer), who often takes a dim view of such "experiments" was impressed.

So far, I've only had the nerve to run the microwave for 4 or 5 seconds, which pretty well fries the CD. Anybody have a feeling for how long you can really run the oven before the magnetron gets tired of such shenanigans? I think modern microwave ovens are pretty robust, but at some point all that unabsorbed power (actually, the CD is probably absorbing a fair amount) goes back into heating up the tube.

As near as I can tell, this may be the REAL reason that both microwave ovens and AOL CDs were invented!

What else should we be frying?!

Dave

Re: Creative Microwavery

*Message #18 Posted by [David Smith](#) on 4 May 2002, 8:26 p.m.,
in response to message #17 by Dave Shaffer*

You can run the nuke-o-matic for quite a while as long as you keep a cup of water in the unit to act as a load. You should never run a microwave empty (or almost so)... it is very hard on the magnetron.

There is another microwave trick that involves the use of a burning toothpick or match stick to make ball lightning. I had it explained to me a while back, but was wearing beer plugs at the time so I don't remember the details.

Re: Creative Microwavery

*Message #19 Posted by [John K. \(US\)](#) on 5 May 2002, 5:40 a.m.,
in response to message #18 by David Smith*

Ahh. Magnetrons and beer. Sounds like a recipe for disa-- erm, an interesting story. :^)

Re: Creative Microwavery

*Message #20 Posted by [Dave Shaffer](#) on 5 May 2002, 8:07 p.m.,
in response to message #18 by David Smith*

Yeah, but if you put the water in there, it may absorb all the juice and the AOL disk will just sit there, dark. Not as much fun.

I suppose neither of these (cup of water or AOL disk) is a good 50-75 ohm free space impedance match - but what is the impedance of a baked potato, and what (mis)match does the magnetron expect/survive?

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HP 9830A Computer

Message #1 Posted by [slm](#) on 27 Apr 2002, 8:15 p.m.

I have HP 9830A Computer & 9B67B Mass Memory. Want to know the \$ value.

Re: HP 9830A Computer

Message #2 Posted by [doug](#) on 28 Apr 2002, 8:19 a.m.,
in response to message #1 by slm

Prices & Rarity <http://www.hpmuseum.org/collect.htm#diff> HP-9830 \$100, \$270, \$280

High End Desktop Series (1971) <http://www.hpmuseum.org/hp9830.htm>

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Bezels and logos for Voyagers?

Message #1 Posted by [Dave Mabry](#) on 27 Apr 2002, 11:39 a.m.

In looking through the archives of this forum I came across a message from Feb, 2000, about a place to buy logos and bezels for HP15C and HP16C. Here is the post itself. I just wanted to know if anyone knows if they are still available. I'd hate to call this guy if he sold out two years ago and doesn't want to be bothered. Just wondering if anyone here knows anything current about it...

===== quoted post =====

Posted by Ron Ross on 25 Feb 2000, 11:31 a.m., in response to Restoring Voyager Metal Bezel, posted by Hugo on 24 Feb 2000, 8:22 p.m.

Don't bother, order a new one. \$4 plus postage. call 949-582-2631 and ask for Jim. He has these button logo's for the HP16, hp15 and the hp 12 plus all sorts of other great stuff, most of it cheap.

=====

Thanks.

Re: Bezels and logos for Voyagers?

Message #2 Posted by [Julián Miranda](#) on 27 Apr 2002, 2:46 p.m.,
in response to message #1 by Dave Mabry

This is Jim Carter Interfab Corporation - HP liquidation 27959 Cabot Road, #J Laguna Niguel, CA 92677 Phone (949) 582-2631 Fax 582-1445 Email - Jimedualc@tio.com

I emailed him february 2001 and got an answer, perhaps someone in this forum can tell you more about.

Re: Bezels and logos for Voyagers?

Message #3 Posted by [db\(martinez,california\)](#) on 27 Apr 2002, 7:24 p.m.,
in response to message #1 by Dave Mabry

he dosn't seem to be too interested in selling his leftover hp stuff anymore. he probably dosn't have much left anyway and seeing people turn around and sell what he sold at a bargain price as a favor to someone - going on ebay for three or four times his price may have soured him on our "community". anyway; your mileage may vary.

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Off-topic, but Important: SIDS & Nerds

Message #1 Posted by [Paul Brogger](#) on 26 Apr 2002, 11:27 a.m.

Folks:

I was touched by an article about SIDS at <http://www.pbs.org/cringely/pulpit/pulpit20020425.html> .

I read Bob Cringely's column regularly -- he's something of a dreamer. I thought I'd call this capable group's attention to his nightmare on the off chance that you or someone you know might have something to offer on his latest project.

I hope I've not abused this Forum,

Paul B.

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need some similar about hp test equipment

Message #1 Posted by [David](#) on 26 Apr 2002, 7:16 a.m.

Please, if you somebody know some www like this about HP test equipment, please, send it to my email. Thanx a lot. David

Re: need some similar about hp test equipment

Message #2 Posted by [Reinhard Hawel \(Austria\)](#) on 26 Apr 2002, 8:14 a.m.,
in response to message #1 by David

I don't know such a site, but maybe I can help you with some hints.

Do you have any model numbers, you need information about ?

Re: need some similar about hp test equipment

Message #3 Posted by [Ren](#) on 26 Apr 2002, 10:03 a.m.,
in response to message #1 by David

It is not a forum, but you may find help on the sci.electronics.equipment newsgroup. Asking questions about all kinds of test equipment is its charter.

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49g reflections

Message #1 Posted by [Walter Smits](#) on 25 Apr 2002, 8:09 a.m.

Hi,

I'm new to this forum, so I hope I'm not asking something that's been asked a thousand times before...

A week ago I bought an hp49G, till now I'm perfectly happy with it. But, the display shows some beautifull rainbow-effects and seems to reflect every lightbeam it can find. Found some sites on the internet about completely removing the screencover, but that's something I'm not going to do. Has someone ever tried to use an anti-reflective film or coating? I came across some sites about PDA protective sheets, maybe someone has tried these?

Thanks in advance, Walter.

Re: 49g reflections

Message #2 Posted by [Tom \(UK\)](#) on 26 Apr 2002, 7:49 a.m.,
in response to message #1 by Walter Smits

I thought the rainbow pattern problem had been solved with the 'new' screen cover (the early one was also easy to scratch). How old is your '49G? (see 'decoding serial numbers' on this web site for more info). I think it was something to do with a polarisor being needed.

I think it is a bad idea to try and remove the screen cover because the case is too weak without it. I have heard that the blue case cracks near the screen because of the stresses if it is removed. The HP48 has a much stronger case and does not need a screen cover - however only the latest HP48's have the higher contrast screen that the HP49 comes with.

Anti reflective coatings are common on glass (e.g. camera lens and CRT screens) but I've not heard of a stick on anti reflective sheet - do the protective ones really cut down on reflections or is it sales hype? Do they incorporate a polarisor which may help in this case?

Please post on this site if you find an answer / solution.

Re: 49g reflections

Message #3 Posted by [Walter Smits](#) on 26 Apr 2002, 10:54 a.m.,
in response to message #2 by Tom (UK)

Hi Tom,

Thank you for replying. I just checked the serial number, and I fear I've bought a rather old one... 1999. The display is indeed very sensitive to scratches, yesterday I bought a 48 softcase to protect it from dust, but as soon as the display came in contact with its zipper it made a huge scratch from top to bottom. Although I bought it a week ago, I'm definitely going back to the shop, especially now I know that it's been made 3 years ago.

About those protective sheets - today I bought a set of them, but it only makes it worse. First, because they're made for PDA's they're made from some kind of special plastic to make the touchscreen work, which doesn't make it that clear (kind of pixelizes). Second, because you've got to stick them to the screen you get, depending on your handiness, some or a lot of bubbles between the screen and sheet. That looks really ugly and makes the screen even more unreadable. And even if you could get it perfectly on the screen and it was 100% clear, I doubt if it takes away the reflections.

Concluding, not a good idea (especially considering the high prices - EUR 18 here in Holland).

I'll go back to the shop next monday, see what they'll do.

Thanks again for your help.

Cheers, Walter.

Re: 49g reflections

Message #4 Posted by [Walter Smits](#) on 26 Apr 2002, 1:00 p.m.,
in response to message #3 by Walter Smits

BTW, before I tried those protective sheets I put the polarizer of my SLR on top of the display, hoping that that would help (like Tom mentioned), but except for some beautiful color effects in the cover it didn't work. But what I did notice is that unlike many other LCD's that turn entirely black when you look at it through a polarizer, this one looks more like one of those lava-lamps; some black blobs that move around the screen when I rotate the polarizer. No idea if that's normal....

cheers, Walter.

49g reflections - my 'solution'

Message #5 Posted by [Tom \(UK\)](#) on 29 Apr 2002, 1:35 p.m.,
in response to message #3 by Walter Smits

Walter,

Over a year ago HP (UK) exchanged my HP49 for a newer one after I complained about the screen and software downloading problems (my original HP49 was a 1999 issue and apparently also had a comms fault). I don't know if HP (Holland) do anything similar or if the time has run out for this offer.

If the shop gives no joy, try the importer as they may be authorised to replace your calculator. However since HP have tightened their belt (to make the Compaq merger?) your request may fail.

Note: Some of the very latest HP49 calculators seem to have a problem with the key pad ink wearing out, I think this only affects the Chinese built units and is caused by bubbles in the paint on the key tops.

You could just try to order a new screen cover or send it back to HP for an 'in warranty' repair, I think I've seen a web page saying the screen cover can be removed by pushing it out via the RS232 port - if you do this yourself you will probably invalidate the guarantee so be careful!

Keep us posted on this web site on how it goes.

All for now, Tom.

Re: 49g reflections - my 'solution'

Message #6 Posted by [Walter Smits](#) on 30 Apr 2002, 8:24 a.m.,
in response to message #5 by Tom (UK)

Hi Tom,

Before I'm going to complaint at the shop or HP I'm first going to contact the Dutch Consumer Organization, just to know what my rights are. In a week time I've heard about just too many other problems that can happen (now bad keypad ink and faulty comm ports too) that I think about trying to change it for a 48. I bought this calculator for double checking my calculations, but yesterday it gave a negative result (-1) for a simple integration ($\int \cos x dx$ from 0 to $(3\pi)/2$). This one is easy to

catch, but one starts wondering what other less obvious faulty results it gives when it simply doesn't check for such a fundamental error (maybe -1 is possible when traveling through a black hole, but certainly not on Planet Earth). In the latest ROM this bug apparently has been solved (tested it in the YorkeM emulator, 'cannot determine sign' or something like that) but that one isn't supported by HP. And apparently they don't plan to do so either.

Or am I just expecting too much?

Thanks for all your replies, Walter.

Re: 49g reflections - may I?

*Message #7 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 26 Apr 2002, 12:06 p.m.,
in response to message #2 by Tom (UK)*

Hi;

I have an earlier 49G (Y2K) and the first thing that called my attention was the protective adhesive that "covers" the transparent cover. I did not remove it so it would keep protecting the plastic cover, but the viewing angle is smaller than the 48's usual. In fact, it is a bit harder to see what's written in the 49's display, if compared with the newer 48's, that comes with the same LCD and has no effective protection.

Anyway, the 49's cover is scratch-free. I would suggest finding some sort of transparent plastic adhesive that could be placed over the 49's cover. As it is not the LCD itself, this is going to be harmless.

Cheers.

Re: 49g reflections - may I?

*Message #8 Posted by [Walter Smits](#) on 26 Apr 2002, 12:47 p.m.,
in response to message #7 by Vieira, Luiz C. (Brazil)*

Hello Luiz,

Mine had this piece of plastic on the cover too, but I removed it almost immediately after I bought it as I wasn't aware of the potential problems. Tried to put it back, but it wouldn't. If the place where I bought the calc doesn't want to change it for a newer one, I think I'll have to use the PDA screen protectors.

Think I should have checked this forum *before* I bought the machine.

Thanks for the suggestion, Walter.

Re: 49g reflections - may I?

*Message #9 Posted by [koyote](#) on 30 Apr 2002, 3:31 a.m.,
in response to message #8 by Walter Smits*

Incidentally- the PDA screen protectors can be applied without bubbles by using a "scraper" (I use a thick stock business card on my visor).

And while most of them aren't totally smooth, some appear to be-can't say which brands, since the ones I buy aren't (smooth)

But why not just use the clear vinyl that "no adhesive" window stickers are made of?

Re: 49g reflections - may I?

*Message #10 Posted by [Walter Smits](#) on 30 Apr 2002, 8:38 a.m.,
in response to message #9 by koyote*

Hi Koyote,

They did come with such scraper (just a thick piece of paper). That works quite good, but it's almost impossible to keep it clear from dust when applying. But if I have no success changing the calculator I won't have any problems with 'bubbles'.

A thing I did notice with those sheets is that they apparently produce lots of statical electricity (likely to support handwriting recognition). Don't know if that's so good for the display (you can clearly see that some spots temporarily 'turn on' when rubbing the sheet).

Can you tell what brand you use?

Thanks for your reply, Walter.

Re: 49g reflections - may I?

*Message #11 Posted by [Koyote](#) on 30 Apr 2002, 1:03 p.m.,
in response to message #10 by Walter Smits*

Heyo, I can't find the packaging, If I recall correctly it is "Fellowes" (blu and gold packaging).

I've never had issues with static, the protectors are lightly textured physically for pen aid.

-Koyote

Re: 49g reflections - may I?

*Message #12 Posted by [Walter Smits](#) on 1 May 2002, 11:10 a.m.,
in response to message #11 by Koyote*

Hi Koyote,

Seems like they're the same as I've got, "WriteRight/Fellowes". Maybe I should try them again.

Thanks again for your responses, Walter.

Re: 49g reflections - solved

*Message #13 Posted by [Walter Smits](#) on 10 May 2002, 1:21 p.m.,
in response to message #1 by Walter Smits*

Hi again,

I'd like to say a big thank you to all who helped me here, and especially to the shop where I bought my calculator, if they happen to be around here. Great service. They kindly replaced my old one with a newer version, with a good display.

Maybe something to add: it wasn't actually that easy for the shop to get it replaced. I was very lucky they had a newer one in stock, because the HP distributor refused to believe the story - about newer versions and better screens. Even after the salesman actually 'proved' it by placing the two versions side by side. They (the distributor) stated that it only applied to units sold in the US, not to European ones, while it is clear that all units are produced in either China or Indonesia. It's a shame.

This one has without doubt a much clearer screen and is almost clear of rainbow effects (unnoticable). I'm not sure if it is more scratch resistant, I'm not going to try. Already sticked some plastic foil on it, just for sure. After some practice you can apply it almost without any bubbles, so it'll be as good as unnoticable.

Thank you once again,

Walter.

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Re: HP 11C

Message #1 Posted by [Peter](#) on 24 Apr 2002, 10:01 p.m.

"I costi perfetti quello di più gradiscono \$200"

Translated back into English, this is something like:

What the perfect costs enjoy the most is \$200.

Or in another way:

What the perfect costs most like is \$200

where "perfect costs" is together, and "costs" is a name, not a verb.

So now I have two questions:

- 1) What did the original writer write before translation?
- 2) Which automatic translator was used?

These automatic translations are really funny. Once on the paper encasing two chopsticks I read (in Italian):

to hold the rods, enjoy a pencil

the original English (reverse engineered):

hold the sticks like a pencil

Peter

chopstick instructions

*Message #2 Posted by [Ellis Easley](#) on 24 Apr 2002, 11:16 p.m.,
in response to message #1 by Peter*

You have brought up one of my favorite topics: the messages printed on chopstick wrappers. For as long as I have used chopsticks (only occasionally over the past 30 years or so), the English endorsement printed on the different brands and styles of disposable chopsticks in the north- and central-Texas region, where I have lived, has remained fairly constant. Here is the sentence from a pair that were in my kitchen drawer:

"Welcome to Chinese Restaurant. please try your Nice Chinese Food With Chopsticks the traditional and typical of Chinese glonous history. and cultural."

I've stared at this set for some time and it definitely says "glonous" but usually they say "glorious" which I'm sure is intended. What first caught my attention was "cultural" which is always spelled that way. I have wondered, are they trying to avoid the word "cultural" because it raises painful memories? Or are "cult" and "culture" synonyms in Chinese? Or am I missing the boat: are they synonyms in English? My little pocket dictionary defines "cult" as "1.A system or community of worship. 2.Obsessive devotion." and "culture" as "...3. Socially transmitted behavior patterns. 4.Social and artistic expression and activity."

I'm sure I'm making too much out of it. Also I'm sure whoever is printing these could put perfect English if they wanted to. So I have concluded that they intentionally print a sort of "pigeon" English because it increases the exotic charm of Chinese food. Couple this with the fact that using chopsticks makes food taste better (I think this is because it makes you take smaller bites) and there's no reason to change the message.

Re: chopstick instructions

*Message #3 Posted by [Juan J](#) on 25 Apr 2002, 3:02 p.m.,
in response to message #2 by Ellis Easley*

Not to mention those "Are you expecting?" pamphlets/cards, providing instructions on how to handle a phone call you're waiting for or to receive a message, found in non-English-speaking countries hotel rooms. "Expect" is often synonymous with "wait" in several languages.

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82104A Card Reader Made in USA

Message #1 Posted by [Larry Wiese](#) on 24 Apr 2002, 6:58 p.m.

How unusual is it for a HP-41 card reader to be stamped "Made in USA?" All the other ones I have seen are made in Singapore.

Re: 82104A Card Reader Made in USA

Message #2 Posted by [Bill Wiese](#) on 25 Apr 2002, 6:49 p.m.,
in response to message #1 by Larry Wiese

Hey Larry...

[Wow, a namesake into HPs! From where did your family hail?]

The first 41 card readers were Corvallis, I believe. Can't remember now, but my old 41C (I use a CV now) was a USA product; was purchased from ElekTek in 1981. I (albeit possibly mistakenly) would assume the card reader mfg would roughly track/move with calculator mfg.

Bill Wiese San Mateo, CA bill@bwiese.org

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HP 11C

Message #1 Posted by [Giorgio](#) on 24 Apr 2002, 8:52 a.m.

Cerco calcolatrice HE 11C in stato perfetto Offro 50\$ piu' spese di spedizione.

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hp32sII

Message #1 Posted by [barry anderson](#) on 24 Apr 2002, 7:46 a.m.

I have been using HP calculators since 1980 and my 32SII is the best one that I have owned. I was dismayed to learn that the suits have decided to stop making it. Are they going to replace with an up dated version or what?

Barry

Re: hp32sII

Message #2 Posted by [Pascal](#) on 24 Apr 2002, 12:34 p.m.,
in response to message #1 by barry anderson

Probably not. It seems that scientific RPN calc are economically not interesting. Anyway, you should have seen the 42S - IMHO this is the best scientific RPN calc ever made, right in front of the 15C (both of which I use still today).

Pascal

... or what (sadly)

Message #3 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 24 Apr 2002, 12:46 p.m.,
in response to message #1 by barry anderson

It seems "or what" is the right answer, as you may read in previous posts...

If I may, Pascal, I cannot agree more. As stand-alone calculators, both HP42S and HP15C are also, for me, the best ones (should I guess you're in Electrical OR Surveying business?)

Cheers.

Re: ... or what (sadly)

*Message #4 Posted by [Pascal](#) on 1 May 2002, 10:23 a.m.,
in response to message #3 by Vieira, Luiz C. (Brazil)*

You're close: Maths and EE :-)

Re: hp32sII

*Message #5 Posted by [BillZ](#) on 24 Apr 2002, 9:43 p.m.,
in response to message #1 by barry anderson*

So this is how it ends!

The 32sII, the very last of the fabled RPN calculators.

I suppose nothing last forever...

Re: hp32sII

*Message #6 Posted by [aruid](#) on 24 Apr 2002, 11:09 p.m.,
in response to message #5 by BillZ*

HP still makes the HP 12c I think this is the last of the Scientific RPN calculators

ARUID

Re: hp32sII

*Message #7 Posted by [Karl Schneider](#) on 25 Apr 2002, 1:24 a.m.,
in response to message #6 by aruid*

"aruid" --

The 12C is a business calculator on the same platform of the scientific 10C/11C/15C/16C. The quality of today's "Made in China" 12C's, though, is lacking.

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Assembler 3

Message #1 Posted by [Johnny Billquist](#) on 24 Apr 2002, 5:24 a.m.

Hi all. I've finally figured out that since I don't have any documentation, this is probably the right place to ask.

I have an MLDL for my HP-41, and have had it for years. It's fun playing with, and works nice with my ZENROM.

However, there is also a ROM in there, which holds Assembler 3. Lots of functions, but I haven't got the first clue on how to use this.

Does anyone have more information about this "module"/software?

Re: Assembler 3

Message #2 Posted by [Chris Catotti \(Florida\)](#) on 27 Apr 2002, 1:25 a.m.,
in response to message #1 by Johnny Billquist

Possibly a Davids ROM (?). What are the functions provided?

Re: Assembler 3

Message #3 Posted by [Raymond Hellstern \(Germany\)](#) on 27 Apr 2002, 1:50 p.m.,
in response to message #2 by Chris Catotti (Florida)

Hi,

the Assembler3 eprom and the David Assembler are completely different things.

Assembler3 provides various functions to manipulate data, on the stack and/or in 'ROM', whereas the David Assembler has a built-in user interface, which lets you code directly, like you key in a user code program. Supporting the David Assembler is a so-called mainframe Labels ROM, which includes all the entries of the HP-41. It came with a suitable keyboard overlay

The DA was my favourite coding tool back then.

Maybe there's a function description of ASSEM3 and DAVID-ASSEM somewhere here in the museum.

Regards,

Raymond

Re: Assembler 3

*Message #4 Posted by [Johnny](#) on 7 May 2002, 6:53 p.m.,
in response to message #3 by Raymond Hellstern (Germany)*

Aha! So atleast someone knows about them.

Unfortunately I have not been able to find any documentation anywhere around here.

Got any other good ideas on where I could find information?

Also, the DAVID-ASSEM sounds really nice. Do you know where I could find an image? My MLDL have 27C256 and I can burn those...

Re: Assembler 3

*Message #5 Posted by [Johnny](#) on 7 May 2002, 6:50 p.m.,
in response to message #2 by Chris Catotti (Florida)*

ASSEMBLER 3 AND OR APPFN ASSEM DISASM A>X X>A BCD>BIN BIN>BCD
CF55 SF55 CLROM CODE DECODE COMPILE COPYROM CVIEW VIEWA DISS
GETPC PUTPC HEXKB INSBYTE RCLBYTE STOBYTE LOADP MLDL? NEXTFN
NRCL NSTO PCWRT REG>ROM ROM>REG ROM>X X>ROM ROM? RXL RXR SXL
SXR X>\$ X+Y Y-X 1CMP 2CMP 1-D 2-D 3-D 4-D

Some of these I can guess, but the more complex stuff really makes me want a manual. :-)

Re: Assembler 3

Message #6 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 8 May 2002, 7:14 a.m.,
in response to message #5 by Johnny

Hi;

Let me see:

CF55 clears system flag 55 (Printer not connected)

SF55 sets flag 55 (Printer connected)

These are internal operations. I used to think 41's checking procedures would crash if some sort of internal interference occur. Wow.

Out here we do not have access to these inner words...

Cheers.

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HP 41 "other" uses

Message #1 Posted by [Juan J](#) on 23 Apr 2002, 5:45 p.m.

We all know the 41 series had a distinguished career aboard the Space Shuttle. A custom-made ROM was developed by NASA for it. Should be a great addition to any collection if available.

I just found out that the 41 series, as well as the 71 series, had military uses as well. Someone even posted not long ago about his 71 with military applications modules. Does anybody know about these uses in the 41/71 series or about the modules produced for them?

Thanks in advance.

Re: HP 41 "other" uses

Message #2 Posted by [Ren](#) on 24 Apr 2002, 9:31 a.m.,
in response to message #1 by Juan J

Well, because they are trapezoidal in shape, you could probably use one as a doorstop...

B^)

Re: HP 41 "other" uses

Message #3 Posted by [Ellis Easley](#) on 24 Apr 2002, 9:32 a.m.,
in response to message #1 by Juan J

I don't know anything about specific uses, but in a lot of calculators I recently acquired, there was an HP71B with some of the military ROMS mentioned before and also a TI59 with a Library Module and instruction card with similar military markings. The keywords on the instruction card suggest an inventory control function.

Re: HP 41 "other" uses

Message #4 Posted by [David Smith](#) on 24 Apr 2002, 5:57 p.m.,
in response to message #1 by Juan J

The HP71 was used by the army for calculating trajectories for a lot of their field artillery and tank guns. There are ROM modules for various guns.

There is also the ever useful "Air Blast" module for calculating the effects of nukes exploding in the atmosphere. It is an HP41 module. I don't think there was a "Ground Blast" module...

HP 41 "other" uses

Message #5 Posted by [btokarczyk](#) on 24 Apr 2002, 11:05 p.m.,
in response to message #4 by David Smith

If there is such an "air blast" module, does someone know where I might be able to acquire one?

Regards, Bryan

Re: HP 41 "other" uses

Message #6 Posted by [Juan J](#) on 24 Apr 2002, 11:10 p.m.,
in response to message #5 by btokarczyk

I am also interested in the "air blast" module for the 41. And the others for the 71. Available, maybe, at surplus stores/depots? Or from former users?

A great addition to any collection, indeed.

Re: HP 41 "other" uses

Message #7 Posted by [David Smith](#) on 25 Apr 2002, 6:08 p.m.,
in response to message #5 by btokarczyk

There is definitely a "Air Blast" module, one was in an HP41CV that I purchased a while back. It had a quick reference card also. It is labeled "Air Blast" not "Air Burst". Now, if I can only find couple of nukes to test it with... they don't seem to show up on Ebay very often ;)

Re: HP 41 "other" uses

*Message #8 Posted by [Ren](#) on 26 Apr 2002, 9:59 a.m.,
in response to message #7 by David Smith*

I didn't mean to confuse the issue regarding Air Blast v. Air Burst. Back when I took the Army's 2 week nuke course (pre-HP-41) they called it an air burst. So if it says Air Blast on the module, then it must be an Air Blast module B^)

Re: HP 41 "other" uses

*Message #9 Posted by [Ren](#) on 25 Apr 2002, 9:43 a.m.,
in response to message #4 by David Smith*

I wonder about the practicality of an "Air Burst" module, oh, I don't challenge its existence, but would an HP-41 survive the ElectroMagnetic Pulse (EMP) of an air burst? I don't think so...

Re: HP 41 "other" uses

*Message #10 Posted by [Richard Garner](#) on 25 Apr 2002, 11:10 a.m.,
in response to message #9 by Ren*

There was a hard case imported from the UK, made for NATO, that was sold by EduCalc that was advertised as being able to survive and protect the 41C/CV/CX from an EM bast.

Re: HP 41 "other" uses

*Message #11 Posted by [Ren](#) on 25 Apr 2002, 12:52 p.m.,
in response to message #10 by Richard Garner*

Hmmm, Thanks! Did NASA harden the space shuttle HP-41's for cosmic radiation?

Re: HP 41 "other" uses

*Message #12 Posted by [Juan J](#) on 25 Apr 2002, 2:54 p.m.,
in response to message #10 by Richard Garner*

Once I saw a US mortar crew using an HP-41 in the "battle case," as it was known back then. Thankfully I got some pictures from a fellow member of the Forum.

By the way, back in the 1970s and 1980s, the Russians built their bombers' electronics with sort of an "outer core" of vacuum tubes, and an internal core of microchips. Both operated jointly, and the vacuum tubes were supposed to block the Compton effect radiation of the EMP that would fry the chips. A rough but usable solution. Western bombers had different protective systems, based to some extent on the battle case, but less is known about their electronics package protection.

Ren: I read that the 41 was slightly modified for zero-gravity operation aboard the Space Shuttle. The whole story is in a link on a message thread about two weeks old.

Re: HP 41 "other" uses

*Message #13 Posted by [Vassilis Prevelakis](#) on 27 Apr 2002, 4:58 p.m.,
in response to message #12 by Juan J*

> Ren: I read that the 41 was slightly modified for zero-gravity operation aboard the Space Shuttle.

Low pressure, not zero gravity. They removed some parts (e.g. rubber feet) that would outgas in the low pressure regime of the shuttle.

Unlike the Apollo craft where the cabin could be vented into space (for EVA - since they did not have an airlock), Shuttle electronics only need to survive the low pressure that is used for pre-breathing before EVA.

I do wonder about the HP-65 that flew on Apollo era hardware for the Apollo-Soyuz docking. Was that spec'd for vacuum?

****vp**

Re: HP 41 "other" uses

*Message #14 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 29 Apr 2002, 8:34 a.m.,
in response to message #13 by Vassilis Prevelakis*

Hi (Hey, Vassilis; where've you been?)

Just wondering: any different LCD construction/material? Would ordinary LCD resist a low-pressure environment?

About the 65, I wonder about the card reader. Any special care about the rubber puller (same outgas situation) and the mechanics (dust)? Or it was also removed?

Cheers.

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Strange HP71

Message #1 Posted by [GE \(France\)](#) on 23 Apr 2002, 3:40 a.m.

I got a nice HP71 recently, but the configuration is a little bit strange. Can anyone shed some light on this ?

The VER\$ command returns : HP71:1BBBB HPIL:1B INST:A TCNV:A FMT:A So it seems to be an early version, with HPIL, but what's the INST/TCNV/FMT stuff ?

It has a module plugged on the leftmost port, reading : 5061-7290 HP-71 DATA ACQ

The MEM command reports 49616 bytes. The showport command reports : 0.05 16384 2 1 65536 2

Actually, there is a special RAM expansion port in the card reader slot with the following front label : 71 M/M ! Hand Held 32K RAM! Products But this doesn't make for the 76K of rom mentioned above.

The CAT :PORT(1) command lists a lot of stuff, starting with : LEX3421 LEX 7520 09/06/85 12:00 1 BIN3421 BIN 356 09/06/85 12:00 1 TCONV LEX 243 09/06/85 12:00 1 ... and so on with other LEX, BASIC and SDATA files .

It also takes a noticeable while for the machine to power up, probably some RAM check ?

What a strange beast ! BTW, the 71 rules !!

Re: Strange HP71

Message #2 Posted by [GE \(France\)](#) on 23 Apr 2002, 3:43 a.m.,
in response to message #1 by GE (France)

Sorry for the poor formatting of my message, this forum seems not to take into account newlines and tabs. Next time I'll do better.

About text formatting

Message #3 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 23 Apr 2002, 7:23 a.m.,
in response to message #2 by GE (France)

Hi;

Maybe you have already found it; anyway, if you don't mind...

There are some (good!) formatting features explained [here](#). (Thanks, Dave) and they are somewhat easy to understand and use (if you have once used WordStar or you get into some Unix/Linux Text Processors, you won't feel uncomfortable). Have a brief look and you'll judge by yourself.

Re: About text formatting

Message #4 Posted by [GE \(France\)](#) on 23 Apr 2002, 10:37 a.m.,
in response to message #3 by Vieira, Luiz C. (Brazil)

Thank you, here is my post again the 'right' way :

I got a nice HP71 recently, but the configuration is a little bit strange. Can anyone shed some light on this ?
The VER\$ command returns :

```
HP71:1BBBB HPIL:1B INST:A TCNV:A FMT:A[\pre]
```

So it seems to be an early version, with HPIL, but what's the INST/TCNV/FMT stuff ?

It has a module plugged on the leftmost port, reading :

```
[pre] 5061-7290 HP-71 DATA ACQ[\pre]
```

The MEM command reports 49616 bytes.

The showport command reports :

```
[pre]
      0.05 16384 2
      1 65536 2[\pre]
```

Actually, there is a special RAM expansion port in the card reader slot with the following front label :

```
[pre] 71 M/M ! Hand Held
      32K RAM! Products[\pre]
```

But this doesn't make for the 76K of rom mentioned above.

The CAT :PORT(1) command lists a lot of stuff, starting with :

```
[pre]
      LEX3421 LEX 7520 09/06/85 12:00 1
      BIN3421 BIN 356 09/06/85 12:00 1
      TCONV LEX 243 09/06/85 12:00 1
      ...
```

and so on with other LEX, BASIC and SDATA files .

It also takes a noticeable while for the machine to power up, probably some RAM check ?

What a strange beast ! BTW, the 71 rules !!

Re: About text formatting

Message #5 Posted by [doug](#) on 23 Apr 2002, 11:46 a.m.,
in response to message #4 by GE (France)

Turn off the machine. Remove all the modules. Do a memory reset or init 1, 2, 3. Then add one module at a time and run the commands, which will show you exactly what is on the respective module. You won't have to wade thru a lot of information to isolate what belongs to where and why. Some modules might actually interact and set information differently when they appear together. This way you will now for sure. Diagnose them separately. Then plug them all in and see if they return identical information as they did when only one was in the machine.

Re: Strange HP71

Message #6 Posted by [Michael Meyer](#) on 24 Apr 2002, 4:57 p.m.,
in response to message #2 by GE (France)

Hi!

The delay you've encountered happens due to the IL module looking for devices on the loop. There's a command to disable the IL module and speed up the turn on response, but I don't have my manuals here at work. Something like, "off io".

The extra stuff in the "VER\$" command has to do with LEX files (language extension files) installed on the machine.

Hope that helps some.

Michael

Re: Strange HP71

Message #7 Posted by [Ellis Easley](#) on 24 Apr 2002, 9:48 a.m.,
in response to message #1 by GE (France)

regarding: 5061-7290 HP-71 DATA ACQ

I've noticed a lot of HP41C modules with 82xxx and 00041-xxxxx P/Ns are marked with 5061-xxxx numbers.

My 1986 HP catalog has a P/N 82479A, HP-71 Data Acquisition Pac ROM listed as an accessory for the HP3421A data acquisition/control unit.

Briefly, it says the pac adds over 40 keywords in 6 areas: front panel, strip chart, monitor, data logger, report program, data transfer.

Strangely, this catalog doesn't list the HP41C module for the 3421A - it must have come out later.

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How to handle an eBay swindler?

Message #1 Posted by [glynn](#) on 23 Apr 2002, 1:49 a.m.

I am trying to be calm and rational, but really do not know which way best to proceed... so I hope to hear from you clear thinkers in this forum.

I have just been swindled by an eBay seller. There is no doubt in my mind that it was an intentional and bold bonking. An item (hp computer) was shown in pictures and represented as complete; "as pictured, as is"...

I won the auction, and got the box today. It was packed in conformal foam. Inside, the computer had been stripped (even forcibly) of some critical parts, leaving it quite useless. This obviously happened prior to the foam packing.

It is now a spare parts depot only... can't use the thing as it sits now. To try to repair the damage to make it functional would require finding ANOTHER unit with the right components in place. The parts had been clearly visible in the original auction page pictures. But they were gone before it ever left their warehouse.

Naturally, I am angry. This seller has many glowing eBay feedbacks and VERY few negative. But I am beginning to decide that there is a DISINCENTIVE to complaining on eBay about anyone.

I have all good feedback myself. I like this fact. I COULD write what I think of the seller on eBay, but in his feedback and his response to mine, he can rebut my assertions any way he likes-- so IF I care about MY eBay reputation, it almost pays just to keep my mouth shut and move on, doesn't it?

Is this how to handle being conned? Is it just a case of "be a man and accept the risks of online auctions-- you are gonna get taken sometimes, and that's that"?

Or is there a better way to deal with a crooked seller? Have any of you had similar experiences, and what did you find yourself doing for redress or as warning to others?

Geez. I LIKE eBaying, have good experiences most of the time, but this one BITES. I mighta bid on

the thing assuming the parts were non-functional and I could fix them; but to get the idea that the parts were considered "for the taking" AFTER I bought the unit, and may be a future auction, or a part of a refurbished unit that they sell-- well, makes me feel quite "used".

--- So. What do you all think is "the wise course"?

-- glynn.

Re: What are the details?

*Message #2 Posted by [Mike](#) on 23 Apr 2002, 2:50 a.m.,
in response to message #1 by glynn*

It may well be as you say. But you only give your version. Just because it's obvious that the unit has been stripped, it may not have been obvious to the seller. He may not have even tested it. If it does not work and has been stripped and the seller said it was, then it may be that you've been swindled. Can you provide some more details?

- 1) What was the auction number, if you don't mind? I realize that you may not want to give it out. If you don't want to list the number, give a description of what they said. Remember the code words "as is" means "known to have problems" in most cases.
- 2) Computers are a very hard item to buy, unless you are buying from an individual.
- 3) Be very wary of any seller with 3000, 4000 or more sales. They almost always have 30 to 100 negatives.
- 4) These with many thousands are likely wholesalers and don't have a clue what they are selling.

If you have been out-and-out swindled, you can take advantage of eBay buyer protection policy. It's a hassle but does two things. a) gets you some money back and b) registers a strike against the seller.

Of course, you have to prove your case.

Re: How to handle an eBay swindler?

Message #3 Posted by [doug](#) on 23 Apr 2002, 6:01 a.m.,
in response to message #1 by glynn

1. Contact seller and notify him of the condition of the unit upon arrival if you haven't.
2. ASIS by law doesn't mean doodley if it doesn't have a stated condition. Some people think putting the word asis excuses anything and it doesn't. If you omit asis the unit is assumed to function properly. If asis is present then it must have a description that discloses all known problems for asis to be valid and for asis to have a meaning.
3. If seller didn't put the exact condition it arrived in, in his ad, then there is a problem. First did you inspect the package to make sure it hadn't been tampered with before you opened it. In other words did it arrive as packaged by the sender. Take a photograph of the box in as many angles as possible.
4. If the ad didn't state the condition and the seller doesn't offer to make it right then file with squaretrade. They will be a in-between to collect information. You can opt for a mediator for \$15.00. With or without the mediator, it will build a case file that shows ebay that you are interested in resolution.
5. If they refuse to participate then it is time to file fraud charges.
6. Don't just jump into anything until you have asked the right questions. There is always the possibility that it got taken apart in transit though unlikely.
7. Last, if none of that works and it was insured and shipped USPS then you will want to file a FORM 1000, and they will investigate and send the form you file a claim with to the seller for his input. They will have to answer all questions, and show the receipt for insurance coverage, unless the receipt was mailed to you.

URL:<http://pages.ebay.com/help/rulesandsafety/43110002.html>

Hope this helps.

doug

Re: How to handle an eBay swindler?

Message #4 Posted by [Ron Ross](#) on 23 Apr 2002, 12:51 p.m.,
in response to message #1 by glynn

I also sympathize with you. I feel the ebay system is flawed in this respect and made a suggestion to ebay as to its feedback policy. I feel that the buyer should not be able to leave feedback at all until the seller leaves feedback. If a sellers negative feedback reaches some unacceptable level, he/she should be banned. If a buyer's feedback reaches some unacceptable level, he/she should be banned and all his/her feedback into the system should be nuetralized.

If after 30 days the seller cannot leave ANY feedback. If the seller hasn't recieved payment from the buyer by then, the seller should be leaving Negative feedback anyway.

This method would result in more honest reporting of ebay sellers so that buyers could be more honest and not worry about revenge feedback. The worry of a bad feedback revenge would be gone.

At present I use this method: I check feedback, if it is greater than 2%, I move on. If the seller has any neg feedback, I also check to see how he responded to his feedback. If the seller engages in revenge feedback, I move on. If the seller posted negative feedback first and suffers from negative revenge feedback I don't worry to much as long as his ratio is low, ie >2%. Sellers have to sell to any jerk who wins an auction, vs a buyer puts himself in that position by bidding the Highest amount.

Still, I like my idea for feedback rules and emailed ebay as to its merrit. However, ebay is a sellers market and the seller pays ebay. Therefore ebay caters to the seller. It probably always will.

Re: How to handle an eBay swindler?

Message #5 Posted by [Plampione](#) on 23 Apr 2002, 3:10 p.m.,
in response to message #1 by glynn

I also wondered about it... first, does the period you have for feedback on ebay expire before, or after, the one of the seller? Reason would call for it to expire after, since you receive the package after he receives the payment. If they expire at the same time, you could "snipe" wait till the last moment then post your negative feedback, leaving him no time to complain.

Finally, you could always sue him...

Best,

Re: How to handle an eBay swindler?

Message #6 Posted by [db\(martinez,california\)](#) on 23 Apr 2002, 9:01 p.m.,
in response to message #5 by Plampione

glynn;

as another american once said; "i feel your pain." i also believe you unconditionally. you've always been a positive contributor here.

i think you should do what was suggested about going through all those established channels and see what can be fixed that way. it's early in the game and there are a few "inocent" reasons that this could have happened.

if he is a rip off and a regular seller; stalk his auctions and e-mail all his big-ticket-item bidders a short and concise version of the story. let them decide if they want to risk this kind of thing. hit him where it hurts. the worst thing that can happen is that you'll get kicked off ebay and have to use a different credit card and email address to get another ebay account.

btw; i'm assuming that this will all turn out fine but if he won't make it right please tell us the bastards name so we don't make the mistake of dealing with him.

Re: How to handle an eBay swindler?

Message #7 Posted by [doug](#) on 24 Apr 2002, 2:22 a.m.,
in response to message #5 by Plampione

Many people I have spoken to don't seem to be aware of this:

<http://cgi2.ebay.com/aw-cgi/eBayISAPI.dll?LeaveFeedbackShow>

You must sign in. You never have to wonder what is pending for you to leave feedback.

Re: How to handle an eBay swindler?

Message #8 Posted by [Spice_Man](#) on 23 Apr 2002, 11:29 p.m.,
in response to message #1 by glynn

I've always had good luck working with the seller to resolve any problems. I will also open a case with Square Trade immediately so there is another party involved as well. Usually it gets resolved without much trouble.

If the square-trade case does not proceed well, then I file a fraud complaint with EBay. EBay will notify them about the fraud charge and request input from the seller.

Be sure to check out the EBay fraud filing requirements, and fraud insurance claim requirements.

Re: How to handle an eBay swindler?

Message #9 Posted by [tdkessis](#) on 24 Apr 2002, 9:23 a.m.,
in response to message #1 by glynn

All the advice given so far is great and usually effective. I would try any of these approaches as they vary with the situation. With respect to revenge feedback, here's how I handle it if the circumstance appears to have the potential for this occurring (and I feel I might get screwed).

I write a nice succinct note to the seller / buyer detailing the transaction as I've experienced it. I then tell them I either will or won't (depending on the situation) be posting feedback. I then state that if they even think about posting any negative feedback to me I will respond via feedback with a brief negative message and a link pointing potential viewers to a page on my website where I have archived the original auction listing, all email communication involved and my side of the story.

If I truly feel that it was an unfair situation and that anyone with half a brain could see this once they had all the information then I can sleep easy at night even if I get some bad feedback from some bum.

The problem with the eBay system is you get like,... 2 lines to describe a fucked transaction. My approach has worked in several instances. Once a deadbeat seller who's 1st response was two weeks after the auction wanting to know why I didn't want the item anymore, left me positive feedback after I took such an approach.

TDK

Re: How to handle an eBay swindler?

Message #10 Posted by [Steve S.](#) on 24 Apr 2002, 3:36 p.m.,
in response to message #1 by glynn

I know how you feel. I purchased an HP 16C on Ebay advertised as perfect condition. It had perfect listed three times in the add and the photos showed it to be perfect. When I received it, it had his initials carved in the back in an area cut off in the photos. I asked to return the item for a refund, and he refused. He said I should have asked him if his initials were in it before I bid and that it was in perfect working condition, not perfect condition. His add said perfect condition, not perfect working condition. After three weeks, I left negative feed back on vbeachbum. Within thirty minutes, he had left negative feed back on me. His complaint was "buys now and asks questions later."

Re: How to handle an eBay swindler?

Message #11 Posted by [Steve S.](#) on 24 Apr 2002, 3:42 p.m.,
in response to message #10 by Steve S.

P.S.

About one week later, vbeachbum emailed and said he was thinking about giving me a refund, but after leaving him negative feed back, he had changed his mind. How stupid does this guy think HP calculator people are. I replied yes and pigs have wings.

Re: How to handle an eBay swindler?

Message #12 Posted by [Ellis Easley](#) on 24 Apr 2002, 4:51 p.m.,
in response to message #11 by Steve S.

I think there might be an inverse relationship between Ebay sellers who clutter their ads with lots of superfluous pictures, and honesty. They are obviously trying to distract a bidder's attention. One big seller I run into frequently has his auctions play the first few notes of "Born In The USA" over and over, and has an annoying text message attached to the mouse cursor. I turned off my sound two months ago because of this guy. I only look because I think his auctions are so annoying, some other potential bidders might be staying away.

UPDATE: contacted seller

*Message #13 Posted by [glynn](#) on 26 Apr 2002, 11:26 a.m.,
in response to message #12 by Ellis Easley*

I want to thank all of you who responded-- the roadmap of options you've given me is FAR superior to the dark thoughts I managed immediately after opening my "surprise".

I called the seller. Explaining that the unit as pictured was not how I received it, and that it appeared to have been packed that way, the seller responded cheerfully that he would simply send me the parts that had not been included, from a stock of several units he has. He even asked if I wanted more units of this type.

Hmmm. I have my doubts about whether he will follow through with the proper parts, but we shall see. In the meantime, I have possibilities for follow-up, myself. I'll update when something happens either way.

In the meantime: Noticed that a high-feedback seller can still have sunglasses-- because you can, apparently, change your eBay ID at anytime. And keep your feedback. And no trace of your original ID exists on eBay. Theoretically, you could do business with the same bad penny every couple of months, and not even realize it.

In my feedback, good, bad or other, I am now going to include the ID as it exists at that time; as in "Thanks 'LowLeader'-- item arrived quickly". If LowLeader becomes HighChamp, his feedback will still reflect his old persona.... I can't believe eBay would not have a "formerly... " line in their User Profile-- and I think eBay is making it too easy for the sleazy.

Re: UPDATE: contacted seller

*Message #14 Posted by [Rick](#) on 27 Apr 2002, 4:57 p.m.,
in response to message #13 by glynn*

you can see the ebay id history for any user. fill out form and submit.

[http://cgi3.ebay.com/aw-cgi/eBayISAPI.dll?
MemberSearchShow#UserIDHistory](http://cgi3.ebay.com/aw-cgi/eBayISAPI.dll?MemberSearchShow#UserIDHistory)

Re: How to handle an eBay swindler?

*Message #15 Posted by [doug](#) on 24 Apr 2002, 7:05 p.m.,
in response to message #10 by Steve S.*

I have had similar problems on ebay. But you don't have to ask every possible question there is. It is the responsibility of the seller to disclose any unusual condition of an item for sale. That is the law. eBLA rules don't change the law. You should file the whole string of events you can as I put in a previous response. I found out you can file fraud charges through eBay, not just the authorities. Then you can file with the authorities also. What you described is FRAUD with FRAUDULENT intent. URL:<http://pages.ebay.com/help/rulesandsafety/43110002.html>

I contacted the person "vbeachbum" about some HP16C's I had and he put my contact information in his ad as if I was lying, some time ago. I normally wouldn't type this anywhere but he is a S___T A_S.

He is not a knowledgeable programmer or calculator user.

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Re: You are correct

Message #1 Posted by [Mike](#) on 22 Apr 2002, 11:57 a.m.

You are correct, the label does say Replica. I guess my eyes are not as good as yours.

I should not have mentioned that. My point was not to criticize the seller of the Replica Labels. He has done the right thing by adding the Replica note. My comment came at the end so was not my main point.

My point was that buyers should beware that HP-67s with Replica Labels are finding themselves on eBay and one must now be careful to ask if the labels are real. Most of the people that commented on the other topic said they were interested for personal use.

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HP 38GX???

Message #1 Posted by [Frank B. \(Germany\)](#) on 22 Apr 2002, 3:18 a.m.

Look at this

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1347943199>

Will there be a HP 38GX this year?

Re: HP 38GX???

Message #2 Posted by [Ellis Easley](#) on 24 Apr 2002, 10:40 a.m.,
in response to message #1 by Frank B. (Germany)

I think the seller must have edited the "48G/ no 48GX" text to make the 38G auction.

That auction answered one thing I have wondered about: whether the TIVO was built with a standard hard disk drive and allowed a user to upgrade the disk drive (the seller also sells upgraded TIVOs).

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Replica Labels - HP-67 on eBay with Fake

Message #1 Posted by [Mike](#) on 22 Apr 2002, 1:56 a.m.

Well, I hate to say "I told you so", but Replica Labels have found their way onto ebay by sellers of HP-67s.

I told you these replica labels would not be used for ones own use. Here is the first Replica Label that I have found on eBay. Clearly, these labels will be used to sell, otherwise, poor quality 67s.

At least this seller is honest to mention that it is a Replica. But you will soon see others that are not so honest, selling replica label 67s as original.

[HP-67 with Replica Label](#)

I also notice that this is not one of the ones that clearly states **Replica Label** so beware that the seller of the Replica Labels must be selling the other type still.

Re: Replica Labels - HP-67 on eBay with Fake

Message #2 Posted by [Ellis Easley](#) on 24 Apr 2002, 10:16 a.m.,
in response to message #1 by Mike

I would just like to state for the record that I am not "ellis4447". Also, that auction makes me feel very good about my HP67 that I "won" on Ebay for \$138, which had been attacked with a screwdriver, for which the seller agreed to refund \$25. That calculator is in similar condition (other than the attack), had been stored without a battery (I think this led to the attack - an effort to learn the battery polarity), had no electrical damage from the attack, and the damage cleaned up pretty well. Also the calculator came with complete Standard Pack, Navigation Pack, and Games Pack.

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"plug in" power for HP 41

Message #1 Posted by [aruid](#) on 21 Apr 2002, 3:55 p.m.

Hello,

I recently found an HP 41, but it only has the rechargeable battery pack (very corroded) and not the alkaline battery holder. My question is can I make the calculator run by modifying the rechargeable battery pack and having it constantly plugged in?

Is their another quick way of providing power to it so I can test the calculator?

Thanks

ARUID

Re: "plug in" power for HP 41

Message #2 Posted by [Ellis Easley](#) on 21 Apr 2002, 9:31 p.m.,
in response to message #1 by aruid

Tony Duell said there are two versions of the rechargeable pack - one has a voltage regulator that applies no more than 6 volts to the NiCads, the other just has a limiting resistor and would produce a higher voltage if the NiCads opened up. Since the NiCads are soldered in, there isn't the same risk of an open circuit as in the Spice and Woodstocks. But what I have considered doing (haven't done it yet), since my rechargeable pack, which I got in non-working order, has the voltage regulator, is to use the pack without NiCads just to run the calculator from the line, as you suggest. My pack has a rectifier, filter cap, a TO-92 12 volt (I think) regulator, a resistor, and a 6 volt zener diode. Adding some large electrolytic caps, maybe some approximately 1 farad "supercaps", in place of the NiCads might even keep the memory without AC for some time (if you are very careful not to turn on the calculator!)

Re: "plug in" power for HP 41 - additional

Message #3 Posted by [Ellis Easley](#) on 24 Apr 2002, 10:22 a.m.,
in response to message #2 by Ellis Easley

I should have mentioned that I would not expect to be able to operate the card reader and maybe some other peripherals that need extra power (HPIL?) using the regulated version of the rechargeable pac without NiCads.

Re: "plug in" power for HP 41 - additional

Message #4 Posted by [aruid](#) on 24 Apr 2002, 11:22 p.m.,
in response to message #3 by Ellis Easley

You are partly correct, But I was unable to use the calculator at all with the nicads removed. The power supply only charges the batteries and will not run the calculator the output was only 4.75 volts. To fix the problem I just "gutted" the nicad pack and ran wire directly to the connectors, the calculator now operates on 4 "AA" size batteries in a seperate pack.

ARUID

41's Power Pack? - Some questions

Message #5 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 22 Apr 2002, 3:21 p.m.,
in response to message #1 by aruid

Hi;

I have a full-nut that came with the golden-spheres contacts (say, a pair of golden-plated spheres with one golden-plated spring each, built with a rubber "holder" (?); these are built in the two little holes inside the charger tunnel). I read that these allow the 41 to be powered by an AC/DC converter. I also noticed that the holes are available in the newer half-nut's, but they are dummy (say, no contacts for the AC/DC converter available at the mainboard).

Getting Aruid's requests, I would like to know if anyone have already used these contacts. I remember (sometime ago, in the past 80's) I connected an external battery pack (four 1.5 A-size batteries) to read a bunch of cards. Successfull. But I don't remember the polarity...

Maybe this is more usefull.

Cheers.

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need batt pack for HP 34C

Message #1 Posted by [Bernt](#) on 21 Apr 2002, 7:31 a.m.

Hi - does anybody know of a good source for a replacement battery pack? I live in Western Europe (France) but can order in the US as well. Thanks!

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Length of 34C battery pack?

Message #1 Posted by [karl schneider](#) on 20 Apr 2002, 9:04 p.m.

HP-34C users --

I have yet to get my hands on a real battery pack designed for the HP-34C -- I've only seen the photo in the MOHPC site. The pack consists of 2 flat-topped AA NiCd cells held together side-by-side in a small bracket and jumpered together in series at the non-terminal end.

Standard AA cells with posts on the + terminal might be just be a bit too long, even if jumpered with aluminum foil. They do fit tightly, but might put too much stress on the calc's fragile spring terminals.

Can anyone tell me the overall length of a proper HP-34C battery pack? This length should be measured from one of the exposed battery terminals to the outside edge of the jumpering bracket.

Thanks,

-- Karl Schneider

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How to open 48GX?

Message #1 Posted by [David Chong](#) on 20 Apr 2002, 12:14 a.m.

Can anyone tell me how to open up my 48GX? It was damaged by a battery leak and cannot power-up. I am hoping some cleaning up may help revive it.

Re: How to open 48GX?

Message #2 Posted by [Andreas Stockburger \(Germany\)](#) on 21 Apr 2002, 9:40 a.m.,
in response to message #1 by David Chong

Hi,

see the "Articles Forum" on tis page and see the page "www.hpcalc.org". You sould find what you looking for ...

Best regards

Andreas

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would HP repro plastic parts sell?

Message #1 Posted by [barry](#) on 19 Apr 2002, 3:58 p.m.

hello to the group: i was wondering if reproduction parts for HP calcs would sell? my friends have an injection mol- ding shop, and we were looking at a 41C i had just picked up; i have seen WTB ads for port module covers and battery port covers, was wondering if you folks think quality repro parts like this would sell? has it been tried before? are there enuff 41XX out there needing small parts to support this? we figured that after mold & manufacturing costs were taken into account, we would have to sell 1000 of any one part over a period of time to make it worthwhile (and these parts would have to sell for about \$4.00 each); too much money for replacement parts? any thoughts out there? what parts would you like to see repro'd? tnx, barry carson city nv

Re: would HP repro plastic parts sell?

Message #2 Posted by [Larry Wiese](#) on 19 Apr 2002, 4:14 p.m.,
in response to message #1 by barry

I'm not sure how large your market would be, but the HP-41 series is a very collectible item. They move very quickly on eBay and the covers seem to have a way of disappearing. Someone did have an advertisement posted here on the hpmuseum for this very thing and I believe they were asking \$5 apiece for them. I have also seen them on eBay for around \$5 or \$6 but don't know how well they sold. Hope this info is of some use to you.

my experiences also, larry

Message #3 Posted by [barry](#) on 19 Apr 2002, 4:19 p.m.,
in response to message #2 by Larry Wiese

i sell some HP's here (tnx dave!) occasionally, and when i view the ads i see the WTB for the 41 series small parts; that's where we would probably start if we do this; i was considering the HP41C/etc battery compartment (N cell), but it would be a rather more expensive mold, and it would push the price much higher, or have to sell more quantity. the thought here is that we would expand to other small parts for other models also (maybe!).
tnx, barry carson city, nv

Re: my experiences also, larry

Message #4 Posted by [Larry Wiese](#) on 19 Apr 2002, 4:39 p.m.,
in response to message #3 by barry

Also, for the battery holder you probably would want to include the springs. I might be in the market for something like that if I cannot get my rechargeable pack rebuilt.

Re: would HP repro plastic parts sell?

Message #5 Posted by [doug](#) on 19 Apr 2002, 5:10 p.m.,
in response to message #1 by barry

People will need replacement parts as long as they can get enough to keep their machines working, or to ready them for sell.

I recently needed a battery compartment door for a TI 30, and a TI programmer calculator. I think they are the same. A person I finally found said he might sell some. I asked how much. \$30 for the TI-30 and \$40 for the TI-Programmer. Then I could do with the doors as I choose. If you have a calculator and lost the battery door or other then how aggravating is tape?

\$5 to \$10 per door.

If old enough and rare enough or someone just really needs a door to make a unit perfect. \$15 up.

Nothing is free anymore. The less of things there are, the less people will be so quick to give these items away or sell for \$2 or \$5. Given away or sold real low anything lately only to find you need the same item withing a few months and had to pay \$20 to get something?

Re: would HP repro plastic parts sell?

Message #6 Posted by [Spice_Man](#) on 20 Apr 2002, 1:15 a.m.,
in response to message #1 by barry

I'd definitely be a buyer of repro parts for the 41 series, classics, woodstocks, SPICE! series, etc. (for broken battery doors, half-cases, and red LED windows).

Better yet, how about some repro electronics? :-)

Re: would HP repro plastic parts sell?

Message #7 Posted by [Ellis Easley](#) on 21 Apr 2002, 3:48 p.m.,
in response to message #1 by barry

How about the sliding latches that go in the Classic battery covers? The way HP made them, the part that makes them stay in the extended position breaks off easily. Also, this is probably not in great demand, but I got two HP75's from EduCalc mounted in the expansion pod and I would like to have the battery cover for the 75 itself, which is discarded when the unit is installed in the pod.

Re: would HP repro plastic parts sell?

Message #8 Posted by [glynn](#) on 21 Apr 2002, 6:21 p.m.,
in response to message #1 by barry

I think there would be sufficient market for some of these to merit the project; the port covers, battery-doors for the 41 series, the 75 battery door, also perhaps molded plastic packs for batteries, or of module boxes-- the possibilities are there.

If you are doing the toolwork yourself, rather than simply creating a form directly from an original part, you will primarily concern yourself with precise fit and compatibility; after that, however, it is not only conceivable, but desirable, to IMPROVE, where you can, the design-- and in so doing, differentiate your design from one simply copied. I know that may be hard to imagine right away; do some thinking on the pieces themselves, study them and how they act, and perhaps you'll come up with something.

The improvement/differentiation could do several things:

- A. Properly identify your part as a repro-- protecting the market for all-original equipment. As most here are familiar with the demands/wishes of collectors, you should see that this move should not harm your market overall.
- B. Protect you from the legal ramifications of "lifting" or copying someone else's design/tooling.
- C. Rib or reinforce those areas that may have proven fragile in the field over the lifetime of the part.
- D. Provide smooth "label areas" or other feature not included originally in the design. Or alternately, a molded-in legend providing useful information on the calculator's operation... one can imagine the self-test and reset and other subtleties of a calc being documented on a battery door, for instance.

E. Create a brand-image and repute of your own-- so that the hard work you do in this area will translate to a recognition amongst collectors that your parts are valuable in their own right... a small but recognizable logo or "cartouche" so that the source of such a part is known and respected... that would be better in my mind than a "source unknown" knock-off part.

The project has merit, surely. Best of success to you-- looking forward to seeing examples of this being done right. If they are, I'll be a customer, too.

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Message for David Smith re: batteries

Message #1 Posted by [Larry Wiese](#) on 19 Apr 2002, 3:20 p.m.

The thread on some of the messages get quite long and I don't think you saw the one from Erik asking where you get your 150mAH NiMH batteries for the HP-41 rechargeable battery pack. I would also be interested in the answer to this. Thanks.

Re: Message for David Smith re: batteries

Message #2 Posted by [David Smith](#) on 19 Apr 2002, 6:03 p.m.,
in response to message #1 by Larry Wiese

Several months ago I found a place that had around 50 of the 1/2N cells in stock. I bought them all and had them wired them up into groups of 4. Unfortunately I have used them all to rebuild packs. They tried to find me some more but were unsuccessful.

It looks like it's NiMH time from now on. I have been unable to find a source for the 150mAH NiMH cells that TGWORKS sold. TGWORKS told me that they were Sanyo cells, but my Sanyo supplier could not find them in his catalog.

Re: Message for David Smith re: batteries

Message #3 Posted by [katie](#) on 19 Apr 2002, 11:10 p.m.,
in response to message #1 by Larry Wiese

<http://www.batterystation.com/nicads.htm> sells 1/3 AAA NiMH (100mah) cells for \$2.00 and 1/3 AAANiCd (50mah) cells for \$1.50. They'll add solder tabs for free and ship very quickly. I'm quite pleased with this company.

Re: Message for David Smith re: batteries

*Message #4 Posted by [Larry Wiese](#) on 24 Apr 2002, 4:37 p.m.,
in response to message #3 by katie*

Thanks so much for the information.

Re: Message for David Smith re: batteries

*Message #5 Posted by [Spice_Man](#) on 25 Apr 2002, 1:31 a.m.,
in response to message #3 by katie*

Will 1/3 AAA NiMH (100mah) cells work properly with the 41C charger?

Spice_Man

Re: Message for David Smith re: batteries

*Message #6 Posted by [David Smith](#) on 25 Apr 2002, 6:02 p.m.,
in response to message #5 by Spice_Man*

Yes, they should work just fine. I have found the 1/3AAA cells to be a bit too small for a good fit without a lot of shimming, etc. That's why I liked the 150mAH cells. They were only a little shorter, but their diameter was a good fit.

The HP battery pack dumps a pretty good slug of current into the batteries on charge (around 15mA). This amounts to a C/5 charge rate for the original NiCd cells, C/7 for the 100mA NiMH cells, C/10 for the 150mAH cells. I prefer not to leave NiMH cells on a constant charge of over C/15-C/20. The 15mA trickle charge rate does not seem to heat the cells up, so it is probably OK. To assure maximum battery life, you may not want to charge them for more than 10 hours or so. Also stop charging if they begin to get overly warm.

charging time

*Message #7 Posted by [Ellis Easley](#) on 27 Apr 2002, 5:33 p.m.,
in response to message #6 by David Smith*

I'm curious about this statement:

"To assure maximum battery life, you may not want to charge them for more than 10 hours or so."

I have no experience with NiMH cells but I've noticed that for regular NiCads, standard charge is usually defined as C/10 for 15 hours. If I followed your post correctly, the 10 hour recommendation referred to 150 mAH cells at 15 mA. Are NiMH cells different from standard NiCads in this regard? If the extra 50% charging at the C/10 standard rate is good for full capacity and battery life, would charging for less than 15 hours constitute undercharging? If so, would it lead to the "memory effect" (which I understand has been de-bunked) or just reduced capacity per charge? In general, is the important thing for long life and full capacity to make sure you don't recharge till the cells are quite discharged (down to 1V or less), always making sure to avoid reverse charging in multi-cell strings?

Re: charging time

*Message #8 Posted by [David Smith](#) on 28 Apr 2002, 9:44 p.m.,
in response to message #7 by Ellis Easley*

Yes, you usually need to overcharge a battery from 20-50% for a full charge. I was trying to be safe with the NiMH cells for a while since I don't have a long history of using them in the HP41 pack. Best thing to do is keep an eye (and finger) on them and take them off charge if they start to get warm. This gives a good feel for how long they should be charged. The NiCD cells in the HP41 pack don't seem to heat up even with extended charge times. They have quite a bit of mass for 15mA to warm up, I think this is why HP dumps such a big slug of current into them without ill effects.

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48GX IR POrt

Message #1 Posted by [John Kercheval](#) on 19 Apr 2002, 10:37 a.m.

Is this IR port on the GX useful for anything other than use with the IR Printer?

John

Re: 48GX IR POrt

Message #2 Posted by [Ellis Easley](#) on 19 Apr 2002, 11:05 a.m.,
in response to message #1 by John Kercheval

You can use it to connect to another 48S/G/X and I have heard (haven't done it) you can build a simple IR interface for a PC. In all cases, doing with the IR what you can do with a cable.

Re: 48GX IR Port

Message #3 Posted by [Les Bell \(Sydney\)](#) on 19 Apr 2002, 6:57 p.m.,
in response to message #1 by John Kercheval

There are programs out there that allow you to use the HP-48GX as a TV/VCR remote control. Out of curiosity, I tried it, and was able to play tricks on my kids by changing channels while they had the remote control. . . <g>

On a more serious note, I believe there are programs that can upload/download to a notebook with an IR port. Never tried that, though.

Best,

--- Les [<http://www.lesbell.com.au>]

Re: 48GX IR Port

*Message #4 Posted by [Reinhard Hawel \(Austria\)](#) on 20 Apr 2002, 10:59 p.m.,
in response to message #3 by Les Bell (Sydney)*

I did this with my Omnibook 300 and my HP100LX.

I remember myself using KERMIT and XMODEM protocols. You can use the cable too, but it was too much work fiddling around with the cable all the time (though transmission would have been much faster).

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HP IL to Serial Converter

Message #1 Posted by [John Kercheval](#) on 19 Apr 2002, 8:48 a.m.

Does anyone have any experience using this device?

I've never tried it but I am having some fantasies about getting one and using it to connect my 48GX to the IL Printer & cassette drive. That would allow me to transition to the GX and still get very practical use out of my IL devices.

Has anyone ever written routines for the converter?

Thanks,

JohnKercheval

Re: HP IL to Serial Converter

Message #2 Posted by [Vassilis Prevelakis](#) on 19 Apr 2002, 12:23 p.m.,
in response to message #1 by John Kercheval

Unlike the HP-IL to HP-IB interface which allows the controller to be on either side of the interface, the serial to HP-IL interface works only one way. So you need a controller on the HP-IL side to drive the loop.

So by adding a computer on the IL side (e.g. HP-71B) you may be able to drive the IL printer by transferring data from the 48GX to the 71B and then on to the IL printer.

You may be able to do the same with cassette drive files, but it will need lots of code on the 71B.

**vp

Re: HP IL to Serial Converter

*Message #3 Posted by [John Ioannidis](#) on 19 Apr 2002, 1:21 p.m.,
in response to message #2 by Vassilis Prevelakis*

You can also put the 82164 in "remote mode", where it accepts HPIL commands over the serial port. You would still have a lot of work to do to get it to actually print.

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48GX versus 49

Message #1 Posted by [John Kercheval](#) on 19 Apr 2002, 8:33 a.m.

Does anyone prefer the 49 over the 48GX? I have both and there is not a single thing I like about the 49 over the 48.

John Kercheval

Re: 48GX versus 49

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 19 Apr 2002, 10:15 a.m.,
in response to message #1 by John Kercheval

Hi;

I also have both, but there are some points I consider as big differences. No doubts about usage: the HP48 is fairly better for daily use. About the HP49, we have:

- bigger available USER memory - Upgradable O.S. (who knows we'll be able to develop our own...)

Negative points:

- no expansion PCM-CIA slots - no IR link (why did HP place an IR filter? Cosmetics? Future implementation?)

Despite being not so friendly for daily use, ACO guys made a great job. Anyway, let's face it: the HP49G is the best place you have to keep (and even run, if they do not use Equation Library...) your favorite HP48 programs.

Re: 48GX versus 49

*Message #3 Posted by [John Kercheval](#) on 19 Apr 2002, 10:34 a.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)*

I'm not following you.

Why do you say:

"HP49G is the best place you have to keep (and even run, if they do not use Equation Library...) your favorite HP48 programs."

If you mean the memory, I have the 1.0MB expansion card in my GX so the RAM is nearly as much as in the 49. Also, Calcpro out of Corvalis will upgrade the internal ram to up to 2304K.

I did not know the OS was upgradeable. How do you do that?

John K.

Re: 48GX versus 49

*Message #4 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 19 Apr 2002, 3:31 p.m.,
in response to message #3 by John Kercheval*

Hi;

The HP49G's O.S. is kept in FLASH memory (1 MBytes) and it can be upgraded. The original is 1.05, now it is at 1.18. You can go [here](#), search for Flash ROM, download the file, unzip it and follow the upgrading instructions. Of course, you'll need comms SW and cable (please, don't blame me; it's just for checking purposes...).

Hope it helps.

Cheers.

Re: 48GX versus 49

*Message #5 Posted by [John Kercheval](#) on 23 Apr 2002, 9:05 a.m.,
in response to message #4 by Vieira, Luiz C. (Brazil)*

Very interesting.

Yes it would be good if you could upgrade the 48GX OS.

JK

Re: 48GX versus 49

*Message #6 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 23 Apr 2002, 9:38 a.m.,
in response to message #5 by John Kercheval*

Hi, JK.

Maybe it's old news, but... are you aware the HP48G's OS has also been upgraded? We cannot do it, but HP made some upgrades during production. If I am not wrong, the newer ones have R-version OS.

Again, just for checking purposes. Also, www.hp4calc.org has all of them (ROM dump) available to download, INCLUDING a 1.19, Beta-release, for the HP49G. They are free to download, as HewPack made them public available. Have a look in there. Good stuff..

Cheers.

Re: 48GX versus 49

*Message #7 Posted by [aruid](#) on 19 Apr 2002, 11:10 a.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)*

HP uses the same case on the HP 39G and that has an IR port. I bought the HP 49G because it has a computer algebra system. Now I think I need both calculators.

On a side note: I didn't buy the HP 48GX first because HP does not make expansion cards for it! HP uses expandability as a selling point yet they do not sell the expansion cards! The HP 49G selling point is an upgradable Operating System yet HP has no plans to update it!

The product info on the web is misleading.

Re: 48GX versus 49

Message #8 Posted by [Ron Ross](#) on 19 Apr 2002, 11:38 a.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)

I agree with Vieira. I like my 48 better for daily use. If you have a RAM card you can nearly equal a 49 in capability and use. However, if you want the most powerful OS (comparable to Win95 vs Win 2000) you need an Hp49. It has the latest CAS and Meta Kernal on IT for all practical purposes vs 4 year old software equalivents for the Hp48 (though these are not shabby by any means).

If you have a 48GX with RAM, the only reason to own a 49 is either to have a newer flashier, somewhat more powerful machine or to just simply have a newer calc.

Re: 48GX versus 49

Message #9 Posted by [Olivier Croissant](#) on 13 May 2002, 12:15 a.m.,
in response to message #8 by Ron Ross

I also discovred that the 49 has more high level functions than the 48 : - The gamma function with its derivatives :digamma and polygamma - The orthogonal polynomials : Hermite, Tchebichev and Legendre

doing a lot of probability, i appreciate that because these function are not easy to program and the implementation of the digamma and polygamma are impressive (much faster) on the 49 compared to an implementation throug the mathlib card on the 48gx.

THE minus side is the lack of IR print. (I hate this stupid limitation)

olivier

Re: 48GX versus 49 - Gamma function

Message #10 Posted by [Ellis Easley](#) on 17 May 2002, 1:40 a.m.,
in response to message #9 by Olivier Croissant

Are you familiar with Viktor Toth's programmable calculators website? In an article titled "[Why The Madness?](#)" he describes how seeing a calculator with the Gamma function built-in fired his fascination with programmables (he wanted the Gamma function on his calculator). He uses the Gamma function as an example (where possible) of how to program a wide variety of programmables of many brands.

Re: 48GX versus 49 - Gamma function

Message #11 Posted by [olivier croissant](#) on 17 May 2002, 10:05 a.m.,
in response to message #10 by Ellis Easley

yes,

I like the way he talk about his passion, I think , though in different circumstances, I followed a very similar path.

I also have a SR52 , but the card reader does not work any more, I do not know why.

Olivier

Re: 48GX versus 49

Message #12 Posted by [Frank](#) on 17 May 2002, 12:27 p.m.,
in response to message #9 by Olivier Croissant

Several of these functions, including the Gamma are also on the Commodore Mathematician (M-55) of 1977, bought one new then, still have, overall it was the most powerful preprogrammed (not programmable) machine of it's time to my knowledge, but I would welcome other challenges on that subject!

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HP Portable Plus/ HP 150 Systems

Message #1 Posted by [John Kercheval](#) on 19 Apr 2002, 1:35 a.m.

I own the 150 Touchscreen II and the Portable Plus. GREAT computers for their time.

Also they had IL capability so I interfaced them to each other, various IL peripherals and to the 41 & 71.

Anyone else try this?

41/71 users may wish to consider doing this now, as 150s and 110 are pretty cheap.

John Kercheval

Re: HP Portable Plus/ HP 150 Systems

Message #2 Posted by [J-F Garnier](#) on 19 Apr 2002, 6:42 a.m.,
in response to message #1 by John Kercheval

I agree, the Portable Plus is a great machine. How do you drive the HPIL? Do you use Basic, or assembly level? I remember I made (a lot of years ago) a simple "HPIL monitor" program in Basic with in/out functions.

J-F

Re: HP Portable Plus/ HP 150 Systems

*Message #3 Posted by [John Kercheval](#) on 19 Apr 2002, 8:30 a.m.,
in response to message #2 by J-F Garnier*

Thanks for your response.

In the case of the 110+, it has built in I/O features to run the IL. Once the unit is connected to a Calc, the 41/71 can upload files, etc, in effect using the electronic discs of the 110+ as mass storage devices. In the case of the cassette drive, you just use the storage commands to save data to it.

I LOVE the idea of using plug in ROMS to load programs versus the hard drive & wish my HP Omnibook XE2 had such features.

In the case of the 150, shareware was released in 1987 that ran the IL Card and provides a seamless interface "shell" between the unit and calcs. and was very easy to use.

Did you ever subscribe to the third party newsletter " the "Portable Paper?"

Do you still have the 110? What applications did you use?

JK

Re: HP Portable Plus/ HP 150 Systems

*Message #4 Posted by [Philip Reagan \(Houston, TX\)](#) on 22 Apr 2002, 3:48 p.m.,
in response to message #3 by John Kercheval*

I have several 110's. I purchased them in the past year specifically because of the IL capabilities. I've been in an binge to acquire anything with HP-IL. I have tested the machines with the 9114B IL disk drive and worked great. My goal is to connect them to the 41 and 71 to see what I can do. I've even thought about writing some sort of control or monitor program in either Basic or Assembly just to try it out but I haven't had the time. There various ROM-based routines that allow you to "talk" to the IL.

Re: HP Portable Plus/ HP 150 Systems

*Message #5 Posted by [Rick](#) on 22 Apr 2002, 9:42 p.m.,
in response to message #4 by Philip Reagan (Houston, TX)*

What would you say is a good price for the 110? Do you have any accessories you would like to trade or sell?

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Internal User Modifications

Message #1 Posted by [John Kercheval](#) on 19 Apr 2002, 1:28 a.m.

Any of you guys know of or tried to modify the hardware?

I did the double speed mod to the 41CV.

CalcPro is advertising an internal memory upgrade for the 48GX.

We tried to hardwire ROM chips directly into the INSIDE of the 41CX (failed)

Any other mods tried?

John Kercheval

Re: Internal User Modifications

Message #2 Posted by [Chris Catotti \(Florida\)](#) on 19 Apr 2002, 1:28 p.m.,
in response to message #1 by John Kercheval

I have doubled HP-41 modules within the module cases. These are described by David (Ebras-) White in the PPC Journal under a series of articles titled "Butcher's Block".

I have also done the internal speedup on the HP-41. I did these circa 1984, and have not taken the time to do another one. I could find the articles if needed ... they are easy to follow.

Re: Internal User Modifications

*Message #3 Posted by [John Kercheval](#) on 19 Apr 2002, 2:52 p.m.,
in response to message #2 by Chris Catotti (Florida)*

The speedups only involve the replacement of one capacitor.

Sadly, they must be done on older machines as they newer ones had a blob of epoxy on the to prevent tinkering.

John Kercheval

Re: Internal User Modifications

*Message #4 Posted by [David Smith](#) on 19 Apr 2002, 5:56 p.m.,
in response to message #3 by John Kercheval*

I have opened up well over 100 HP41 machines of all types and ages. I have never seen one with the timing capacitor epoxied over.

Re: Internal User Modifications

*Message #5 Posted by [Johnny](#) on 7 May 2002, 7:05 a.m.,
in response to message #4 by David Smith*

I've only looked inside one Halfnut, and it was probably 15 years ago, but if I remember correctly, the Halfnut don't have the same design for the clock. I remember not finding those capacitors at all. Either with or without epoxy on them.

The fullnut have them visibly enough. No problems there.

However, I no longer remember which one to change, and to what. Anyone care to remind me?

Actually, if I remember correctly, the inside of the halfnut turned out to be very different from the fullnut (I was comparing two 41CX).

Re: Internal User Modifications

Message #6 Posted by [Kim](#) on 7 May 2002, 3:11 p.m.,
in response to message #3 by John Kercheval

The halfnut has an SMD capacitor that you can swap using the same rules as the NUT. If you don't use the card reader or the IL, you can remove the cap altogether and your speed will be 3x. Most units will work well with 80% increase (33pF).

Kim

Re: Internal User Modifications

Message #7 Posted by [John Kercheval](#) on 8 May 2002, 5:41 p.m.,
in response to message #6 by Kim

I did not know you could do that. Without the capacitor at ALL did you experience crashes or lockups?

Re: Internal User Modifications

Message #8 Posted by [kim](#) on 9 May 2002, 1:56 a.m.,
in response to message #7 by John Kercheval

Apparently the halfnut IC and the PCB had gone through enough techno iterations to not be bothered and - of course - the location of PCB tracks close enough and long enough to act as a capacitor.

As far as I remeber the original cap was 150pF at 1x the 33pF at 1.8x and the wires must be but a couple of pF.

No no crash, no lockups, no nothing - except a lot of battery consumption (probably part of the original design tradeoffs)

Kim

Re: Internal User Modifications

Message #9 Posted by [Johnny](#) on 7 May 2002, 7:01 a.m.,
in response to message #1 by John Kercheval

I never did the speedup on my CX, but I'm actually thinking that perhaps I should do it now...

However, I have the ZenROM and two X-mem modules built into my 41CX.

Have worked like a charm for 10+ years now.

Re: Internal User Modifications

Message #10 Posted by [John Kercheval](#) on 7 May 2002, 8:38 a.m.,
in response to message #9 by Johnny

I have not done that mod in about 18 years.

But I'm sure someone on here has the instructions.

We could modify CV's easily enough but all of the CX's we tried had a blob of epoxy over the circuitry. We looked into modifying about 5 or 6 of them and all had it. However there may be those that do not.

Good luck & let me know how it works out.

JK

Re: Internal User Modifications

Message #11 Posted by [Peter Lampione](#) on 9 May 2002, 3:37 a.m.,
in response to message #10 by John Kercheval

I thought internal user modifications were best left to an MD... I certainly wouldn't want to put my hands into a user that lightly.

Peter

Re: Internal User Modifications

Message #12 Posted by [Johnny](#) on 9 May 2002, 2:03 p.m.,
in response to message #10 by John Kercheval

Okay, I have my CX open now. No epoxy, no nothing. Now, which capacitor should I change (and to what)?

I see three:

1 470 uF (probably to maintain power when battery is changed).

1 grey with onknown value. Looks like normal electrolyt.

1 blue drop capacitor. Marked "33+ 10F" if I manage to read it right.

If I remember correctly, it's one of the three in the upper left corner of the small PCB with the CPU and memory stuff.

Re: Internal User Modifications

Message #13 Posted by [Luis](#) on 10 May 2002, 8:12 a.m.,
in response to message #12 by Johnny

Hi Johnny,

After all this thread and as interested in speed up my 41CX, could you tell me how can I do this? I've tried to find out any instruction here but unsuccessful. My 41CX is of 1987 and have reduced electronics.

Thanks All!

Luis

Re: Internal User Modifications

Message #14 Posted by [Johnny](#) on 10 May 2002, 10:02 a.m.,
in response to message #13 by Luis

Unfortunately I don't know much about the newer halfnut hardware. Until recently I was under the impression that you could not speed it up at all, unlike the older hardware.

Someone here claimed otherwise though. I hope he can provide you with more details on how to do it.

For the older hardware, the speedup is achieved by just changing a capacitor. I'm just trying to figure out which one. Most of my friends did the speedup (I can't even remember why I didn't), but this was in the mid '80s, and memory have faded some, so now I don't remember which capacitor... :-/

Re: Internal User Modifications

Message #15 Posted by [Kim](#) on 10 May 2002, 2:33 p.m.,
in response to message #14 by Johnny

OK, it seems like everyone has some level of amnesia, after all this modification has not been in fashion for about a generation.

Older NUTs

One capacitor, usually green (very old red), resembling something like 150pF. That's the one (LC circuit)

Half NUTs (what an expression)

the Cap is a TINY ceramic SMD component (20 mil by 30) located (as far as I recall) on the lower left of the CPU chip (could be epoxy covered) around 7 o'clock. Again some sort of indication should be present that this is 150pF.

DISCLAIMER

You are on you own, this could Zap the MOS circuits (Might require the earlier indicated MD). I personally changed speed on about 500 units some 10-12 years ago (commercial approach) and NEVER zapped one unit. But I used all the Bells and Whistles in order to protect against ESD.

Kim

Re: Internal User Modifications

*Message #16 Posted by [Johnny](#) on 10 May 2002, 4:03 p.m.,
in response to message #15 by Kim*

Let me know if I should take this by email instead.

I don't see either a green or red capacitor. :-/

Holding the CPU card with the large 470uF capacitor at the top left corner I have two other capacitors right below it. One grey and one blue. We're talking around 10 to 11 o'clock here. I was under the impression that it was (probably) the blue that I should change, but the markings on it have me confused.

It was a long time ago, but I seem to remember that my CX looks pretty much exactly like a CV in this area.

The only green component I have is a small thing under the piezo speaker. Looks slightly like a diode, and I cannot read the markings on it.

Is **that** the capacitor to change?

Re: Internal User Modifications

*Message #17 Posted by [David Smith](#) on 10 May 2002, 4:10 p.m.,
in response to message #16 by Johnny*

The capacitor can be in different places depending upon the board revision. It is in parallel with an inductor that has a very low (less than 50 ohm) resistance. If you have an ohm meter you can try buzzin around for the cap with the inductor across it. On all the full nut boards that I have seen it is a light blue-green color with a value of 150 pF (usually indicated by the numeric code 151, but sometimes 150)

Re: Internal User Modifications

*Message #18 Posted by [Johnny](#) on 11 May 2002, 12:18 p.m.,
in response to message #17 by David Smith*

Ah. Silly me, the grey unidentified thing was the inductor. That was pretty obvious (and approx 4 ohm).

But I cannot find any capacitor in paralell with it.

I found one capacitor the the marking "151K" but that one is definitely not in paralell with the inductor. :-/

This is slightly silly. Unfortunately my digital camera is in for repairs, so I cannot take a shot at what I have right now either...

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Is this a real RED DOT?

Message #1 Posted by [Spice_Man](#) on 18 Apr 2002, 11:51 p.m.

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1347350817>

Any way to tell for sure?

Spice_Man

Re: Is this a real RED DOT?

Message #2 Posted by [Anonymous](#) on 19 Apr 2002, 12:32 a.m.,
in response to message #1 by Spice_Man

I Can't view the picture, does not load, when it does it's fuzzy. Ask seller to email better pics and ask for serial number. My bid... ? \$75.35...

Re: Is this a real RED DOT?

Message #3 Posted by [Spice_Man](#) on 19 Apr 2002, 11:04 p.m.,
in response to message #2 by Anonymous

The seller gave me descriptions and the serial number and info on this calculator. It appears to be the real thing... SN 1143A 03XXX

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Replacing cells in 41 battery pac

Message #1 Posted by [Larry Wiese](#) on 18 Apr 2002, 4:21 p.m.

How do you split open the case on the 82120A rechargeable battery pack for the 41 series so that you can replace the cells? Does hair dryer help? Also, what are we now using to replace the half N cells?

Re: Replacing cells in 41 battery pac

Message #2 Posted by [John Kercheval](#) on 18 Apr 2002, 4:56 p.m.,
in response to message #1 by Larry Wiese

I would not suggest that.

You can buy full size N cells at Radio Shack and just put them in the standard battery holder. I've been doing this for years- longer life than a brand new Pac and cheaper.

The downside is that you must recharge them externally.

John Kercheval

Re: Replacing cells in 41 battery pac

Message #3 Posted by [Larry Wiese](#) on 18 Apr 2002, 6:19 p.m.,
in response to message #2 by John Kercheval

I would do that if I had the "standard battery holder." Somehow it grew legs and walked away. Thanks for your response.

Re: Replacing cells in 41 battery pac

Message #4 Posted by [David Smith](#) on 18 Apr 2002, 6:03 p.m.,
in response to message #1 by Larry Wiese

I open my 82120's with single edge razor blades and a hammer. Gently tap the blade into the seam between the case halves. If you tap too hard the blade breaks... wear eye protection. If you slip your finger spings a leak... be careful. Some packs are much easier to open than others. I reseal my packs with IC2000 tire cement. This is a black, rubberized super glue that is made for gluing rubber tires to RC model cars.

As far as cells go you are probably out of luck finding the 1/2N NiCD cells. Sanyo quit making them over a year ago. TGWORKS (mentioned elsewhere on this site) is now out of business.

There are some 150mAH NiMH cells by Sanyo that are a close match in size. They are about 1/8 inch shorter than the NiCD cells, so you need to back them up with a small piece of wood. The 120mAH NiMH cells can be made to fit also, but they are quite a bit smaller in diameter.

Re: Replacing cells in 41 battery pac

Message #5 Posted by [Larry Wiese](#) on 18 Apr 2002, 6:22 p.m.,
in response to message #4 by David Smith

Thanks alot for the information. I will give your method a try. Yesterday I replaced the drive rollers in two card readers and now they actually work! I didn't screw them up so now I will see what luck I have with the battery pack. Thanks again.

Re: Replacing cells in 41 battery pac

Message #6 Posted by [Erik Wahlin](#) on 18 Apr 2002, 9:32 p.m.,
in response to message #4 by David Smith

David, Where do you get your NiMH cells? Thanks

Re: Replacing cells in 41 battery pac

Message #7 Posted by [David Smith](#) on 19 Apr 2002, 6:07 p.m.,
in response to message #6 by Erik Wahlin

Several months ago I found a place that had around 50 of the 1/2N cells in stock. I bought them all and had them wired them up into groups of 4. Unfortunately I have used them all to rebuild packs. They tried to find me some more but were unsuccessful.

It looks like it's NiMH time from now on. I have been unable to find another source for the 150mAH NiMH cells that TGWORKS sold. TGWORKS told me that they were Sanyo cells, but my Sanyo supplier could not find them in his catalog.

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Time Setting for HP 01 Watch/Calculator

Message #1 Posted by [WKH](#) on 18 Apr 2002, 10:20 a.m.

Hello Everybody:

Can anyone help to explain how to set the time for the HP 01 watch/calculator?

Thanks and regards,

kh

Re: Time Setting for HP 01 Watch/Calculator

Message #2 Posted by [Michael O. Tjebben](#) on 18 Apr 2002, 11:53 a.m.,
in response to message #1 by WKH

An Adobe Acrobat version of the HP-01 manual is on its way to you by email. Courtesy of this HP Museum site (I purchased the CD set a while back, and it is on it.)

Best wishes!

-Mike

Re: Time Setting for HP 01 Watch/Calculator

Message #3 Posted by [Michael Tjebben](#) on 18 Apr 2002, 12:00 p.m.,
in response to message #2 by Michael O. Tjebben

Well, I didn't pay attention to how LARGE it is! It probably will not go by email, though I'll try. On the order of 13-14MByte! Do you have an ftp site that I could upload it to?

Here's the "short" description of how to set the time: Key in the time in the HH:MM:SS format at press "triangle"-T.

If you wish to key in an evening time, key in HH:MM:SS, then p-"triangle"-T.

Good luck and email me if you want to figure out how to get the copy of the manual, if it doesn't make it by email.

-Mike

Re: Time Setting for HP 01 Watch/Calculator

Message #4 Posted by [WKH](#) on 18 Apr 2002, 12:44 p.m.,
in response to message #3 by Michael Tjebben

Hello Mike,

Thanks for the information. Maybe you can try sending it to my office mail.

I work for HP :-) and my office email is:

kia-heng_wong@hp.com

If this did not go through, I will get back to you about some other means. Thanks once again!

kia heng

Re: Time Setting for HP 01 Watch/Calculator

*Message #5 Posted by [Michael O. Tjebben](#) on 18 Apr 2002, 2:08 p.m.,
in response to message #4 by WKH*

Hello All!

My apologies to Dave Hicks, who, along with many others, has put a lot of effort into the scans which are copyrighted and cannot be distributed as I had planned to do!

In light of this, I suggest that you look at this site for the Museum CD's which have a copy of the HP-01 manual and are priced very reasonably and are quite valuable and useful!

Best wishes!

-Mike

p.s. I have, at times, tried to post links to sites which also contain HP information, but have not known that those sites had unauthorized copies, until Dave's "scanner" has notified me while posting. My apologies for potentially spreading any problems!

Thanks Michael

*Message #6 Posted by [Dave Hicks](#) on 18 Apr 2002, 2:33 p.m.,
in response to message #5 by Michael O. Tjebben*

The CDs are covered by both HP's copyrights and my own. I spent about 2 years from about 6PM to 2AM weeknights and all day weekends standing over the scanner flipping pages in bound manuals. (After spending about 6 months getting permission.) I'm hoping that at some point I that sell enough to make something like minimum wage on them. Last year I quit my job at Intel due to burn out, so having a little money coming in from the CDs helps a little. I don't mean to imply I'm desperate or anything – but if a lot of people start passing my scans around, then I should really stop scanning and get a real job. As long as there's a trickle of money from the CDs I can call myself "a semi-retired small business owner" for a while at least. :-)

By the way, I've scanned an 8" stack of manuals for the next version in the last week. The next version might not even fit on a single DVD!

Re: Thanks Michael

*Message #7 Posted by [John Kercheval](#) on 18 Apr 2002, 4:59 p.m.,
in response to message #6 by Dave Hicks*

Dave:

I bought the CD's only last month- mostly for the manual scans. How do I upgrade to the new version with all of those new manuals?

Thanks,

John Kercheval

Re: Thanks Michael

*Message #8 Posted by [Dave Hicks](#) on 18 Apr 2002, 6:13 p.m.,
in response to message #7 by John Kercheval*

Once it's available, there will be options added to the order page. It will probably be available both as additional CDs and as a DVD.

May I suggest something?

*Message #9 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 18 Apr 2002, 8:22 p.m.,
in response to message #8 by Dave Hicks*

Hello, Dave.

As many thankful owners, I could get my HPMuseum CD pack. (does the name Paulo Vieira mean anything? Yes, my brother.) Amazing. And I respect a lot what you've done. Thanks.

Mr. Tjebben has been honest a lot by expressing his intentions openly. In fact, this fact called others attention to what sort of trouble this action would result over you and your work.

My suggestion is adding an advice (a letter) that might be read carefully by anyone who buys the CD's. Even very well known, your effort must be clearly expressed, so the ones who buy them will be aware that copying the CD's contents is a not-supported action (or

something like it)

Mr. Tjebben has proved being sensitive and respectful, and I know everyone in here has noticed that. We, who understand that the CD's contents are priceless, will unconditionally support this activity of yours.

Thanks, Dave. And best regards.

That might be a good idea

*Message #10 Posted by [Dave Hicks](#) on 19 Apr 2002, 12:38 a.m.,
in response to message #9 by Vieira, Luiz C. (Brazil)*

I thought the copyright statement on the CD was enough and I wouldn't like there to be anything like a difficult to read software license agreement but perhaps a few words should be added.

Re: Time Setting for HP 01 Watch/Calculator

*Message #11 Posted by [WKH](#) on 19 Apr 2002, 10:51 a.m.,
in response to message #5 by Michael O. Tjebben*

Hello Everybody:

My sincere thanks to Michael for his offer to my call for help.

I understand the amount of work and energy that Dave have put into the CDs, and I am pretty sure they will be very useful and informative for all HP calculator collectors.

Anyway, I have already placed an order for a set of the 5-CD set.

Regards,

kh

Re: Time Setting for HP 01 Watch/Calculator

*Message #12 Posted by [Dave Hicks](#) on 20 Apr 2002, 12:08 a.m.,
in response to message #11 by WKH*

Thanks! They will ship next week.

Re: Time Setting for HP 01 Watch/Calculator

Message #13 Posted by [Reinhard Hawel \(Austria\)](#) on 20 Apr 2002, 7:19 p.m.,
in response to message #1 by WKH

Without violating anybody's copyrights I think I can give you a short description how to set the watch

You enter the time separated with colons:

HH ":" MM ":" SS

The colon is in the 3rd row, 1st column of the keyboard

Then press the "shift" key "^" and "T"

"^" is in the 4th row, 4th column and "T" is in position 4/7

"T" "^" followed by "." will switch between 12 and 24 hour display mode.

Setting the date works this way:

Enter (in example) 22/12/02

then "^" "21" (for the 21st century)

and then "^" "D"

A decimal point at the right side of the display shows, that you have set a date after year 2000.

For changing the date display between "MM-DD-YY" and "DD-MM-YY" just press "D" "^" and then "." similarly to switching between the different time modes.

I assume you know, that you need to push "D" or "T" for a short time to see date or time for some seconds.

Have fun with your HP-01. It's a great toy and I sometimes wear it in business meetings. I own two IWCs, but the HP is a completely different watch. Currently there is a movement to larger and larger watches and the HP-01 is absolutely compatible with this trend :-)

Re: Time Setting for HP 01 Watch/Calculator

*Message #14 Posted by [Frank](#) on 22 Apr 2002, 12:49 p.m.,
in response to message #13 by Reinhard Hawel (Austria)*

And the year of course, 1977! ;+}

Re: Time Setting for HP 01 Watch/Calculator

*Message #15 Posted by [kh](#) on 23 Apr 2002, 10:20 a.m.,
in response to message #14 by Frank*

Thanks Everybody!

kh

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New HP calculator photo ???

Message #1 Posted by [ekirnam](#) on 18 Apr 2002, 7:33 a.m.

Hello,

Seeing next HP Handheld 728 photo I noticed that other machines were there. Look it at: <http://www.microsoftmobilitypress.com/site/extras/pics/normal/oem/hpcommanche2.jpg>

See at left side in the photo..

Is it a calculator or not? It seems it..

Ok, the photo seems to be a 3D realistic drawing, but at least shows something complete diference from actual units..

Have fun, J.Manrique CdU de la ETSIG

Re: New HP calculator photo ???

Message #2 Posted by [ekirnam](#) on 18 Apr 2002, 7:37 a.m.,
in response to message #1 by ekirnam

Funny, it is a phone ...

;:-))

Re: New HP calculator photo ???

Message #3 Posted by [Frank](#) on 18 Apr 2002, 8:25 a.m.,
in response to message #2 by ekirnam

Phone, PDA, Handheld PC, Calculator, Personal Controller, what's the diff? (soon)

Re: New HP calculator photo ???

Message #4 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 18 Apr 2002, 9:44 a.m.,
in response to message #1 by ekirnam

Hi;

it's indeed a telephone set (the monophone's corner is visible). But... is it not an HP product... is it?

About Frank's observation: THAT WORRIES ME A LOT! Phones that look-like (or do what do) PDA's, Handheld PC emulating Calculators... Mam, I don't dare thinking about this.

Cheers.

Why not 735?

Message #5 Posted by [Jan \(CH\)](#) on 18 Apr 2002, 4:12 p.m.,
in response to message #4 by Vieira, Luiz C. (Brazil)

A telephone with scientific, engineering and integral functions. It should be designated 735 instead of 728.

Jan

Re: New approach for HP calculators ???

Message #6 Posted by [Paul Brogger](#) on 18 Apr 2002, 4:21 p.m.,
in response to message #4 by Vieira, Luiz C. (Brazil)

Maybe THAT's what will get HP to reissue the -42s -- integrate it with a cell phone! Sexy new product idea, amazing functionality, and wireless up/download thrown in for a bargain! (Not to mention the extra sales to people who never bother to activate a phone account . . .)

HP, are you listening? (You could announce it by next April . . .)

Re: New approach for HP calculators ???

Message #7 Posted by [Ren](#) on 19 Apr 2002, 10:03 a.m.,
in response to message #6 by Paul Brogger

Paul, You are on to something! Cell phones and Calculators have something in common that PDAs don't have. Dedicated numeric keys! As more cell phones are incorporating displays (for text messaging and phone number listings) many share a display as well. Maybe TI or Casio will do it, I'm not holding out any hope that HP monitors this site.

Re: New HP calculator photo ???

Message #8 Posted by [Les Bell \(Sydney\)](#) on 18 Apr 2002, 7:18 p.m.,
in response to message #1 by ekirnam

It's a standard-issue Ericsson hotel room phone. At front left is a standard-issue hotel room key, and in the background at right is a standard-issue hotel bed with a standard-issue business traveller suitcase (not Samsonite - the other major brand) on it.

You need to travel a bit more! <g>

Best,

--- Les [<http://www.lesbell.com.au>]

Re: New HP calculator photo ???

Message #9 Posted by [Steve Borowsky](#) on 21 Apr 2002, 3:27 a.m.,
in response to message #8 by Les Bell (Sydney)

An HP calculator with an integrated cell phone is an excellent idea! This way, you could use it to call tech support since 90% of the functions won't be in the manual.

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Re: HP 42S emulation for HP 48GX or next generation HP calculator

Message #1 Posted by [HrastProgrammer](#) on 18 Apr 2002, 2:08 a.m.

Well, I would like to start thinking about making an HP-42S emulator for HP-49G very much but I don't own the real one and I don't have the ROM dump so I cannot do anything for now :-(

At the moment, I am concentrating on the HP-41X (specifications are on <http://hrastprogrammer.tripod.com>) ...

Best regards.

Re: HP 42S emulation for HP 48GX or next generation HP calculator

Message #2 Posted by [Tom \(UK\)](#) on 18 Apr 2002, 3:33 a.m.,
in response to message #1 by [HrastProgrammer](#)

There is a description of how to obtain an HP42S ROM dump from a real HP42S, via the infra red output, on this great site.

I'm sure many people would be happy to lend you an HP42S if an emulator for the 48/49 was forthcoming.

Keep up the good work.

Tom.

Can we talk about your 41's emulator?

Message #3 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 18 Apr 2002, 9:22 a.m.,
in response to message #1 by [HrastProgrammer](#)

Hi;

after looking at the pictures, I thought a lot about the 41's emulator. I'll post the questions and you answer the ones you can:

- did you use a 41's ROM image or you build the emulator's resources yourself? (answer the way you believe is most appropriate) - did you build the emulator as part of the 49's OS? Say, did you open the OS and incorporate it as part of the basic system OR it runs as a LIB attachment or the like? - is there any possibility you will allow it to become available? Does the emulator belong to you, say, is there anyone else involved on its creation? (any ACO's wizard participation?)

You know that a lot of people would die for this emulator. It's mean showing it and not allowing us to touch it... (sob!). WHY DID YOU DO IT TO US? Makes me remember "Good Will Hunting", when the teacher says something like: "I could sleep before knowing you exist."

If you think you cannot answer here (I'd prefer a public-address answer), my e-mail is up there.

Best regards.

Re: Can we talk about your 41's emulator?

Message #4 Posted by [HrastProgrammer](#) on 18 Apr 2002, 10:18 a.m.,
in response to message #3 by [Vieira, Luiz C. \(Brazil\)](#)

Hi Luiz,

I can answer to your questions here (but you can find more information on my homepage):

Q: Did you use a 41's ROM image or you build the emulator's resources yourself? A: Yes, the emulator interprets microcode instructions from real HP-41 ROM images (HP-41 firmware and other modules like XF/XM, CCD ROM, Printer, HEPAX, ZENROM, Advantage, ...). So, it behaves like the real HP-41 meaning that synthetic and machine code programs work as on the real calculator. But, in order to implement new features and extensions I rewrote some parts of the HP-41 firmware (and other modules) in native HP-49G machine language.

Q: Did you build the emulator as part of the 49's OS? Say, did you open the OS and

incorporate it as part of the basic system? A: No, I didn't. About 1% of the emulator is written in System RPL, everything else is pure machine code including display and keyboard handling.

Q: OR it runs as a LIB attachment or the like? A: As explained on my homepage, the emulator consists of three regular libraries: HP41X, HP42X and HP43X as well as one variable called MEM41. Total size is about 360K because all modules are compiled. I am now testing some techniques which will give me the ability to have about 488K of (linear) memory available for my programs at the same time. I need additional space because I have some plans with the emulator for the future ...

Q: Is there any possibility you will allow it to become available? A: We could talk about this in private when the emulator will be finished. Currently I have on my mind some more features which had to be implemented (like card reader support).

Q: Does the emulator belong to you, say, is there anyone else involved on it's creation? A: HP-41X is my personal project. Nobody else isn't involved but people like J-F Garnier and Mike (Stgt) helped me by providing some information about HP-41 internals (bank switching, peripheral instructions and printer) when I started to build my first HP-41 emulator for Windows somewhere in 1998/9.

Q: Any ACO's wizard participation? A: No ACO, no HP, ... I tried to contact them but they aren't interested at all. I only got one letter from JYA regarding my older emulator called HP-41E and this was about two years ago. And only "help" from HP are in the form of two VASM listings and ROM modules which I found on the Internet.

Best regards.

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Re: HP 42S emulation for HP 48GX or next generation HP calculator

Message #1 Posted by [Richard Garner](#) on 17 Apr 2002, 3:46 p.m.

I think HP has grossly missed the mark on the profesional market it virtually created. Alot of HP Calculator users seem to have the same feeling. When the light goes out on the last HP Calculator, the US will no longer have access to its best engineers. They would rather retire than face a job without a proven and trustworthy friend.

Re: HP 42S emulation for HP 48GX or next generation HP calculator

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 18 Apr 2002, 7:25 a.m.,
in response to message #1 by Richard Garner

Hi;

should I suggest placing "...the **World** will no longer have access to its best engineers." instead of "...the US will no longer have access to its best engineers."? As seen in this forum, Hewlett-Packard is world-wide, and HewPack calcs are also welcome anywhere. I know you, US-born people, are (surely) proud HewPack was born there (I would). And we, out here, are glad we can taste it, too!

Cheers.

Re: HP 42S emulation for HP 48GX or next generation HP calculator

Message #3 Posted by [Richard Garner](#) on 18 Apr 2002, 4:37 p.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)

Sorry if I offended anyone. Most of the newsgroups and message boards I have been on are all US based. I forget that this board has world wide readers.

Oops! Misunderstandings...

*Message #4 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 18 Apr 2002, 7:59 p.m.,
in response to message #3 by Richard Garner*

I was just trying to say: "Hey! We're here, too!"

I would never (and I believe others, too) feel offended.

Thanks for your concerns.

Cheers.

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HP-41C in space link...hadn't seen this before, sorry if it's all over the museum site!

Message #1 Posted by [gene](#) on 17 Apr 2002, 12:04 p.m.

<http://www.nasm.si.edu/nasm/dsh/artifacts/GC-hewlett-.htm>

Re: HP-41C in space link...hadn't seen this before, sorry if it's all over the museum site!

Message #2 Posted by [Luis](#) on 17 Apr 2002, 12:21 p.m.,
in response to message #1 by gene

Yes, and there is more about it here <http://www.hpmuseum.org/adverts/41nasaad.jpg>

Re: HP-41C in space link... in a different time...

Message #3 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 17 Apr 2002, 12:55 p.m.,
in response to message #1 by gene

... when people used to be beyond their own needs. In a time where available technology used to dictate the future (not that it is good or bad, right or wrong). In a time we could see something like this and feel thankful for all those guys that were definitely beyond their own needs and could understand ours. Thanks, Bill and Dave. Thanks to all 'crew' in the calculators' team.

Now we can just seat down and unfold our memories.

Cheers. (sob!)

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I get emails...

Message #1 Posted by [Gene](#) on 16 Apr 2002, 11:12 p.m.

This one came today:

"Help!!! I have 3 electromagnetic engineering tests coming up in the next 3 weeks. I lost the manuel for my HP 38G years ago and the teacher expects that most of us know how to use the calculus functions on our calculators. I don't!!! Any ideas where I might find this information or get another manuel?
Thanks, Stephanie"

Gene: I get about 4-5 of these a week. Sometimes it is because someone lost the cover to their TI-83. Do any of the rest of you get ones like this?

It is particularly sad that someone can't search the net for "HP38G manual". I don't think Stephanie will do all that well on this test. I try to help, but ...

Re: I get emails...

Message #2 Posted by [Ren](#) on 17 Apr 2002, 10:00 a.m.,
in response to message #1 by Gene

No Gene, I don't get emails like those, even once a year. I didn't author a book on how to use a calculator, and my math skills leave a lot to be desired. You are the lucky one! Nor do I get emails from people trying to give me a table saw or old HP calculators, or parts to my flathead Ford... B^)

Re: I get emails...

Message #3 Posted by [Mike Sebastian \(Texas\)](#) on 17 Apr 2002, 9:24 p.m.,
in response to message #2 by Ren

Well, I don't get as many requests as you do, but they more than make up for it in weirdness.

For example, from late March: "hey this is [name deleted] and i was wonderin if u can send me codes for calculators(when u type in numbers and turn it upside down and it says somethin)i know one and it goes like... [not appropriate for a family friendly forum] ...so if u can find codes like that can u please send them to me thank you"

hillbilly alphanumerics

Message #4 Posted by [db\(martinez,california\)](#) on 17 Apr 2002, 10:50 p.m.,
in response to message #3 by Mike Sebastian (Texas)

in a smoke filled room one night in 1974 i found that if i put 0771738 in most any calculator and turn it upside down it spells my last name. i can spell my first name too if i pretend that an upside down 4 is an "n", however the middle initial is right out. eat your heart out (name deleted).

Re: I get emails...

Message #5 Posted by [Frank](#) on 18 Apr 2002, 3:06 p.m.,
in response to message #1 by Gene

OK, Gene, sounds like your extrabusy working, teaching and calculator collecting self need an offer to help, send her email and I'll write her back.

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HP 27

Message #1 Posted by [Steve S.](#) on 15 Apr 2002, 2:20 p.m.

I have an HP 27 that I bought on Ebay. I can not get it to light up, even with a new battery pack. If the previous owner tried to run the calculator with no or bad batteries, what component(s) could he have burned out? Any ideas how to repair it? I am a former EE so I have tools and skills to attempt a repair if I know what to replace. Thanks.

Re: HP 27

Message #2 Posted by [Frank](#) on 15 Apr 2002, 2:43 p.m.,
in response to message #1 by Steve S.

Leave it on for about 30 minutes with charged battery pack after you are sure it is firmly contacting both battery post terminals (often a problem itself with weak pack springs, worn posts and rebuilt battery packs). See if you get a display following the "warm-up period" If so see the archives this site for some hints from Katie Wass, when she's not sniping ;+} on ebay or working she is very talented at fixing calculators and has posted much helpful information.

Re: HP 27

Message #3 Posted by [katie](#) on 16 Apr 2002, 12:44 a.m.,
in response to message #2 by Frank

Thanks Frank, I think, sort of!

Steve, Actually, the warm-up problem would always show something on the display, like a zero, so that's probably not your problem. If you've got nothing on the display, the first check that you should make is to see how much current is being drawn by the batteries. You should hook up an external 2.5 volt power supply with an ammeter in series. If the power supply is working, you should see around a 100 ma (blank display) to 200 ma (most segments on) current draw. Assuming that you're getting that, you should next check the output voltages from the inverting supply. If you measure them relative to the negative battery terminal you should find three of them: -3.3, +6.5 and +12.6. The easiest place to find these is on the non-component side of the main circuit board on 16-pin IC pattern that

doesn't have a chip installed in it (labeled U5). Pin 9 = 6.5v, Pin 12 = -3.3v, pin 15 = +12.6v.

If you're getting all that, the most likely problem is a bad chip and it's probably U1 (HP 5061 0430). They seem to have the highest failure rate of the chips used in this calculator. And if it has failed, the display will likely be blank. The really bad news is that this is the only HP calculator that uses this chip (that I know of) so you'll need to find another 27 to use as an organ donor.

I hope that helps.

-Katie

Re: HP 27

*Message #4 Posted by [Frank](#) on 16 Apr 2002, 8:12 a.m.,
in response to message #3 by katie*

The one I had and another collectors a couple of years ago were both blank and then, presto, in 5-10 minutes after being left on, display was on.

Re: HP 27

*Message #5 Posted by [katie](#) on 16 Apr 2002, 10:21 p.m.,
in response to message #4 by Frank*

I've gathered up some of the discussions about this common Woodstock problem and how to repair it and made it into an article that I just posted. (Dave had suggested that I do this long ago.) I've tried to condense the discussion into a practical "how to" repair article and haven't covered everything that's been mentioned in these discussions. Please let me know what I can do to improve this write up as far as including important facts and other repair tips.

-Katie

Re: HP 27

*Message #6 Posted by [Steve S.](#) on 16 Apr 2002, 6:09 p.m.,
in response to message #3 by katie*

Thanks for the help, but I think I need to look for an HP 27 to remove chips from. If any one has one with poor cosmetics but works, I am now in the market for one. Thanks.

EE status forever!

Message #7 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 15 Apr 2002, 5:16 p.m.,
in response to message #1 by Steve S.

I must say that you still **are** an EE indeed, since there is no thing as a "former" EE!

Welcome!

Re: EE status forever! - Agree!

Message #8 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 16 Apr 2002, 1:37 a.m.,
in response to message #7 by Andrés C. Rodríguez (Argentina)

(Ola, Andrés; como estás? And Argentina? Nice reading your posts again. Best regards!)

I agreee 101% with your words. EE status forever. As long as your mind travels with you...

About the HP27... Hey, where are those fellows? Doctor Mike Meyers? Prevelakis? Glynn? Korensky? among many others? I've been running out of time somewhat, but I miss you here, guys. Get back...

Cheers.

Re: HP 27

Message #9 Posted by [Victor](#) on 15 Apr 2002, 8:32 p.m.,
in response to message #1 by Steve S.

You can also try hooking the calculator up to a charger for a couple of hours; this heats up the circuit board and seems to make it work.

I have a feeling it is a design fault in the main IC's (See previous postings in "Woodstock Design: Why so many problem 27's?" posted August 12, 2000).

Re: HP 27

Message #10 Posted by [Davis Smith](#) on 16 Apr 2002, 6:08 p.m.,
in response to message #1 by Steve S.

If your power supply checks out, I have found the cause of a blank display or a 0000000000 display to almost always be the ACT chip. This is the 22 pin 0.4 inch wide chip near the bottom row of connector pins. Most of the Woodstock machines have their ACT chips numbered differently but... they are all the same internally!!! I have successfully transplanted ACT chips amongst most of the Woodstock series machines, but have never had to work on a '27.

I do have a '27 that you occasionally have to turn on and off and then on to get it to turn on.

Re: HP 27

Message #11 Posted by [Victor](#) on 16 Apr 2002, 6:46 p.m.,
in response to message #10 by Davis Smith

Can you replace the ACT chip of an HP-27 with the ACT chip of another Woodstock calculator (e.g. an HP-25)? The ACT chip of an HP-25 is black plastic, and the ACT chip of an HP-27 is ceramic with a gold top. I think this is because the HP-25 uses P-MOS technology, while the HP-27 uses N-MOS technology. Can you replace an N-MOS chip with its equivalent P-MOS chip without making any other changes and have it work?

Re: HP 27

Message #12 Posted by [David Smith](#) on 16 Apr 2002, 7:38 p.m.,
in response to message #11 by Victor

I just read through Katies old posts about the HP27 and its bastard NMOS ACT heritage. With the different voltages that the '27 uses, I doubt that it can be replaced with one of the other Woodstock ACT chips.

I have gone as far as to place HP21 (and HP25) ACT chips into HP22, HP25, HP25C, HP29C, HP67, and HP97 units without any problems. I counted my dead ACT chip pile and it exceeds the number of digits on my various appendages (including the "carry" flag)

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Problems w/ HP 49G

Message #1 Posted by [Mark](#) on 14 Apr 2002, 6:13 p.m.

Hi,

I use an HP 49G calculator. I have three problems.

#1 I try to create a directory in the HP 49G's port memory 0 & 1. The HP 49G won't let me do the. The purpose of the directories is to store my programs and equations on those ports. is there a correct procedure to do this?

#2 I try to cut, copy, & paste on my equations on equation writer, and on the command line. The HP 49G won't let me do that. Is there a correct procedure to do that?

#3 I used the equation solver for the HP 49G. The equation is $q = k \cdot (P_n)^{1/2}$, where k is in units of $(\text{GPM}/(\text{psi})^{1/2})$, q is in GPM, and P_n is in psi. (GPM stands for Gallons per Minute).

I tried to incorporate the units into my HP 49G solver. The problem is that when I try to type into the k "1_gal/(min*(psi)^(1/2))", the HP 49G responds by saying "Invalid Syntax".

Please help me correct this problems.

Thanks in advance

Mark

Re: Problems w/ HP 49G

Message #2 Posted by [doug](#) on 15 Apr 2002, 11:11 p.m.,
in response to message #1 by Mark

Get a VOYAGER (HP15C). There have never been any reported MENU problems trying to do something that simple and logical. (:o)

Re: Problems w/ HP 49G - #1 for now

Message #3 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 16 Apr 2002, 8:10 a.m.,
in response to message #1 by Mark

Hi;

I never tried to create a directory in any port, cause I am not sure they support it. AFAIK, you can have libraries and backup files there. BUT you can create a directory in USER RAM and transfer (copy or move) it as a backup file to any of the ports (use FILES commands). They will appear as ordinary variables, but if you recall them to the stack you'll see they are directories.

I'll delve into the calculator so I can find some more info, O.K.?

Cheers.

Re: Problems w/ HP 49G - #3

Message #4 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 16 Apr 2002, 8:48 a.m.,
in response to message #1 by Mark

Hi;

I got success building the expression like this (you can type in OR use UNITS menu): Hi;

'q_(gal/min)=(kx_(gal*psi^.5/min))*(Pn_psi)^.5'

When you enter the equation, it changes to this:

'q*1_gal/min=(kx*1_gal*psi^.5/min)*(Pn*1_psi)^.5'

I tried other ways to enter it without success (in some situations, the units got collected if no parenthesis are placed).

I believe this will fit your needs.

Cheers.

Thanks Luiz!

*Message #5 Posted by [Mark](#) on 16 Apr 2002, 9:54 p.m.,
in response to message #4 by Vieira, Luiz C. (Brazil)*

I appreciate your help!

Mark

Did it work?

*Message #6 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 16 Apr 2002, 11:20 p.m.,
in response to message #5 by Mark*

Hi;

just to know if the procedures result O.K.

Best regards.

Yes it did!

*Message #7 Posted by [Mark](#) on 18 Apr 2002, 10:09 p.m.,
in response to message #6 by Vieira, Luiz C. (Brazil)*

Yes it did!

#1, #2

*Message #8 Posted by [yuu](#) on 21 Apr 2002, 8:42 p.m.,
in response to message #1 by Mark*

#1: The manual of the hp48gx says it is not possible to create directories in ports. The 49 appears to have the same limitation. #2: Try using HIST to access the stack while you're in EQW. HIST is accessible from several situations where up-arrow doesn't work. (But maybe it's not exactly what you want)

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HP-45

Message #1 Posted by [malcolm mcclure](#) on 13 Apr 2002, 3:13 p.m.

This may seem trivial but it has stuck with me since 1974. I have an HP-45, but its charger and manual have been lost along the way. What's bugging me is a neat formula that links air temperature with elevation that was used in one of the manual examples. Can someone please tell me what that formula is? —I have not been able to locate it elsewhere.

malcolm@mcclure.demon.co.uk

Re: HP-45

Message #2 Posted by [Les Bell](#) on 13 Apr 2002, 6:08 p.m.,
in response to message #1 by malcolm mcclure

International Standard Atmosphere is 15 deg C at Mean Sea Level, and decreases at 1.98 deg C per 1,000', up to 36,000 ft.

Above 36,000', the air temp is constant at -56.5 deg C up to 66,000'.

--- Les [<http://www.lesbell.com.au>]

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HP 49G Units in Solver equation.

Message #1 Posted by [Mark](#) on 13 Apr 2002, 2:24 p.m.

Hi,

The calculator I'm using is an HP 49G.

I would like to know how to incorporate units into my solver equation.

Example 1:

For an example: $A^2 + B^2 = C^2$, where A, and B is in feet, but the C will be calculated in inches.

Example 2:

A more complicated example is $q = k \cdot (P_n)^{1/2}$, where k is in GPM per (psig)^{1/2}, q is in GPM, P_n is in psig. But in this case, I want to incorporate CMS (cubic meters per sec) as well as GPM as the final result. In other words, when the HP 49G calculates the answers, it's got to produce two results number (one in GPM and the other in CMS). Can it be done?

Thanks in advance,

Mark

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HP Quality Is Gone

Message #1 Posted by [J.C. Randerson](#) on 13 Apr 2002, 12:14 p.m.

Just sent back my third HP49 because the paint wore off those goddamned rubber keys. Whoever designed those keys, you blew it, your design is a complete failure!

HP customer "service" just emailed me that this last unit is out of warranty, and I must buy a replacement unit. HP quality and committment to user satisfaction is gone. Queen Fiorina, please remove the name HP from your new company, because it isn't the old HP I was once loyal to.

Fighting Mad -

J.C. Randerson

Pueblo, Colorado

Re: HP Quality Is Gone

Message #2 Posted by [doug](#) on 13 Apr 2002, 1:26 p.m.,
in response to message #1 by J.C. Randerson

WELL DUH!

Re: HP Quality Is Gone

Message #3 Posted by [karl schneider](#) on 13 Apr 2002, 7:20 p.m.,
in response to message #1 by J.C. Randerson

Recently, I was in Office Max, examining the HP-12c and HP-17bII business calculators.

The 12C's, now made in China, still have the same design as those made in the USA during the '80s, and the price is down somewhat (from \$120 or so to a still-high \$80), but the quality of construction has slipped.

An recently-replaced accessible display model suffered from noticeable paint fade on many of the keys, which felt hollow. The "ENTER" lettering on the key of the replacement display model was slanted upward, as though it wasn't sprayed on correctly.

All the key lettering on my 1983 HP-15C still looks great. The lettering might be inlays. Why can't HP still use those keys, if they had the technology? I don't think that this an America-vs.-Asia issue; my Singapore-made units of the '80s (1981 HP-34C, 1986 HP-41CV, 1989 HP-42S) are certainly of acceptable quality.

-- Karl

HP-12C Quality

Message #4 Posted by [Gil Petri](#) on 14 Apr 2002, 10:48 a.m.,
in response to message #3 by karl schneider

Last friday I had the opportunity to examine the china-made HP-12C and was really surprised. Not sure we can compare the china-made with the others, it's another class! CHEAP made machine, that's what I'd call it. TI has better quality! If I had to buy another HP-12C I'd look for an older model, that's for sure.

Re: HP Quality Is Gone

Message #5 Posted by [Jeff](#) on 14 Apr 2002, 8:56 p.m.,
in response to message #1 by J.C. Randerson

At the local OfficeMax they have a 17BII as a display model that has been there for as long as I can remember (5+ years). I was thinking about buying one and asked to see one from stock. The new one (with the terrible blister wrap) looked like garbage compared to the floor model. The plastic colors were way off and the keys were labeled on an angle in some cases. Needless to say I didn't buy it.

I think I'm going to buy another 48. I would like to buy a 32SII, but every time one is up on eBay, everyone drive the price up past my reservation price. :-)

Re: HP Quality Is Gone

Message #6 Posted by [John K. \(US\)](#) on 14 Apr 2002, 9:39 p.m.,
in response to message #5 by Jeff

If you're looking for a new 32SII, there are (or were, as of a few weeks ago) plenty of them left in the retail channel -- that is, if you don't mind the new color scheme. Several sources have been mentioned here over the past week. I ordered a 32SII a few weeks ago from [Wholesale Advantage/Wagon Photo](#). They're asking US\$46.95 plus shipping (\$6.95 in the continental US). I've ordered from them a couple of times without problems.

Re: HP Quality Is Gone

Message #7 Posted by [Ken](#) on 21 Apr 2002, 6:33 a.m.,
in response to message #5 by Jeff

Jeff,

I certainly would purchase the HP 32SII through eBay with great care. I find so much offered up there overpriced, and it's a roll of the dice if you get what's been descibed. Shop the electronic outlets you'll find on the Internet. I've seen on eBay other goods that are readily available new, sell in used condition for a greater cost (than brand new).

Three weeks ago I purchased a new, factory sealed 32SII for \$47.50 from an outfit in North Carolina. I may have lucked out because I received one of two remaining in stock. The person informed me that the day before a buyer purchased 500 HP32SIIs from them. I would not be surprised if this model is being hoarded for eBay bids. Ken

Re: HP Quality Is Gone

Message #8 Posted by [Tom \(UK\)](#) on 15 Apr 2002, 7:48 a.m.,
in response to message #1 by J.C. Randerson

Don't replacement units come with a '+3 month' guarantee regardless of when you bought the original unit? Or do the keys take about 3 months to wear off?

Either way, I think HP know full well they have a paint quality problem with the HP49G and are not sorting it out. Someone posted here that it was because air gets mixed up in the paint used for the key tops and this crumbles and wears off when used. I have an HP49G made in Indonesia and this does not have a problem.

I think the same goes for HP not sorting the Made in China HP12C because of key bounce (or was this a single batch?).

PS I'm not knocking China because they can produce goods at the right quality level but with high tec goods HP are probably getting what they are paying for.

Re: HP Quality Is Gone

Message #9 Posted by [Frank](#) on 15 Apr 2002, 11:09 a.m.,
in response to message #1 by J.C. Randerson

Not to mention the Calculator business itself, well OK I just did.

Re: HP Quality Is Gone

Message #10 Posted by [doug](#) on 16 Apr 2002, 8:00 a.m.,
in response to message #9 by Frank

(:O (

Re: HP Quality Is Gone the real Focus is:

Message #11 Posted by [Frank](#) on 16 Apr 2002, 8:18 a.m.,
in response to message #1 by J.C. Randerson

<http://msnbc.com/news/738869.asp?0bl=-0> More on the Vote now being Federally Probed and "extraordinaries" voicemail.

Re: Quality Is Gone, some Value in Printers

*Message #12 Posted by [Frank](#) on 16 Apr 2002, 8:28 a.m.,
in response to message #11 by Frank*

Actually, while perhaps not high Quality (certainly not in the traditions of HP), HP Printers seem to be of at least moderate to high value, if you don't consider the excessive price of supplies at least. That seems to be the One area Walter is concerned about getting diluted by a post merger scenerio, without looking at the financials, it would seem to be one of the stronger businesses for HP.

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41CV -- access programmed lines outside global label?

Message #1 Posted by [Karl Schneider](#) on 12 Apr 2002, 4:33 a.m.

41C "gurus" --

I just bought a 1986 HP-41CV. One "feature" I haven't figured out how deal with is a seeming inability to access lines of programming that were not preceded by a global label (e.g., LBL "PROG") On several occasions, I have entered a series of instructions followed by an END, then been unable to insert a global label in front of these lines using PRGM mode. CATALOG 1 shows the END statement for the incomplete program, and the memory indicators show that the instructions remain in program memory. However, I can't seem to access the set of programmed instructions or even delete them except with the master clear. I have not seen the an answer in the manuals.

This was, and is, not a problem with the 15C I've had for 19 years. I'm sure someone can enlighten me. Thanks!

Karl (15c, plus recently-acquired 41cv, 42s, 34c)

Re: 41CV -- access programmed lines outside global label?

Message #2 Posted by [Fred](#) on 12 Apr 2002, 4:45 a.m.,

in response to message #1 by Karl Schneider

I will be, maybe, the first to answer

When you run CATALOG 1 just press on the R/S key : this will stop the catalog listing and you can press SST or BST to single step and backward step in the catalog. You just have to position where you want and to pass in PRGM mode to see the END statement of your program-without-global-label. And you can do what you want here : adding a global label or deleting lines (do not forget to delete manually the end statement, I think it will not be deleted by XEQ "ALPHA" DEL "ALPHA" 999).

Re: 41CV -- access programmed lines outside global label?

*Message #3 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 12 Apr 2002, 9:43 a.m.,
in response to message #2 by Fred*

Hi;

just to add some info over Fred's answer: to add a global label BEFORE the first program line, do what Fred posted before, stop the listing over the lone END, switch to PRGM mode and press:

```
GTO . 000
```

You'll see:

```
00 REG nnn
```

where nnn is the number of available registers. Then you can press:

```
LBL [ALPHA] name_you_want [ALPHA]
```

If done alright, you'll see the new global label next time you use CAT 1, and it will be in the first program line.

Cheers.

Re: 41CV -- access programmed lines outside global label?

*Message #4 Posted by [Håkan Thörngren](#) on 12 Apr 2002, 1:56 p.m.,
in response to message #2 by Fred*

A better way of deleting the program is to XEQ ALPHA C L P ALPHA (clear program) then ALPHA ALPHA as argument. This will erase the program you are standing in.

Re: 41CV -- access programmed lines outside global label?

Message #5 Posted by [Karl W. Schneider](#) on 13 Apr 2002, 7:24 p.m.,
in response to message #1 by Karl Schneider

A "thank you" to Fred, Luiz Vieira, and Hakan Thorngren --

Your suggestions worked for me. It turns out that this topic is specifically addressed on pp. 39-40 of the HP-41C/41CV Operating Manual ("A Guide for the Experienced User"), if perhaps not the Owner's Guide.

-- Karl

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HP-65 Variations

Message #1 Posted by [Mike](#) on 11 Apr 2002, 11:16 p.m.

I'm curious. I've seen people remove the silver trim from around the keyboard on badly worn calculators.

There is someone on eBay selling an HP-65 that has no silver trim. The ridge looks like it is there but it is without trim.

He is saying that it is a "**A DIFFERENT VERSION THAN NORMAL.**"

Anyone know the 65s has a special variation without the trim? Or is this just a case of removed trim?

Re: HP-65 Variations

Message #2 Posted by [David Smith](#) on 12 Apr 2002, 5:15 p.m.,
in response to message #1 by Mike

I am pretty sure this is a case of worn/removed trim. If the plastic was not properly prepared the vacuum deposited trim would not stick and would flake off very easily. Once it started to go, all you had to do was rub it and it would come off without leaving a trace. The Ebay machine keyboard looks like it was fairly well used.

I have a "stealth" HP67 with no trim or labels. It makes it look totally different from "normal" machines.

I know it "can" be done

Message #3 Posted by [Mike](#) on 13 Apr 2002, 11:29 a.m.,
in response to message #2 by David Smith

But what I was wondering is if any 65s we ever manufactured without the trim, as a variation?

Was your "stealth" 67 manufactured that way? I can see a label being left off but it seems odd that the trim would be.

Re: I know it "can" be done

Message #4 Posted by [Fred](#) on 13 Apr 2002, 4:23 p.m.,
in response to message #3 by Mike

There are no versions of the HP-65 without trim the trim is worn off and the calc is of little value if you care for cosmetics. I suppose it may still function as a calculator...

Re: I know it "can" be done

Message #5 Posted by [David Smith](#) on 13 Apr 2002, 4:33 p.m.,
in response to message #3 by Mike

No, my '67 was just worn. There were a couple of inches of silver left... I wiped it off. As far as I know HP never intentionally made a unit with trim.

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HP-IL/RS232 Interface

Message #1 Posted by [Neil Kittipalo](#) on 11 Apr 2002, 11:02 p.m.

I have here a Multi Channel HP-IL/RS232 Interface Model FSI164A, made by Firmware Specialists of Corvallis, OR

Does anyone have or know of a manual for this old and rare beast.

It's quite urgent!

Thanks, Neil

Re: HP-IL/RS232 Interface

Message #2 Posted by [Raymond Hellstern \(Germany\)](#) on 12 Apr 2002, 2:09 a.m.,
in response to message #1 by Neil Kittipalo

Hi,

try <http://www.firmwaresystems.com/>

Raymond

Re: HP-IL/RS232 Interface

Message #3 Posted by [Neil Kittipalo](#) on 12 Apr 2002, 9:52 a.m.,
in response to message #2 by Raymond Hellstern (Germany)

Nothing there about this interface - probably too old. Neil

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A Recent HP Handheld Anecdote

Message #1 Posted by [John Kercheval](#) on 11 Apr 2002, 4:50 p.m.

NOT SO LONG AGO, a few of the members of our HP 41/ 71 enthusiast team got together for wine and melon to talk about the type of individual who invests in these products. It was a casual get together, more conversation than meeting; an easy back-and-forth as technical interchanges go.

A question came up, however, which focused us all on a single point. It seems that a member of the team had been asked by a heavily talented friend if 41/ 71 equipment could be properly seen as 'fast lane' products. Was it, as he had been told, THE handheld system to own- one more sophisticated statement he might make within his home?

Frowns went all around. Embarrassment was in the air for this distant friend.

The conversation that ensued distilled a single answer. It was that HP 41/71 computers and accessories were meant only to place in the user's hands analytical efficacy for all who chose to own them. The esteem in which they were held would not rub off on the owner. To us, using these products for social definition seemed a silly, quaintly adolescent idea, a quest better suited to the many more visible, if less valuable, symbolic products in the marketplace.

We felt that these products were so easy to own that their value would stand without the crutch of status. Their sophistication and their identity lay with their ability to analyze data without coloration and with their ability to keep handheld computing at the forefront and technology parked out of the way.

So it went. Our friend with a quest for a 'message product' made us think quite hard about what we were trying to achieve with our own systems. Consensus about his need could only be reached tongue and cheek. It was simply decided that , while he may well end up owning a 41 or 71 handheld system , we would not in our hearts consider him to be one of us.

At one time or another, with one group or another, such talk goes on with HP handheld enthusiasts. It shapes our development efforts and loosens up the future for us. Perhaps it is not all that important that you know this, but we will wager that the effect of these conversations is half the reason you are

interested in such products in the first place.

It was hard to tell why no one ate the lone pear- someone did once say you couldn't trust a pear.

John Kercheval

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Card reader other problem :-(

Message #1 Posted by [Dave](#) on 11 Apr 2002, 4:19 p.m.

Thanks! i fix the "non" detection of the card with your tips... But now i have notice when doing the job that the rubber wheel is slowly getting... liquifying and leave some trace on cards. I read about replacing the "material" with o rings? what size is best; my wheel is smaller that original and don't know about "real" size it's suppose to be.

Is there another material for the job? if not, how many o rigins to add?

Thank you

Re: Card reader other problem :-(

Message #2 Posted by [John Kercheval](#) on 11 Apr 2002, 4:26 p.m.,
in response to message #1 by Dave

Ok, that's it. Just chuck it and buy a used TI-59. Now that's a REAL machine ;)

JK

You can do it!

Message #3 Posted by [Ellis Easley](#) on 11 Apr 2002, 4:50 p.m.,
in response to message #1 by Dave

Look in the articles section. I know there are articles on replacing the wheel in the 67 and 97 and I'm pretty sure there is info for the 41C card reader. For the 67 and 97 there are two ways, O-rings or silicone tubing. I've done the silicone tubing on my 67 with no problems. Sometimes tubing doesn't have a uniform wall thickness, O-rings might be made to better tolerances. Also I can see how the round cross section of O-rings would make this method more tolerant of variation. I understand it is necessary to glue the O-rings, which is not required for the silicone tubing. Also, I wonder about the mold "flash" around the circumference of O-rings I have seen. Does it rub off after a little use? I don't know, but I'm going to try the O-ring method sometime.

Re: You can do it!

*Message #4 Posted by [Ty Rogers](#) on 11 Apr 2002, 4:56 p.m.,
in response to message #3 by Ellis Easley*

It is not necessary to glue the O-rings. The size is 006, or the ones that I use are 1/4" OD, 1/8" ID. The 005 also works. Most hardware stores carry o-rings.

Re: You can do it!

*Message #5 Posted by [David Smith](#) on 11 Apr 2002, 5:51 p.m.,
in response to message #4 by Ty Rogers*

EVERY size 006 ring that I have seen is too big, and I have them from over a dozen sources. The size 005 is very hard to find. I have also seen problems with the O-rings wanting to slide apart (you need to use two of them) and drag on the sides of the mechanism. I prefer the silicone tubing, but finding nice, round, concentric tubing can also be a problem.

Re: You can do it! Don't give up now!

*Message #6 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 11 Apr 2002, 7:10 p.m.,
in response to message #5 by David Smith*

Hi;

well, here in Brazil is somewhat easier to find them. In fact, I was given some O-Rings that were easily found in a (believe me) car's maintenance garage. They are found in old carburetors, as used or replacing, spare O-Rings. I have an 82104A working with two used O-Rings (I just cannot find my cards' pack... I only have two cards for testing, and they run a lot good) not glued to the axes. Dave, I did not measure the O-Rings, I simply inserted the two (same) that fit in the same measure of the axes (inner and outer limits). They are still there and running smoothly.

Hope it helps.

Cheers.

Re: You can do it! Don't give up now!

Message #7 Posted by [John Kercheval](#) on 11 Apr 2002, 7:45 p.m.,
in response to message #6 by Vieira, Luiz C. (Brazil)

Using CAR parts to fix your 41- now I've seen it all.

John Kercheval

Re: You can do it! Don't give up now!

Message #8 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 11 Apr 2002, 11:20 p.m.,
in response to message #7 by John Kercheval

Yeah! (but don't remind me, please...)

Cheers.

Re: You can do it! Don't give up now!

Message #9 Posted by [Dave in Mississippi](#) on 23 Apr 2002, 12:03 a.m.,
in response to message #6 by Vieira, Luiz C. (Brazil)

And for \$20 you guys better take Ty up on his repair! How you doing Ty?

Dave

Re: You can do it! Don't give up now!

Message #10 Posted by [Ty Rogers \(Texas\)](#) on 23 Apr 2002, 7:59 a.m.,
in response to message #9 by Dave in Mississippi

Doing good. Thanks Dave.

Re: Card reader other problem :-)

Message #11 Posted by [Ty Rogers \(Texas\)](#) on 12 Apr 2002, 8:06 a.m.,
in response to message #1 by Dave

I would be happy to supply o-rings to the less fortunate ones who cannot find them. Price is \$1 for two o-rings and mailing(in the USA). I also fix card reader drive wheels for \$20.

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HP 41 Port Extender

Message #1 Posted by [John Kercheval](#) on 11 Apr 2002, 12:58 p.m.

Was cleaning up and "rebatteryng" my hp system yesterday, whaen I came upon my custom 2X Speed CV plugged into the Port Extender.

Anyone remember this neat device? It fit below the 41 Via Velcro, and added 6 additional ports to the 41. Made by AMe Design an affiliate of EduCalc in Marina Del Rey, CA.

FYI, mine has the Financial I Module, the Extended IO Module, The Home Managemment Pac, The Thermal Pac, The Il Development pac, an an Xmem in it. I have the Card reader plugged into the main unit & the wand attachment as well.

What a collectable.

John Kercheval.

Re: HP 41 Port Extender

Message #2 Posted by [Richard Garner](#) on 11 Apr 2002, 1:38 p.m.,
in response to message #1 by John Kercheval

There is one on e-bay now.

Re: HP 41 Port Extender

Message #3 Posted by [John Kercheval](#) on 11 Apr 2002, 4:37 p.m.,
in response to message #2 by Richard Garner

Wow1 You are correct and as I write this the bidding is at \$41.00 !

there's an omen!

John Kercheval

Re: HP 41 Port Extender

*Message #4 Posted by [John Kercheval](#) on 19 Apr 2002, 8:58 a.m.,
in response to message #2 by Richard Garner*

FYI

This went for a whopping 152.50.

GO PORT EXTENDER!

John Kercheval

Re: HP 41 Port Extender

*Message #5 Posted by [CJ](#) on 29 Apr 2002, 8:52 p.m.,
in response to message #4 by John Kercheval*

I have 2 of these. One is for my 41C fully loaded. IL, Ext IO, Ext Func. and 2 X/ memorys and a wand. Card reader, Quad and Time in calc.

The other I use with my 41CX it has IL, Ext IO, PPC Rom and and Games module. 2 ext mems and card reader in calc.

BTW there are 7 ports on these. There is one on the top that mirrors port 3 of the calc.

This is a must have if you have a 41C.

CJ

Re: HP 41 Port Extender

*Message #6 Posted by [Vassilis Prevelakis](#) on 1 May 2002, 5:26 a.m.,
in response to message #5 by CJ*

Why bother with a port extender when you can have the ability to download ROM images to a PIC. In this way you can use images from ROMs that you do not have since they are bundled with many HP-41 emulators. Check the [pictures](#) of a the PIC board placed in the case of an HP 82143A printer.

The PIC board and software were developed by ji (search for MLDL in the museum archives).

**vp

Re: HP 41 Port Extender

*Message #7 Posted by [CJ](#) on 1 May 2002, 7:47 a.m.,
in response to message #6 by Vassilis Prevelakis*

That looks AND sounds like a great thing but.... were do I get something like that and how do I program it?

I have a 82143 that I hardly use that I could hack but could you direct me to more info about making one or getting one?

The site you posted a link to doesn't say anything about that aspect of this unique device.

Christopher

Re: HP 41 Port Extender

*Message #8 Posted by [Vassilis Prevelakis](#) on 1 May 2002, 11:58 a.m.,
in response to message #7 by CJ*

> The site you posted a link to doesn't say anything about that aspect of this unique device.

sorry I forgot to add the link - I've updated the page, and I am including the [link](#) here.

**vp

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CMT- Corvalis Microtechnology

Message #1 Posted by [John Kercheval](#) on 11 Apr 2002, 12:52 p.m.

Do you guys remember CMT?

It was a bunch of great HP Engineers who broke off from the HP Corvalis Calc. division to start their own third party accessories vendor.

I bought the massive 32KB ROM that fits in the card reader slot of my HP71B. Great product, still in full use today!

Anyone know what happened to them?

Are there any good 3rd party HPCalc vendors out there now?

I love this board! Thanks Mr. Hicks.

John Kercheval in VA

They also made

Message #2 Posted by [Mike](#) on 11 Apr 2002, 3:02 p.m.,
in response to message #1 by John Kercheval

I have the 128K and 64K for the card reader slot and 64k, 32K for the front plug-in slots, as well as the 64K EPROM for the front plug in slot, in my 71Bs.

Someday, I'll have to try and build up something to program the EPROMS.

Re: They also made

*Message #3 Posted by [John Kercheval](#) on 11 Apr 2002, 3:20 p.m.,
in response to message #2 by Mike*

Glad to meet another HP 71B Fanatic. I remember those big roms- out of my price range and more ram than I needed.

Now, I use the 32K Ram plus internal memory.

Tell me more about your 71s. What else do you have? What do you use them for?

Have you tried the 48? Your impressions?

See my post under " Your best calc."

John Kercheval

Re: They also made

*Message #4 Posted by [Mike](#) on 11 Apr 2002, 3:54 p.m.,
in response to message #3 by John Kercheval*

Tell me more about your 71s. What else do you have? What do you use them for?

I have several. I have a couple configured with 200K+ of RAM. I have the card reader, Math, Finance, 41 Translator, FORTH, HP-IL, some military ROMs, the usual.

Got my first one the day they first came out. Got it like some of my other stuff by driving down to Corvallis and getting it direct from HP salesman.

I don't actually use them on any daily basis. I have an engineering degree and take one (at least) of my HPs to work most everyday. Just like to give them a little use from time to time.

Re: They also made

*Message #5 Posted by [John Kercheval](#) on 11 Apr 2002, 4:29 p.m.,
in response to message #4 by Mike*

You could be arrested for that!

The 71B is sacred machine, not to use it is like NOT looking for Mariah Carey's panty lines- it simply isn't done.

200K is a lot- you must have had a lot of online programs.

I assume you are an avid user of the Digital Cassette Drive?

Are you aware of any other CMT products? Didn't they made a HEATED case for the 71b?

John Kercheval

Re: They also made

*Message #6 Posted by [Ellis Easley](#) on 11 Apr 2002, 5:11 p.m.,
in response to message #5 by John Kercheval*

>Didn't they made a HEATED case for the 71b?

Do you mean that the CMT organization made a large contribution to the advancement of the HP71B platform, or are you saying they actually manufactured a calculator warmer? Was that to allow the LCD to work in low temperature environments?

Re: They also made

*Message #7 Posted by [John Kercheval](#) on 11 Apr 2002, 5:46 p.m.,
in response to message #6 by Ellis Easley*

I believe someone made an electrically heated case for the 71B for harsh environments. Unsure if it was CMT. It was sold via EduCalc. Where is Jim Carter when you need him?

John Kercheval

Re: They also made

*Message #8 Posted by [Raymond Hellstern](#) on 12 Apr 2002, 3:49 a.m.,
in response to message #7 by John Kercheval*

Hi,

I think it was the 'battle-case'. Maybe Tripod Data Systems (TDS) made something like this. At least they made the battle case for the HP-48 and their surveying pac, with optional built-in extra RAM.

Regards,

Raymond

Re: They also made

*Message #9 Posted by [John Kercheval](#) on 19 Apr 2002, 9:00 a.m.,
in response to message #8 by Raymond Hellstern*

Yes! I stand corrected, it was TDS.

JK

I have that much because

*Message #10 Posted by [Mike](#) on 12 Apr 2002, 12:01 a.m.,
in response to message #5 by John Kercheval*

200K does not mean I need that much. I have it because it is something to have.

Who has to justify it?

If you had to justify having it, I'd never be able to justify a house full of calculators.

Re: CMT- Corvalis Microtechnology - They still make: GPS

Message #11 Posted by [Dave Shaffer](#) on 12 Apr 2002, 5:40 p.m.,
in response to message #1 by John Kercheval

A quick search (i.e. yahoo) on "corvallis microtechnology" will result in <http://www.cmtinc.com/>.

These guys make GPS (global positioning system) stuff (now). I don't know if they are the same folks referred to here, or a descendent, or just so good a name it had to be resurrected.

Dave

Re: CMT- Corvalis Microtechnology - They still make: GPS

Message #12 Posted by [db\(martinez,california\)](#) on 13 Apr 2002, 3:35 p.m.,
in response to message #11 by Dave Shaffer

cmt also made a calculator/handheld computer. it may have been called the cmt 500; i'm going on faulty memory here. it had a screen and keyboard similar it size to the 48 and was about twice as thick. it used a low power version of some ibm clone chip and had a (for the time) massive memory. i played with one that had a surveying program for a couple of hours and it was really impressive for it's time - which was pre hp 48sx. it's only problem was that the (well made) case was designed with vent holes and you could see the mother board. that would be ok in an office but in the real world i think it would have to be covered or the dust would kill it.

Re: CMT- Corvalis Microtechnology - They still make: GPS

Message #13 Posted by [John Kercheval](#) on 19 Apr 2002, 9:01 a.m.,
in response to message #12 by db(martinez,california)

Yes, I remember that device well- it was an IBM machine with a 286 platform. I only saw it in ads, never in real life.

John Kercheval

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Favorite 48GX Program

Message #1 Posted by [John Kercheval](#) on 10 Apr 2002, 11:34 p.m.

Hello:

I've been to dsome of the HP 48 download sites. Can you folks chime in & tell me your favorite downloaded routines?

I'm new to the 48 environment.

John Kercheval

Re: Favorite 48GX Program

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 11 Apr 2002, 12:53 a.m.,
in response to message #1 by John Kercheval

Hi;

is there any particular subject that you're interested on?

You can try something at [this site](#). Many programs can be found there.

Is that what you are talking about? Hope it is of help.

Best regards.

Re: Favorite 48GX Program

Message #3 Posted by [John Kercheval](#) on 11 Apr 2002, 12:38 p.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)

Yes, I went there. I was asking for members' favorites on this board. There are many programs at hpcalc.org.

JK

Re: Favorite 48GX Program

Message #4 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 11 Apr 2002, 7:33 p.m.,
in response to message #3 by John Kercheval

Hi;

You know, you touched a very sensitive point. I really like programming the HP48/49, S/G series, and any other RPN/RPL Hewpack. What I miss is the needing for that kind of activity nowadays. I see people walking around with PDA's, Palms, Notes and the like, as we, in our golden HewPack time, could walk with our HP41, 71, 67, 97, 34, 15C, 16C, and the like. Now, having an HP48 full of programs has no such glamour (not among us here, of course, who will die with our precious in hand), and I would like to know if people (Carly included) no longer understands it or their place (calculator's place) in tech society has been filled with other kind of portable (mentioned above).

I do not substitute any of my 10 Hewpack calcs for a new equipment. I have my laptop, my 5 desktops and I work with them (I'm a teacher), and enjoy my vacancy time with the calcs (my shrink says it is fine... for now), and my family, of course.

All of this to ask: will we be happy to see calculators being used again? Does HP know something we don't? I'll keep my calcs and use them as long as any math/scientific procedure can be programmed on them.

Oh, yes, the best 48 program. I'm not sure it exists, but I would like seeing a good, machine coded file browser, that would ADD easy-to-use features, instead of adding features. Something better than 49's FILES.

Cheers (sorry writing that much).

Re: Favorite 48GX Program

*Message #5 Posted by [John Kercheval](#) on 11 Apr 2002, 7:46 p.m.,
in response to message #4 by Vieira, Luiz C. (Brazil)*

Excellent post. Long live Brazil!!

JK

Re: Favorite 48GX Program

*Message #6 Posted by [Raymond Hellstern](#) on 12 Apr 2002, 3:43 a.m.,
in response to message #4 by Vieira, Luiz C. (Brazil)*

Hi,

did you try Filer48 from Raul Del Cid Lopez?

IMHO it's the best file browser around.

It looks similar to the MK or 49G filer, but the best point is you don't need the MK to run it.

BTW it's my favourite program from another author. Ok, the other one is JAZZ, of course;-)

Regards,

Raymond

Why not more calculators?

*Message #7 Posted by [Ellis Easley](#) on 12 Apr 2002, 11:09 a.m.,
in response to message #4 by Vieira, Luiz C. (Brazil)*

The subject of "numbers and how to use them" is foreign to most people so a calculator (beyond a four-banger) is fairly useless to them (remember the thread about "funny looks" from people who see our collections?). My current favorite example is a TV ad for a local furniture store which starts with, "You work hard all year for your income tax refund!" (In the U.S., we tell our employer how much tax to take out of our pay. If you do it right, they take out just enough. A large number of people in the U.S. believe that if they get a refund at the end of the year, they are not paying any taxes, and the bigger the refund [read: the worse the information they

gave their employer], the more Uncle Sam [the government] likes them!) My point is that many people refuse to deal with numbers even when it is in their own best interest.

A PDA is like a cell phone, most people can see some use for it. The only thing I have like a PDA is the early Psion Organizer with the sliding case, two-line LCD, and EPROM cartridge storage. It has an interesting user programming language. Do modern PDAs come with a user programming capability? I've heard about the calculator emulators, but I'm talking about something that ships with the unit.

I got interested in the Macintosh when Windows 95 came out, since everyone was saying Win95 was a poor copy of the Mac OS. I was most surprised to find that the Mac OS doesn't come with any kind of programming language. Other than the software development system, the only thing Apple customer service had to recommend was the Resource Editor, which lets you change some things in existing programs. I can appreciate Apple's point of view that since they provided the ClarisWorks integrated utility, a user who needed to automate some calculations could do it with the spreadsheet. (I'm talking about the System 7 era, I don't know what the state of things Mac is today.)

I suppose the same can be said of Windows, since the old Basic interpreter (if it is still there at all) is only supported as a "legacy app" in a DOS box. But Microsoft does provide a wide range of programming environments for Windows. A beginner can do a lot with Visual Basic without having to learn to be a system programmer. I'm going to take a chance of drawing flames by speaking in defense of Bill Gates. I honestly believe he is a guy who loves programming and thinks a lot of people with different levels of ability can benefit from programming and that is why Microsoft sells a wide range of programming systems. I believe the official legend that Microsoft only jumped on the chance to provide DOS to IBM (when Digital Research told IBM to go away) because they didn't want to lose their deal to sell IBM the Basic interpreter. I've been listening to people blast Bill Gates for wanting to get paid for that thing since the late 70's, but I think that argument is in the same class with the belief that we are all entitled to any music we want through Napster (Nabster?) or the complaint that all HP manuals aren't available on-line.

In the interest of "fairness", I thought I would add that I understand and appreciate the argument that says "why should I have to pay for Windows just to buy a computer?" and I guess by extension "why should I have to pay for Basic just because I want to buy DOS". Then I realized this is the same argument people make for Nap(b)ster: "why should I have to buy an album when all I want is one song!" Does anybody remember Sams Photofacts TV repair manuals? You had to buy them in sets that included some off-the-wall models and a popular model.

Re: Why not more calculators?

Message #8 Posted by [John K. \(US\)](#) on 12 Apr 2002, 9:01 p.m.,
in response to message #7 by Ellis Easley

> Do modern PDAs come with a user programming capability? I've heard about the calculator emulators, but I'm talking about something that ships with the unit.

No, they don't -- and for some very good reasons. But, to the best of my knowledge, all of them do have development environments available commercially. Most have at least some tools available for free. After all, the vast majority of people who bought calculators didn't buy programmables, and those who did paid a premium. I don't see that much has changed, really.

>I was most surprised to find that the Mac OS doesn't come with any kind of programming language.

I'm not sure why this came as a surprise to you, since I can't think of another commercial OS sold during that time that did (was MS still shipping qbasic with Win95?). Now, I'm not sure how you're defining "user programming language" but if it includes scripting languages, then the version of System 7 that was shipping at the time (7.5 IIRC) did come with AppleScript, a fairly powerful -- if poorly documented -- object-oriented scripting language. It should have been in the "CD Extras" folder of the System 7 CD.

> Microsoft does provide a wide range of programming environments for Windows.

Yes, it does. So do most OS vendors, including Apple. At the time, they were pretty much giving away MPW, though most people were using CodeWarrior by Metrowerks. Today, Apple ships OS X with a fairly complete GNU development set, plus an additional CD of development tools that includes a full IDE.

> I believe the official legend that Microsoft only jumped on the chance to provide DOS to IBM (when Digital Research told IBM to go away) because they didn't want to lose their deal to sell IBM the Basic interpreter.

Yup, that's pretty much exactly how it happened. IBM wanted to license BASIC (and, as I recall, the Pascal and FORTRAN compilers that Microsoft was developing) for their new "Personal Computer". After DR dropped the ball with CP/M, Microsoft bought QDOS, polished it up a little, and offered it to IBM as MS-DOS in order to save their language contract. Arguably the best deal ever

made in the industry -- from Microsoft's point of view.

Maybe it's just me, but I'm not exactly sure what your point is. Are you arguing for or against programmability? Or, perhaps, some other sublimely subtle point which I've obviously missed...? :^)

Re: Why not more calculators?

*Message #9 Posted by [Ellis Easley](#) on 13 Apr 2002, 10:26 a.m.,
in response to message #8 by John K. (US)*

I'm for programmability. I see your point, that most people didn't buy programmable calculators. I've got a TI-57 manual that says one reason to learn to use a programmable calculator is because "In the future you'll be seeing more and more 'programmable' things - from microwave ovens to home computers." That was written in 1977. Today a common programmable device is a VCR, with which apparently most people can't set the time let alone program the timer (of course, you've got to do one before the other will work). Regarding the cost premium for a programmable calculator, I wonder what cost was added to the Apple II, the TRS-80, the IBM PC to have Basic in ROM? Or to include Basic with MS-DOS? Back when people were sharing Microsoft Basic for CP/M, what was Microsoft charging for it? I understand that Basic was more important then, since there weren't many applications and most early adopters probably wanted to write their own programs.

I just verified that my other PC, which came with WinME, has a copy of QBasic I must have copied from this, Win95 Upgrade system (the files are stamped 1995) and the Help system has no mention of Basic or Programming. I was also surprised and pleased to see that WinME comes with Debug. Most of the programming I have done has been assembly language in Z80 and 8086. I've used the Debug one-line assembler a lot to write short programs and have my own convention for writing and naming programs to be run from Debug. I like to say I think of Debug as an environment.

I'm not familiar with AppleScript, is it something like MS-DOS batch files or Unix shell scripts? While that is also very good to have, I think it is more an adjunct than an alternative to a programming language.

I started out responding to, and sympathizing with, Luiz's remarks. I like programming but I think I understand why it isn't a more popular activity. I think any computer should come standard with some provision for the user to

write his own program, in case he finds he needs to do something that the available functions won't do. Basic with MS-DOS is a perfect example of what I'm talking about. It's always there (if it doesn't come with Windows anymore, I think you can install it from your old DOS diskettes), it gives you a good set of program control statements, lets you do I/O pretty well - it's fairly complete and easy to use. It doesn't necessarily support or enforce the best programming rules - you can write as messy a program as you want - but with good programming practices you can get very good results. The same things can be said about a good programmable calculator.

I think I know what MPW is - Apple's Mac software development system? - and I recognize the third party products you named, but those aren't for the casual user. Also they are too big to just include with the machine. I understand the reason they are so big and complicated is that they support GUI programming.

To draw a parallel to using Basic in a DOS box, I guess I'm saying that no matter how powerful the operating system is, it should come with an easy to use, text oriented programming language. I understand most people will never use it, that's why it has to be small and inexpensive. But if it is there, some people will use it, and then other people who would never write their own programs would use already written programs and possibly modify them a little. I think that's how people get interested in programming. But if there isn't a simple programming environment in every system, that cross-pollination never occurs.

Just because I learned to use computers before GUI OS's, I guess I shouldn't assume that anyone would find a command line interface easy to use. I remember back in the Windows 3.1 days, a summer intern who had his system set up to go straight to Windows, he didn't know how to format a floppy from DOS - and I didn't know how to do it from Windows! But I assume programming requires a little initiative, and providing by default only a simple, text-based programming system is a practical solution to my concern that some programmability should always be available.

And while I continue to dwell in the past, I understand a lot of people are learning to program in Java in web pages.

Whither Programmability? [OT]

Message #10 Posted by [John K. \(US\)](#) on 14 Apr 2002, 11:30 p.m.,
in response to message #9 by Ellis Easley

[NB: Most of this is way off topic, so if that kind of thing bothers you, skip this post.]

> Regarding the cost premium for a programmable calculator, I wonder what cost was added to the Apple II, the TRS-80, the IBM PC to have Basic in ROM? Or to include Basic with MS-DOS? Back when people were sharing Microsoft Basic for CP/M, what was Microsoft charging for it?

My comment on the price premium was actually in reference to PDAs, but with a little fudging, it's still true for PCs. As I recall, when Microsoft first started selling their basic interpreter, they charged about \$50 for the cassette tape version (paper tape was, I believe, a little cheaper). I really don't know where Tandy got their BASIC, but I'm pretty sure Apple developed their version in-house, so it probably didn't cost them too much on a per-unit basis. I seem to recall that the license fee paid by IBM was in the \$20-30 range per unit, plus some additional up-front development costs and an annual base fee to cover on-going development and support. It's hard to say with any authority.

Still, these were high-buck machines in their day (\$1000-\$2500) so the purchaser had already paid the premium for programmability -- even if it was never used. At that time, a decent scientific non-programmable was in the \$30-50 range with programmables about running anywhere from \$150 to \$300. In terms of price premium as a percentage, programming languages were dirt cheap on the early home computers. Of course, this was in a day when the idea of selling software -- let alone an entire industry devoted to doing so -- sounded just a bit odd. After all, the real money is in the hardware, right? :^)

> I'm not familiar with AppleScript, is it something like MS-DOS batch files or Unix shell scripts? While that is also very good to have, I think it is more an adjunct than an alternative to a programming language.

It's really hard to describe AS without getting into the nuts and bolts of Mac OS interprocess communication. The closest thing I can think of is Tcl/Tk, but even that's not an exact fit. It is possible to create entire applications in AppleScript with full-featured GUIs and help systems, but

I'm not sure why anyone would. If you're curious, you may want to take a look at [Apple's AS page](#). In particular, the "[Overview of AppleScript](#)" section of the Language Guide contains a pretty good shotgun intro.

> I like to say I think of Debug as an environment.

Yeah, baby! Bare iron. That's what I'm talkin' 'bout! Structured programming is for wimps. ;^)

> I'm saying that no matter how powerful the operating system is, it should come with an easy to use, text oriented programming language. I understand most people will never use it, that's why it has to be small and inexpensive.

I agree. I also think that Ferrari and BMW should make inexpensive, easy to own sports cars. I'd order two. :^)

In all seriousness though, it would seem that they do. As you pointed out, QBasic is still available for Windows and every other OS that I can think of off the top of my head contains at least some form of scripting ability (and several contain full-blown IDEs with a serious set of tools) which might whet the appetite of a lucky few to explore further.

Unfortunately, as you point out, modern operating systems are complex and, if one wishes to write anything other than trivial code, a certain level of understanding must be achieved in the OS's run-time environment. There is just no way around it. Some RAD environments come close. Those are generally a good, low-impact way to start, but they tend to be a little to spendy to satisfy simple curiosity.

Ultimately, it comes down to money. Since the vast majority of owners will never, ever have the slightest inclination to program their systems, the folks who sell them don't feel particularly inclined to include a development system. Even basic, text-oriented environments require maintenance and at least some level of support. And "simple" and "easy-to-use" often translates into "complicated" and "maintenance-intensive" when it comes to creating a development environment. Which translates directly into money. And every year the personal computer industry becomes more and more like a commodity industry -- the cheapest wins and quality takes a back seat to price.

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Dumb Question - HP34 Charger

Message #1 Posted by [scott](#) on 10 Apr 2002, 9:47 p.m.

Ok, I have a nice HP34 that works great with fresh batt's charged outside the unit. The charger is apparently not working. Is it ok to just get a charger of the correct amperage, cut off the connector and splice it onto the new charger?

Your insights appreciated.

Re: Dumb Question - HP34 Charger

Message #2 Posted by [Ellis Easley](#) on 11 Apr 2002, 4:22 p.m.,
in response to message #1 by scott

There have been a number of discussions on that subject in this forum. The whole issue of battery chargers and/or AC adapters is the weakest point of these old calculators and other battery operated equipment. (Except the HP Classics, where HP provided a real constant current supply to charge the battery and a separate, constant voltage supply to operate the calculator at the same time.) I can only imagine that the battery manufacturers told the OEMs that charging NiCads wasn't very critical, judging by the instructions provided to the end-users.

The problem with substituting a different transformer is that the charging circuit in the calculator is just a diode to provide half-wave rectification and a resistor to limit the current. HP apparently depended on the resistance of the transformer winding to provide part of the total current limiting resistance. So the transformer secondary voltage and winding resistance is what you really need to match.

I like to have the proper HP charger for the sake of completeness, but I prefer to charge the battery externally and never operate the calculator from the adapter because of the risk of damage to the ICs due to over-voltage if the battery should happen to be making poor contact because of corrosion or whatever (except the Classics, where I trust the adapter).

If I was going to make a substitute charger, here is what I would do: First, I would only plan on charging the battery with the calculator off for a definite period of time. If you never turn the

calculator on with the charger attached, you don't have to worry about over-voltage (this statement is probably not valid for the constant memory models). Next, I would try to use the lowest transformer voltage practical to provide enough charging current, just in case I accidentally turn on the calculator. Then, I would provide some external resistance to limit the charging current to a reasonable level.

Now, the last two items are working against each other: for charging batteries in a stand-alone setting (no concern about over-voltage) the best simple way to get a constant current is to use a voltage source considerably higher than the battery voltage, and a relatively high series resistance to drop the extra voltage. This way, as the battery voltage rises with increasing charge, the voltage across the limiting resistor changes by a small percentage, so the current changes by a small percentage. This scheme has two weaknesses: since the current limiting resistor is dropping more voltage, it is dissipating more heat, and if the connection to the battery should open or develop a high resistance, the voltage at the battery end of the current limiting resistor rises to a high voltage (which is why I wouldn't do this for an in-the-calculator charger).

The reason I would use some additional external resistance is that it might not be possible to find a transformer with the same output voltage as the HP transformer. If you use a transformer with less voltage, you will get less current and will need to leave it charging longer. If that doesn't bother you, and the transformer provides enough current to charge the battery in a reasonable amount of time, then you can be less concerned about accidental over-voltage. But if you want to charge the battery in the "normal" time, you will need a transformer with the same voltage or more. If all you can find is "more", then you will need some additional resistance to reduce the current.

I've just made a bunch of measurements of my AC adapters and the charging circuit in an HP25. I have two Woodstock chargers, one the older 115/230V type 82026A and one the newer 90-120V type 82041C, and two Spice chargers, 82087B and 82087D. All four are labeled 10VAC 1.8VA output (except the 82026A which only says "1.8W"). All four measure from 10.1 to 10.4VAC open circuit (my power line measured 119-120VAC during these measurements). The two Woodstock adapters measure 5.7 ohms, the Spice adapters measure 7 and 6.9 ohms. The HP25 charging circuit has an 8.2 ohm, 5%, 1 W resistor which measured 9.1 ohms (old carbon composition resistors are notorious for increasing in resistance over time). I would guess that the Spice models might have a lower value resistor since the adapters have more resistance. With a battery that is partially charged in the HP25, I connected the two Woodstock adapters and took measurements with the calculator off at all times. I verified that the power switch shorts out the 8.2 ohm resistor when the calculator is on, meaning the external resistance is the only thing limiting the current in that state. Both adapters measured 8.1VAC under load. The voltage across the "8.2" (9.1) ohm resistor was 1.5V (165 mA) with the 82026A and 1.4V (153 mA) with the 82041C. The battery measured 2.6V in both cases. I'm not sure how the accuracy of my meter is affected by the AC component of the voltage across the resistor but I trust it on the battery voltage and the transformer voltage since they should be just DC and just AC. According to the DigiKey catalog, the "quick charge" rate for a Panasonic

standard 500 mA-h NiCad is 150 mA for 5 hours. HP recommends 6 hours for a full charge for the HP25 and 5-9 hours for the HP34C. If I were to substitute a different transformer, I would add some additional resistance to get about 150 mA. I would trust a current value calculated from the voltage measured across such a resistor (having verified the resistance) more than the current measured by a milliammeter in series, because in a circuit like this the resistance of the milliammeter could have a sizable effect on the current.

An interesting side note: I also measured several 82059B and D adapters (the only difference between the two models seems to be the length of the cord) which are used with the HP71 and HP75 and many HPIL devices etc. They are labeled 8VAC 3W or VA max output. They measure 12.7-12.8 VAC open circuit and 6.5-6.6 ohms. I was surprised to see that while the nominal output voltage is lower than the Woodstock and Spice adapters, the open circuit voltage is higher. Since they have almost twice the output power, I guess the greater current would bring the output voltage down to the nominal value.

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Dumb Question - Cases

Message #1 Posted by [Juan J](#) on 10 Apr 2002, 6:53 p.m.

Does anyone know where or how to get a leather case for the HP-28S/18C/19B? They used to come with a fine leather case with a flap, but not anymore. And searching on hp.com yielded no results.

Same thing for the Voyager series. They also had a leather case. One of my 15Cs has no case and I'm looking for one.

Any suggestions?

Thanks in advance,

Re: Dumb Question - Cases

Message #2 Posted by [Iqbal](#) on 10 Apr 2002, 9:05 p.m.,
in response to message #1 by Juan J

Check out www.calpro.com look under Bags, Cases & Vests You would find what you're looking for.

Re: Dumb Question - Cases

Message #3 Posted by [Iqbal](#) on 10 Apr 2002, 9:07 p.m.,
in response to message #2 by Iqbal

Oops! that should be : www.calcpro.com

Re: Dumb Question - Cases

Message #4 Posted by [Juan J](#) on 10 Apr 2002, 10:10 p.m.,
in response to message #3 by Iqbal

Thanks. You people in this forum are the best.

Re: Dumb Question - Cases

Message #5 Posted by [db\(martinez,california\)](#) on 10 Apr 2002, 9:06 p.m.,
in response to message #1 by Juan J

you can still buy the slipcase for your 15 from hp for \$6.

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New facts on HP-42S

Message #1 Posted by [J-F Garnier \(France\)](#) on 10 Apr 2002, 4:34 p.m.

Hello all,

In the process of developing an emulator for the HP42S, I made some discoveries on the HP42S internals that could also be useful for the people that want to expand their machine. I found that it could be possible to add a second ROM inside the HP42S that can be accessed by the hidden XFCN function. I will never open my machine to test it, but I know that some of you did it to upgrade the RAM. You will find the complete description in the article forum.

Best regards.

Jeff

Re: New facts on HP-42S

Message #2 Posted by [Philip \(Houston, TX\)](#) on 10 Apr 2002, 5:48 p.m.,
in response to message #1 by J-F Garnier (France)

Thanks for your very interesting article! I'm new to the 42S but have spent a lot of time with the 41. Can you point me to more details about the 42S Memory Browser. I didn't realize this was possible. Also, how do you obtain the INPRT program for the 48. Now I'll have to go get a 48 to try everything out.

Thanks

Re: New facts on HP-42S

*Message #3 Posted by [James M. Prange](#) on 12 Apr 2002, 12:38 a.m.,
in response to message #2 by Philip (Houston, TX)*

INPRT for the 48 is available at www.hpcalc.org/details.php?id=2296. hpcalc.org is a good place to check for anything related to 28, 48, 49, 38, 39, and 40 calculators.

Regards, James

Re: New facts on HP-42S

*Message #4 Posted by [Juan J](#) on 10 Apr 2002, 7:03 p.m.,
in response to message #1 by J-F Garnier (France)*

Thanks for the excellent article. One question: is it possible to access the internal clock and use it for time/date functions, like in the HP-28S? A clock/timer would be an excellent complement for the 42S.

Re: New facts on HP-42S

*Message #5 Posted by [Richard Garner](#) on 11 Apr 2002, 1:45 p.m.,
in response to message #4 by Juan J*

I wrote a quick user code program that can be used as a clock/timer for the 42s. It keeps well enough time for timing most things, about a second or 2 +/- in an hours time.

Re: HP 42S emulation for HP 48GX or next generation HP calculator

*Message #6 Posted by [Frank Travis](#) on 12 Apr 2002, 3:44 p.m.,
in response to message #1 by J-F Garnier (France)*

I bought my HP 42S in 1991. I read in an issue of Chip Chapter newsletter that HP had plans for an expandable version of the HP 42S, but when when the HP 48 series calculators were selling, the idea was put on the shelf. It would be nice if an HP 42S emulation were available for the HP 48GX (there are HP 41 emulators on www.hpcalc.org). A big wish of mine would be for HP to introduce a next generation expandable graphing calculator to succeed the HP 48GX and have HP 42S emulation built in.

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ERAMCO MLDL help needed

Message #1 Posted by [Thomas Schaefer](#) on 10 Apr 2002, 12:18 p.m.

I have got a working ERAMCO MLDL but without any manual or software. Has anybody an idea where I can get these things?

Thanks, Thomas

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HP-41 AOS Emulator ROM

Message #1 Posted by [Enrico](#) on 10 Apr 2002, 7:44 a.m.

In the v11n9 of PPC Calculator Journal there is a text on page 20 (written by Joe Horn) about HP-41 AOS Emulator ROM which will turn an HP-41 into Texas Instruments TI-59!

I was wondering if anyone has ever seen this ROM?

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HP 19BII memory hacks available?

Message #1 Posted by [Antonio](#) on 10 Apr 2002, 5:58 a.m.

I have a HP 19BII & I want to know if it is theoretically possible to increase the memory (I know already that it is not officially available).

If anyone out there knows about how to do this operation, you will be saving, if not my life, my sanity.

thanks a lot

Antonio

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HP-41CV

Message #1 Posted by [Clemente](#) on 9 Apr 2002, 7:45 p.m.

Hi folks, Can somebody help me with my old beloved calculator: After some seconds and after having made an operation it turns OFF. After turning it on again manually it still has all data on the stack, just as it was before.

Thanks

Clemente

Re: HP-41CV

Message #2 Posted by [Ellis Easley](#) on 9 Apr 2002, 9:07 p.m.,
in response to message #1 by Clemente

Is it possible that the automatic time-out number (that turns the machine off after a certain amount of inactivity) has been changed? Is that something the user has access to?

Re: HP-41CV

Message #3 Posted by [Fred](#) on 10 Apr 2002, 4:28 a.m.,
in response to message #2 by Ellis Easley

It seems to be strange that this number may have been changed.

One way to test is to execute the ON function by typing XEQ "ALPHA" O N "ALPHA" which toggle the right flag (the purists will remember us that it is the # 44) and disable the auto-turn-off-after-a-certain-time feature.

Real synthetic programmer will toggle the 44 flag with special manipulation.

Fred

Re: HP-41CV

*Message #4 Posted by [Clemente](#) on 10 Apr 2002, 9:08 a.m.,
in response to message #3 by Fred*

Thanks Ellis and Fred

I will check out your recommendation during some hours and will come back to you.

Clemente

Re: HP-41CV

*Message #5 Posted by [Clemente](#) on 10 Apr 2002, 4:08 p.m.,
in response to message #4 by Clemente*

Sorry, but although making XEQ "ALPHA" ON "ALPHA", the calculator is still turning off 3 - 10 seconds after making an operation.

Please help!!

Thanks

Clemente

Re: HP-41CV

*Message #6 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 11 Apr 2002, 12:49 a.m.,
in response to message #5 by Clemente*

Hi;

just a hunch: have you opened the calculator and cleaned the BATT/IO assy contacts? If there is some sort of dirt, it is possible that the current drain in executing any internal program (i.e. executing a function) is enough to cause a voltage drop and switch the calculator off. Check, also, for the batteries' springs: they tend to get oxide residual from batteries leakage.

Hope it helps.

Cheers

Re: HP-41CV

Message #7 Posted by [John Kercheval](#) on 11 Apr 2002, 12:42 p.m.,
in response to message #1 by Clemente

Yes.

The DS capacitor is probably blown.

I have a 41CV & performed the double speed mod. in 1984. When I did that the unit timed out 50% faster than usual- which I expected as the clock was running 2X faster.

I doubt you have don the modification, but if the ORIGINAL capcitor is blown, broken, or leaking , the exact problem you described will occur.

Try replacing it & see what happens. It should cost about 25 cents, plus some solder.

John K.

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need help to open & fix my hp28s

Message #1 Posted by [EDWARD](#) on 9 Apr 2002, 5:56 p.m.

hi! guys, I have a HP28S from 1989, and never being clean on the keyborads, today i try to used it but the 4th row on the lefth keyboard did'nt work, how can i open it with out damaged on the calculator to clean and have it working back. please help me, thanks.

Re: need help to open & fix my hp28s

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 10 Apr 2002, 9:10 a.m.,
in response to message #1 by EDWARD

Hi (maybe I'm wrong, but... are you in Brazil?)

Opening an HP28 is not something we hear about everyday. The old ones and some new ones are somewhat easier to open. The HP28 itself needs some mysterious procedures. I have one photo showing an opened HP28, but I am not sure it helps. One of the contributors in here have mentioned once his old HP28 was splited inside his son's backpack. I am not sure if he sent me the photos of the opened HP28, I'll check for it. If I find the photos and you want to, I'll send them so you can see where are the locking points.

Best regards.

Re: need help to open & fix my hp28s

Message #3 Posted by [Johnny Bjoern Rasmussen](#) on 10 Apr 2002, 11:15 a.m.,
in response to message #1 by EDWARD

Take a look at <http://www.hpcalc.org/hp48/docs/misc/hp28io.txt>

I haven't tried it out yet, but will do in a short time. I have a couple of HP-28S with defectives...

Happy dismantling! Johnny

Re: need help to open & fix my hp28s

Message #4 Posted by [EDWARD IN MEXICO](#) on 10 Apr 2002, 6:30 p.m.,
in response to message #3 by Johnny Bjoern Rasmussen

JONNNHY, THAK YOU VERY MUCH FOR THE SUGGESTED PAGE INFROMATION, IT WORK PERFECTLY, I STARTED ON THE LEFTH SIDE KEYBOARD, BUT WATH I FIND IS PROBABLY A LOSE OR BROKEN FLAT CABLE WICH CONECTS THE 3RD ROW TO THE CPU. I WILL TRY OPEND THE RIGHT SIDE TODAY LATER, IF I'M SUCCESFULL I WILL LET YOU KNOW, TO PUT IT BACK TOGETER I USE AN HOT SILICON GUN WITH FINE POINT. IT WORK OK.

GRAT SITE. REGARDS

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HP-41 cx and card reader.

Message #1 Posted by [Dave](#) on 9 Apr 2002, 12:19 p.m.

I install a card reader on my CX and i can't make the card motor to run. I have alle the fonctions available (cat-2) but if i put my calc in "program mode", load my program into "ram" from cat-1 Then insert the card, the motor don't take the card (it don't run)

I try others fonctions that write "CARD" on the LCD and when i enter the card nothing too; it's like the card reader don't detect the presence of the card

Perhaps it's more trivial; did i miss a command to do before using the card reader?

I opened the reader and the motor run free, the wheel is ok. I notice a kind of "LED" inside the reader is it an optical detection for the presence of the card?

Thank you for any help Dave

Re: HP-41 cx and card reader.

Message #2 Posted by [Stephan \(CH\)](#) on 10 Apr 2002, 2:56 a.m.,
in response to message #1 by Dave

Don't get me wrong here, but have you checked the batteries? The reader is very consuming and if your batteries are some kind of weak, it won't run. (Happend to me before). Regards Stephan.

Re: HP-41 cx and card reader.

*Message #3 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 10 Apr 2002, 8:58 a.m.,
in response to message #2 by Stephan (CH)*

Hi;

Stephan is right, but something else must be considered. If batteries are low, the BAT annunciator turns on and a LOW BATT is shown in the display everytime a card operation is performed. I believe something wrong in the card-insertion sensor (contacts) is the cause.

Maintaining the card reader can be shown [here](#). If there is no reaction in the calculator when the card is inserted, then something beyond batteries must be checked. As mentioned, at least CAT 2 returns all reader functions. It means electronics are (probably) fine.

Cheers.

Re: HP-41 cx and card reader.

*Message #4 Posted by [John Kercheval](#) on 11 Apr 2002, 12:47 p.m.,
in response to message #3 by Vieira, Luiz C. (Brazil)*

I agree 100%.

That is an old , motorized unit & it needs maintenance.

I had to rebuild mine two years ago. It has nothing to do with the batteries. Motors wear out! Even HP ones ;)

John Kercheval

Re: HP-41 cx and card reader.

*Message #5 Posted by [Dave](#) on 11 Apr 2002, 4:13 p.m.,
in response to message #3 by Vieira, Luiz C. (Brazil)*

Hey! thanks, i read the article and fix the "blades" and the card are now detect and pass the reader.

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HP 32SII & 17BII

Message #1 Posted by [Thibaut](#) on 9 Apr 2002, 9:16 a.m.

I went downtown in Brussels today and I noticed that an important styore (Fnac, for those who know) still sell 17BII's and 32SII.

Should these be unavailable anywhere else I would gladly get them for you.

Thibaut

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Educalc?

Message #1 Posted by [John Kercheval](#) on 8 Apr 2002, 9:32 p.m.

I guess Educalc is dead. Can anyone suggest a similar vendor?

Thanks,

John

What about CalcPro?

Message #2 Posted by [Ion Abraham \(New Mexico USA\)](#) on 9 Apr 2002, 9:13 a.m.,
in response to message #1 by John Kercheval

Well, I've bought a few things from CalcPro, and they were very nice. Of course, there will never be another EduCalc.

Ion Abraham Albuquerque, New Mexico

Re: What about CalcPro?

Message #3 Posted by [John Kercheval](#) on 11 Apr 2002, 12:48 p.m.,
in response to message #2 by Ion Abraham (New Mexico USA)

Thanks. I'll check them out.

John Kercheval

Re: What about CalcPro?

*Message #4 Posted by [John Kercheval](#) on 19 Apr 2002, 9:03 a.m.,
in response to message #2 by Ion Abraham (New Mexico USA)*

Good place! The formatting they use in their catalogs is very similar to Educalc &

They are in Corvalis!

John Kercheval

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HP / Compaq in the news

Message #1 Posted by [Tom \(UK\)](#) on 8 Apr 2002, 1:16 p.m.

Look at:

http://news.bbc.co.uk/low/english/business/newsid_1916000/1916632.stm

For a story of Walter Hewlett trying to put a 'spanner (wrench?) in the works' of the HP / Compaq merger.

Tom.

Re: HP / Compaq in the news

Message #2 Posted by [HPComaq](#) on 9 Apr 2002, 11:28 a.m.,
in response to message #1 by Tom (UK)

That's old news... we've been hearing about it on a daily basis ever since HP announced the merger plans last year.

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HP 11C

Message #1 Posted by [J Veteto](#) on 8 Apr 2002, 12:15 p.m.

I've lost my manual. I just changed batteries and all I get is 0.0000. None of the keys are working. What did I do wrong?

Re: HP 11C

Message #2 Posted by [David Smith](#) on 8 Apr 2002, 5:54 p.m.,
in response to message #1 by J Veteto

Probably the processor is just locked up. According to Appendix D (pg 243?) of the manual you should LEAVE THE BATTERIES IN and then very briefly short the ends of the battery stack together with a piece of wire. They specifically state that you should NOT short the calculator battery contacts while the batteries are removed!

Re: HP 11C

Message #3 Posted by [db\(martinez,california\)](#) on 8 Apr 2002, 9:22 p.m.,
in response to message #2 by David Smith

two things;

i guess i got lucky. i was working on a made in usa 12c that i got at the flea for three dollars this weekend and i didn't know that i shouldn't short the contacts with the batteries removed. it unlocked with no problems but i won't do that again.

the pcb was labeled 8122A. a lot of things hp made were 8XXX. is this the hp # for the whole calc or just the board? is the 22 in the number a nod to the old hp 22 that the 12 eventually replaced?

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HP15c

Message #1 Posted by [Luis](#) on 8 Apr 2002, 8:13 a.m.

Je recherche la domumentation de la calculatrice HP 15c Merci de me la faire parvenir SVP Merci Luis

Re: HP15c

Message #2 Posted by [Fred](#) on 8 Apr 2002, 12:20 p.m.,
in response to message #1 by Luis

Il serait peut-être judicieux de traduire ce message dans la langue la plus utilisée sur ce forum !!!!!

A moins que tu ne recherches vraiment qu'une documentation en version française.

Fred

Translation:??? Re: HP15c

Message #3 Posted by [Translation from French to English](#) on 8 Apr 2002, 1:35 p.m.,
in response to message #2 by Fred

Luis wrote something close to:

>I seek the domumentation of the computer HP 15c Merci me forwarding it PLEASE
Thank you Shine

Fred replied something close to:

It would be perhaps judicious to translate this message in the language most used on this forum!!!!!! With less than you search really only one documentation in French version. Fred

Re: HP15c

Message #4 Posted by [Frank](#) on 10 Apr 2002, 10:41 a.m.,
in response to message #1 by Luis

Il n'y a rien mal avec la signalisation en français, il est, discutablement le langage universel de la CEE en plus si tout va bien de l'anglais. Pour la meilleure réponse sur ce site, cependant, l'anglais serait préféré.

Re: HP15c

Message #5 Posted by [Fred](#) on 10 Apr 2002, 11:11 a.m.,
in response to message #4 by Frank

Yes, and please do not forget that the french is the official language of the olympic movement.

I'm sure that many people reading this forum and browsing this fabulous web site (I mean hpmuseum.org of course) would appreciate a simultaneous translation in different languages and please, keep in mind that in less than 5 years the major part of the exchange on internet will be in chinese.

Re: HP15c (may I?)

Message #6 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 10 Apr 2002, 1:56 p.m.,
in response to message #5 by Fred

Hi;

completely off-topic, but I would like to understand some things.

I've been told (still being told) lots of times that Chinese is the language spoken by the biggest part of the world. It is a lot known that China is the most populated place on Earth, and, of course, they all speak Chinese.

Is this the reason that Chinese will be used everywhere? I don't sincerely understand that. English is a lot easy to use, when no special, particular structure is invoked. English can be a lot complicated, also, but is still the easiest way to transfer information between people in different countries.

Why should I learn Chinese (how long does it take to learn? I don't have even a clue), if anybody learns English in a few months? At least, enough English to communicate.

I would just like to know if I'll have to learn ideograms and new grammar structures,

cause I'll begin now, if this is a fact. If not, what is this all about?

Please, is there any e-address for language forum? If anyone knows, post it. I'd really like reading something about that.

Best regards.

Re: HP15c (may I?)

*Message #7 Posted by [Ellis Easley](#) on 10 Apr 2002, 5:31 p.m.,
in response to message #6 by Vieira, Luiz C. (Brazil)*

TV is always telling us (in the U.S., anyway) that when Americans (and other English speakers, I presume) visit China, all the Chinese kids want to practice their English. Maybe Dave Hicks can tell us whether this is true. Another thing TV tells us is that Americans are near the bottom of the industrialized world in test scores, and yet most Americans speak English to some degree, so how hard can it be to learn? Though I must admit that many Americans don't speak English very well - I have found that the best English speakers, as a group (in my limited experience) are people from India - the largest democracy in the world, the second largest nation in the world if I am not mistaken, where I think English is the official language in a population with many native languages.

Oh yeah

*Message #8 Posted by [Dave Hicks](#) on 10 Apr 2002, 8:09 p.m.,
in response to message #7 by Ellis Easley*



Here's one group of students that came up to me one at a time to say "HELLO!". A "Ni Hao" wouldn't do - they wanted a "hello" in return.

Adults too sometimes

Message #9 Posted by [Dave Hicks](#) on 10 Apr 2002, 8:28 p.m.,
in response to message #7 by Ellis Easley

One time when cruising down a river I heard someone yelling from the shore:

Him: Hello? Hello? Foreign Man?

Me: Ni hao

Him: Where are you from?

Me Wo shi Mei guo ren

Him: Can you speak English?

Me: Shi de. Wo hui shuo Ying yu. Ni hui bu hui shuo Han yu

Him: Yes I can speak Chinese. Would you please speak English?

Me: OK

Him: garbled – too far away.

Well hopefully he heard the "OK" I'm afraid I just wasn't in an English kind of mood ;-)

Re: HP15c (may I?)

Message #10 Posted by [marc](#) on 10 Apr 2002, 11:10 p.m.,
in response to message #7 by Ellis Easley

Politics and economy make the international language. If I'm not mistaken, Portuguese has more speakers than French, but what language is more 'international'? What countries are more important: France, Canada, etc. or Portugal, Brazil, etc.? Maybe Brazil (my country) is important as a bad example... :) (but perhaps Brazil is better than The Simpsons creators think...) I too, would like to practice my English since now it's an important language. But it's unfair. While native speakers hear, speak and learn by everyday usage, we need to take bad English courses and travel abroad. And when we arrive there, nobody understands because we have a tendency to pronounce bit, beach and bitch the same way (or it, eat, each, itch and itchy). Every language is learnable when you're young and everyone around speaks it. This reminds me of a joke (I'll try to explain the idea, I don't remember clearly): A person travels to USA and returns astonished: "In the USA, everybody is very intelligent. They all speak English, even children!". It's less unfair when two non-native speakers use English to communicate: both have it as a second language. That's why I (once in a while) support Esperanto. It's easier (Really! You should try it!) and all have it as a second (third, fourth, ...) language. Furthermore, it's not tied to any culture or religion.

Answer in English, Portuguese, Esperanto or Spanish. No, I don't know French.
Answer in English if you want the other readers to understand too... :(

Re: HP15c (may I?)

Message #11 Posted by [Yani](#) on 10 Apr 2002, 6:09 p.m.,
in response to message #6 by Vieira, Luiz C. (Brazil)

You know how I hate to be a pedant ... but

Chinese is not a language but a group of diverse peoples artificially conglomerated into a nation. There are I believe about 200 languages still spoken in China today, Mandarin being the predominant language.

Yani.

Mandarin/Hanyu/Putonghua is also the official language

Message #12 Posted by [Dave Hicks](#) on 10 Apr 2002, 8:01 p.m.,
in response to message #11 by Yani

so almost everyone in China speaks it as well as their local language. The local languages are verbal-only - the same written words are used through-out China.

Not so off-topic

Message #13 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 11 Apr 2002, 12:41 a.m.,
in response to message #6 by Vieira, Luiz C. (Brazil)

(It seems that sometimes I can add something in here to think about...)

I must thank you all for all info I found here. No need for a languages' forum at all. Here is the place.

And Dave, thanks a lot. Your cases are a lot concise and they showed me what I'd like to know.

Best regards.

Re: HP15c

Message #14 Posted by [John K. \(US\)](#) on 10 Apr 2002, 6:41 p.m.,
in response to message #5 by Fred

Hrmph. I'm holding out for a resurgence in Latin myself...

Salvete!

Re: HP15c

Message #15 Posted by [doug](#) on 10 Apr 2002, 8:04 p.m.,
in response to message #5 by Fred

Everyone should learn how to speak and write to accomodate the people where they are or they won't be speaking to anyone. But as far as language goes, all of you should stop this non-sense about which is best and learn the one and only language. It is the only true simply language anywhere to include the universe.

Language Name: Binary Syntax and characters: 0,1

>(:o)

Re: HP15c

*Message #16 Posted by [Frank](#) on 11 Apr 2002, 9:52 a.m.,
in response to message #15 by doug*

Saw an (joke) Newspaper article awhile back that Bill Gates was patenting the use of 0 and 1, well written.

Very interesting but

*Message #17 Posted by [Luis](#) on 11 Apr 2002, 8:59 a.m.,
in response to message #1 by Luis*

what about my search of a user manual for my HP15C !!!!

Luis

Re: Very interesting but

*Message #18 Posted by [Chris Catotti](#) on 11 Apr 2002, 10:17 a.m.,
in response to message #17 by Luis*

I have a coworker who travels a lot, and he goes out of his way to learn to tell this joke in the native tounge, and then gets a big laugh at the local bars. In English it goes:

Question: If you say a person that speaks two languages is bilingual, and person that speaks three languages is trilingual, and many languages is a polyglot ... what do you call a person who speaks only one language?

Answer: An American.

sigh ... I am guilty.

There it goes in Portuguese

Message #19 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 11 Apr 2002, 11:48 a.m.,
in response to message #18 by Chris Catotti

Direct spelling:

"Se uma pessoa que fala dois idiomas é bilíngüe, e uma que fala três idiomas é trilingüe, e muitos idiomas é poliglota... como se chama a pessoa que fala somente um idioma?

Resposta: um Americano"

(just to please your friend...)

I know it is still off-topic, but I have no idea about how to conjugate English verbs in their complete, ancient form. And I've been told it is still thought in north American schools.

Cheers.

Re: Very interesting but

Message #20 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 11 Apr 2002, 11:34 a.m.,
in response to message #17 by Luis

Hi;

you're right! Your request vanished after all.

What you really need is an original HP15C's manual? Is it mandatory the French language or not? Would you also feel O.K. with a copy? Another language (I have both Portuguese and English, no French, sorry)?

Just to let us know about your actual needs.

Best regads.

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Smaller sibling of HP-6S (from Lexibook)

Message #1 Posted by [GE \(France\)](#) on 8 Apr 2002, 5:47 a.m.

I found recently a LCS110 (made by Lexibook). You may recall the HP6S is also sold as the LCS200 - there was another brand carrying the very same machine, I don't recall which. Well, the LCS110 is a fairly boring lower-end algebraic scientific calculator. The only funny thing is that it has the very same display as the LCS200/HP6S, and the same overall capabilities. It has a rigid folding cover and very nice hard plastic keys.

My feeling is that this one should have been selected instead of the other design by HP for the 6S...

The price ? \$5. There's no room left for "quality" machines on that side of the spectrum.

Re: Smaller sibling of HP-6S (from Lexibook)

Message #2 Posted by [Raymond Hellstern](#) on 8 Apr 2002, 6:37 a.m.,
in response to message #1 by GE (France)

Hi,

AFAIK the 'original' manufacturer of these calculators is Textet of Taiwan. The original name of the 6S solar is 'Textet Albert'.

Raymond

And they multiply like rabbits ...

*Message #3 Posted by [rsenzer](#) on 8 Apr 2002, 12:00 p.m.,
in response to message #2 by Raymond Hellstern*

It appears that essentially a similar model is produced by a number of companies with variations including:

rearrangement of keys

different labels on the keys (STO instead of $X \rightarrow M$, X^Y instead of Y^X , etc.)

battery powered

solar powered

battery and solar powered

plastic keys vs. rubber keys

Such models include the TI-34, the HP6 series, and the CANON F-603. They have similar behavioral characteristics as well:

The open parenthesis key automatically places a zero inside the parenthesis by default rather than the previous operand in the display register.

The equals key persists in carrying out the previous pending operation when pressed repeatedly. It is a good idea on these calculators to use the sequence $[+][0][=]$ to terminate such activity.

They do not round in full floating point display.

They all have the same accuracy.

Nonetheless, I find the greatest problem without getting into the RPN discussion is the lack of multiple independent memories.

I would argue that the TI-34 is the best implementation due to the clear labelling of the keys and the quality of the keys. However, it only works in the presence of photons. On the other hand, photons are free on a daily basis. The big problem is loss of memory. [The calculator's memory :)]

Re: And they multiply like rabbits ...

*Message #4 Posted by [Ellis Easley](#) on 9 Apr 2002, 1:42 a.m.,
in response to message #3 by rsenzer*

I also like the TI34. I hadn't noticed the similarity to the HP6S, now I see every key is the same! Does this mean even TI is using an off-the-shelf chip - or does it mean all the others are using a TI chip, making TI's domination even greater than is obvious?

What had struck me about the TI34, when I first saw it recently, is that it must be where HP got the idea for some of the styling of the HP30S, at least the graphics molded into the sliding cover.

In an effort to answer my own first question, I used my new miniature screwdriver set to open my HP6S and TI34 (not 34C). I should have realized that the IC dice would be bonded directly to the printed circuit boards and covered with blobs of epoxy. The only particular similarity I can see is that both calculator chips have a connection to the + power source, and a capacitor from the + source to another pin (not the other supply lead), to provide either a power-on-reset or an oscillator or a substrate supply bypass. That's all the parts there are on the HP6S; the TI34 has another capacitor (maybe because it is solar only) and -

A very interesting thing on the TI34 is an LED next to the IC (covered by the case). It is a flat leaded package aiming across the surface of the PCB. The main axis of the LED would be below the seam on the side of the calculator, between the "STO" and "RCL" buttons. The LED plastic is pink, suggesting to me it is probably an infrared LED. Because of my background in diagnostics, I imagine the LED is there to output diagnostic information during testing, and infrared LEDs are the most efficient.

As to how to put the chip into test mode, it might be through direct connection to some test pads, but if that is the case, and a bed-of-nails fixture is being used, why not get the output that way as well? I remembered that an engineer at Tandy had a patent on a way to transmit information on an AC power line, not a modulated carrier method like carrier current transmission (like X-10) but a baseband method that assumes you have complete control of the power source. He did the work in an effort to automate the giant light displays on Tandy's "twin towers" headquarters (which the new Radio Shack corporation recently sold). The two 20 story buildings have arrays of lights on two sides which are used to display things like "Radio Shack", "United Way", and at Christmas

time, the color images of candles. The lights are changed by hand and the only animation is blinking lights to make the candles twinkle. But the engineering department (the original one, not the one that did the computers) had developed a way to automate the lights by providing an addressable microprocessor to control each light. Information would be transmitted by dropping individual cycles or half-cycles from the AC power, using zero-crossing solid-state relays, I presume. So this might be the way the TI34 is put into test mode. Assuming that extensive testing is only being done once, on the complete assembly, they might be using an LED to illuminate the solar cell to power the unit, and then pulse the LED off to input information. I have some amber LEDs made for road signs which are incredibly bright with only 20-30 mA, I'm sure they would power the calculator. This sounds like a great experiment!

Regarding solar-only calculators, I happened to look at a Radio Shack calculator made by Casio (I think the Casio's with aluminum bezels and little plastic keys are some of the prettiest calculators, although they are confusing to use), this was a "dual power" calculator and its little lithium battery had expired just sitting in the box. I looked in the "Tandyized" booklet to see if it said what battery to use - another "dual-power" Casio I have names the battery number although it says it is not user-replaceable (meaning you need a screwdriver to do it). The Tandy booklet said you can't replace the battery, but you can keep using it as a solar-only after the battery dies. This may be a case of Tandy's natural inclination to sell an expensive battery being overridden by Tandy's need to avoid liability if a salesman tried to change the battery. If anybody remembers "DeskMate" which Tandy shipped with many pre-Windows PCs, including in ROM in some early laptops - and which was a major project inside Tandy and was very Windows-like by the time development stopped - it was explained to me that the main reason Tandy wanted DeskMate, which was a basic integrated utility, was so that the sales people would have some Tandy-owned software to run while demonstrating the computers. Obviously, training the people to use one suite of software was an advantage, but the greater purpose was that the alternative would be to use commercial software like Lotus 123 to demo the machines, and if there were open packages of commercial software in the stores, the sales people would be tempted to give customers bootleg copies to make a sale, exposing Tandy to an unacceptable liability.

Anyway, I found that by removing the dead battery from the Radio Shack/Casio calculator altogether, it went from working sluggishly to working crisply. I like solar-only's because sometimes when they turn on they have interesting junk on the display or in the memory. Like when things go wrong on TV.

Re: And they multiply like rabbits ...

*Message #5 Posted by [Mike Sebastian \(Texas\)](#) on 9 Apr 2002, 7:50 p.m.,
in response to message #4 by Ellis Easley*

The TI-34, HP-6S, and a host of similar calculators are based on a family of three Toshiba chips, the T7987A, T7988, and T6M19. These chips basically vary in their power supply requirements.

The T7987A is a 3.0 volt chip intended for battery only operation. I believe this is the chip used in the HP-6S and Datexx DS-700-30Xa.

The T7988 is the 1.5 volt chip intended for only solar powered operation. I believe this chip is used in the TI-34 and HP-6S Solar.

The T6M19 is a 1.5 volt chip intended to be solar and battery powered. I suspect this is the chip in the now discontinued Radio Shack EC-4048.

As to the LED in solar powered calculators, I've seen an LED in many solar powered calculators. I believe it is intended to function as a voltage regulator. If you trace the circuitry, you will find that the LED is in parallel with the solar cell.

Re: And they multiply like rabbits ...

*Message #6 Posted by [Ellis Easley](#) on 9 Apr 2002, 8:57 p.m.,
in response to message #5 by Mike Sebastian (Texas)*

I'll have to open my TI34 again and check the connection of the LED. When I was closing it I saw something I hadn't noticed at first, another capacitor, a small electrolytic at the bottom edge of the circuit board under some black tape. While I had it open I put a voltmeter on the solar cell and measured a maximum of about 2.5V. It did seem that the voltage stopped rising as I held it up to a light bulb, and 2.5V sounds about right for an IR LED. I know "real" reverse-bias zeners are not very good at low voltages, so using a forward biased LED is a good idea. I'll experiment with that instead of trying to get the TI34 to talk! So at a certain light level, the calculator becomes a visible - to - IR converter.

I hope my Radio Shack/Casio isn't in danger now that I have removed the battery, which might also have served as a voltage limiter.

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HP71B - #\$\$%!!#!\$@ screwed

Message #1 Posted by [doug](#) on 7 Apr 2002, 5:29 a.m.

A number of people responded to my original posting of:

HP71B - #\$\$%!!#!\$@ screwed, on November 08, 2001.

I had fully intended to thank any and all of you for your help, but by the time I got the proper tools and figured everything out the posting was gone. Anyway this is my resolution.

Don't waste your time on a unit that uses 1/4 inch bits for the HP71B unit. It will not however work on one of the deeply recessed torx screws on the HP71B Case. The exact tool for all latter model HP71B units I used with success was as follows:

WIHA Protturn 657/T6 x 40 Item # 95713 \$4.10 <http://www.wihatools.com/957serie.htm> a. Tip size = T6 - This is a standard blade b. Blade Length = 40mm c. Blade Diameter = 2.5mm

Some people that posted a response to my original question said that it takes a T7. While that might be true on some older units it wasn't on the latter units I have. I also wondered if there are different types of torx bits. The answer is yes.

a. TORX - Standard tapered style blades b. TORX Security - Center point hole on blades - Nipple on screws - can't push solid standard on c. TORX Plus - Straight edge blades (Vertical)

The WHIA webiste has a lot of useful information on the subject, as well as many fine products as well. I contacted them when I found the one torx screw couldn't be removed with the 1/4 inch bit. One of the employees eventually put me in touch with a designer type person that helped me find the exact tool in just a few minutes. Great service and resolution. They stock the units all the way down to the rare T1 in this series. But not the 1/4 version. The quality is really fine as well. Doug

Torx Plus: http://www.wihatools.com/torx_plus_benefits.htm Also: <http://www.wihatools.com/indexes/indxtorx.htm> - Bottom of page

HP71B - #\$\$%!!#!\$@ screwed 8 Nov 2001

<http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/archv006.cgi?read=12483>
=====

Re: HP71B - torx stuff

Message #2 Posted by [glynn](#) on 7 Apr 2002, 2:10 p.m.,
in response to message #1 by doug

Thank you Doug!

That was most helpful information, and I'm glad you posted it.

I find I can never have TOO many good tools! And so many fasteners these days are torx-type. I'll stock up.

Re: HP71B - #\$\$%!!#!\$@ screwed

Message #3 Posted by [Ellis Easley](#) on 8 Apr 2002, 11:54 p.m.,
in response to message #1 by doug

I love the Wiha tools. I bought a set at Mouser Electronics walk-in store, an assortment of about 6 tools that included I think 3 sub-10 Torx sizes, for around \$30. A few weeks later I was in Fry's Electronics and they had a shopping cart full of closeout items that included most of the Wiha tools I had bought, plus some more, individually for around \$0.90 each! Of course I stocked up. A Wiha Philips #1 has been my most-used tool since then (about 2 years) and it shows very little wear.

I remember the discussion about the 71B but I don't remember which screw is the worst case. Recently I bought a tool set which consists of a handle and bits, but it is not the usual 1/4 inch hex with magnetic retainer, the bits have a .156" (about 5/32") hex fitting and the retainer is a spring-loaded ball on each bit which you line up with a hole in the handle socket; it doesn't increase the outer diameter of the handle shaft which is .230" (a little less than 15/64"). Do you think that would fit in the worst case on the 71B?

I bought this set from the same catalog that had the 3.5" ds/dd floppies (microcenterorder.com) partly because it looked kind of like Wiha tools in the ad. They aren't that good but pretty good anyway. The bits snap in very snugly and the handle has a good spinner on the end. The set

has 2 Philips, 2 Posidrive, 4 straight blade, 3 Allen hex sizes (1.5, 2, 2.5 mm) in both regular and ball-end, and Torx 6 through 10 (19 bits plus the handle). The set comes in a very nice fitted case with a metal spring catch. The brand (not mentioned in the catalog) is Velleman. I don't know if this is a manufacturer or just a label. The set was \$18. I also ordered a 16 piece jewelers's type set which included some small nut drivers for \$5. This has the same name on it but is not very good, some of the Allen wrenches are bent and the hard plastic case arrived with the catch broken off.

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HP 15C emulator for the Palm OS platform?

Message #1 Posted by [Richard Ghost](#) on 6 Apr 2002, 8:04 p.m.

Does anyone know of a HP 15C program that works for the Palm V handheld computer. Tried the Hp 16C listed on the museum by the way, and did not get it to work. Just kept getting the: "This application needs AppForge Booster to run properly. Please visit www.appforge.com to download"

Downloading and installing this application made no difference. I just kept getting the above error message. I tried to do a software reset etc. but nothing could bring me past that error message.

But what I really would like to have is an HP 15C emulator. Thanks Richard

Re: HP 15C emulator for the Palm OS platform?

Message #2 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 8 Apr 2002, 8:29 p.m.,
in response to message #1 by Richard Ghost

While not HP15 specific, Coconut (HP41) and MathUpron are nice RPN calculators for the Palm platform

Re: HP 15C emulator for the Palm OS platform?

Message #3 Posted by [r.j. bied](#) on 8 Apr 2002, 10:25 p.m.,
in response to message #2 by Andrés C. Rodríguez (Argentina)

I would also recommend MathUPro at www.creativecreek.com My HP11C was getting tired and this fits well. The programming is very much like the HP41 and the 'keyboard' layout is great.

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HP-10B / HP-10BII error on regression - example

Message #1 Posted by [Gene](#) on 6 Apr 2002, 3:40 p.m.

The HP-10B and HP-10BII give an incorrect answer for the y-intercept on certain regression problems.

Excel and the TI-BAII Plus give the correct answer.

Example:

X Y 2400 1000 3700 1350 2500 1250 3000 1800 2500 1200 3100 1700 3000 1150

This is a managerial accounting problem. X stands for units produced while Y is for mixed overhead.

Anyway, the HP-10B and HP-10BII give the equation

$$Y = 510.375 + 0.29166667 X$$

But Excel and the BAII Plus give

$$Y = 508.3333 + 0.291666667X$$

The Y intercept on the 10B is wrong.

Any ideas why? Internal round-off?

I remember problems similar to this on old HPs where people would try to find the mean and std deviation on 999999997 and 9999999995 and 9999999996 and it would zonk out because of the large numbers involved, but these numbers are not large enough that this should be a problem.

?

Gene

Re: HP-10B / HP-10BII error on regression - example

Message #2 Posted by [John Ioannidis](#) on 6 Apr 2002, 4:38 p.m.,
in response to message #1 by Gene

My HP32SII agrees with Excel, as does my HP41 with the Advantage Module. I wonder if it's a coincidence that for $x=7$, $y=510.375$, and you have seven points. Are you sure you didn't hit any wrong keys?

/ji

No wrong keys...I've done this multiple times on different 10b's

Message #3 Posted by [Gene](#) on 6 Apr 2002, 5:41 p.m.,
in response to message #2 by John Ioannidis

It appears to be a real problem in the 10b somehow.

thanks for checking it with the other machines...someone else with a 10b want to confirm this is an error?

Gene

Re: No wrong keys...I've done this multiple times on different 10b's

Message #4 Posted by [Massimo Gnerucci \(Italy\)](#) on 6 Apr 2002, 6:15 p.m.,
in response to message #3 by Gene

All the calcs I tested it on agree with Excel (BTW: what is that strange sequence of letters between "and the" and "Plus"? ;)).

I carefully opened up the (once) mint 10B... the only one available here.

I entered your sequence three times and I can confirm your bug... however, try this: after pushing $y^{\wedge},m$ hit "C" and $y^{\wedge},m$ again. This time it will show you the right answer.

Can you confirm this?

My 10B is a later model, s/n ID8460####.

I'll try this on a 10Bii too.

Greetings,
Massimo

Older 10B's seem to be ok

*Message #5 Posted by [Gene](#) on 6 Apr 2002, 6:35 p.m.,
in response to message #4 by Massimo Gnerucci (Italy)*

I've tried it on 2 older HP-10B's I have S/N 2850A and 3251S and both work fine. Didn't think to do this until just now.

All the 10Bs at school this morning are fairly recent, most are the UGLY green teal shifted function 10b's but a couple of yellow ones were there. The bug, as you note, did show up on the newer 10BII calculators as well.

Unfortunately, I don't have a bug producing 10B calculator in the house, apparently.

Any other 10B users confirm presence of bug or absence?

Re: Older 10B's seem to be ok

*Message #6 Posted by [Massimo Gnerucci \(Italy\)](#) on 6 Apr 2002, 6:59 p.m.,
in response to message #5 by Gene*

I confirm the same behaviour on one of mine 10Biis (no, I won't open the other one too).

Just for fun I tried the same thing on a 12C (2512A####) and had the same bug (?) then on 15C (2729A####) same thing with y[^],r; right answer with L.R.

Am I missing something?!?

Massimo

If you leave the "7" showing in the display...

Message #7 Posted by [Gene](#) on 6 Apr 2002, 7:09 p.m.,
in response to message #6 by Massimo Gnerucci (Italy)

Then you'll get the wrong answer of 510.375

If you press Clear and then estimate $Y^{\wedge}$ (for the intercept), then you get the correct answer.

At least, that is how these older 10B's work.

I have done this enough times that I can't believe I forgot to push C before doing the $Y^{\wedge}$ function. Maybe the BUG was in my own brain? :-(

Can anyone confirm that this bug exists on a 10BII AND when you enter all 7 data points, press clear and then $Y^{\wedge}$?

?

Gene

Re: If you leave the "7" showing in the display...

Message #8 Posted by [Massimo Gnerucci \(Italy\)](#) on 6 Apr 2002, 7:21 p.m.,
in response to message #7 by Gene

Yeah, you're right!

I began babbling around before studying the basics... now I've read the 12c manual and understand how this works.

No bug then: it is consistent with what the manuals say.

Sorry,
Massimo

Don't be sorry, I'd rather it NOT be a bug!

*Message #9 Posted by [Gene](#) on 6 Apr 2002, 8:13 p.m.,
in response to message #8 by Massimo Gnerucci (Italy)*

Sorry all. Sure thought I did this properly. Oh well! Gene

And you may have been right

*Message #10 Posted by [Gene](#) on 6 Apr 2002, 7:15 p.m.,
in response to message #2 by John Ioannidis*

I might very well have left that pesky 7 in the display and then done a $y^{\wedge}$ projection.

Sadly, I should know that, having written a chapter on linear regression in my business math textbook USING the 10B.

I did this 3 times on 3 different 10B's this morning. I must have really been asleep if I forgot to press C before EACH time.

:-(

Gene

brain bugs

*Message #11 Posted by [Ellis Easley](#) on 9 Apr 2002, 2:02 a.m.,
in response to message #10 by Gene*

I was once troubleshooting around a 48 pin IC and kept getting the wrong signal on pin 40 or thereabouts. I asked a technician to check the wiring and make sure the right thing was connectd to the pin; he checked and told me the right thing was connected. Then I went back to what I was doing and found the wrong signal again. So just to make sure, instead of counting backwards from 48, I started at pin one and counted all the way around and found the right signal. I tried counting down again and after a little experimentation I discovered that when counting backwards from 48, I was skipping 44! As soon as I discovered it, it went away. But who knows how many more such bugs are embedded in me!

Re: brain bugs

*Message #12 Posted by [Gene](#) on 9 Apr 2002, 10:18 a.m.,
in response to message #11 by Ellis Easley*

Quite right! I specifically state in my textbook (which just happens to be available on amazon.com .. search for "Gene Wright Quantitative" and it will show up) to press CLEAR before calculating the Y-intercept!

Need to give myself a C- grade for this mess!

Gene

Re: brain bugs

*Message #13 Posted by [marc](#) on 10 Apr 2002, 11:16 p.m.,
in response to message #11 by Ellis Easley*

Why didn't you count from 40 to 48 instead of from 1 to 40? ^_^ (I friend of mine suggested that when I told it about your problem...)

Re: brain bugs

*Message #14 Posted by [Ellis Easley](#) on 11 Apr 2002, 11:27 a.m.,
in response to message #13 by marc*

What I was doing was using an oscilloscope to observe the signals on the pins of an IC on a printed circuit board. Usually, only pin 1 is explicitly marked and you know the total number of pins (the highest pin number), so my habit is to count up or down from pin 1 or pin (max), whichever is nearer to the pin I want.

This was back in the days of dual-inline packages when the largest package was about 64 pins. "Nowadays" pin counts are so high, circuit board usually have numbered tick marks every 10 pins to help you locate individual pins. That is, if you have access to the pins at all - with ball grid array packages which are very popular now, you don't have direct access to the pins on the top or the bottom of the board. There was a period in between when "smaller" surface mount parts (84 or 100 pins) would be marked on the circuit board with the numbers of the corner pins. But in any of these cases, at some point you have to count to get to the pins in the middle.

Re: HP-10B / HP-10BII error on regression - example

Message #15 Posted by [Jeff](#) on 6 Apr 2002, 5:49 p.m.,
in response to message #1 by Gene

My 20s agrees with Excel and the BAI+.

Re: HP-10B / HP-10BII error on regression - example

Message #16 Posted by [Rupert \(Northern Italy, EU\)](#) on 7 Apr 2002, 5:20 p.m.,
in response to message #1 by Gene

The HP48G+ too gives '508.333333333+.291666666667*X' (Correlation:.455).

Choosing the best fit model it gives '4.4530492363*X^{.715680669564}' (Correlation:.524).

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how to open a hp71b

Message #1 Posted by [andre schroeter](#) on 6 Apr 2002, 5:34 a.m.

how can a hp 71b be opened ? id like to clean the inside of the display window.

best regards andre schroeter

Re: how to open a hp71b

Message #2 Posted by [Raymond Hellstern \(Germany\)](#) on 6 Apr 2002, 7:49 a.m.,
in response to message #1 by andre schroeter

Hi,

the 71B is held together by several screws on the back. One of them is inside the card reader compartment, the others should be under the rubber feet. Be careful with the PCB, because it's relatively thin.

Regards,

Raymond

Re: how to open a hp71b

Message #3 Posted by [Julián Miranda](#) on 6 Apr 2002, 12:04 p.m.,
in response to message #1 by andre schroeter

If you have the MoHPC CD set you can find there a book "Control the World with HP-IL" where it's described how to open a HP-71B.

HP71B - #\$\$%!!#!\$@ screwed

Message #4 Posted by [doug](#) on 7 Apr 2002, 5:21 a.m.,
in response to message #1 by andre schroeter

Hi, I posted almost the same type of question, HP71B - #\$\$%!!#!\$@ screwed, on November 08, 2001.

A number of people responded and I fully intended to thank them, but it took quite a bit of time to find the torx tools necessary to do the job. But at least I can point you to an exact resolution. Don't waste your time on a unit that uses 1/4 inch bits, unless you need multiple sizes. If you do let me know and I will give you the model number of a really nice unit they sell. It will not however work on one of the deeply recessed torx screws on the HP71B Case. The exact tool for all latter model HP71B units I used with success was as follows:

WIHA Protorn 657/T6 x 40 Item # 95713 \$4.10 <http://www.wihatools.com/957serie.htm> a. Tip size = T6 - This is a standard blade b. Blade Length = 40mm c. Blade Diameter = 2.5mm

Some people that posted a response to my original question said that it takes a T7. While that might be true on some older units it wasn't on the latter units I have. I also wondered if there are different types of torx bits. The answer is yes.

a. TORX - Standard tapered style blades b. TORX Security - Center point hole on blades - Nipple on screws - can't push solid standard on c. TORX Plus - Straight edge blades (Vertical)

The WHIA website has a lot of useful information on the subject, as well as many fine products as well. I contacted them when I found the one torx screw couldn't be removed with the 1/4 inch bit. One of the employees eventually put me in touch with a designer type person that helped me find the exact tool in just a few minutes. There was also a duplicate of one size of bits with my unit. When he sent it they paid the shipping for the replacement bit, and for the new torx driver as well. Great service and resolution. They stock the units all the way down to the rare T1 in this series. But not the 1/4 version. The quality is really fine as well.

Now for the bad news. Unless the older units are different, you have to remove the PCB to get to the LCD. That requires removing the tips of the plastic stakes with the tops melted down over the PCB to hold it in place. Cheap way to build a machine. Never intended to be repaired unless you have the complete front section of the case to put all the components in. Unless you can blow compressed air and do the job you intended. Hope this helps anyway. Doug

Torx Plus: http://www.wihatools.com/torx_plus_benefits.htm Also: <http://www.wihatools.com/indexes/indxtorx.htm> - Bottom of page

===== HP71B - #
\$%!!#!\$@ screwed 8 Nov 2001 http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/
archv006.cgi?read=12483
=====

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Is the HP-32E Display module the same for 34C?

Message #1 Posted by [Luis](#) on 5 Apr 2002, 4:07 a.m.

Hello All,

Could someone inform me if is the Display module used on the HP32E the same for the 34C?
Thanks for all "Spicealist"!

Luis

Re: Is the HP-32E Display module the same for 34C?

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 5 Apr 2002, 6:57 a.m.,
in response to message #1 by Luis

E aí?

AFAIK, they are functionaly equivalent. I have once replaced one 32's for a 34's, and it worked fine. I remember both calculators' circuitry was built sandwich-fashion, no solder, just flex circuit and IC's kept together with two metal clips joining the structure. The display assy could be removed and replaced without disassembling the assy.

Anyway, check the "replacing" component for it's code.

I know it is no concise info, but may help.

Cheers

Re: Is the HP-32E Display module the same for 34C?

*Message #3 Posted by [Luis](#) on 8 Apr 2002, 7:53 a.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)*

Thanks for your reply, Luiz. I have already someone selling it, anyway I'll check its P/Number first.

Bye!

Luis

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Re: Thibaut Cousin

Message #1 Posted by [Glenn McEnroe](#) on 4 Apr 2002, 11:52 p.m.

Just wanted to post a followup on my order from Thibaut. I received the timer module today which amounts to 2 month delivery time from Belgium. It looks like the envelope was opened and resealed for customs inspection. Thanks for all the posts advising me on the expected time to ship items from Europe to USA.

Glenn

Re: Thibaut Cousin

Message #2 Posted by [Thibaut.be](#) on 5 Apr 2002, 1:49 p.m.,
in response to message #1 by Glenn McEnroe

I'm glad it arrived... at last !

Enjoy your module !

Thibaut

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Re: Downloadable manuals

Message #1 Posted by [James M. Prange](#) on 4 Apr 2002, 9:17 p.m.

It looks as if the 49G manuals got "lost in the shuffle" when HP redesigned their web site, but you can find them at www.hpcalc.org. There's also a scanned 48G User's Guide at hpcalc.org.

Regards, James

Re: Downloadable manuals

Message #2 Posted by [James M. Prange](#) on 6 Apr 2002, 2:23 a.m.,
in response to message #1 by James M. Prange

PS:

The 49G User's Guide (English) is now available on HP's site at:

www.hp.com/cposupport/manindex/hp49ggraph24252_eng_man.html

But for the 49G Advanced User's Guide and Pocket Guide, go to www.hpcalc.org, at least for now.

Regards, James

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Looks like the HP-32sII has finally bit the dust

Message #1 Posted by [Leon](#) on 4 Apr 2002, 2:33 p.m.

Looks like the HP-32sII has finally bit the dust, It has been discontinued & store stocks are dwindling. Just a 'heads up' for collectors.

Re: Looks like the HP-32sII has finally bit the dust

Message #2 Posted by [aruid](#) on 4 Apr 2002, 2:54 p.m.,
in response to message #1 by Leon

I think the HP 20s is next

ARUID

Re: Looks like the HP-32sII has finally bit the dust

Message #3 Posted by [Frank B. \(Germany\)](#) on 4 Apr 2002, 3:39 p.m.,
in response to message #2 by aruid

On hpshopping.com the 20S, the 39G and the 19BII are sold now with 10% rebate ... closeout.

Re: Looks like the HP-32sII has finally bit the dust

Message #4 Posted by [leon](#) on 4 Apr 2002, 6:08 p.m.,
in response to message #1 by Leon

hp32sII for 47.50 + shipping <http://www.electronicprods.com/prod01415.htm>

Re: Looks like the HP-32sII has finally bit the dust

*Message #5 Posted by [Erwin](#) on 5 Apr 2002, 1:24 a.m.,
in response to message #1 by Leon*

And What happend with the HP-40G???????

Also discontinued?

Re: Looks like the HP-32sII has finally bit the dust

*Message #6 Posted by [lokhin](#) on 6 Apr 2002, 11:20 a.m.,
in response to message #1 by Leon*

HP32SIIs have been sold out in amazon.com

[Amazon.com buying info Hewlett Packard HP32SII Scientific Calculator](#)

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Infrared comm for HP 48GX

Message #1 Posted by [mapet](#) on 4 Apr 2002, 6:53 a.m.

Is there any way to transfer data from PC to HP 48GX by infrared? Probably there is a program that can do it, but how to send it without using a wire ?

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RPN programming for HP 49G

Message #1 Posted by [Mark](#) on 3 Apr 2002, 10:23 p.m.

Hi,

Would you please teach me how to program and store mathematical equations into an HP 49G. I want to program them RPN form.

For example, $C = (A^2 + B^2)^{1/2}$ where A, B, & C are variables. I want to store this equation in RPN form, so if C and B are known, the HP 49G can calculate A.

Thanks in advance,

Mark

Re: RPN programming for HP 49G

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 4 Apr 2002, 7:03 a.m.,
in response to message #1 by Mark

Hi;

In this form, I do not think of a way to store it in RPN format. Anyway, you can change it from $C = (A^2 + B^2)^{1/2}$ to $(A^2 + B^2)^{1/2} - C$. In this case, one of the solutions (expect many) would be:

Consider C and B already stored in the current directory

	LEVEL1	LEVEL2
« -> A		
«		
B	B	
SQ (x^2)	B^2	
A	A	B^2

```

SQ  (x^2)      A^2      B^2
+      B^2+A^2
.5      .5      B^2+C^2
^  (y^x)  (B^2+A^2)^.5
C      C      (B^2+A^2)^.5
-      (B^2+A^2)^.5 - C
»
»

```

Given A in the stack, this program returns the expression value. If it returns zero, you have a root. To automate the process, it's necessary to use the ROOT command, and you'll need an extra procedure.

Hope it helps. (I did not check this info, I have neither the manuals, nor the calcs in hand now. Maybe there are some errors)

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41cv

Message #1 Posted by [b.tokarczyk](#) on 3 Apr 2002, 8:18 p.m.

I have a 41cv that reads 'memory loss' at battery insertion and will not respond to any keys, even power toggle. I've gone through Mier-Jedrzejowicz's brief recommendations. Is there any advanced options to get this operational?

Regards,

Bryan

Re: 41cv

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 4 Apr 2002, 5:59 a.m.,
in response to message #1 by b.tokarczyk

Hi;

is your HP41CV the halfnut OR an earlier coconut (fullnut)? The basic difference is the motherboard, that exists only in the fullnut. If you're lucky having a fullnut, there is a possibility that you can get it repaired.

In fact, I had one HP41C that happend to be exactly with this behaviour and I could get it working. Depending on what kind of board you have, you'll find one of both:

- six 8 pin, DIP, memory IC's lined up at the right side of the board OR - three pairs of IC's, stacked built, in the upper top of the board

In both cases, five of them are ILExxx series and one is an ILAyyy. This ILAyyy is the memory chip that holds system registers (ALPHA, X-Y-Z-T-L stack registers, among others). When this fella is not working, MEMORY LOST is shown and the calculator does not work. In my case, I could swing the calulator slightly and see the brief, tiny LCD's blinking (about 1 sec. delay) meaning the system was trying to restart. After removing the IC and replacing it (from another HP41), everything worked fine.

Well, that's my story. I am almost sure that some other, easier to handle situation may happen in your case.

Success.

41cv

*Message #3 Posted by [b.tokarczyk](#) on 7 Apr 2002, 5:13 p.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)*

Luiz,

Thanks for the info -- I'll check on the type and get back. The reversal of the batteries actually allowed me to turn the unit on with toggle, but then it displayed the same error and stayed without response to keys.

Regards, Bryan

Re: 41cv

*Message #4 Posted by [b.tokarczyk](#) on 9 Apr 2002, 2:23 a.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)*

Luiz,

Thanks again for the response. The cv is a fullnut version. Again, my only success at a response is the momentary reverse polarity of the n-cells. I am trying a couple of various ways to get the display to at least respond to the keys/toggles -- unsuccessful so far. Any ideas would be much appreciated.

Regards,

Bryan

Re: 41cv

Message #5 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 9 Apr 2002, 7:40 a.m.,
in response to message #4 by b.tokarczyk

Hello, Tokarczyk.

There is a procedure I tried some times. It will probably be taken as risky by some contributors in here, and I agree it is risky. But I have done it more than a couple of times with successful results.

You will find two capacitors built in the mainboard (the bigger ones). Allow the mainboard to rest outside the calculator's box for a couple of hours and shorten these capacitors' terminals (use a piece of flexible, thin wire). Both will retain battery's charge and keep calculator's status for some time. Shortening them will 'reset' power supply and erase all memory contents.

After that (make sure no residual charge is left in the capacitors with a voltmeter), find some conductive foam and allow the mainboard to rest over it, making sure all IC's terminals touch the foam. Let it there for a couple of minutes.

Also, check for corrosion and dust in both BATT/IO assy and the zebra connectors between the mainboard and the keyboard/display board. Sometimes a single cleanup procedure will be enough. If you find oxide residuum, some metal polishing solution will help removing.

I guess these procedures will eliminate external causes. If none of them get to successful operation, any of both the mainboard or the display assy is bad. The best shot, in this case, is having another calculator, so you can switch parts with each other and try to replace components.

If there is something else I remember, I'm posting soon. Also, if there is something else you need, let us know. I believe other contributors will try to help, too. (there are great gurus in here, it's just a matter of time for them to read this)

Hope you have success.

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HP-01 HOW MUCH IS IT WORTH

Message #1 Posted by [JOHN](#) on 3 Apr 2002, 3:05 p.m.

I HAVE HP-01 STAINLESS BLACK KEYS,LEATHER BAND DATED MAY 1977 SERIAL NO. 1801A35530 FOR SALE ORIGINAL BOX,MANUAL,PEN WITH GAURANTEE CERTIFICATE BATTERIES DEAD,SOME WARE NOT USED FOR 23YRS

CAN SOMEONE PLEASE TELL ME WHAT THIS COLLECTOR'S ITEM IS WORTH IF I SELL IT

Re: HP-01 HOW MUCH IS IT WORTH

Message #2 Posted by [Jim L](#) on 3 Apr 2002, 3:13 p.m.,
in response to message #1 by JOHN

I don't know about the HP-01 but is your ASR-33 for sale?

:~)

Re: HP-01 HOW MUCH IS IT WORTH

Message #3 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 3 Apr 2002, 4:47 p.m.,
in response to message #2 by Jim L

Good answer, Jim. As per the HP-01, you can post a message at the Museum Classified Ads section, or try some of the e-auction sites (there are mixed opinions about these).

Re: HP-01 HOW MUCH IS IT WORTH

Message #4 Posted by [doug](#) on 3 Apr 2002, 4:50 p.m.,
in response to message #1 by JOHN

When you have an HP item for sale and you are in doubt of it's value or you just want to sell it to the highest offer then it is best to run an MFSBO ad on the MoHPC classified ad section. Some people don't respect the designators but some will simply make an offer if they really want the item you have for sale. <http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/adforum.cgi>

You could also turn off the CAPS LOCK key :-)

Message #5 Posted by [Gene](#) on 3 Apr 2002, 5:54 p.m.,
in response to message #1 by JOHN

Can't get much harder to read than that!

Re: You could also turn off the CAPS LOCK key :-)

Message #6 Posted by [JOHN](#) on 4 Apr 2002, 4:08 a.m.,
in response to message #5 by Gene

IT'S IMPOSSIBLE BECAUSE I BROWSE THE VERY FAMOUS HPMUSEUM WEB SITE WITH MY OWN DEVELOPPED BROWSER ON MY SUPER HP-41CX WITH A SPECIAL ETHERNET CONNECTION MODULE. PLANS ARE AVAILABLE ON DEMAND.

JOHN

Re: You could also turn off the CAPS LOCK key :-)

Message #7 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 4 Apr 2002, 6:38 a.m.,
in response to message #6 by JOHN

would you say that again?????????

Re: You could also turn off the CAPS LOCK key :-)

*Message #8 Posted by [Luca Passaggio](#) on 4 Apr 2002, 8:27 a.m.,
in response to message #7 by Vieira, Luiz C. (Brazil)*

Hey, it seems that it is still April 1st here !!!

At least we are joyful people...

Best regards

Luca

Re: You could also turn off the CAPS LOCK key :-)

*Message #9 Posted by [J. Lopez](#) on 4 Apr 2002, 9:35 a.m.,
in response to message #7 by Vieira, Luiz C. (Brazil)*

"IT'S IMPOSSIBLE BECAUSE I BROWSE THE VERY FAMOUS HPMUSEUM
WEB SITE WITH MY OWN DEVELOPPED BROWSER ON MY SUPER HP-
41CX WITH A SPECIAL ETHERNET CONNECTION MODULE. PLANS ARE
AVAILABLE ON DEMAND.

JOHN"

Sorry... I couldn't resist.

Nonsense -

*Message #10 Posted by [Ellis Easley](#) on 4 Apr 2002, 12:41 p.m.,
in response to message #6 by JOHN*

My browser runs on a 9100 and not only do I have upper AND lower case text, I have
color images ... one pixel at a time ... red in X, green in Y, blue in Z

Re: HP-01 HOW MUCH IS IT WORTH

*Message #11 Posted by [Mark](#) on 3 Apr 2002, 6:57 p.m.,
in response to message #1 by JOHN*

It's not worth much at all since it is the stainless model, not the gold one. I'll give you \$45 for it.

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82169C vs. A

Message #1 Posted by [Ellis Easley](#) on 3 Apr 2002, 1:58 p.m.

What's different about an HP82169C HPIL/HPIB Interface from an 82169A? Other than the label it looks and behaves just as described in the 82169A manual that I got with it.

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No more Hoaxes

Message #1 Posted by [Carly Fiorina](#) on 3 Apr 2002, 9:10 a.m.

Dear Sir:

Hp does NOT appreciate the new calculator joke. See to it it does NOT happen again.

Carly in Palo Alto

Re: No more Hoaxes

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 3 Apr 2002, 9:21 a.m.,
in response to message #1 by Carly Fiorina

Who are you?

Re: No more Hoaxes

Message #3 Posted by [Frank](#) on 3 Apr 2002, 9:38 a.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)

The former CEO? ;+}

Re: No more Hoaxes

Message #4 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 3 Apr 2002, 11:40 a.m.,
in response to message #3 by Frank

Ms. Fiona e-mail should begin with:

Knock, knock!

Than we should ask:

8-0 WH0000 IIIS IIIIT????

... and so.

Re: No more Hoaxes

*Message #5 Posted by [Anonymous](#) on 3 Apr 2002, 9:40 a.m.,
in response to message #1 by Carly Fiorina*

It seems we are again the 1 april !!!!!

Re: No more Hoaxes

*Message #6 Posted by [William Hewlett](#) on 3 Apr 2002, 7:00 p.m.,
in response to message #1 by Carly Fiorina*

HP may not appreciate the humor but I'm rolling over in my grave with laughter!

William Hewlett, HP founder.

Re: No more Hoaxes

*Message #7 Posted by [David Packard](#) on 4 Apr 2002, 4:18 a.m.,
in response to message #6 by William Hewlett*

Fine, William, to have news of you.

They are all mad here.

Regards

David Packard, other HP founder.

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Diggle "U Da" Man

Message #1 Posted by [Jeff_G](#) on 3 Apr 2002, 7:33 a.m.

Daniel Diggleman,

I just received the SPARCOM EE card for the 48SX (advertised here) you sent to me from Switzerland and I'm happy to report that it made it here in New Jersey in great shape.

Its nice to know that internet transactions can be on the level and hassle free.

Best regards,

Jeff

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HEWLETT Need Not Apply to HEWLETT PACKARD

Message #1 Posted by [doug](#) on 2 Apr 2002, 4:45 p.m.

Did you hear they are booting the Hewlett out of the Hewlett Packard? The guy is not being allowed back in the board of HP again. They said he is taking half of the shareholders with him. National news.

Re: HEWLETT Need Not Apply to HEWLETT PACKARD

*Message #2 Posted by [Frank](#) on 3 Apr 2002, 9:40 a.m.,
in response to message #1 by doug*

Yes, very unfortunate. He should be able to take his name off the thing that's left as well, bet he'd like to!

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data transfer from 48sx to 49g

Message #1 Posted by [Michelle Dulzer](#) on 2 Apr 2002, 12:40 p.m.

I am trying to transfer information from a 48sx to a 49g or a 48g. I always get a timeout message. Please help. Thank you. I have made sure that the calculators are both set the same, so I need more help.

Re: data transfer from 48sx to 49g

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 2 Apr 2002, 7:20 p.m.,
in response to message #1 by Michelle Dulzer

Hi;

there is a procedure to test the IR AND RS232 comms. Have you done it? It is at Appendix A (Testing Calculator Operation), 48SX Owners' Manual. If you don't have it, let me know.

Would you post the I/O setup status for both calculators so we can have a clue? I know you have already doubled-checked it, but, maybe, there is some hidden clause not detected... Who knows!

Cheers.

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Rhode Systems II ROM

Message #1 Posted by [Philip \(Houston, TX\)](#) on 2 Apr 2002, 11:54 a.m.

I have acquired a ROM without documentation that I'm curious about. It is labeled "RHODESYSTEMS II". It has a part number of 82500A-A18, ID31. It appears to have an autorun configured because when it is placed in the HP41 and turned on, the system displays "WORKING..." and then beeps with USER mode on. The functions appear in CAT2 with the little "t" preceeding the label name implying to me they can be copied to RAM. A COPY yields a PRIVATE message. The functions are: F-S S-F H-S D-S S-D FT-S S-FT S-M SOLVE Y/N FX HIT ZZ RESET FILM NDF EBU DF FT FR FH CLK MET BEAT MS SEC- BEAT1 FSTRT VSTRT SET SUB ADD COMP LISTH ADDH CHGH CHGW READH RECOVER

There seems to be some connection with the TIME module. When Shift-On is pressed, the calc displays WORKING... again and then displays time. The S-H, S-M and their inverse appear to convert Seconds to hours, seconds to minute and so on.

Anyone have any ideas about this ROM?

Re: Rhode Systems II ROM (Just wondering...)

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 2 Apr 2002, 7:28 p.m.,
in response to message #1 by Philip (Houston, TX)

Hi;

very peculiar. As you mentioned, the little "t" means that you are dealing with programs (this is the same "t" you see in any ALPHA label, except for the 2-byte A-J, a-e). What I am curious about is that the programs are made PRIVATE (un-PRIVATing them is another story) and the calc begins an autostart routine. In time: are you using an HP41C/CV or CX? Just to know if SHIFT-ON is active or not.

If you are not using a time module OR an HP41CX, this module has an internal clock (is it possible to simulate time counting in the HP41 with, say, synhtetic program?). Wow! I want to know more about it...

Now it makes two curious in the place. Someone? Ahn?

Re: Rhode Systems II ROM (Just wondering...)

*Message #3 Posted by [Philip \(Houston, TX\)](#) on 3 Apr 2002, 11:20 a.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)*

In a CV without the TIME module: Shift-ON turns the calc off as expected. In a CV with the TIME module: Shift-ON starts the Clock and responds the same as a CX.

In a module with PRIVATE programs, can the programs actually be copied to memory but maintain their private status? If so, can someone point me to a way to UN-PRIVATE programs in memory.

Another curious thing, at startup, something is copied to memory that is protected. A CAT1 displays nothing but pressing PRGM displays PRIVATE which implies to me a PRIVATE program was automatically copied into memory. With a SIZE 100 on a CX there are 219 registers, after the startup with the ROM, there are 206 registers. Thanks

Re: Rhode Systems II ROM (this is getting even better...)

*Message #4 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 3 Apr 2002, 11:48 a.m.,
in response to message #3 by Philip (Houston, TX)*

Mam, this is amazing! I suspected that the SHIFT-ON was related to the Time Functions, alright.

About unprivating: try [this link](#), that you will see how. I believe that some internal 41's trick is probably active; I'd not be frustrated if this PRIVATE stuff maintain itself private even after the unprivate procedure.

I'm still a lot curious about this fella. I believe some knowledge of the 41's synth prgm and internals will be of help. I wish I know more about it...

Success. And please, keep us informed.

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Stefan Seiwerth's HP41CV ttCalc

Message #1 Posted by [Ty Rogers](#) on 2 Apr 2002, 11:24 a.m.

Does any one besides me use the HP41CV Simulator by Stefan Seiwerth?

Re: Stefan Seiwerth's HP41CV ttCalc

Message #2 Posted by [Stephan \(CH\)](#) on 3 Apr 2002, 1:32 a.m.,
in response to message #1 by Ty Rogers

Hi Ty, I used to work with the ttCalc but then found the HP-41 MCode Emulator by Warren Furlow more appealing.

Re: Stefan Seiwerth's HP41CV ttCalc

Message #3 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 3 Apr 2002, 7:04 a.m.,
in response to message #2 by Stephan (CH)

I liked ttCalc, but I have experienced trouble in use, and find no helpful information or support. Where could I find the MCode Emulator? Thanks in advance.

PS: Anybody knows about an emulator for PocketPC, similar to "Coconut" for the Palm?

Re: Stefan Seiwerth's HP41CV ttCalc

Message #4 Posted by [Raymond Hellstern \(Germany\)](#) on 5 Apr 2002, 3:00 p.m.,
in response to message #1 by Ty Rogers

Hi,

I liked ttCalc, too. It's a very nice program. But the one from Warren Furlow has some advantages. One of them is that it's a 32-bit application, so it doesn't need a VDM under NT/W2K;-) And it uses a more realistic bitmap.

Raymond

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Dying Hp-42s needs doctor

Message #1 Posted by [Andy Warburton](#) on 2 Apr 2002, 7:33 a.m.

Hi, Anyone tell me where I could send an Hp42s calculator for repair (I > > live in the UK)... this one crashed spectacularly when I changed the batteries recently... though that might not have much to do with it, it could have been dead already..

Rgds

Andy W

Re: Dying Hp-42s needs doctor

Message #2 Posted by [richard](#) on 4 Apr 2002, 9:28 a.m.,
in response to message #1 by Andy Warburton

I've had a couple of scary low-battery events: the beeper beeps, everything's locked...it's horrible. Years ago I phoned HP tech support in the UK and a very helpful person suggested taking the batteries out for a few minutes, turning the machine on so it completely discharged the temporary storage, then replacing the batteries. (Make sure the new ones are good!) It will display "memory clear" but I was thrilled that the machine was as good as new. Once it went like this after flying...cosmic rays?

Richard

Re: Dying Hp-42s needs doctor

Message #3 Posted by [Iqbal](#) on 4 Apr 2002, 10:42 p.m.,
in response to message #2 by richard

I would also try shorting off the battery contacts with a coin.

Re: Dying Hp-42s needs doctor

Message #4 Posted by [John K. \(US\)](#) on 5 Apr 2002, 12:01 a.m.,
in response to message #3 by Iqbal

I would also try shorting off the battery contacts with a coin.

I'm sure that this goes without saying, but just in case-- Make sure you remove the batteries **before** shorting the contacts... ;^)

(Howdy, Iqbal. How's things?)

Re: Dying Hp-42s needs doctor

Message #5 Posted by [David Smith](#) on 5 Apr 2002, 5:29 p.m.,
in response to message #4 by John K. (US)

Actually some of HP's manuals recommend briefly shorting the contacts WITH the batteries installed. Also installing the batteries backwards for a brief time.

Re: Dying Hp-42s needs doctor

Message #6 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 6 Apr 2002, 8:26 a.m.,
in response to message #5 by David Smith

If there is a diode to protect the circuitry for reverse poalrity, reverse batteries won't do a thing. If there is no diode, ICs are very likely to be damaged, particularly CMOS RAM.

So: DON'T DO THE REVERSE POLARITY TRICK!!!

Also it is nonsense from an electronics engineering point of view to short circuit the batteries (except to help them discharge and overheat, something we are not supposed to look for).

It makes sense to REMOVE the batteries and short circuit the terminals, to discharge capacitors that may be inside, so to fully erase all memory, registers, etc. and force a cold reset.

If we are entering the non-scientific-approaches land, perhaps someone should suggest **which** type and value of coin will offer the best results. For magic purposes, I'd suggest a Krugerrand, or Canada gold coins, but any **gold** coin will do, as long as it is in **mint** condition...

Just my 10 pennies

Re: Dying Hp-42s needs doctor

*Message #7 Posted by [David Smith](#) on 6 Apr 2002, 2:56 p.m.,
in response to message #6 by Andrés C. Rodríguez (Argentina)*

Since all diodes have some reverse leakage current, I think HP intended this trick to help discharge the internal capacitor fully. I know the '41 has reverse diodes and the HP recovery techniques for the 41 say it is OK to reverse the batteries.

The '42 and Voyager machines mentioned shorting the batteries while installed... strange, but a temporary short of the button cells won't damage them or even effect their life much. I still don't know why HP recommended it though.

Re: Dying Hp-42s needs doctor

*Message #8 Posted by [Ellis Easley](#) on 9 Apr 2002, 4:28 p.m.,
in response to message #7 by David Smith*

I think the reason HP says to leave the batteries in place is to prevent possible damage from electrostatic discharge. Normally the user never gets near any electrical signal inside the calculator except when the battery cover is off. The act of touching the battery terminals with a metal object is an opportunity for an electrostatic discharge to get on the printed circuit board. With the batteries in place (and if you have followed HP's instructions in order, you will have fresh batteries in place) a discharge to either battery terminal will be shunted to the other battery terminal through the low impedance of the batteries, bringing all nodes in the circuit to about the same potential. Without batteries in place a discharge might be conducted onto either the + or - power supply bus, then might find a path through one of the chips to continue on its way to ground. I think one of the battery terminals is connected to the shield ground of the calculator - in the Voyager series this is the metal back plate and the metal keyboard bezel (connected together by springs). Without batteries, a discharge to the other battery terminal might pass through any of the chips to the ground side of the power supply, then to the shield, into your hand, to ground.

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current RPN for user

Message #1 Posted by [a](#) on 1 Apr 2002, 6:21 p.m.

Foolish beginner question: Is there a current RPN offering from HP? Anything at all? Thanks a

Re: current RPN for user

Message #2 Posted by [Paul Brogger](#) on 1 Apr 2002, 6:49 p.m.,
in response to message #1 by a

The HP-48G/GX/G+ are ostensibly available, though maybe not for long. They're large, richly-endowed things with big LCD dot-matrix screens and graphing functionality. They work with a more recent version of RPN employing a variable-depth stack. The newer HP-49G may be used in either RPN or Algebraic modes. Its RPN is (I believe) essentially the same as that of the HP-48G.

Some people don't like that mode of operation as much as the older, simpler four-level stack RPN. The most recent offering with that behavior was the HP-32SII. I say "was" because, as you'll notice elsewhere in this forum, there's lots of talk about its recent discontinuation. They're still to be found, apparently, at some of the larger electronics stores and some university bookstores.

I believe the HP-17BII is another recently-discontinued model with an RPN mode.

Both the HP-48G and the HP-32SII are readily available on eBay in all stages of "new" & "used" for very reasonable prices.

Good luck!

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New Calculator Available (shipping on the 8th)

Message #1 Posted by [Dave Hicks](#) on 1 Apr 2002, 8:31 a.m.

Please see the [product page](#) for more information.

The expected ship date is the 8th.

For those of you who were beta testers, you may now speak freely even though the NDA runs through the 10th.

Re: New Calculator Available (shipping on the 8th)

Message #2 Posted by [Tony](#) on 1 Apr 2002, 8:58 a.m.,

in response to message #1 by Dave Hicks

Finally, HP understands the need to support legacy products. The new RPN3 mode will allow us to make a smooth transition from our 9100's. It will be worth the wait.

Re: New Calculator Available (shipping on the 8th)

Message #3 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 1 Apr 2002, 9:51 a.m.,

in response to message #1 by Dave Hicks

Today is a holiday here (HP offices are closed), but reportedly the new model will be available in my country December 28th(*), or when the economy improves, whichever happens first.

If our history keeps repeating (iterating with the same parameters, may I say), it will have a price tag of 1E+18 \$ (pesos), equivalent to U\$S 149.95 + tax. At least is a real and not a complex number! (Do you know our currency has an "imaginary" part?)

(*) Local equivalent to April 1st.

Re: New Calculator Available (shipping on the 8th)

Message #4 Posted by [Karl Hafen](#) on 1 Apr 2002, 10:07 a.m.,
in response to message #1 by Dave Hicks

I think I'll wait for the 43s. But I'm going to order a few of the Lithium-ion battery packs. (they fit right in the OTHER classic models. :)

Re: New Calculator Available (shipping on the 8th)

Message #5 Posted by [Bert Keuken](#) on 1 Apr 2002, 10:30 a.m.,
in response to message #1 by Dave Hicks

Ha ha Dave, nice to see you've got a fine sense of humor!

Re: New Calculator Available (shipping on the 8th)

Message #6 Posted by [Frank](#) on 1 Apr 2002, 11:48 a.m.,
in response to message #5 by Bert Keuken

Only on 4/1?

I've ordered mine

Message #7 Posted by [Jim L](#) on 1 Apr 2002, 1:57 p.m.,
in response to message #1 by Dave Hicks

Sounds great! I ordered the CX. I can't wait for that Astronomy module. It sounds VERY useful.

What's the price?

Message #8 Posted by [Chan Tran](#) on 1 Apr 2002, 2:14 p.m.,
in response to message #7 by Jim L

Hi Dave, What the price on the 67C or CX? Must be very expensive. I estimate it must be at least 10 times the price of a good 67 on ebay

Re: What's the price?

Message #9 Posted by [Jim L](#) on 1 Apr 2002, 3:14 p.m.,
in response to message #8 by Chan Tran

I didn't see the price until I clicked on add to cart. The CX is \$399. I didn't check the C.

Re: New Calculator Available (?)

Message #10 Posted by [Paul Brogger](#) on 1 Apr 2002, 2:24 p.m.,
in response to message #1 by Dave Hicks

I guess I fell for it. I tried to get to the order pages, but they each give a script error. I called the "Home / Home Office" order number, and they don't know anything about it. A web site Search doesn't return any hits. The URL looks fishy (to my untrained eyes), even though it begins with "www.hp.com".

A very ELABORATE prank, if it is one. If it's for real, I suppose the rough edges will be smoothed out in the next few days.

I'm either a sucker or a frustrated would-be buyer!

Please DON'T call HP about this!

Message #11 Posted by [Dave Hicks](#) on 1 Apr 2002, 4:52 p.m.,
in response to message #1 by Dave Hicks

The page is an April Fools joke. I cleared it with some calculator people in HP but we never checked with the business store because we didn't think anyone would get so far as to call or place an order online without laughing.

Maybe I should have priced it higher?

I guess I should have made up a picture of someone wearing that extended belt loop case that holds the calculator and 600 26" long cards. Surely that would have done it ;-)

I was also debating whether to change the batteries to Dilithium-ion and add a depth rating of 300 meters.

My apologies to anyone who was confused. I'm still not sure if Paul was truly confused just getting me back with an April Fools joke of his own - but if not - I'm sorry Paul.

Re: Please DON'T call HP about this!

*Message #12 Posted by [Monte Dalrymple](#) on 1 Apr 2002, 5:28 p.m.,
in response to message #11 by Dave Hicks*

Good one! I had added it to my cart and had my credit card out until I looked closely at the new labels along the bottom row... HALT CTCH FIRE

I am old enough to remember that from the original 6800.

Then I saw the UNIX commands on one of the middle rows...

Boy, did I feel stupid (and disappointed).

Re: Please DON'T call HP about this!

*Message #13 Posted by [Paul Brogger](#) on 1 Apr 2002, 5:53 p.m.,
in response to message #11 by Dave Hicks*

For what it's worth, I went in with "Maybe it's just an April Fool's joke, but . . ." (April Fool that I am, I DID call.)

A very convincing simulation, I must say! You get the award. (And I get a red face . . .)

It all sounded too weird to be true, but part of me just wanted to believe that something new would be made available . . .

"RPN3" mode -- the "HP-68WX" -- five function keys and a keyboard full of colorful legends -- pretty good one! (If you'd simulated taking orders, you might have gotten a few credit card numbers . . .)

Sorry I went to the company -- hope it doesn't cause you any grief!

Re: Please DON'T call HP about this!

*Message #14 Posted by [Nenad Vulic \(Croatia\)](#) on 2 Apr 2002, 1:36 a.m.,
in response to message #11 by Dave Hicks*

I could not have seen the page you are all talking about, due to time zone difference I suppose. Dave, if possible would you repeat the mentioned picture of HP67CX somewhere for us in Europe who have missed the opportunity.

I am not sure that I would not be another one who would have ordered it, just if I saw it...

It's still there

*Message #15 Posted by [Dave Hicks](#) on 2 Apr 2002, 1:49 a.m.,
in response to message #14 by Nenad Vulic (Croatia)*

It just has a big red April Fools added now.

[Product page](#)

Price was Right

*Message #16 Posted by [Mike McDonald \(KS, USA\)](#) on 2 Apr 2002, 9:08 a.m.,
in response to message #11 by Dave Hicks*

GREAT Joke! Thought about clicking on the order buttons, but knew it was going to be too expensive. Best 4/1 joke of the day here!

Truth is - the "price" is not too far from what I paid for a new HP-45 in 1975 (about \$245 as I recall) when I was working as farm labor for \$1.75/hr during summers while attending Oregon State University.

Maybe there is a willingness to pay for performance that is being overlooked.

Credits

Message #17 Posted by [Dave Hicks](#) on 1 Apr 2002, 7:17 p.m.,
in response to message #1 by Dave Hicks

Ernie Malaga supplied the 68WX materials which he originally called the 67CX and the suggestion to do this.

I thought that the 67CX needed more of a "physical" presence for an announcement so the "new" 67CX was created and old "old" 67CX became the 68 Wide Body ;-)

Thanks Ernie!

Re: Credits

Message #18 Posted by [Ernie Malaga](#) on 1 Apr 2002, 8:02 p.m.,
in response to message #17 by Dave Hicks

You're quite welcome, Dave. Man, that was fun. Can I invent an HP-69ZX for April Fool's Day, 2003? 8^)

That aside, my apologies to those who fell for it!

-Ernie

Re: New Calculator Available (shipping on the 8th)

Message #19 Posted by [Ellis Easley](#) on 1 Apr 2002, 8:08 p.m.,
in response to message #1 by Dave Hicks

I particularly liked the addition of a "NOP" key. I can remember calculators with suggested "NOP" functions to use due to a lack of program editing support, but putting a real one the keyboard is better. I could live without all the "%" functions.

Re: New Calculator Available (shipping on the 8th)

Message #20 Posted by [aruid](#) on 1 Apr 2002, 9:27 p.m.,
in response to message #1 by Dave Hicks

"Note Pad: On back" that made me laugh out loud!

ARUID

DANG! How I want one of these!!

Message #21 Posted by [glynn](#) on 1 Apr 2002, 9:45 p.m.,
in response to message #1 by Dave Hicks

With failing, aging eyes, the multi-line LED display was a dream come true! And yes, I did put it in my shopping cart, but as a "test"... ;-)

You may not know how close you came to what I've been designing in my mind. The batteries, certainly. A polymer LED display would be wonderful. Sturdy, with sure-feeling, tall-felling keys. RPN... even three-line.

HP? If you just disregard the mag-card stuff and put a smart-media card slot in the front, Dave and Ernie have done magnificently.

Even the HCF *(halt and catch fire)* instruction has its use... but I suggest incorporating that particular key on the 6s-II....

LOL, Thanks Dave for making my day!!

Re: New Calculator Available (shipping on the 8th)

Message #22 Posted by [db\(martinez,california\)](#) on 1 Apr 2002, 9:52 p.m.,
in response to message #1 by Dave Hicks

"Thermal noise random number generator" !?!?!?

will it have "stun" and "kill" settings?

will it locate a lost tardis?

DAVE DREAMS BIG!

Really Great Joke!

Message #23 Posted by [J.C. Randerson](#) on 2 Apr 2002, 12:13 a.m.,
in response to message #1 by Dave Hicks

I really got a kick out of this one! I suspected it for an April Fools Joke, but then clicked on the "Add To Cart" icon, I thought, holy smokes, can this be for real? I thought, what the hell, I'll go ahead and buy one. On the "Update Cart" icon the whole thing fell thru, and I realized I fell for it, hook, line, and sinker. Great work, Dave!

J.C. Randerson

Re: New Calculator Available (shipping on the 8th)

Message #24 Posted by [John K. \(US\)](#) on 2 Apr 2002, 12:38 a.m.,
in response to message #1 by Dave Hicks

Wow! I can't wait to get my hands on that SETEC Astronomy module. I figure, as long as it has a street price lower than my credit card limit, then money is no object! I wonder why they didn't announce this sooner? Too many secrets, I guess...

[(^: !einrE dna evaD ot soduK]

What about the desktop 97C/CX ?

Message #25 Posted by [Mark Ringrose](#) on 2 Apr 2002, 12:45 a.m.,
in response to message #24 by John K. (US)

What a fabulous calculator, and no need for a backlight. But what about the corresponding desktop 97C/CX ? Also with a carry case and belt loop.

Great job. I think we should all send in orders to HP (cc Carly) using the forms provided on the order page. This would show that there really is a demand, and maybe, just maybe....

Cheers!

Re: New Calculator Available (shipping on the 8th)

Message #26 Posted by [Fred](#) on 2 Apr 2002, 3:50 a.m.,
in response to message #1 by Dave Hicks

We are waiting for a simulator on PC !!!!

Re: New Calculator Available (shipping on the 8th)

Message #27 Posted by [Top Fool](#) on 2 Apr 2002, 4:29 a.m.,
in response to message #1 by Dave Hicks

It's a real great joke (and top design!), thanks Dave & Ernie... But I'm quite depressive now...
Sigh...

Happy April Fool's Day (belated) to everyone!

Comments from a beta-tester

Message #28 Posted by [Gene](#) on 2 Apr 2002, 8:27 p.m.,
in response to message #1 by Dave Hicks

Had the pleasure of being a beta-tester for this unit. Comments below.

- 1) Was glad to see the influence of Bill Wickes, whom HP brought back in to manage the product. It was evident that he had listened to HP's customers with the dismissal of the dismal rubber keys on one of HP's latest, sad outings in calculators.
- 2) The processing speed of this unit is just amazing. The old HP41 could do LBL 01 + GTO 01 with about 1000 loops per minute. The HP-67C (the unit I tested) clocks in at about 40,000.
- 3) As a concession to the sad state of the educational market, a secondary algebraic AOS mode is built in. The user must consciously activate it by pressing the keys CTCH first. Then the FIRE function. As I understand it, this is some sort of internal joke within Bill's team.
- 4) Since Bill designed it, he included a couple of bugs that were easy to find. By storing the system flag for a low battery indicator in register 01, pressing and holding the SIN key, the + key, and the ENTER key while reading in a magnetic card, the system will overwrite the default OS with whatever is on the card. Bill was kind enough to slip me a special card (that I will make available soon) that activates the unique 802-11cx wireless internet hookup that HP marketing made them remove from the documentation at the last minute. I was able to run a linux derived browser and access the HP museum site using the 67c (the HP museum site is the default home page).

That's all for now. Glad someone at HP has their head screwed on properly. At least this wasn't some shade of frozen animal whatever.

Gene

Re: New Calculator Available (shipping on the 8th)

Message #29 Posted by [Bill Stanley](#) on 2 Apr 2002, 11:02 p.m.,
in response to message #1 by Dave Hicks

Hoo-whee!

nice touch w/ the lightyear to parsec conversion. i guess a mph to furlongs/fortnight would have been too much of a giveaway.

and i was struggling to decide between a 48gx and a 49 . . .

bs (my initials, not necessarily a comment)

Re: New Calculator Available (shipping on the 8th)

Message #30 Posted by [Masao Kinoshita](#) on 3 Apr 2002, 12:10 p.m.,
in response to message #29 by Bill Stanley

Does this mean that HP's working with UNIX/Linux and organic LED's? This "HP 67C/X" was OK'd by them, right?

Hmmmmmm... :-)

Re: New Calculator Available (shipping on the 8th)

Message #31 Posted by [b.tokarczyk](#) on 3 Apr 2002, 7:54 p.m.,
in response to message #1 by Dave Hicks

Dave,

Great Ad! Nice to see the retro-look in a 49 successor (sans rubber keys)!

Bryan

Permanent addition to the MoHPC

*Message #32 Posted by [Glen Kilpatrick](#) on 6 Apr 2002, 5:07 p.m.,
in response to message #31 by b.tokarczyk*

I certainly hope this prize addition to the MoHPC is retained indefinitely. I almost experienced a total system crash when I laughed so hard my chair's stability was threatened :). And one of my web-based teammates said "did I read perl !!!".... Yes indeedy, we'd have been queuing up for the day this one came out.

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Geoworks Bindery

Message #1 Posted by [Glen Kilpatrick](#) on 30 Mar 2002, 11:31 a.m.

Geoworks would appear to be out-of-business (possibly years ago), they're not selling / giving away this (DOS?) software that "binds" books into .gpk files (lets you turn the text of your choice into a book, there are boatloads of public domain text that I have yet to read, but only a handful of already bindery'd .gpk books across the entire web); <http://home.clarksville.com/~bcollins/NEWPAGE.HTM> refers me to <http://www.newdealinc.com/> but they don't seem to have any "Geoworks Bindery" any more, although one product does have an associated "Book Reader". I've emailed them requesting a status / reality check, but just in case....

And what does this have to do with MoHPC? Well, [1] such "books" are the only kind that may be read on the Book Reader in my ~new *HP* OmniGo 100 (organizer, vaguely similar to an LX100/200) that runs Geoworks, and [2] where the heck else could I ask (I already scoured the web, nobody else has this)?

So the question, does anybody have this software (orphanware) anymore, and might be able to help me? I don't care about anything else in the SDK, just in the Bindery functionality. Thanks in advance.

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I have my 19C apart. . .

Message #1 Posted by [Jason Day](#) on 29 Mar 2002, 11:20 a.m.

Hi I have my 19C calculator apart. My question is how do I make the little finger prongs line up so I don't smash them when I put it back together again?

Jason

Re: I have my 19C apart. . .

Message #2 Posted by [David Smith](#) on 29 Mar 2002, 5:15 p.m.,
in response to message #1 by Jason Day

The answer to your question is (even though it sounds really flippant) is... very carefully.

Mainly you have to make sure that all the pins are nice and straight and their heads are all properly shaped. Then hold it up to the light, very carefully align the two halves of the machine and mate them together. I have done around a dozen of these little beasts and have not found a sure fire easy way to do it, but they usually go together fairly smoothly.

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HP32SII available

Message #1 Posted by [GE \(France\)](#) on 29 Mar 2002, 10:34 a.m.

I just purchased a new HP32SII at a long-time HP dealer for something like \$65.

It has the new horrible color scheme, the 'unprotected' screen, and the keys are painted, but the key feel is very nice (compared to other more recent models).

The dealer told me he had just received a batch of these, and that to his knowledge it was still made.

As I proposed a number of times here, if anyone wants one, brand new unopened (but with french manual), just let me know.

Re: HP32SII available

Message #2 Posted by [Dave Shaffer](#) on 29 Mar 2002, 3:50 p.m.,
in response to message #1 by GE (France)

I just bought one of these on Wednesday (3/27) at a Fry's electronics store in Phoenix (Arizona), for \$59.99. They had a few more. I didn't ask about more in the pipeline. There was also a selection of all (?) other current HP calcs ('12, '17, '30, '38 (or '39, I don't remember) and '48 or '49 (again, I don't remember).

Get 'em while you can.

Dave

Re: HP32SII available

Message #3 Posted by [Mike Sebastian \(Texas\)](#) on 29 Mar 2002, 11:24 p.m.,
in response to message #2 by Dave Shaffer

The Fry's in Arlington, Texas, still had several HP-32SII units in the new color scheme as of noon Friday, along with the 12C, 20S, 30S, 39G, and 48GX.

Re: HP32SII available

*Message #4 Posted by [Dave](#) on 30 Mar 2002, 8:16 p.m.,
in response to message #3 by Mike Sebastian (Texas)*

I bought one a month ago from the buy.com website for \$45.00. However, they are no longer in stock at buy.com.

new color scheme?

*Message #5 Posted by [aruid](#) on 30 Mar 2002, 8:26 p.m.,
in response to message #3 by Mike Sebastian (Texas)*

Why did they change the color scheme? In the manual it still refers to the old blue and red color scheme, rather than the new green and light purple scheme. I do like how the area around the LCD panel is silver with black text rather than black with silver text.

I don't think the changes are bad, but why would they change if they didn't have to? Quality wise, the newer HP 32Sii is still as nice as my 6 year old HP 20S the keys feel exactly the same, and they both feel very sturdy

Can a color blind person see the new scheme better?

ARUID

Re: new color scheme?

*Message #6 Posted by [Chan Tran](#) on 31 Mar 2002, 10:39 p.m.,
in response to message #5 by aruid*

I am color blind and I found the new color scheme is both ugly and difficult to read. However, beauty is in the eyes of the beholder so being color blind my judgment does not have much value.

Re: new color scheme?

Message #7 Posted by [John K. \(US\)](#) on 2 Apr 2002, 12:42 a.m.,
in response to message #6 by Chan Tran

I am color blind and I found the new color scheme is both ugly and difficult to read.

Well, I'm not color blind and I, too, find the new color scheme to be both ugly and difficult to read. :^)

Re: new color scheme?

Message #8 Posted by [Ernie Malaga](#) on 2 Apr 2002, 5:26 a.m.,
in response to message #6 by Chan Tran

Quite the opposite, Chan! Your remarks prove a point I've felt very strongly about: that the new "cool" colors chosen by HP are hard on color-blind people.

It is said that 1 out of every 100 men (not women) is color-blind, being unable to distinguish between red and green, but (I suppose) being able to differentiate the other colors without trouble.

Back when HP was still run by Mr. Hewlett and Mr. Packard, they selected gold and blue shift keys (and labels) for the shifted functions of their calculators -- as far back as the 1974 HP-65. Gold and blue are excellent choices for color-blind people. Turquoise and purple aren't.

-Ernie

Re: new color scheme?

Message #9 Posted by [Tony](#) on 31 Mar 2002, 11:24 p.m.,
in response to message #5 by aruid

The 32SII is a mature product and is not aggressively marketed by HP. This would make me believe the new package is the result of a cost reduction in manufacturing and/or parts.

Re: new color scheme?

*Message #10 Posted by [J.Manrique](#) on 1 Apr 2002, 5:38 a.m.,
in response to message #5 by aruid*

Hello,

I have a "new color" HP32SII from two years more or less. As far as I know HP bought great amount of black plastic at lower price from a company near to close that was selling it so cheap due its financial problems..

At least that are the news we have here at Spain...

Cheers, J.Manrique

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HP41C calculator

Message #1 Posted by [Tal](#) on 29 Mar 2002, 6:06 a.m.

Hi, All!

I hold an HP41C calculator.

After I hadn't worked with it for too years, I tried to operate it, but only the start beep works with 4 fresh batteries.

Best regards, Tal

Re: HP41C calculator

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 29 Mar 2002, 4:59 p.m.,
in response to message #1 by Tal

Hi;

There are several reasons for this to happen. One of the major ones is "dirty" data. Sometimes, simply opening the calc and short-circuiting both capacitors inside it is enough. One other reason is physical dirty, now in the batteries/IO assembly. This leads us to a question: do you know how to open the calculator? Are you ready to try?

Let us know. (if you want to have a look first, go [here](#) just to know how to open it.)

cheers.

Re: HP41C calculator

*Message #3 Posted by [Tal](#) on 4 Apr 2002, 2:50 a.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)*

Thanks for your help. Regards, Tal

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Re: Kidding?

Message #1 Posted by [Luca Passaggio - Lugano -Switzerland](#) on 29 Mar 2002, 3:49 a.m.

No, I was very serious, but unfortunately my prototype was stolen yesterday, and therefore now I have to use my next prototype - HP 44F(ool) !!!

Sorry for kidding, but it's the only way not to cry !!!

Best regards to everybody in this beatiful forum.

Luca

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Have you seen the HP41X? Is this a joke?

Message #1 Posted by [Enrico Bruciamonti, Italy](#) on 29 Mar 2002, 3:21 a.m.

I have visited <<http://hrastprogrammer.tripod.com>>. There is a detailed description of his new emulator for HP-49G called HP41X but this is too good to be true. Maybe this is just a 1st april joke.

What do you think?

Re: Have you seen the HP41X? Is this a joke?

Message #2 Posted by [Daniel Diggelmann](#) on 29 Mar 2002, 5:41 a.m.,
in response to message #1 by Enrico Bruciamonti, Italy

Hi Enrico,

I have tried hrastprogrammer emulators before and then the HP41X isn't a 1st april joke. My question is just how to download it. Any ideas?

Cheers Daniel

Re: Have you seen the HP41X? Is this a joke?

Message #3 Posted by [Enrico](#) on 5 Apr 2002, 3:48 a.m.,
in response to message #2 by Daniel Diggelmann

As stated on the homepage - it won't be available for download :-(

Re: Have you seen the HP41X? Is this a joke?

Message #4 Posted by [Carlos](#) on 11 Apr 2002, 6:21 a.m.,
in response to message #2 by Daniel Diggelmann

Isn't that one which destroyed your HP-48 and 49?

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Need my 19C tuned up

Message #1 Posted by [Jason Day](#) on 28 Mar 2002, 5:21 p.m.

Is there anyone out there who could go through my 19C and unjam my printer.

Sincerely,

Jason

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LIF Image Files --> Disks

Message #1 Posted by [Dan M](#) on 28 Mar 2002, 4:07 p.m.

I have concocted a way (without using Linux :-() to turn Tony Duell's swap disk LIF image files back into LIF files on a LIF disk.

I am taking Tony's LIF disk image files and creating zip files from them. In the zip file are all the files themselves, a .BAT file and the LIF program file needed to put everything back onto a LIF disk in a PC drive.

What you need:

a MS-based computer with floppy drive a floppy disk -- I've been using brand new 1.44mb 2hd 3-1/2 inch disks out of the box with no problem...yet. The zip file with everything in it (about 550kb per swap disk)

What I did:

I used Tony's image file to extract the both the file header information and the files themselves to a DOS/Windows environment. I also use the info to create a ".BAT" file which sends everything back onto a disk when its run.

What you need to do:

Get a zip file from me, or the HPMuseum ftp site when I put them there. Format your floppy to LIF format (I've used PC-drive and LIFUTIL software) Extract the zipped files to a directory Run the included .BAT file Then you have the original disk, on disk.

What then?

It's best to have HP-IL capabilities and a 9114 drive, but there are ways to run the files on the various HP41 emulators.

email me for questions or for files (short term). With Dave's permission, I'll put them on his ftp site (longer term).

Thanks, Tony, for creating these image files. You had several swap disks that I did not have on file yet.

Dan M Bellows Falls, Vermont USA

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processing system

Message #1 Posted by [Irene](#) on 28 Mar 2002, 3:05 p.m.

What was the processing system used on HP calculators called?

thx Irene

Re: processing system

Message #2 Posted by [Ellis Easley](#) on 30 Mar 2002, 4:17 p.m.,
in response to message #1 by Irene

Do you mean RPN - Reverse Polish Notation?

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HP computers?

Message #1 Posted by [aruid](#) on 28 Mar 2002, 2:54 p.m.

Do any of you know of a good site about HP computers? (like the HP 64000). I noticed several HP computers being sold off at my work, and want to find out some information about them.

ARUID

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Re: Kidding? HAHAHA

Message #1 Posted by [Ty Rogers \(Texas\)](#) on 28 Mar 2002, 2:14 p.m.

April Fools day is just around the corner.

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Programming challenge (HP 12C)

Message #1 Posted by [mapet](#) on 28 Mar 2002, 3:08 a.m.

Write the shortest (measured by steps not keystrokes) program for 3 root...Platform: HP 12C

Re: Programming challenge (HP 12C)

Message #2 Posted by [Frank Glitz](#) on 28 Mar 2002, 4:15 a.m.,
in response to message #1 by mapet

Is it allowed to use y^x ? :-) Or the LN / e^x functions? :-) Or should algorithms avoiding these functions be used? :-(How large is your solution (if you have one yet...)?

Re: Programming challenge (HP 12C)

Message #3 Posted by [mapet](#) on 28 Mar 2002, 5:20 a.m.,
in response to message #2 by Frank Glitz

My solution is 4 steps long, but it seems that you've already guessed it ... :-)

BTW y^x makes it 5 steps long. I have to work on more difficult challenge next time...

Re: Programming challenge (HP 12C)

Message #4 Posted by [Frank Glitz](#) on 28 Mar 2002, 5:52 a.m.,
in response to message #3 by mapet

> I have to work on more difficult challenge next time...

Not really! Just don't allow the usage of these functions of the 12C. That's a little harder nut to crack (for someone whose math courses are long-forgotten, like me ;-) Someone remembers how to do?

Re: Programming challenge (HP 12C) - May I?

Message #5 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 28 Mar 2002, 8:39 a.m.,
in response to message #1 by mapet

Hello;

I did not get to the point (Sorry!). What is 3 root?

Re: Programming challenge (HP 12C)

Message #6 Posted by [thibaut.be](#) on 28 Mar 2002, 12:01 p.m.,
in response to message #1 by mapet

I guess this is you solution :

$$y = e^{((\ln x)/3)}$$

so the steps are :

01 43 23 g e^x 02 3 3 03 10 / 04 43 22 g LN

Note how it is easy in a HP to calculate a apperently more complicated formula...

Re: Programming challenge (HP 12C)

Message #7 Posted by [John Ioannidis](#) on 28 Mar 2002, 8:44 p.m.,
in response to message #1 by mapet

Why is this even a challenge? [3] [1/x] [y^x] three steps, three keystrokes.

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Jake Schwartz website link

Message #1 Posted by [Ellis Easley](#) on 27 Mar 2002, 7:24 p.m.

The link to Jake Schwartz' website on the MOHPC links page doesn't work, but if you delete the "-" between "jake" and "s" in the URL, you'll get to the right place. Just click on the link, then correct the URL in the browser's address bar and click "GO".

Re: Jake Schwartz website link

Message #2 Posted by [Ellis Easley](#) on 28 Mar 2002, 10:05 a.m.,
in response to message #1 by Ellis Easley

The links on Jake's CDs also have the "-", so I guess the URL must have changed just recently. All I know is, with the "-" you don't get there, without it you do.

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HP Xpander

Message #1 Posted by [anonymous](#) on 27 Mar 2002, 6:08 p.m.

During the early stages of the production of the HP Xpander, i aquired a prototype version of the HP Xpander through a high school test. I was wondering, even though it doesn't do much, if i could sell it for a good price? Any advice?

Re: HP Xpander

Message #2 Posted by [anonymous](#) on 28 Mar 2002, 12:48 a.m.,
in response to message #1 by anonymous

If you didn't pay much, don't ask for much. If it doesn't do much, don't expect too much. My offer? Half of its intended price, \$100.00 Shipping from Australia? \$75.00 plus mailing costs. That is my advice.

Re: HP Xpander

Message #3 Posted by [anonymous](#) on 28 Mar 2002, 1:41 a.m.,
in response to message #2 by anonymous

Put it on ebay, I have seen them sell for >\$400 to collectors.

Re: HP Xpander

Message #4 Posted by [anonymous, too!](#) on 28 Mar 2002, 8:43 a.m.,
in response to message #1 by anonymous

KEEP IT if you don't NEED to sale it. No money can buy a rare Xpander. How I wish having one...

(let's be honest, falks)

Re: HP Xpander

*Message #5 Posted by [John Kercheval](#) on 29 Mar 2002, 7:40 a.m.,
in response to message #4 by anonymous, too!*

What exactly is an Xpander?

Thanks, John

It was just a dream

*Message #6 Posted by [Fred](#) on 29 Mar 2002, 1:24 p.m.,
in response to message #5 by John Kercheval*

Just a dream A vanishing dream An apparition Substitution In the dark sky Where
people lie For better days Please just pray

Re: It was just a dream

*Message #7 Posted by [anonymous](#) on 29 Mar 2002, 5:14 p.m.,
in response to message #6 by Fred*

whoever put that last message is a weirdo.

Re: It was just a dream

*Message #8 Posted by [Fred](#) on 2 Apr 2002, 4:01 a.m.,
in response to message #7 by anonymous*

Maybe, ... but my name is not "anonymous" !!!!

Re: HP Xpander

*Message #9 Posted by [Rick Meyerson](#) on 2 Apr 2002, 6:02 p.m.,
in response to message #1 by anonymous*

What is this device?

RM

Re: HP Xpander

*Message #10 Posted by [Daniel Kekez](#) on 2 Apr 2002, 6:59 p.m.,
in response to message #9 by Rick Meyerson*

The HP Xpander was a combination calculator/PDA that HP had developed for the education market. A few weeks before its release, the company decided to cancel the project. Details and pictures can be found at <http://www.hpcc.org/links.html#xpander>.

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It's almost April 1st, where's the new HP 43S?

Message #1 Posted by [John M](#) on 27 Mar 2002, 6:32 a.m.

It's approaching April 1st and I haven't heard a thing about the supposed new HP Calculator being released. Anyone here anything? If it is just a hoax, I'd like to thank that idiot for starting this cruel rumor a few weeks ago.

Re: It's almost April 1st, where's the new HP 43S?

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 27 Mar 2002, 7:44 a.m.,
in response to message #1 by John M

Maybe there's some expectation about April 1st... when lies become truths. (the worst is that truths become lies, too)

Re: It's almost April 1st, where's the new HP 43S?

Message #3 Posted by [Fred](#) on 27 Mar 2002, 9:01 a.m.,
in response to message #1 by John M

Don't hold your breath for a new HP calculator.....

Re: It's almost April 1st, where's the new HP 43S?

Message #4 Posted by [Luis](#) on 27 Mar 2002, 12:41 p.m.,
in response to message #1 by John M

Hello all,

I don't know about other countries but, at least here in Portugal and, if I remember well, in Brazil, April 1st use to be called the "Lies Day"...So, let's wait and see...

Regards

Luis

Re: It's almost April 1st, where's the new HP 43S?

*Message #5 Posted by [Ellis Easley](#) on 27 Mar 2002, 4:13 p.m.,
in response to message #4 by Luis*

We call it "April Fool's Day" in the USA and it is carried as far as printing whimsical false stories in major periodicals.

Re: It's almost April 1st, where's the new HP 43S?

*Message #6 Posted by [John Ioannidis](#) on 27 Mar 2002, 9:03 p.m.,
in response to message #1 by John M*

Put your old, dead calculator under your pillow before you go to sleep. The Tooth Fairy will replace them with a shining HP43. If that fails, wait for the Easter Bunny - it's the right season. I guess waiting for Father Christmas would be too far in the future.

Re: It's almost April 1st, where's the new HP 43S?

*Message #7 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 28 Mar 2002, 8:22 a.m.,
in response to message #6 by John Ioannidis*

You made my week...

(here we also have good, funny moments, too. They are a must)

Re: It's almost April 1st, where's the new HP 43S?

*Message #8 Posted by [David Smith](#) on 28 Mar 2002, 5:42 p.m.,
in response to message #6 by John Ioannidis*

Don't bother waiting for the Easter Bunny... he was quite tasty.

Re: It's almost April 1st, where's the new HP 43S?

*Message #9 Posted by [Luca Passaggio - Switzerland](#) on 28 Mar 2002, 11:05 a.m.,
in response to message #1 by John M*

I have a fully working prototype, but I have signed a secrecy agreement and therefore I cannot give details to anybody ! It will be officially announced by HP on April 1st, I suppose.

Best regards,

Luca

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42s batteries

Message #1 Posted by [a](#) on 26 Mar 2002, 10:24 p.m.

Is there a longer-lasting alternative to the 3x button cells? Mine always seem to die during a period of low use - requiring re-programming... very tedious. My 28s otoh, has been running for YEARS on the same batt! thanks a

Re: 42s batteries

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 27 Mar 2002, 8:00 a.m.,
in response to message #1 by a

Hi;

I have a 42S that is not so power consuming. It really rests when switched to OFF. I once saw an HP15C that eat batteries: no more than one week for fresh alkalines, switched ON or OFF. It was replaced by another, new one (80's) and became a good girl.

Maybe your calculator has some extra current consumption in the circuitry, I don't know. If I have the chance to try, I'd disconnect the IR emitter (if I don't use the printer). If the driver is malfunctioning, there's a possibility (vague) that a current flow through the IR LED is killing your batteries.

If it is dying in use, I'd suggest checking for printer mode: if printing is ON (PON) and the calculator is in TRACE mode, every operation would activate the IR LED, that is somewhat power consuming.

Maybe it helps...

Re: 42s batteries

Message #3 Posted by [Ellis Easley](#) on 27 Mar 2002, 4:24 p.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)

I wonder if your 15C ended up in a sidewalk sale in Dallas in 1994? That's where I got mine, for \$30. It looked OK but went through batteries very quickly (< 1 week). I measured the current drain with an external power supply and it actually drew much more when it was off. I found the PCB was covered with corrosion, after cleaning the current drain was normal. It has worked fine since then, except it's not quite the same as new due to having been reassembled - I used a tiny drop of superglue for each of the heat-stake posts, one at a time, pressing the parts together with my fingers till the glue set.

Re: 42s batteries

Message #4 Posted by [David Smith](#) on 27 Mar 2002, 5:46 p.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)

I have a '42S draws 80mA on or off... batteries last around 3 hours. The problem lies in the big chip. Removing all of the other components changed nothing.

Re: 42s batteries

Message #5 Posted by [Ellis Easley](#) on 30 Mar 2002, 5:38 p.m.,
in response to message #4 by David Smith

This reminds me of something - when I first went to work for Tandy repairing TRS-80 boards at the factory, there was a board with a cassette problem that several people had tried to fix without success. I removed all the electronic components and measured between traces with an ohmmeter on a high range. I found something like 4 Megohms between two adjacent traces, ran a scribe between the traces and it became an open circuit. I put new components in (everything had already been replaced at least once) and it was fixed. It was a high impedance circuit built around a 3900 "Norton" amplifier chip and apparently 4 Meg unbalanced things enough to make it fail.

Without knowing anything specific about the chip you're talking about - except that it is CMOS undoubtedly - if there was a pin with a 100-200Kohm internal pullup (or pulldown) and a leakage path of similar resistance to the opposite polarity on the PCB, the input would be in an illegal state and that single input pair of transistors could be drawing that current, and still be presenting a valid logic level to the internal circuitry

Re: 42s batteries

Message #6 Posted by [Thibaut.be](#) on 28 Mar 2002, 12:10 p.m.,
in response to message #1 by a

I work for a watches company, as many of you already know.

We own a swiss batteries brand, that for some reason I am not allowed to explicitly name here.

I can provide the 44 model batteries that are upon to my experience excellent for our calcs. They fot not only the 42 and similar models (32, 17BII, ...) but also the voyager series.

I will sell these batteries at **no profit**. But according to shipment costs it is better to order a more important quantity. Anyway the minimum quantity is 10.

This is very much interesting for european collectors as most of european countries have charged huge taxes on these.

I suggest, for any people showing interest on these, to click [here](#) for all details.

Good luck !

Re: 42s batteries

Message #7 Posted by [Ellis Easley](#) on 30 Mar 2002, 4:50 p.m.,
in response to message #6 by Thibaut.be

I can't connect to your website for some reason, and as I live in the U.S. probably wouldn't benefit, but I am curious about the price. Here, I can get them for \$3 at Radio Shack, \$2 at WalMart, or \$1.29 at Fry's Electronics. At Radio Shack it is "their brand" which I think is made by Eveready. At WalMart it is Eveready brand, at Fry's it is Duracell. I'm not asking your brand, just telling you what these stores have. How much is the tax you have to pay? How much do your governments tax cigarettes? In the U.S. the states have raised cigarette taxes to high levels to raise revenue after winning lawsuits against the cigarette companies. In the process a few lawyers working for the governments have been paid billions of dollars. The only way I can make sense of it is that the cigarette companies have agreed not to sue for restraint of trade after the taxes were raised dramatically. The ironic thing is that in the U.S., most people who still smoke are in the lower income brackets, so "making big tobacco pay" has boiled down to a tax on the poor!

Re: 42s batteries

*Message #8 Posted by [David Smith](#) on 30 Mar 2002, 5:19 p.m.,
in response to message #7 by Ellis Easley*

If you can find the "Vinnic" brand from China, you can get a card of 10 cells for around \$2.50. They seem to work quite well. In the Dallas area Tanner Electronics sells them.

Re: 42s batteries

*Message #9 Posted by [Ellis Easley](#) on 30 Mar 2002, 5:50 p.m.,
in response to message #8 by David Smith*

What's the westernmost Tanner Electronics store? I don't find them in the Fort Worth phone book, and most Arlington stores are in there.

Re: 42s batteries

*Message #10 Posted by [David Smith](#) on 31 Mar 2002, 4:51 p.m.,
in response to message #9 by Ellis Easley*

Tanner only has one store. It is in Carrollton on Valwood, a little west of I35. He does not do mail order but I think BG Micro also has them. BG does mail order and shares a lot of items with Tanner.

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Replacement Batteries

Message #1 Posted by [ASilverman](#) on 26 Mar 2002, 2:23 p.m.

Need to replace the batteries in my Hp11c. Comments on using the AgO battery vs the more common aklaline one. any Thoughts.

Re: Replacement Batteries

Message #2 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 26 Mar 2002, 4:54 p.m.,
in response to message #1 by ASilverman

AgO (SR44) should last longer than alkalines (LR44), at least in theory. I have used both types, but I prefer to buy AgO if available.

Re: Replacement Batteries

Message #3 Posted by [Richard Garner](#) on 27 Mar 2002, 2:45 p.m.,
in response to message #1 by ASilverman

I use the silver-oxide batteries in all of my calc that use them. In average daily use and at least one printer output per month I get 18-24 month of use out of my 42s.

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Sub-C NiCads from tool store

Message #1 Posted by [Ellis Easley](#) on 26 Mar 2002, 11:24 a.m.

Another "bargain" item I mentioned before was cordless tool battery packs which are full of sub-C NiCads. I got a new catalog that has the 12V pack for the drill I mentioned before, for \$9.99, or a dollar per cell. They still have the drill with keyless Jacobs chuck for \$17 and now the price on the same drill with keyed chuck is \$15. I had already bought the keyless chuck drill and it is so nice, I didn't want to cannibalize the battery, so I was happy to see the battery packs at a good price and ordered several. The battery pack in the drill contains Chinese-made cells with brown paper insulators marked 1300 mAh. I know this is less than the usual 1400 for a sub-C. The cells look fine and the spot-welding and lead dress are fine also. I figure if they will work for a reasonable amount of time with a drill, they should be coasting running a tape drive, thermal printer, or HP-97. The website is harborfreight.com.

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DS/DD 3.5" diskettes

Message #1 Posted by [Ellis Easley](#) on 26 Mar 2002, 11:02 a.m.

Earlier, I mentioned MEI Micro Center as a source of DS/DD 3.5" diskettes whose recent catalog said they would have them only while supplies last. Apparently that applied to a normal catalog item that could be ordered in any quantity. Their latest catalog includes one SKU (643908) for "3.5" DS/DD Bulk Diskette", "Sold in packs of 500", "Diskette color will vary" for \$50.00. I've ordered a pack, which I think will be a lifetime's supply! They have a website, microcenterorder.com, which seems to be exactly like the current printed catalog, although it does have some additional closeout items including a 10 pack of Maxell 3.5" DS/DD IBM format diskettes for \$3.49 reduced from \$4.99 (SKU 570457).

Re: DS/DD 3.5" diskettes

Message #2 Posted by [Ellis Easley](#) on 30 Mar 2002, 5:21 p.m.,
in response to message #1 by Ellis Easley

My 500 diskettes arrived and they look pretty good. For some reason, I thought when the catalog said "Diskette color will vary", it meant I would get "pot luck", or an assortment of odd lots that added up to 500 pieces. What I got is a factory sealed box of 500 orange diskettes wrapped up in packets of 50 each. The color reminds me of some of the diskettes that used to come in the mail before CD's started coming in the mail. 500 diskettes is heavy! 12.5 kg according to the label. This catalog charges for shipping according to the total price, regardless of the weight (they sell computers and for over \$1000 total order, they say call for shipping charges, I suppose they ship by weight in that case to be fair.) I ordered some additional items but if it had only been the diskettes standard shipping would have been \$9.25, that sounds pretty good for about 28 lbs by FedEx.

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Can we get eBay to split the calculator categories into HP, TI, and Other?

Message #1 Posted by [Mark](#) on 26 Mar 2002, 9:50 a.m.

I've just sent a suggestion to ebay support (<http://pages.ebay.com/community/suggestion/>) to split the calculator categories into three subcategories: Hewlett-Packard, Texas Instruments, and Other. If you agree, send them a similar suggestion. Maybe there's a better way to split it up. I just checked the top-level calculator category and there are 30 pages of listings. Time to divide and conquer. When I'm looking for an HP, I don't want to wade through the TI stuff, and vice versa. Yes I know I can filter the category using a search term, but given the intensely creative ways sellers have of spelling "Hewlitt Peckerd," not always the best way to find what I'm looking for. Comments?

Re: Can we get eBay to split the calculator categories into HP, TI, and Other?

Message #2 Posted by [Frank Glitz](#) on 26 Mar 2002, 10:10 a.m.,
in response to message #1 by Mark

Glorious idea... for boosting prices some more!

Don't take my reply to seriously...

Re: Can we get eBay to split the calculator categories into HP, TI, and Other?

Message #3 Posted by [Ellis Easley](#) on 26 Mar 2002, 10:39 a.m.,
in response to message #2 by Frank Glitz

The best bargains will still be those that are incorrectly identified.

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A little bit on Ebay...

Message #1 Posted by [Frank Glitz](#) on 26 Mar 2002, 8:21 a.m.

Well, I know that's not a pure HP-related theme... but I think there are a lot of people among the participants of this forum who are quite frustrated (or enjoyed, if they sold something there...) with Ebay.

If someone feels bothered, drop me a line and I'll delete this posting ASAP...

I found an old posting in rec.antiques.radio+phono which I will quote below (including the credits) :

>In article <3A04D109.B30B0914@nwlk.com>, > William Sommerwerck <williams@nwlk.com> wrote: >> StarChaser Tyger wrote: >> >> > "Lou D" wrote: >> > > Sounds like a RARE EAMES ERA to me, NO RESERVE >> >> > And everybody should L@@K... >> >> At this RARE and UNIQUE item... >> >> That's sure to PLEASE any collector... >> >> Because it's in absolutely MINT condition... >> >> Though I don't have a battery to test it... > >It works perfectly, but the cord's cut. > >We spell too well, though.

Okay here's my additions, please understand that these are meant to be stereotypical humor, there are of course honest folks that do say what they mean and mean what they say out there...

The last owner said it worked perfectly --- Means It worked when seller bought it, but seller smoked it

Complete with all tubes -- Means I replaced all the tubes with duds

Original Patina -- Means looks good for having sat on my parents back porch for 40 years in the elements

All Original -- Means the seller theirselves hasn't replaced anything

Rare, Scarce -- Means is the only one the seller has ever owned like it (the last one was missing a knob, this one must be rare, it has all its knobs, right)

Unusual or Unique -- Means someone hacked it something horrible so there isn't another like it

Untested, as-is -- I checked it out (or had it) and its beyond my expertise or means to repair

One of a kind -- I checked and there are no others like it up for auction at the moment I put it up (but you can expect at least 3 more if the bids go up at all)

L@@K -- Its junque, I know its junque, you know its junque, but maybe if I'm cute someone will bid on it anyway

DECO -- Darn-near Everything COlectible

Early -- Its older than I am

Beautiful -- It so pretty I can't stand to have it in my house

Must go -- The wife hates it

Selling off collection -- Just got married/Just got divorced

Museum Quality -- I've spit polished it, used every trick in the book and made this basket case look like its new, the damage must have occurred in shipping

Well thats enough for now... donning my kevlar just in case...

Richard <http://www.nostalgiaair.org> (Melbourne, FL USA)

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Re: Spice series - differences in quality

Message #1 Posted by [Luis](#) on 26 Mar 2002, 6:44 a.m.

Hi john,

I currently do have a 34C (wich I love) and before I had a 33E. The 34C (made in Brazil) has a thin black rubber (?) sheet inside between the keys and the contacts plastic sheet. I guess that wasn't on the 33E and perhaps you don't have in your calculator also. Have you open already yours to check it? That helps to keep keys in place (no jamming) and make the keyboard soft when pressing down. So, the Reiner's solution would be nice for you... Good collecting the very nice Spices (I'm seeking them also...) See you at MoHPC.

Luis

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Question about "incoming"

Message #1 Posted by [Stephan \(CH\)](#) on 26 Mar 2002, 4:22 a.m.

Howdy all, I tried to upload a manual for Dave. Unfortunaltely I received a message that I do not have permission to do that. Has Dave blocked his server or are my settings somewhat missset? Does anybody know what to do? I sended Dave an e-mail but he seams to be bussy at the time and I don't wanna bother him all the time with small issues like this. Thanks for your help in advance. Stephan

Re: Question about "incoming"

Message #2 Posted by [Ty Rogers \(Texas\)](#) on 26 Mar 2002, 7:30 a.m.,
in response to message #1 by Stephan (CH)

Stephan,

I had the same problem. I thought it would not let me copy the files to the incoming folder. I zipped up the PDF files and cut and pasted the zipped file to the incoming folder. If you use the back button on your Internet Explorer you can see the folder "Incoming". Just right click on the folder and paste the file. Hope this helps.

Re: Question about "incoming"

Message #3 Posted by [Stephan \(CH\)](#) on 26 Mar 2002, 9:19 a.m.,
in response to message #2 by Ty Rogers (Texas)

Sorry, didn't work either. But thank you for your sucestion. I will try on.

Re: Question about "incoming"

Message #4 Posted by [Dave Hicks](#) on 26 Mar 2002, 6:40 p.m.,
in response to message #1 by Stephan (CH)

Hi Stephen,

“Permission Denied” shouldn’t be a problem. GUI FTP clients print that because they always try to read the directory but this one is write-only. You should be able to ignore it and upload. (I just tried it in IE6, and WS_FTP to be sure.) You can also use the Windows command line FTP. It won’t bother you with a “permission denied because it only lists the directory when you tell it to ie:

```
ftp ftp.hpmuseum.org
ftp> cd incoming
250 "/incoming" is new cwd.
ftp> binary
200 Type okay.
ftp> put yourfile
200 PORT command successful.
150 Opening BINARY mode data connection.
226 Transfer completed.
ftp: 14 bytes sent in 0.01Seconds 1.40Kbytes/sec.
ftp> ls      (This part won't work but that's OK)
200 PORT command successful.
150 Opening ASCII mode data connection for /bin/ls.
.: Permission denied
226 Listing completed.
ftp: 22 bytes received in 0.01Seconds 2.20Kbytes/sec.
ftp> close
ftp> quit
```

If you still have problems, you probably have a firewall. Usually those can be worked around by setting your FTP client for passive mode or setting your firewall to allow FTP server rights.

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Hp-41 calendar printing.

Message #1 Posted by [Michel](#) on 24 Mar 2002, 9:30 a.m.

Hi, and thanks for answers!

I'm playing like a kid with my HP and TI calculators when i suddenly want to compare an HP-41 and a TI-59 for speed. I mad some very simple loop and i denote that the TI was a little bit faster than the HP. But what about a "big" computation! I look around the net and learned on "Gene" site about a "competition" between TI-59 and HP-41 for speedy printing a one year calendar. I also found a version of that program for the HP-41 on the "Gene" site. I entered the program and expect to print the calendar in about that : ""The program presented below is a little over 370 bytes long and requires 4 data memories. It will crank out a printed one year calendar in about 2 minutes and 20 seconds."" But it did it on my CV and my CX in 7 minutes!!! with fresh batteries on calc and printer... What's wrong?

So i'm looking for The ultimate program Gene is talking about on his site says that it is a lot longer but no problem, i like playing with my toys...

I'm also looking for the TI-59 calendar printing program; i can't find it anywhere. Viktor email me that the program is in one of his "TI newsletters" collection, but not having the time to search it...

Thanks for help!

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clean behind 42S display

Message #1 Posted by [jmwincn](#) on 23 Mar 2002, 7:45 p.m.

my 42S has a lot of dust behind the LCD bezel. does anyone know a way to clean behind the bezel without damaging the calculator's case? thanks in advance.

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Alkaline batteris vs nickel cadmium

Message #1 Posted by [Edwin Morales](#) on 23 Mar 2002, 7:26 p.m.

My hp 31e and hp 34c are working ok with alkaline batteries: 3 volts, no 2.5 volts.

So, it was a hp business or AA batteries 1.5 volts does not exist in 1977 or 1979?

Re: Alkaline batteris vs nickel cadmium

Message #2 Posted by [Chan Tran](#) on 23 Mar 2002, 9:00 p.m.,
in response to message #1 by Edwin Morales

The old LED calculators run down battery pretty quick. I think you would have only about 10 hours of operating time with AA batteries on those calculators.

Re: Alkaline batteries vs nickel cadmium

Message #3 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 24 Mar 2002, 4:30 p.m.,
in response to message #1 by Edwin Morales

At least in my experience with an HP 25, alkalines are OK. I think that the circuitry allows for the not so large difference between a fully charged NiCD (perhaps 1.3V) and a regular alkaline (usually a little over 1.4 V).

The 1.5 V value comes from the old, zinc-carbon (non alkaline) batteries, and is used usually as a convention. A less than 10% tolerance seems almost logical.

While this makes sense to me as an Electronics Engineer, I can offer NO WARRANTY because I don't have any detailed data on the calculators circuitry and proprietary components HP used. This is just my personal opinion. The "C" models may be more sensitive to overvoltage because the batteries are supplying standby power to the memory chips when the calculator is off.

The alkalines may give you some 10 hours of service, while NiCd of the '80s offered about only 2 hours, but a 500 charge-recharge cycles' life. Rechargeables were usual at the time, they were

what users tend to expect in the still infant calculator market. I don't think it was a HP business, since at the time HP earned its profit by offering unique and very well executed products at a premium price. The batteries will add little to such strategy. (Things have changed in the last decades...)

PS: Also see other threads and postings about this same matter.

Re: Alkaline batteris vs nickel cadmium

Message #4 Posted by [Ellis Easley](#) on 25 Mar 2002, 4:45 p.m.,
in response to message #1 by Edwin Morales

I have some TI calculators (2500, 2550, 2500II) from around 1973 on that give the user a choice of using NiCads or alkaline (or carbon-zinc) batteries. Apparently, TI shipped them with regular AA NiCads and a recharger. The 2500 and 2550 take 3 NiCads, the 2500II takes 2. If you want to use regular batteries, you put 4 in the 2500 and 2550, 2 in the 2500II but in two different holders. When the regular batteries are installed, since one or two additional holders are in use, an additional cell operates a switch. I don't know if this just disconnects the charger jack or if it conditions the power supply for a different voltage.

I think HP (and others) used NiCads because it was a fairly high drain application and having to buy batteries all the time would be an inconvenience. As for the special battery packs that HP used (and that TI went to) - I think that serves two purposes: controls the specification of the cells used (high capacity, and TI used the high charging rate), and also the plastic shell helps contain the chemicals when they finally leak. I fault both companies for encouraging people to leave the cells in the calculator in storage and leaving the calculators on charge indefinitely, but I guess they were still learning.

Re: Alkaline batteris vs nickel cadmium

Message #5 Posted by [aruid](#) on 25 Mar 2002, 7:51 p.m.,
in response to message #4 by Ellis Easley

I have 2500 that only has a built-in 3 cell ni-cad pack (it still holds good charge!). The charger plugs into a jack in the unit to charge the batteries. The only way to remove the batteries out of my TI 2500 is to remove 4 screws and seperate the two sections of the calculator then cut the two wires going into the battery pack.

I thought all of the TI 2500s were like this.

Re: Alkaline batteris vs nickel cadmium

Message #6 Posted by [Ellis Easley](#) on 26 Mar 2002, 3:35 a.m.,
in response to message #5 by aruid

The ones I have are the only ones I have seen, except I think a high school friend might have had a 2500 in the 70's! They all have the same battery cover except it goes on in the opposite direction on the 2550 vs. the others.

Here is an interesting difference: my 2500 display has LEDs that look like individual dots while my 2500II display has continuous segments. I have two 2550's and their displays are different as above. I guess this was a "running change" TI made.

First I got the 2500II by itself and later the 2500 with its booklet and was surprised to learn the "tricks" that TI described to extend the usefulness of the calculator, using the constant feature to re-use the first parameter as the second with "*" to square numbers or get higher integer powers; with "/", twice, to accomplish "1/x"; and finding square roots by repeatedly dividing by a guess, adding the guess, and dividing by 2 to get a closer estimate. That last one makes you appreciate the memory when it is available!

I had to read those tricks in the TI booklet, but when someone raised the issue of the changing accuracy (precision?) of "y^x" on HP calculators recently, I figured out how to do it on the 9100 on my own, re-acquainting myself with the slide rule in the process - $y^x = e^{(\ln(y) \cdot x)}$ - and this lets you find 10^x , since the 9100 only has $\ln(x)$, e^x , and $\log(x)$. I first looked in the Museum 9100 article for this "workaround" because I thought I had read it there, but if it is there, I missed it.

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Secant Curve Fitting pgm from old PPC publ

Message #1 Posted by [Butch Fuller](#) on 23 Mar 2002, 1:33 p.m.

Around 1978 - 1980 PPC published a list of keystrokes used to modify the Standard Pack curve fitting routine. It was based on the Secant method of curve fitting which was extremely accurate compared to the least-squares method.

I am searching for a listing of the PPC modification or copy of the article.

Can anyone help this old hp-67 user? Thanks !!

Re: Secant Curve Fitting pgm from old PPC publ

Message #2 Posted by [Ellis Easley](#) on 27 Mar 2002, 6:51 p.m.,
in response to message #1 by Butch Fuller

I just received the PPC 2 CD-ROM set published by Jake Schwartz. There is a series of articles and programs between 1978 and 1980 by Gary M. Tenzer about curve fitting and addressing shortcomings in the programs in the Standard Pack (SD-03A) and Business Decisions (? BD1-17A). The earlier issues have three versions of the program for the 67/97 and the later issues have a version for the 41C. I scanned the articles visually for "secant" and didn't see it but it might be one of the methods incorporated. Apparently, one of the main things the author wanted to do was to make it possible for the user to only have to enter his data once and then the best method would be chosen or could be selected. There were a few other articles about curve fitting by other people but the ones I looked at referred to the original article by Tenzer.

Do you know that you can get all the PPC issues plus much more on these CD-ROMs? They are only \$20 plus \$3 for shipping in the US and Canada, \$5 elsewhere. You can order the set from Jake Schwartz' website <http://www.waterw.com/~jakes/ppccdrom.htm>. He takes PayPal or you can send him a money order as I did.

Re: Secant Curve Fitting pgm from old PPC publ

*Message #3 Posted by [Butch Fuller](#) on 29 Mar 2002, 2:32 p.m.,
in response to message #2 by Ellis Easley*

I very much appreciate the guidance. I will most certainly check it out. Thanks again.

Butch

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"Losing the HP Way"

Message #1 Posted by [Hans Brueggemann](#) on 23 Mar 2002, 12:33 p.m.

what do you think?

<http://www.salon.com/tech/feature/2002/03/22/hp/index.html>

cheers, hans

Re: "Losing the HP Way"

Message #2 Posted by [Frank Glitz](#) on 23 Mar 2002, 4:48 p.m.,
in response to message #1 by Hans Brueggemann

Well, I think HP lost it's way when they began to manufacture IBM-compatible PCs...

Regards, Frank

Re: "Losing the HP Way"

Message #3 Posted by [Håkan Thörngren](#) on 24 Mar 2002, 4:07 p.m.,
in response to message #2 by Frank Glitz

I could not agree more. HP lost its way when they stopped innovating and started imitating others by making PC clones. Later they started imitating its competitors in the calculator market by ditching RPN and moving to AOS.

I liked HP beacuse they made things others didn't. They made good stuff that was different, and usually of great quality as well. It was expensive, but you got what you paid for.

HP have come a far way from what they used to be. The only small hope I have left for them is that the reason why they stopped developing the hp48/hp49 line, was that they maybe, just maybe, finally would realize that what people want is a simple RPN calculator, a business machine and something like the HP41/HP42 (with I/O capability, thank you very much) to choose from.

Re: "Losing the HP Way"

Message #4 Posted by [Frank Glitz](#) on 25 Mar 2002, 10:08 a.m.,
in response to message #3 by Håkan Thörngren

That's exactly what I mean. The brand "HP" was a synonym for quality tech stuff quite a long time - measurement tools, RF equipment, med tech, _calculators_ and even the legendary laserjet printers. The company HP was kind of paradigmatic for the American innovative spirit. Now it's just one in a - long - row; though, a big one (yet).

When they started "cloning", they traded in innovation for "shareholder value", were no longer focusing on "quality made to last" but on the fast - and I've got to admit sometimes short-term profit-making - innovation in the PC and PC-server market, or let's say IT-market in general.

IMHO it would have been better for HP to keep centered on what they did best over the years: the making of high-quality, professional "not-for-everyone"-products: these will _always_ be appreciated by customers in search of accuracy. HP may not have grown that large, but the spirit wouldn't have been lost. And chances to stumble and fall would be much less...

But, heck, I'm too romantic...

Re: "Losing the HP Way"

Message #5 Posted by [Juan J](#) on 25 Mar 2002, 6:08 p.m.,
in response to message #4 by Frank Glitz

I'm heck of a romantic too. I think we all loved (and still love) that not-for-everyone aura that surrounded HP products.

One always knew that if it was HP it was "not for wimps," as a friend of mine likes to say. Maybe expensive but high-quality and very flexible. We all love our little machines because of that, not to mention multimeters, signal generators and gas chromatographs.

After going thru the arguments of both sides about the merger, it is sad to see that a clever strategy helped Fiorina tip the balance to her side, at the expense of a reputation (and prestige) that took so much to build. And it also sad to see how Walter Hewlett was so rudely dismissed when he raised his voice against it. The "old" HP knew better than that, I think.

Companies are much more than stock prices. Why not remaining a small but respectable company producing quality? Why the intention of forcing the entry into a cutthroat market that has little if any to do with quality, real needs filled and lasting values?

Re: "Losing the HP Way"

Message #6 Posted by [Frank Glitz](#) on 26 Mar 2002, 8:03 a.m.,
in response to message #5 by Juan J

I'm pretty sure no one decisive at HP will read these threads and even if someone does, these are only a few inconsiderable voices of obscure HP calculator freaks...

But HPs XEQuives should consider scientists, engineers or inventors (a hell of a lot of quality-oriented customers) when making decisions on the future of their business. Most of them don't need run of the mill PCs. They are looking for high quality, precise and reliable instruments; the opposite of what a PC stands for...

OK, I'm annoyed with that more than enough...

Cheerio! Frank

Re: "Losing the HP Way"

Message #7 Posted by [Ellis Easley](#) on 26 Mar 2002, 10:17 a.m.,
in response to message #4 by Frank Glitz

In the article you pointed to regarding 9100 docs - <http://www.chac.org/engine-ascii/engv2n3.txt> - the interview with Barney Oliver - there is the following passage [KC is Kip Crosby who wrote for the newsletter. The discussion leading to this point concerned the successful 9000 series workstations that had to be developed "under the radar" of company management]:

"KC: _But there was another reason for some hesitation as regarded computer development. A part of management was very dedicated to continued computer development; another part of management saw that much more could be done with calculators; and a third part was committed to refining and upgrading instrumentation, so that you were almost involving three companies in a philosophical sense. That may have created a reluctance to put more than a certain number of eggs in any one basket._"

"Oliver: I'm not as conscious of that as I was of our trying to do things.... That leads

to an issue which I'll try to illustrate. It has been traditional, in development work at HP, that we try to make a contribution in every instrument we bring out. We're not content to put a new face on something; we really want it to perform better in the sense of advancing some specs by significant amounts, or by making a good product more cheaply, whatever, but there must be a contribution. And so when we got into the PC market, for example, we wanted to make a contribution -- we used the paradigm of pushing the spec, but in that market it was less appropriate. There were all kinds of things on those machines that the customer didn't understand, didn't know about, or didn't use, which therefore just sat there and were wasted. Finally we tumbled to the realization that in a PC, what you wanted is not contribution in that sense but compatibility, and the contribution is going to come about through more efficient internal design, or enhancements to the operating system or something like that, or maybe it doesn't have anything, just reliability, and a good price, and then you're in better shape to compute because the software is coming out of Microsoft and everybody else, so we have done better with that philosophy. But we had to have good engines first."

I'm not trying to put Tandy on a par with HP, but when Tandy started building IBM compatibles, they also wanted to add enhancements. The Tandy 1000 was more compact than an IBM PC and had better graphics modes, sound, and joystick interface (partly from the IBM PC Jr.) The Tandy 2000 had a 16 bit bus CPU (80186), ran almost twice as fast, came with twice the memory, and had twice the graphics resolution of the IBM PC, and only claimed to be compatible at the BIOS level. But Tandy also came to realize that compatibility was all that mattered. And they went on to have some success with machines like the 4000, their first 386 AT compatible. I thought it was a mark of success when I saw it being used on "The Computer Chronicles" to demonstrate software products - both the show and the developers thought enough of it to put it on the air.

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A source for full 9100 docs?

Message #1 Posted by [Frank Glitz](#) on 23 Mar 2002, 10:45 a.m.

Look at this URL: <http://www.chac.org/engine-ascii/engv2n3.txt>. It is a quite interesting interview with Barney Oliver, who is well known for his engagement at SETI and HP. Most interesting is the following text passage:

... Oliver: Yeah, I think that's right. I know there were six planes. I'm not sure of the details.

KC: _Don't worry, we have full docs on the 9100. Which, of course, are several times the size of the machine itself._

Oliver:(laughs) Very good! There were something like 2200 bits -- yeah, 2208 bits of core memory. About 32,000 bits of ROM. ...

What does "KC" mean with "full docs"? Does anyone know the guys behind chac.org? Does anyone know another *public* source for 9100 docs?

The interview has been made seven years ago, a short time before Barney Oliver died.

Regards, Frank

P.S.: If the above URL is not working, I've copied the full text. Just drop me a line and I'll send it by mail.

Re: A source for full 9100 docs?

Message #2 Posted by [Ellis Easley](#) on 23 Mar 2002, 11:39 a.m.,
in response to message #1 by Frank Glitz

There are a lot of neat articles there like this one from what appears to be the last issue available online (Volume 3, Number 1, November 1995):

MAKING NEW BATTERY PACKS FOR THE HP-35 CALCULATOR by Douglas W. Jones

It looks like there hasn't been any activity on this site since 1997.

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Make Ebay money fast - sell a xerox copy?

Message #1 Posted by [Gene](#) on 23 Mar 2002, 8:02 a.m.

Suppose you buy something that comes with a xerox copy of a very hard to find manual. What are your thoughts on selling the hard to find xerox copy on ebay?

Search for "ultra rare service manual" and you'll see one out there.

?

Gene

Re: Make Ebay money fast - sell a xerox copy?

Message #2 Posted by [Thibaut.be](#) on 23 Mar 2002, 9:01 a.m.,
in response to message #1 by Gene

I've got mixed feelings about this...

On one side it is illegal to sell such manuals. They are protected by copyright.

On the other side I'm sure many of us would bid on such a HP service manual release should it appear one day on ebay, and this would only improve our knowldge to own such one...

But on a formal point of view I guess this sale is not legal.

same item sold in February

Message #3 Posted by [Ellis Easley](#) on 23 Mar 2002, 10:17 a.m.,
in response to message #1 by Gene

This was sold for \$30 by a seller in Germany on February 2 with the exact same pictures, item number 1326407015. I had made a note of it last time and so still had the item number. I was ready to bid until it got up to \$30! Still, it would be nice to have. If it keeps showing up every month or so, I'll probably buy it. Maybe what people are doing is buying it, making a copy, and selling the "more original" for higher and higher prices.

It's illegal

Message #4 Posted by [Mike](#) on 23 Mar 2002, 9:51 p.m.,
in response to message #1 by Gene

It's illegal unless the copyright has expired.

Since eBay has a policy of violation of copyright laws, they will remove any such auction if people complain about the law being broken.

Re: It's illegal

Message #5 Posted by [Vassilis Prevelakis](#) on 24 Mar 2002, 7:29 p.m.,
in response to message #4 by Mike

> It's illegal unless the copyright has expired.

Come on! If that were true, then the entire hpmuseum site would be a illegal.

Since HP (the copyright owner) has declared that they have no commercial interest in this material, copying them (and charging for the cost of making the copies) is not illegal.

This is a service to the community. If you have a rare document you know that you can only sell the copy once, since the buyer will almost certainly release it to the community (if not out of spite) (why this may reasonable behaviour see The Economist March 23rd, page 73).

Some time ago I purchased a photocopy of the 82938A HP-IL manual for Series 80 computers. The first thing I did was to scan it and send it to Dave (its also good insurance in case I lose my copy).

You are a collector and you abhor copies, but for the people that want to use the equipment

a photocopy of a manual is equivalent to the original.

**vp

This is incorrect

Message #6 Posted by [Dave Hicks](#) on 24 Mar 2002, 10:32 p.m.,
in response to message #5 by Vassilis Prevelakis

"Come on! If that were true, then the entire hpmuseum site would be a illegal.

Since HP (the copyright owner) has declared that they have no commercial interest in this material, copying them (and charging for the cost of making the copies) is not illegal."

HP has given me specific permissions on specific properties. I have been trying to get permission on other items and one of the reasons cited for not giving it is HP's concern about assumptions like the one above - i.e. that allowing certain IP to be redistributed in certain ways might lead people to believe that it is all unprotected.

I have no idea whether the seller of the manual mentioned has asked for permission, but he shouldn't assume that he doesn't need to simply because HP has been generous in the past.

Re: It's illegal

Message #7 Posted by [Todd G.](#) on 25 Mar 2002, 6:42 p.m.,
in response to message #5 by Vassilis Prevelakis

This debate comes up a lot with regard to pirated software (also illegal).

Before you can make a copy, you need permission (except if the copyright has lapsed, as Mike points out). I don't ever recall hearing that HP has "declared" that they have no interest in the copyrights of the old manuals. On the contrary, Dave needed specific permission before he could distribute copies. Bottom line: making copies for distribution or sale on eBay is illegal.

One more point. I subscribed to the Economist for a year. I didn't renew my subscription because I found the articles, editorials, and opinions far too liberal and anti-American. So it comes as no surprise that they advocate some type of "free IP for the masses", contrary to the US copyright laws, as well as the Berne Convention and "droit morale" (moral rights of the authors) so prevalent in Europe.

Todd

Re: It's illegal

*Message #8 Posted by [doug](#) on 26 Mar 2002, 3:08 a.m.,
in response to message #7 by Todd G.*

ouch! Ouch!! OUCH!!! O U C H ! ! !

Re: It's illegal

*Message #9 Posted by [Vassilis Prevelakis](#) on 26 Mar 2002, 4:40 a.m.,
in response to message #7 by Todd G.*

HP cannot reasonably claim that they suffer loss of income by such "illegal" activity since anybody who wants access to the material can simply buy it from Dave without paying HP one cent.

But, rather than fighting over whether its legal or ethical, why not encourage those who actually bought the material to scan it and donate it to the hpmuseum. In this way everybody wins.

Especially with copyright the law allows a lot of leeway. Although I strongly oppose software piracy, consider the case of a 20 year old computer whose software came with a non-transferable RTU licence. What do you do?

Also to correct a misunderstanding, the Economist article is not advocating "free IP for the masses", it simply discusses human behavioural patterns. I mentioned it to substantiate the claim that acting out of spite is not irrational. If you do not want to subscribe to "liberal and anti-American" magazines, the article may be found [on line](#).

Ironically, the whole debate started by a Service Manual for the TI 59.

Nice try, but...

Message #10 Posted by [Todd G.](#) on 26 Mar 2002, 10:08 a.m.,
in response to message #9 by Vassilis Prevelakis

"HP cannot reasonably claim that they suffer loss of income by such "illegal" activity since anybody who wants access to the material can simply buy it from Dave without paying HP one cent."

Loss of income has very little, and probably nothing, to do with it. One of the rights of copyright is the right to make copies, and to prevent others from doing so unless they have permission. Dave has an arrangement with HP whereby he may distribute copies of the old manuals (e.g., he has permission to do this). Others, however, do not have such permission and therefore infringe HP's copyright by making copies. Having free copies available for the world at large sounds like a noble idea (especially in Socialist/Communist countries), but it goes directly against international copyright laws, as well as a specific provision in the United States Constitution (Article I, Section 8, clause 8).

I'll agree with you there are some exceptions, such as Fair Use, etc. However, Fair Use deals with copying small portions of a larger work (e.g., a page or two). It does not allow one to make a copy of an entire copyrighted manual!

Re: Nice try, but...

Message #11 Posted by [Vassilis Prevelakis](#) on 26 Mar 2002, 11:56 p.m.,
in response to message #10 by Todd G.

- > Loss of income has very little, and probably nothing, to do with it.
- > One of the rights of copyright is the right to make copies, and to
- > prevent others from doing so unless they have permission.

So what's *your* point? There are many silly things that are prohibited by law, e.g. buying disposable contact lenses without a perscription.

In the case of copyright, the law merely provides for remedies in case the owner is deemed to the suffered some kind of damage or loss of income.

That's why breach of copyright is a civil dispute not a crime.

You certainly won't go to hell if you photocopy a manual :-)

Re: Nice try, but...

*Message #12 Posted by [Jim L](#) on 27 Mar 2002, 12:39 a.m.,
in response to message #11 by Vassilis Prevelakis*

"So what's your point?"

What's YOUR point? You start off by telling us it's "not illegal" and now you've been corrected. Or is there some distinction between illegal and "prohibited by law" that I'm missing? :-)

Re: Nice try, but...

*Message #13 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 27 Mar 2002,
7:36 a.m.,
in response to message #12 by Jim L*

HI;

as many of you may know, we have, here in Brazil, some sort of situation about copyright, illegal practice, and the like. I am completely aware of the fact that we, Brazilian people, would be a lot more concerned about that all if we could see the results of any legal action, as we see what happens in USA and Europe. In fact, you all show (at least to me) a deep, profound respect for those who create and their creation. Many of you have (and had) your chance to create something and offer it as the result of your work, and this must be preserved at any cost.

I myself have taken a lot of photocopies and scanned material exclusively for studying, what is not an excuse, I know. If I have the original in hands, I'd buy it. But I didn't have it at the time I needed it. Now I'm a writer and I feel guilty when I remember that the photocopies I took did not generate financial return to the writer. As many others didn't.

I think of copyright as law-based right, and must be respect. In other hands, I feel confused about specific, public-address documentation, say, the owner's manual that comes with the equipment. If we stop to think about them, they should not be copyrighted. I do not mention the applications, cause they can be widely used, but an HP41CV Owner's manual. What is it good for to someone that does not own an

HP41CV, or does not know how to use it (supposedly own or have owned one)? The only way to obtain one HP41CV Owner's Manual is buying the calculator. O.K., I know we can order it separately, but no one would buy it without having a calculator. Would?

If they are copyrighted, let's respect the law. I just do not understand why they have been copyrighted.

Comments?

Re: Nice try, but...

Message #14 Posted by [Ellis Easley](#) on 27 Mar 2002, 5:16 p.m., in response to message #13 by Vieira, Luiz C. (Brazil)

I think copyrighting is done routinely, regardless of whether the work has monetary value. It just establishes ownership of the work in case any dispute should arise. Because HP copyrighted all those manuals, they are able to give Dave permission to distribute them electronically.

Consider the disclaimer that must be attached to a program submitted to an HP user's group library. You have to give up your rights to the program so that if HP later puts the program in a copyrighted work, you can't come to HP and ask for money or stop them from publishing the work or a changed version of the work. If you think the work has monetary value, or if you don't want to share it with anyone, or if you don't want anyone changing it, you shouldn't submit it.

When people started copying the ROMs in the IBM PC, a judge said there was nothing visible to the eye on the ROMs to indicate they were copyrighted works, even though there were ASCII strings in the code that were proper copyright statements when decoded. So IBM, and everyone else, started printing the copyright notice on the outside of their ROMs.

I was taught that a major reason a company seeks patents on its innovations is to prevent someone else from getting a patent on the same idea and then coming to the company for license fees.

I was also taught that the reason the U.S. Constitution established patents as they are handled in the U.S. - granting an exclusive

right to an inventor for a fixed period of time - is not so much to guarantee the inventor gets paid for his work, as it is to give others an incentive (avoiding the license fees) to find a newer and better way to do what is covered by a patent. (The patent isn't granted for the result, only the means.)

An alternative to a patent, and presumably a copyright, is to treat the idea as a trade secret. Anyone who wants to see the idea has to sign a contract (a non-disclosure agreement) promising not to share the work with anyone else. Since it is a contract between two people, it is almost certain that a court will find in favor of the owner if the other party distributes the work. Writers could use this to their advantage if they could get readers to agree that they will only say good things about the work!

Cristal clear (former Nice try, but...)

*Message #15 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 28 Mar 2002, 8:33 a.m.,
in response to message #14 by Ellis Easley*

Hi;

Just to express my thankfulness for clearing.

Re: Nice try, but...

*Message #16 Posted by [Todd G.](#) on 27 Mar 2002, 7:32 p.m.,
in response to message #11 by Vassilis Prevelakis*

"You certainly won't go to hell if you photocopy a manual :-)"

No, but you may have to pay a large sum of money to the copyright owner for infringing the copyright. Especially if you infringe the copyright wilfully (e.g., you know about the copyright and infringe it anyway). Which sounds exactly like what you are doing.

In addition to actual, statutory, and compensatory damages, you may also be charged with attorney fees, prejudgement interest, etc. As an attorney who specializes in intellectual property, I can assure you that you do not want to pay attorney fees.

"There are many silly things that are prohibited by law"

Maybe I have a different perspective because I'm a lawyer, but regardless of whether YOU think the law is silly or not, it must be followed. If you don't like the law, tell your congressman to change it.

Re: Nice try, but...

*Message #17 Posted by [Vassilis Prevelakis](#) on 27 Mar 2002, 9:19 p.m.,
in response to message #16 by Todd G.*

First Todd G. said:

> > Loss of income has very little, and probably nothing, to do with it.

..., and then he said:

> No, but you may have to pay a large sum of money to the copyright owner for infringing the copyright.

At last we are getting somewhere! The only reason you can be forced by a court to pay "large sums of money" is for the copyright owner to prove that they have suffered harm by the copyright infringement.

Jim L said:

> Or is there some distinction between illegal and "prohibited by law" that I'm missing? :-)

The difference between criminal and civil law. Copyright disputes are handled by civil courts.

I was trying to make this distinction (not very successfully I admit) in my original posting.

In the example with the contact lenses, the police is not going to raid your house because you bought contact lenses without prescription, not will the manufacturers manage to get a court to award them "large sums of money" for the above "illegal" activity. Rather if you use the wrong contacts and go blind, you will not be able to successfully sue the manufacturer because what you did was prohibited by law.

So to go back to the original posting, it's not my business, or Todd's business or anybody's business **except HP** to go around complaining

about some guy posting photocopies on eBay. If HP feel that they are wronged they can ask eBay to remove the items, or try to sue that guy. If **you** go to a court and say Mr. X is selling photocopied HP manuals, the court will first ask you to explain what is **your** stake in the case. If you cannot explain that then the court will not proceed with the case. Again this is how **civil** courts work. Criminal courts work in a different manner.

****vp**

Re: Nice try, but...,

*Message #18 Posted by [Jim L](#) on 27 Mar 2002, 11:29 p.m.,
in response to message #17 by Vassilis Prevelakis*

Note from the post you replied to: "actual, statutory, and compensatory damages, ... attorney fees"

You only addressed actual damages in your response. What about statutory damages etc.?

As for saying it's someone else's problem, that's your choice to make. I don't see why you feel the need to complain about someone else being a little more proactive but that's your choice too. I'm glad to see someone pointing out a problem even if he doesn't personally benefit.

Re: Nice try, but...

*Message #19 Posted by [Todd G.](#) on 28 Mar 2002, 9:07 a.m.,
in response to message #17 by Vassilis Prevelakis*

You're quite right about who has "standing" to sue. I guess I assumed everyone knew who could bring an action. HP certainly would have standing, since it was the copyright owner. But others may have standing too. For example, distributors who make a profit on the sale of HP products and who are given permission by HP to print and sell the products, including manuals.

Maybe all the calculator collectors could get together and file a class action, citing diminution of value of their manuals based on sales of infringing manuals on eBay. ;-)

Re: Nice try, but...

*Message #20 Posted by [Ellis Easley](#) on 28 Mar 2002, 10:16 a.m.,
in response to message #17 by Vassilis Prevelakis*

The item that started this thread was a TI publication, and TI is well known for defending their patents - I heard that at one point they had more income from license fees than their own manufacturing operations. If any TI employees are reading this, maybe they want to bring the Ebay seller to the attention of their employer?

It is also not true that this is only civil

*Message #21 Posted by [Mike](#) on 28 Mar 2002, 12:50 p.m.,
in response to message #17 by Vassilis Prevelakis*

This can also be a criminal activity. The FEDS are all the time involved in prosecuting people selling counterfeit MicroSoft products.

Further, there are conspiracy laws that can come into effect.

Further, civil laws are not always insignificant to criminal laws.

Absolute nonsense!

*Message #22 Posted by [Mike](#) on 28 Mar 2002, 12:46 p.m.,
in response to message #9 by Vassilis Prevelakis*

If HP had wanted to and if Dave did not have permission, HP could have claimed a multiple of the sales gained by Dave.

Further, they could have gone after punitive damages.

Yes, it would certainly been easily possible to ruin ones life, if they tried to infringe upon a copyright, without permission.

Wishing it were so, does not make it so.

Re: Absolute nonsense!

*Message #23 Posted by [Vassilis Prevelakis](#) on 28 Mar 2002, 9:18 p.m.,
in response to message #22 by Mike*

> Wishing it were so, does not make it so.
Hear hear!

So, how many people have been sued by HP for selling photocopies of 20 year old manuals on the Web?

Also, how many people have received letters from HP for putting up images of the same 20 year old manuals on their Web site without permission?

The point made by Todd, about Dave suing, though, is correct. This depends on the exact wording of the letter HP sent to Dave. Is this available on the web site? Perhaps Dave could be so kind as to post it so that we can all understand the extent of the permissions given.

**vp

Re: Absolute nonsense!

*Message #24 Posted by [Les Bell \(Australia\)](#) on 29 Mar 2002, 8:48 p.m.,
in response to message #23 by Vassilis Prevelakis*

It's important to realize that under copyright law in most jurisdictions, a copyright owner who does not defend his/her rights can lose them.

I dare say HP will happily turn a blind eye to the occasional infringement by people photocopying long-outdated manuals, but if one was to be flagrant in doing so, HP may feel it has no choice but to prosecute or lose its rights to intellectual property. One would be very unwise to force their hand.

On the other hand, by making an agreement with Dave to "license" some of its material via this site, HP has not relinquished any rights.

Best,

--- Les [<http://www.lesbell.com.au>]

Re: Absolute nonsense!

*Message #25 Posted by [Mike](#) on 29 Mar 2002, 9:07 p.m.,
in response to message #23 by Vassilis Prevelakis*

The point is not whether HP will sue. The point is that **you said it was not illegal**, in your first post.

The fact is, that without their permission, it is illegal, isn't it?

Why are you trying to give people the mistaken belief that it's ok?

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HP Forum Archive 08

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How to polish the aluminum bezel of a HP 11C Voyager

Message #1 Posted by [Irqan Rodriguez](#) on 23 Mar 2002, 6:22 a.m.

I have recently been successful in fixing a beat-up Hp 11C calculator. (Glass and the rest of the calculator looks pretty good) But the aluminum bezel looks awful with all its wear and tiny scratch marks. I have tried to polish the aluminum and anything is better than what it was before. But I am wondering if anybody have tips on how to get back the original look. What kind of metal polish or sandpaper is required to get close to what it looked like before. Or rather what technique is required. Any tip would be helpful. I am sure I cannot be the first to try to do this. Thanks Irqan

Re: How to polish the aluminum bezel of a HP 11C Voyager

Message #2 Posted by [Hans Brueggemann \[GER\]](#) on 25 Mar 2002, 3:52 a.m.,
in response to message #1 by Irqan Rodriguez

irquan, i took a look at the hpmuseum picture of the 11c and would suggest the following (no guarantee whatsoever, this is the 'modellers way', i never tried it on an HP!)

- 1) fix a sheet of sandpaper with self adhesive tape onto a glass pane with the rough side upwards. to achieve best results, it **must** be a glass pane or glass table. make sure there are no dust or other foreign particles between the glass and the sandpaper. the sandpaper has to be of the wet sanding type.
- 2) across the sandpaper, fix an old ruler.
- 3) this is for testing: take a piece of aluminium sheet metal and slide it along the ruler and across the sand paper. use plenty of water with soap or dish cleaner as 'lubrication'. only apply little pressure on the aluminium sheet while sanding.
- 4) from time to time, check for the sanding marks on the aluminum. maybe, you have to vary the 'roughness' of the sandpaper to achieve a result that matches the hp bezel. when successfull, take a fresh sheet of sandpaper and repeat step 3), this time using the bezel. 5) rinse the bezel with plenty of water (do not touch the grinded surface) and dry it with a lint-free cloth or a hairdryer.

6) and now for the trick: *as_soon_as_possible* after the sanding, apply a thin coat of clear metal varnish to the bezel and let dry at least ten hours. this will prevent the surface from oxidizing and getting a matt gray look.

7) if you find that the surface is not as glossy as it should be, you can apply another layer of varnish and even try to polish it with polish fo *acrylic glass*. this will give you glass-like surfaces. do not use car polish, it is much too coarse.

that should do the job.

cheers, hans

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online calculator transactions

Message #1 Posted by [Iqbal](#) on 22 Mar 2002, 11:26 p.m.

Anyone ever used : <http://www.escrow.com/company/index.asp> for online calculator purchases??

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BASIC programming 49G

Message #1 Posted by [Jeff_G](#) on 22 Mar 2002, 12:25 p.m.

Where can I get documentation on programming the HP-49G in the native BASIC?

Thanks,

Jeff

Re: BASIC programming 49G

Message #2 Posted by [Ellis Easley](#) on 22 Mar 2002, 6:57 p.m.,
in response to message #1 by Jeff_G

I believe you can download a 49G manual from HP's website. I got an HP39G manual there.

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Your best calc

Message #1 Posted by [mapet](#) on 22 Mar 2002, 8:33 a.m.

My def is - your best calc is the one you use the most

2 categories: *sci *fin

Mine are:

sci HP 40G fin HP 12C

What about yours?

Re: Your best calc

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 22 Mar 2002, 9:27 a.m.,
in response to message #1 by mapet

Hi;

somewhat hard to decide, ahn? O.K., I'll keep in mind a stand-alone, as-is calculator:

sci HP15C fin HP19BII

My US\$0,10.

Cheers.

Re: Your best calc

Message #3 Posted by [John M.](#) on 22 Mar 2002, 9:35 a.m.,
in response to message #1 by mapet

The question was defined as 'the one you use the most': HP 48SX. For the shirt pocket: the ultra slim, ultra light (weighs almost nothing!) "M-Abacus", which does 'everything' except programming, yes 'everything' (hypertrig, stats, complex, etc.) An incredible bargain at \$7! Although algebraic :-(

A calc poll...

Message #4 Posted by [Thibaut.be](#) on 22 Mar 2002, 10:41 a.m.,
in response to message #1 by mapet

Last year I did a calc poll. I had many reactions and I posted the results [here](#)

Re: A calc poll...

Message #5 Posted by [Frank Glitz](#) on 22 Mar 2002, 11:00 a.m.,
in response to message #4 by Thibaut.be

You said "...I wish HP people inspire on this inquiry to build up future models...". And I'd like to complete this statement: "... and rebuild older models, like the fascinating 9100A/B!" It's quite easy to build a new calculator from scratch using today's technology, but to build a scientific calc 1968 with no ICs available, a non-volatile core mem and including transcendental functions for the trigonometrics and logarithms - that's real innovation!

Now you know what my favorite HP is... but I'm old-fashioned of course ;-)

Frank

But my HP9100Bs contain ICs

Message #6 Posted by [Tony Duell \(UK\)](#) on 22 Mar 2002, 3:44 p.m.,
in response to message #5 by Frank Glitz

Seriously, there are ICs in the HP9100B. Even if you don't count the ROM PCB (multi-layer with inductive coupling between the tracks -- and HP considered it to be an IC at one point) or the 1810-0021 hybrids in the flip-flop circuits, there are still ICs in the machine. 8 op-amps on the card reader PCB. 2 for each of the 4 tracks (3 data tracks, one timing track). One for each of the read preamps, one for each of the comparators. OK, the card readers is sort-of optional (the machine will run with it removed), and it's not part of the processor logic, but there are still ICs in the 9100B

Re: But my HP9100Bs contain ICs

Message #7 Posted by [Frank Glitz](#) on 22 Mar 2002, 5:34 p.m.,
in response to message #6 by Tony Duell (UK)

OK, OK, you're right. So let's be more precise: the HP9100As or Bs do not contain any *digital* ICs. All calculating and logic is done using discrete parts. Acceptable? ;-)

And they are fascinating devices, aren't they?

Regards, Frank

Re: But my HP9100Bs contain ICs

Message #8 Posted by [Tony Duell \(UK\)](#) on 22 Mar 2002, 8:24 p.m.,
in response to message #7 by Frank Glitz

Whether _all_ the logic is discrete parts depends on how you consider the 1810-0021 RC network. It contains half the resistors and capacitors for a JK flip-flop. 2 of the RC networks, 4 transistors and a few diodes (the semiconductors all being discrete parts) make a flip-flop. 2 of the PCBs inside are just 20 JKs each.... As for the design, I regard it as one of the most beautiful designs _ever_. It's elegantly simple (it's very simple, considering what it does). There's no adder -- just increment and decrement. Oh, and shifts, transfer between registers, and simple things like that. It's a pity so few people really understand what's going on inside that machine.

Re: But my HP9100Bs contain ICs

Message #9 Posted by [doug](#) on 23 Mar 2002, 1:29 a.m.,
in response to message #8 by Tony Duell (UK)

Ok it sounds interesting. Draw us a picture. Explain all the discrete components and the combination of components that perform the logic.

Re: But my HP9100Bs contain ICs

Message #10 Posted by [Tony Duell](#) on 23 Mar 2002, 2:29 p.m.,
in response to message #9 by doug

Are you seriously asking me to attempt to draw an HP9100 schematic using ascii-art in this forum? What exactly do you want to know about this machine? I don't know much about the firmware, but I've fixed the hardware side a couple of times and know roughly what is going on.

Re: But my HP9100Bs contain ICs

Message #11 Posted by [doug](#) on 23 Mar 2002, 9:48 p.m.,
in response to message #10 by Tony Duell

SURE! If you want. Any logic block type of drawing with directions is great. Whatever you have time for and feel like doing.

Everyone is watching. People like that sort of stuff. (:o)

Re: But my HP9100Bs contain ICs

Message #12 Posted by [Frank Glitz](#) on 23 Mar 2002, 10:36 a.m.,
in response to message #8 by Tony Duell (UK)

Yep, that's a pity ;-) So come on and enlighten us with brilliant wisdom! Tell us where to find detailed information about the mode of operation of the *really* incredible 9100A/B or post it somewhere on the web - and please do not just link to hpmuseum.org; everybody here should know this one...

BTW, look at this URL: <http://www.chac.org/engine-ascii/engv2n3.txt>. It is a quite interesting interview with Barney Oliver, who is well known for his engagement at SETI and HP. Most interesting is the following text passage:

... Oliver: Yeah, I think that's right. I know there were six planes. I'm not sure of the details.

KC: _Don't worry, we have full docs on the 9100. Which, of course, are several times the size of the machine itself._

Oliver:(laughs) Very good! There were something like 2200 bits -- yeah, 2208 bits of core memory. About 32,000 bits of ROM. ...

What does "KC" mean with "full docs"? Does anyone know the guys behind

chac.org?

Before anyone complains: Sorry for "abusing" this theme ("A calc poll...") for discussing the HP-9100A/Bs mode of operation. I'll post the last passage (the link to the interview) in a new theme in the forum because I think it is possibly worth discussing.

Regards, Frank

Re: But my HP9100Bs contain ICs

*Message #13 Posted by [Ren](#) on 22 Mar 2002, 5:55 p.m.,
in response to message #6 by Tony Duell (UK)*

So, Dave Hicks has to change the main Web page, because it says in italics, "no ICs".

Re: A calc poll...

*Message #14 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 22 Mar 2002, 11:10 a.m.,
in response to message #4 by Thibaut.be*

Hi, Thibaut;

I feel somewhat sorry (and embarrassed) not reading the results before. They are valuable source of information.

I myself must thank you for your effort.

Best regards.

Re: A calc poll...

*Message #15 Posted by [Thibaut.be](#) on 22 Mar 2002, 11:31 a.m.,
in response to message #14 by Vieira, Luiz C. (Brazil)*

... but nothing prevents us from going on with this inquiry. Should I carry on with gathering info ?

PS : nothing to feel embarrassed for !

Re: Your best calc

Message #16 Posted by [Victor](#) on 22 Mar 2002, 1:55 p.m.,
in response to message #1 by mapet

There are two calculators of which I use one almost as much as the other.

The first is the HP-16C, which I use a lot at my job as a software engineer. Haven't found any other that is as convenient to use (I think the method used by the HP-48 series to enter numbers in bases other than 10 is a real pain!)

The calculator I use for everything else is an HP-67. I just love LED RPN calculators.

I don't use financial calculators except to play with.

Re: Your best calc

Message #17 Posted by [David Smith](#) on 22 Mar 2002, 5:33 p.m.,
in response to message #1 by mapet

HP41 for handheld use. HP97 for desktop use. I like my digits big.

Re: Your best calc

Message #18 Posted by [Tony Duell \(UK\)](#) on 22 Mar 2002, 8:29 p.m.,
in response to message #1 by mapet

Do I really have to pick just one calculator? OK, it has to be the HP41. Very expandable, nice hardware, and HPIL. However, I'd also like to mention : HP48SX (in my pocket all the time, RPL is a nice programming language), HP71B (probably the nicest pocket computer ever, HP97 (clear display, pretty nice keystroke programming language, and a built-in printer) (And the HP67, which is more portable if I don't need the printer), and of course the HP9100 (one of the best designs ever). But I think I still want to put the HP41 'top of the list'. I don't use financial calculators (I don't have enough money to need one :-)), so I won't consider those.

Re: Your best calc

Message #19 Posted by [db\(martinez,california\)](#) on 22 Mar 2002, 9:05 p.m.,
in response to message #18 by Tony Duell (UK)

the 41cx. it is the perfect desert island calculator. the professor can always whip up some of thoes coconut shell batteries. and yes, that was a bad pun.

Re: Your best calc

Message #20 Posted by [Julián Miranda \(Spain\)](#) on 30 Mar 2002, 6:06 a.m.,
in response to message #18 by Tony Duell (UK)

You are very precise in your comments so I suppose there is a reason why you mention the 48SX and not the GX, in theory more powerful and the same form factor.

Re: Your best calc

Message #21 Posted by [Tony Duell \(UK\)](#) on 31 Mar 2002, 5:35 p.m.,
in response to message #20 by Julián Miranda (Spain)

Only that I bought a 48SX when it came out, but never bought the 48GX. I bought the 48SX because it did have features that I wanted that weren't on mu 28C (specifically the serial port). The GX does have a lot more functions, but I didn't really need them, so I didn't buy it. The 49G (which I did buy) has a horrible build quality, but it's also got a lot of nice functions.

Re: Your best calc

Message #22 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 1 Apr 2002, 8:17 a.m.,
in response to message #21 by Tony Duell (UK)

May I include the VERY desirable 1.5MB user mem (1M Flash, 512K RAM) and reloadable OS to the list of goodies available in the 49G? In time: will we, poor mortals, have access to the 49 O.S. builder (if this stuff exists)?

Re: Your best calc

Message #23 Posted by [John K. \(US\)](#) on 22 Mar 2002, 9:55 p.m.,
in response to message #1 by mapet

My favorites are (in decreasing order of use):

- Scientific:
 - HP 42S
Though I've recently been using MathUPro and Coconut on my Palm more often.
 - HP 16C
Nothing like it for integer math!
 - HP 41CX
'Nuff said!

- Financial:
 - HP 17BII
Generally more useful than a 12C (IMHO) and has an RPN mode!
 - HP 10B
It hangs out on my desk at work, for trivial stuff.

Sorry for the extras under each category. It's kinda' like asking me to pick my favorite standard and metric wrench -- I really can't limit myself to just one. If you really just want one from each, use my first answer.

I'd also like to nominate the following additional category:

- Emulator:
 - MathUPro (Palm OS)
 - Coconut (Palm OS)
Sometimes you just gotta' have those synthetic instructions!
 - x48 (Mac OS, Mac OS X)

Re: Your best calc

Message #24 Posted by [bill duncan](#) on 23 Mar 2002, 3:08 a.m.,
in response to message #1 by mapet

Impossible to choose.

HP-41CX for pure fun, hackability and gadgets. It was fun at any level, from applications right down to machine code.. I guess this would be it if I only had one choice.

But the 20 series, especially the 29C was nice to use. Could be operated with one hand and had a solid "feel". The 27 was an interesting mix of scientific and finance. Neat. I still use the 29C quite a bit, although partly to keep the ni-cads in good shape.

Of course the 15C and 16C for their uniqueness, battery life and shirt pocket size. The only thing I wish the 15C had would perhaps be a clock and time functions.

The hp-48GX for overall functionality and power.

Re: Your best calc

*Message #25 Posted by [David Smith](#) on 23 Mar 2002, 5:56 p.m.,
in response to message #24 by bill duncan*

Never ever charge your nicads in the 29C. Always use the external charger or another machine. The 29C is probably the most prone to die machine HP ever built (followed by the 25C). If the battery contacts are dirty, the pack falls out, or the pack is old the internal voltage rises to chip-lethal levels.

Re: Your best calc

*Message #26 Posted by [Bill Duncan \(CA\)](#) on 23 Mar 2002, 8:37 p.m.,
in response to message #25 by David Smith*

Yes, thank you for the advice. I was fortunate in that I picked up the little external battery pack holder and charger when I originally bought my 29C in the seventies. I didn't realize what a smart buy that was back then, but I'm glad to have it now.

I have 3 battery packs for it, one of which is one I made up with some new Ni-Mh cells. I wasn't sure this would work, but it works just fine. I rotate them through the machine and external pack holder to charge them. (The other two have original ni-cads and still work great.)

With all the machines I have, I'm probably most partial to this machine. I love it's small, robust case.

Cheers.

Charging NiMH batteries

*Message #27 Posted by [Andrés C. Rodríguez](#) on 24 Mar 2002, 3:58 p.m.,
in response to message #26 by Bill Duncan (CA)*

If possible, use a NiMH specific charger instead of the original HP intended for NiCd. While size and voltage are the same, the chemistry is different and it is advisable to apply the proper charge cycle (current and time) to each type. You can find interesting postings (I think they were from Gene) about this issue in the Museum Archives.

Re: Your best calc

Message #28 Posted by [Wayne Brown](#) on 23 Mar 2002, 1:44 p.m.,
in response to message #1 by mapet

I don't use (or own) any purely financial calcs. My favorite for all-around use is my 41CX. The next best is my 16C, which I use while debugging software, tracing TCP packets, etc. And after that is my Pickett N600-ES pocket slide rule, which I carry everywhere. :-)

Re: Your best calc

Message #29 Posted by [John Kercheval](#) on 25 Mar 2002, 7:39 a.m.,
in response to message #1 by mapet

HP 71B , fully "blown."

No contest.

JK

Re: Your best calc

Message #30 Posted by [John K. \(US\)](#) on 25 Mar 2002, 6:03 p.m.,
in response to message #29 by John Kercheval

HP 71B , fully "blown."

Wow! Does it have a blueprinted processor with chromed and polished expansion ports too? ;^)

Re: Your best calc

Message #31 Posted by [John Kercheval](#) on 11 Apr 2002, 1:18 p.m.,
in response to message #30 by John K. (US)

I knew I'd get a response like that!

No ported and polished heads , no dual chrome exhaust, no wooden MOMO steering wheel,

BUT:

In my case, "blown" means with a CMT massive 32RAM in the Card Reader port, the HP 41 Translator Pac (a must), the HP 71 Math Rom, The 3rd party-made HP 71 AMPI

Statistics Rom, the HP 71 Finance Pac, and of course the IL Module. The environmental overlay is there as well to protect the keyboard from spills, or even dirty air molecules.

Add to this 2 41CX's, One Double Speed 41CV (all three used to periodically "feed" 41 programs to the 71 via the IL loop) the digital cassette drive, the IL printer and God knows how many user written, 41, BASIC, and FORTH programs.

The unit is pristine, with the leather carrying case and is "polished" with Armor All every month, during the monthly battery change. Yes, I do change the Duracells every month. Yes, I am a true 71B fanatic, have been since I bought it when I was a calculator salesman at UC Berkeley's bookstore from '84-'86.

Gentlemen, in my case, "blown" means "BLOWN" - start your engines ;)

This has been my day-to-day machine since 1984. I'm having a lot of trouble moving over to the 48GX, although I have been trying!

John in VA

Re: Your best calc

*Message #32 Posted by [John K. \(US\)](#) on 11 Apr 2002, 9:55 p.m.,
in response to message #31 by John Kercheval*

Well, I'm happy to oblige, though actually, I prefer the leather wrapped three-spoke Momo wheels, but that's just me.

For some reason, I just never really warmed to either the 75 or the 71. I don't know why, but they just never appealed to me the way the 41 or the Voyagers did. I guess that with calculators -- as with steering wheels -- it's simply a matter of taste. :^)

Re: Your best calc

Message #33 Posted by [John Kercheval](#) on 19 Apr 2002, 9:11 a.m.,
in response to message #32 by John K. (US)

I agree on the 75- that was NOT a useful machine IMHO. Hard to program, no real interfability and no HP 41 translator capabilities.

The real thing about the 71 was the 41 program running ability and hp 41 connectivity- at about 5X the speed of the 41. You had that massive library of cheap/free programs out there and almost any 71 user probably was a 41 user before and knew which programs he wanted. All he had to do was shoot them over to the 71 (EASY via IL) and run them a lot faster and with a zillion times more onboard storage. They used to call the 71 a "Turbo 41" at Educalc.

Despite this the 71 sold terribly.

John Kercheval

Re: Your best calc

Message #34 Posted by [John K. \(US\)](#) on 19 Apr 2002, 11:01 p.m.,
in response to message #33 by John Kercheval

Oh, don't get me wrong -- the 71 was a fine machine -- it's just that it never evoked in me the same desire that the 41 and the 1{1|5|6}C did. It could also have something to do with the fact that, at the time, I couldn't really afford one. :^)

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HP Forum Archive 08

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Substitution for thermal paper for HP printers

Message #1 Posted by [Frank Glitz](#) on 22 Mar 2002, 4:53 a.m.

HP thermal paper for printers like 82143A or those used in HP-97 ist hard to find and expensive - at least in Germany ;-(

What I recommend to save money and time: take a roll of thermal fax paper (very cheap compared to HP paper!) and cut off a piece with the correct size to fit into your favorite thermal printer. For the cutting job, use a fast running circular saw, equipped with (sorry, I don't know the correct english word) "cememted carbide" or "stellite" blades (in Germany this is called "hard metal"). You don't have such a thing at hand? Doesn't matter, ask the next carpenter or joiner! It should be a quite new or freshly sharpened blade to prevent ripping off the paper. And the roll has to be well fixed.

The fax paper works fine (well, you get black printing instead of blue...) but there are two small problems: the fax paper gets a black coloring at the cutting edge (abt. 1/16" or 1.5 mm) caused by the cutting heat. And it is a little thicker than the original HP paper, so your printer has to work "a little harder" (I experienced that effect with an HP-97 printer only, it sounds more "strained").

OK, let me know what you think about my suggestion...

Frank

Re: Substitution for thermal paper for HP printers

Message #2 Posted by [Todd G.](#) on 22 Mar 2002, 6:50 a.m.,
in response to message #1 by Frank Glitz

I don't have a circular saw with a carbide blade. :-(

A few months ago, someone suggested using NCR 2.25-inch thermal printer paper as a substitute for the HP thermal paper. It's sold at Staples in packs of 6 rolls for about \$10, and it works great.

Todd

Re: Substitution for thermal paper for HP printers

Message #3 Posted by [Frank Glitz](#) on 22 Mar 2002, 8:36 a.m.,
in response to message #2 by Todd G.

Todd,

thanks for your reply.

as I said, you don't need to own such a saw yourself... Joiners and carpenters have those at hand normally.

But I have to admit that your suggestion is much more "comfortable" than mine. I know Staples to have subsidiaries in Germany but what I don't know (yet) is if they sell the NCR rolls you mention here... Any rolls I found to date were either much too small or too large.

Well, doesn't matter... I'll go visiting the next Staples store today!

Thanks, Frank

Re: Substitution for thermal paper for HP printers

Message #4 Posted by [John K. \(US\)](#) on 22 Mar 2002, 9:01 p.m.,
in response to message #2 by Todd G.

I've been using the NCR paper as well. One thing that I have noticed is that it isn't quite as stable as the HP paper, but it is perfectly suitable for everyday use.

Re: Substitution for thermal paper for HP printers

Message #5 Posted by [David Smith](#) on 22 Mar 2002, 5:30 p.m.,
in response to message #1 by Frank Glitz

The NCR paper is very common in the US. It is used in virtually all gasoline pumps that have a built in receipt printer and on most credit card receipt printers in stores. It is sold in either packs of 3 or 9 rolls. I just bought a 9 roll packs for 9 bucks at Office Depot... it has been on sale for around 7 dollars at times.

Re: Substitution for thermal paper for HP printers

Message #6 Posted by [Ellis Easley](#) on 22 Mar 2002, 6:54 p.m.,
in response to message #1 by Frank Glitz

HP warns that it is important the end of the roll not be glued to the core, as this will put a great strain on the printer's motor.

By the way, as you mentioned the 9100A/B in another thread - is there any paper available in Europe suitable for use in the 9120 printer? It is not thermal, but "electrosensitive" - whatever that means! Radio Shack's first printer sold to use with the TRS-80 (model 1) used a paper with a metallic looking surface, I think it was coated with aluminum powder, the print head contacted the paper with metal electrodes and the printed spots looked kind of charred. The 9120 printing is more "subdued" than that but I think the printing mechanism is similar, charged electrodes in contact with the paper surface and a broad metal bar making a common return path.

Re: Substitution for thermal paper for HP printers

Message #7 Posted by [Frank Glitz](#) on 23 Mar 2002, 4:29 p.m.,
in response to message #6 by Ellis Easley

I do not have a 9120 printer - though I've seen one already ;-) - I don't know the correct width of the paper you need for it. Try the following link: <http://www.unisysdirect.com/europe/english/supplies/miscfin2.html> and look for part no. 41-0400-386. It is described as electrosensitive paper 4 inch x 200 ft. Maybe it fits into the 9120 (with a little sawing...?). We used this stuff earlier for our older Unisys equipment; I don't know if it is still available.

If you try the paper, would you let me know if it works?

Regards, Frank

Re: Substitution for thermal paper for HP printers

Message #8 Posted by [Frank Glitz](#) on 23 Mar 2002, 4:43 p.m.,
in response to message #6 by Ellis Easley

Another source for electrosensitive paper may be manufacturers of medical tech equipment. I found the following link: http://www.vitalograph.co.uk/uk/access_product_list.pdf. As it is a PDF-Doc, you need the Acrobat Reader.

Try to look for "electrosensitive paper" using a search engine like Google. It displays tons of results.

Regards, Frank

Re: Substitution for thermal paper for HP printers

Message #9 Posted by [Ellis Easley](#) on 25 Mar 2002, 5:00 p.m.,
in response to message #8 by Frank Glitz

Thanks for the leads! I have a few feet of the original paper in the printer. First I will have to replace the rubber platen, it has turned gummy (more like runny) and make sure it still works with the original paper. I repaired the printer electronics when I first got it (mid-80's), I forget exactly what was wrong but I think it was just a power supply capacitor. I'll post any progress I make on the electrosensitive paper.

Re: Substitution for thermal paper for HP printers

Message #10 Posted by [James M. Prange](#) on 23 Mar 2002, 7:59 p.m.,
in response to message #1 by Frank Glitz

I'm not familiar with the 82143A, but if it takes the same paper as the 82240A/B, I can confirm that NCR brand thermal paper works fine. Another brand that works well is "Perfect print"; I'm not sure which store I bought it at, but it was one of the office supply chains. The rolls were an oversize diameter: 2.75 inch instead of 2 inch, but it's easy enough to rewind it onto an empty core. the cost was US\$4.89 for 3 2.25 inch by 155 foot rolls. A brand that I've used that didn't work out so well is "AMPAD"; the printing was a rather difficult to read purple, and the contrast control needed to be set to its highest.

Re: Substitution for thermal paper for HP printers

*Message #11 Posted by [David Smith](#) on 24 Mar 2002, 3:05 p.m.,
in response to message #10 by James M. Prange*

I beleive the "Perfect Print" paper is sold at Sav-On Office Supplies. They also sell a 1.5 inch wide paper that works in the 19C and HP10. Most stores don't stock it but they can usually get it in a day or so.

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HP Forum Archive 08

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Thermal printer small "bracket" use???

Message #1 Posted by [Michel](#) on 21 Mar 2002, 7:59 p.m.

I'm a little bit curious about my HP-82143A thermal printer for the HP-41. I recently observe a small metal bracket on the rear left side of the printer. This bracket is usually "inside" the plastic case and it can be "flip" out of the case. There is a kind of eleptic hole in the bracket. WHAT is the purpose of that "option". Thanks for feeding my curiosity!

Re: Thermal printer small "bracket" use???

Message #2 Posted by [Ellis Easley](#) on 21 Mar 2002, 9:39 p.m.,
in response to message #1 by Michel

That's for attaching a security cable.

Re: Thermal printer small "bracket" use???

Message #3 Posted by [Michel](#) on 22 Mar 2002, 11:19 a.m.,
in response to message #2 by Ellis Easley

Shame on me... I forgot that there was a time that those printer are very expensive... Thank you!

Re: Thermal printer small "bracket" use???

Message #4 Posted by [John K. \(US\)](#) on 22 Mar 2002, 10:05 p.m.,
in response to message #3 by Michel

Still are, if the prices on eBay are anything to go by...

Ducks under an asbestos blanket...

Re: Thermal printer small "bracket" use???

*Message #5 Posted by [David Smith](#) on 23 Mar 2002, 5:52 p.m.,
in response to message #4 by John K. (US)*

I have purchased several of the 82143A printers on Ebay for under \$25... some under \$5. Most were listed as in unknown or broken condition, all wound up working... some after a little repair.

Most common problems are: 1) Dirty mechanisms (needs cleaning and oiling). Four screws are under the rubber feet. One in a hole near the center of the calculator. The printer mechanism is held in by three screws. If you overtighten the one by the motor, the head will lock up. The printer screw bosses are often times cracked. Same for the screw boss for the case corner screw by the security cable mount.

2) Bad drive belt (head wont move and printer locks up). A 2.3-2.4 inch circumference belt around 0.048 thick. Most o-rings are too fat. Projector Recorder Belt Company SCX2.4 works well.

3) Bad (or missing) battery or charger. These are almost always available on Ebay. Old battery packs can be rebuilt for under \$25. Printer will not work on AC alone. It needs a somewhat good battery.

4) Missing paper tear bar. Still works without it but it is annoying. You can fake one out of some thin clear plastic.

5) Bad dot(s) in the print head... you are out of luck.

Re: Thermal printer small "bracket" use???

*Message #6 Posted by [Edwin H. Heusinkveld](#) on 23 Mar 2002, 9:16 a.m.,
in response to message #3 by Michel*

You wrote: ""... there was a time that those printer are very expensive... ""

What did this printer cost originally ??

Edwin

Re: Thermal printer small "bracket" use???

Message #7 Posted by [Ellis Easley](#) on 23 Mar 2002, 10:27 a.m.,
in response to message #6 by Edwin H. Heusinkveld

This is one of the few things I have a box for and it has a series of price tags from a department store: \$385.00, \$299.99, \$174.99 which I guess must be what my friend paid, who later sold me most of his 41C equipment (he kept only the calculator, as I recall - I know I didn't buy it).

Re: Thermal printer small "bracket" use???

Message #8 Posted by [Edwin Morales](#) on 23 Mar 2002, 7:22 p.m.,
in response to message #7 by Ellis Easley

I prepared thermal paper for hp822040 for hp 19c, cutting. It is OK.

Re: Thermal printer small "bracket" use???

Message #9 Posted by [Chan Tran](#) on 23 Mar 2002, 8:46 p.m.,
in response to message #8 by Edwin Morales

I paid \$350 for my printer in 1980. It was quite a lot of money for me back then.

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HP Forum Archive 08

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HP65 please help me !!!

Message #1 Posted by [Andreas Stockburger \(Germany\)](#) on 21 Mar 2002, 3:39 p.m.

Hi,

I bought an HP65 on ebay - It is NOT working :-((

Perhaps someone has an idea:

If I connect the calculator with power (stabilized power supply) it takes 150 mA but the display is dark !

So I decided to disassemble the calculator and checked (randomly) some signals with my oscilloscope. Hey! there is live in it! I checked the boards for broken connections - nothing.

I cut the connection to the card-reader to be sure that there is no side-effect here - but nothing.

The calc consumes 150mA and the display is dark

Questions:

- 1.) should there be dynamically changing signals at the display-drivers ?
- 2.) Is 150mA consumption OK (without display) ?

Thanks for your help ..

Andreas

Re: HP65 please help me !!!

Message #2 Posted by [Ellis Easley](#) on 21 Mar 2002, 9:42 p.m.,
in response to message #1 by Andreas Stockburger (Germany)

I'm no expert, but for a start, see if the DC-DC convertor is working. Look for the toroidal transformer. It is driven by a blocking oscillator and it has windings that are rectified to generate about -12V and +6V (I think) for the MOS chips

Re: HP65 please help me !!!

Message #3 Posted by [Andreas Stockburger \(Germany\)](#) on 22 Mar 2002, 1:16 a.m.,
in response to message #2 by Ellis Easley

Hi,

I investigated a little bit further ...

The calculator-electronics itself is working! I can measure fancy digital signals at the display drivers (? -> ICs under the LED-display) The signals changes if I press some keys !!

But the display itself is dark !

Question:

- 1.) How can I verify if the display drivers are working ?
- 2.) Whats the pin-layout of the LED-Chips ?

Many thanks for your help

Best regards

Andreas

Re: HP65 please help me !!!

Message #4 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 22 Mar 2002, 9:34 a.m.,
in response to message #2 by Ellis Easley

Hi;

Just to add some other interest points to the valuable info from Ellis.

I do not own an HP65, but I am A LOT concerned about these 150 mA with a dark display. It smells like a short circuit (let's take "short circuit" as its definition, not a zero-ohm load), I don't know. I believe 65's circuitry (is the 65's CPU a C-MOS?) would not need that much current, considering no LED is on. That is what we here call a Tupiniquim technique (Tupiniquim is the name of a native indians tribe in Brazil), based on finger touching. If the component is somewhat hot, it is probably the villain.

As you have a Scope, try measuring the waveform at the displays' segments. Should you see the same waveform anywhere, some circuit is opened, right? No waveform and we have no sign for the LED's, which may result from an unexpected load (short circuit?)

Keep us informed. Maybe Tony Duell (as others I don't remember the names now, sorry!) will post something valuable.

Success.

Tupiniquim technique

Message #5 Posted by [Ellis Easley](#) on 22 Mar 2002, 6:35 p.m.,
in response to message #4 by Vieira, Luiz C. (Brazil)

The Tupiniquim technique must be used with caution. I used to repair computer boards with 4K dynamic RAMs which, if they were missing the -5V connection, got hot enough to burn their part number markings into your fingertip!

Re: Tupiniquim technique

Message #6 Posted by [Tony Duell \(UK\)](#) on 22 Mar 2002, 9:18 p.m.,
in response to message #5 by Ellis Easley

I remember just that comment ('It's painful to discover the RAM manufacturer's logo burnt into your fingers' or something similar) in the TRS-80 (Model 1) Technical Manual... That dates me somewhat, right...

Re: Tupiniquim technique

Message #7 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 24 Mar 2002, 4:11 p.m.,
in response to message #6 by Tony Duell (UK)

The reverse technique, used at least in my job in Argentina in the '80s was to use a can of freezing gas (named as "Fault Diagnosing" tool) to cool chips suspected to be more hot than usual, and to see if cooling them makes some change in behavior.

You can burn yourself with the gas if you let it touch your skin for more than a couple of seconds. (I think the gas was not freon, because freon was banned in Argentina from the '70s on, due to ecological concerns. One rare case of good thinking here...)

I would not pretend to name the technique from some indigenous tribe from the Patagonia, the very nice and cold southern part of my country, but, perhaps, ...

(To my good friend Luiz, please don't take this as a criticism!)

Re: Tupiniquim technique - I agree!

Message #8 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 25 Mar 2002, 8:17 a.m.,
in response to message #7 by Andrés C. Rodríguez (Argentina)

Hello, you all.

Thanks for the comments. Sometimes, we need to think a bit more and practice a bit less.

To my friend Andrés: I would never take it as criticism. The Tupiniquim term sounds too strong, and is somewhat easy to remember. In fact, it refers to any technique that uses "natural" resource (in this case, hot sensing). I know that, in some cases, even portable, low voltage calculator circuitry can generate enough heat to burn fingers. For this, I'm sorry. (mine have been burnt once or twice...)

Now, a single request. I believe Dave Hicks can help, if so. There are lots of valuable info in here (this forum) about many calculators' HW that could lead to very good, compiled documents. Some calculators, say, HP67/97, 41 series, Voyagers and others, allow user intervention and small repairs. Now,

the request: Dave, is it easy to have the Forum Archives as complete files, instead of links? Say, is it possible having the Forum Archives downloadable? This way, compiling this or that subject would be easier. (Is it correct?)

Cheers.

Re: Tupiniquim technique - I agree!

*Message #9 Posted by [Ellis Easley](#) on 25 Mar 2002, 5:10 p.m.,
in response to message #8 by Vieira, Luiz C. (Brazil)*

I agree that the Forum would be nice to download in bulk or would make a good addition to the CDs. While not every post is memorable, quite a few are real gems.

Re: HP65 please help me !!!

*Message #10 Posted by [David Smith](#) on 22 Mar 2002, 5:27 p.m.,
in response to message #1 by Andreas Stockburger (Germany)*

The HP65 draws around 200mA or so with a lit display. 150mA with a dead one is OK. If your display is totally dark, but the machine works, then I would suspect the problem may be in the display chips on the keyboard or the connections to it. The driver chips are basically compatible with those on the HP35 or HP45 and these can be used as a source for parts.

Re: HP65 please help me !!!

*Message #11 Posted by [David Smith](#) on 22 Mar 2002, 7:13 p.m.,
in response to message #1 by Andreas Stockburger (Germany)*

Andreas,

I tried to send you an email that describes the HP internal circuitry, but your email filter rejected it. I tried sending it from three different hosts... why bother asking for help if you won't accept it?

Re: HP65 please help me !!!

Message #12 Posted by [Andreas Stockburger \(Germany\)](#) on 23 Mar 2002, 1:20 a.m.,
in response to message #11 by David Smith

Hi David,

sorry for the inconvenience with my e-mail at angelfire. Please try this one "andreas.stockburger@gmx.de"

Best regard

Andreas

Re: HP65 please help me !!!

Message #13 Posted by [Tony Duell \(UK\)](#) on 22 Mar 2002, 8:47 p.m.,
in response to message #1 by Andreas Stockburger (Germany)

First check the power converter circuit. It produces +6.2V (Vss) and -12V (Vgg) for the PMOS logic chips. The ground reference (for the 'common' lead of your voltmeter or 'scope) is the -ve side of the battery pack. OK, you can find VSS on the 'top' (nearest display) of the connector to the card reader PCB, or on pin 10 of the CPU hybrid. Vgg is on the 4th pin from the 'top' of the testpoints down the opposite edge of the PCB from the card reader connector, or on pin 16 of the CPU hybrid. If those are present, look for a 2-phase clock (square waves) on pins 40 and 41 of the CPU. If missing, then suspect the display anode driver chip. If that clock is OK, then look for a similar pair of clock signals on pins 38 and 39 of the CPU. If those are missing, then the CPU hybrid is faulty :-(. OK so far? Look for activity on CPU pins 11-15. Those carry the display data to the anode driver chip. If there's something there, then the problem is most likely the anode driver chip (on the keyboard/display PCB), the displays themselves (but I wouldn't have thought that all 3 would go simultaneously) or the inductor modules at the top, near the charger connector. But those don't fail often. The display driver is on the on/off switch side of the display, and is often an 1820-1029. One other thing to check. The cathode driver (1820-1226) needs a +8.2V Vcc supply on pin 10. Check it's there. If not, the display will be blank. It comes from the power converter circuit on the logic board.

Thank you all !!! was HP65 please help me !!!

*Message #14 Posted by [Andreas Stockburger \(Germany\)](#) on 25 Mar 2002, 3:44 a.m.,
in response to message #13 by Tony Duell (UK)*

Hi there,

thank you all for your fantastic help! Tony: the document you sent to me was exactly what I need to fix the calculator !!! I could find a (randomly) broken connection on the "main"-board. It was easy to fix after I found it.

Once again: Thank you all very, very much for your help !!!

Best regards

Andreas

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32Sii - it's unavailable?!

Message #1 Posted by [Robert King](#) on 21 Mar 2002, 2:56 p.m.

Have the people at Hewlett Packard started discontinuing calculators again? None of the office supply shops in Toronto, including Business Depot which is where I bought mine four years ago, stock the 32Sii and one of my friends wants to buy one (discovered as I did that the 32Sii and RPN in general is great for physics and computer sciences classes).

Also, if it has been discontinued, what has replaced it? I couldn't find any new HP calculators, RPN or otherwise.

-Robert King

Re: 32Sii - it's unavailable?!

Message #2 Posted by [Daniel Kekez](#) on 21 Mar 2002, 7:23 p.m.,
in response to message #1 by Robert King

Some resellers say that the HP 32SII has been discontinued. Others say it hasn't. Although HP has recently changed the calculators area on their website (<http://www.hp.com/calculator/>) the 32SII is still listed.

One of HP's Canadian retailers tells me that the 32SII has not been discontinued and they have it in stock. Their website is <http://www.buyhp.ca/> and you can call them at 1-888-871-5111 (8:00 - 18:00 EST). The calculator sells for \$104 CDN, including shipping.

I hope this helps.

Comparing prices but it's gone! / Re: 32Sii - it's unavailable?!

*Message #3 Posted by [Robert King](#) on 22 Mar 2002, 8:06 p.m.,
in response to message #2 by Daniel Kekez*

\$104 + shipping. Presumably that includes taxes as well. I probably came out a bit better on September 23rd, 1998 at \$91.99 (I checked the receipt which is still tucked away at the front of the manual so I've got the price paid and the date) plus the cost of a round trip on the subway.

Now for the 'but it's gone!' part. I checked the website you put and the 32Sii isn't in the calculator section anymore. I also used the search function and fed it the model number and it found nothing, not even a discontinuation notice. I'll tell my friend to keep checking the office supply stores.

-Robert King

Re: 32Sii - it's unavailable?!

*Message #4 Posted by [Dave](#) on 21 Mar 2002, 10:12 p.m.,
in response to message #1 by Robert King*

It is no longer listed on HP calculator site, the last of the RPN non graphing scientific calcs is history.

Re: 32Sii - it's unavailable?!

*Message #5 Posted by [Daniel Kekez](#) on 22 Mar 2002, 4:41 a.m.,
in response to message #4 by Dave*

I guess it has been discontinued. The 32SII was on HP's new site when I visited it on the 16th of March and now it's gone. Was there any kind of formal notice?

BTW - the URL in my original message should have been http://products.hp-at-home.com/sub_category/sub_category.php?id=8.

Take a 17BII instead (Was: Re: 32Sii - it's unavailable?!)

Message #6 Posted by [Raymond Hellstern](#) on 22 Mar 2002, 4:48 a.m.,
in response to message #4 by Dave

>the last of the RPN non >graphing scientific calcs is history > Not really. We still have the 17BII, which features both RPN and the other notation;-) But who knows how long it'll be available...

Raymond

Re: Take a 17BII instead (Was: Re: 32Sii - it's unavailable?!)

Message #7 Posted by [John K.](#) on 22 Mar 2002, 5:52 a.m.,
in response to message #6 by Raymond Hellstern

But who knows how long it'll be available...

Well, given that the 12C is still available...

Re: Take a 17BII instead (Was: Re: 32Sii - it's unavailable?!)

Message #8 Posted by [mapet](#) on 22 Mar 2002, 8:00 a.m.,
in response to message #6 by Raymond Hellstern

HP 17BII was discontinued as well.

and what about the 19BII ?

Message #9 Posted by [Thibaut.be](#) on 22 Mar 2002, 10:44 a.m.,
in response to message #8 by mapet

This is also a great calc. Very nice and easy solver, all scientific functions, well, a good all-rounder. This one is really good value for money.

Re: Take a 17BII instead (Was: Re: 32Sii - it's unavailable?!)

Message #10 Posted by [John K. \(US\)](#) on 22 Mar 2002, 10:02 p.m.,
in response to message #8 by mapet

mapet: *HP 17BII was discontinued as well.*

Huh?! It's still listed on their site, though... And it's listed as "In Stock" on hpshopping.com. Where did you see the discontinuation notice?

Re: Take a 17BII instead (Was: Re: 32Sii - it's unavailable?!)

Message #11 Posted by [mapet](#) on 25 Mar 2002, 2:50 a.m.,
in response to message #10 by John K. (US)

<http://www.exrom.com/Main.htm>

Re: Take a 17BII instead (Was: Re: 32Sii - it's unavailable?!)

Message #12 Posted by [Raymond Hellstern \(Germany\)](#) on 22 Mar 2002, 11:15 p.m.,
in response to message #8 by mapet

Some of the decisions at 'HP' seem to be really questionable...

Re: 32Sii - it's unavailable?!

Message #13 Posted by [Dan M](#) on 22 Mar 2002, 10:14 p.m.,
in response to message #4 by Dave

This is (and has been) listed as "out of stock" on

hpshopping.com aka shopping.hp.com

Staples.com lists this as deliverable in "1-3 days" for US \$68.99

Good luck shopping. I have one which I hope will be enough.

Dan

Re: 32Sii - it's unavailable?!

Message #14 Posted by [Bill Smith](#) on 23 Mar 2002, 11:36 p.m.,
in response to message #13 by Dan M

i was at Frys in Wilsonville, OR on Thursday. they had at least a dozen 32Sii on the rack for ~\$59.99.

i haven't checked their website lately (www.outpost.com), but they will ship with a credit card over the phone for those truly interested in a new one.

best regards, bs

Re: 32Sii - it's unavailable?! Response from HP.

Message #15 Posted by [Edwin Russell](#) on 25 Mar 2002, 8:09 a.m.,
in response to message #1 by Robert King

I sent the following to HP Technical Support:

Dear HP,

When you discontinued the HP-41 you released the source code in to the public domain under a "NOMAS" (NOt MAAnufacturer Supported)" agreement which has been implemented in emulators such as the superb one by Warren Furlow so the calculator can live on and the user's investment in learning it has not been wasted.

Now that you have discontinued the HP32SII just 4 months after I bought mine, as a supposed long term investment, will you now release the source code as before so that I am not wasting my time? It is a superb machine, but I was hoping to be able to rely on it for many years. If I accidentally break it and cannot buy another one I cannot do that, can I?

Yours faithfully, Edwin Russell.

and received the following reply:

Thank you for contacting HP's Customer Care e-mail support.

I have followed up on the HP 32Sii. I do first want to mention that you have reached technical support, and because the technical support center is not involved in decisions related to research and development of products, I cannot provide a detailed answer to your question.

I do know that we have not been officially notified that the HP 32Sii has been discontinued. It does seem that it has, but we have not received any official notification.

I do know that we support a product for 3 years from the date it is officially discontinued.

I think it is very probable that HP will be releasing the HP 32sii source code in to the public domain . There are several emulators for many of our older calculators, including the HP 12C that we still make. This seems to be standard operating procedure, but again, I am technical support and not involved in this decision. You may want to check at www.hpmuseum.org from time to time, they should have it when it is released.

Re: 32Sii - it's unavailable?! Response from HP

*Message #16 Posted by [Dave Hicks](#) on 25 Mar 2002, 1:22 p.m.,
in response to message #15 by Edwin Russell*

NOMAS materials are generally not public domain. The one's that I've looked at are copyrighted.

Last week I spoke with several people at HP about releasing ROM code for older calculators including the 41C and they didn't think it was very likely. Concerns expressed included giving the impression that HP doesn't defend its copyrights and the sort of confusion that we've seen recently about what items are or are not OK to copy. In fact, this seems to vary significantly even when you ask different people at HP. I've been given a contact for the new head of HP's calculator operations and I'm waiting to hear his take on all this. (I was told that with all the excitement at HP right now, it might take a while to get an answer.)

Response from HP - two questions:

*Message #17 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 26 Mar 2002, 10:12 a.m.,
in response to message #16 by Dave Hicks*

Hi, Dave, guys;

is the mentioned excitement caused by the Compaq merging? Is there anything new about that? Just to be up-to-date.

Thanks.

Re: Response from HP - two questions:

*Message #18 Posted by [Dave Hicks](#) on 26 Mar 2002, 6:44 p.m.,
in response to message #17 by Vieira, Luiz C. (Brazil)*

Mostly the merger. There was also a rumor about calculators but that was just casual conversation - nothing that anyone would want taken as an announcement I'm sure.

Re: Response from HP - two questions:

*Message #19 Posted by [adf33](#) on 16 Apr 2002, 1:14 a.m.,
in response to message #18 by Dave Hicks*

What rumor!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

Re: Response from HP - two questions:

*Message #20 Posted by [Paul Brogger](#) on 16 Apr 2002, 10:03 a.m.,
in response to message #19 by adf33*

I've heard that early 2nd quarter of 2003 (probably the beginning of April)
there'll be an astounding announcement about a new model that will be the
answer to everyone's dreams . . .

;^|

Re: Response from HP - two questions:

*Message #21 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 16 Apr 2002, 12:19 p.
m.,
in response to message #20 by Paul Brogger*

You mean... duh... April 1st?

Re: Response from HP - two questions:

*Message #22 Posted by [Frank](#) on 16 Apr 2002, 9:07 p.m.,
in response to message #21 by Vieira, Luiz C. (Brazil)*

Yes, you must mean the HP 43GZX Extreme. More powerful than Intel and Microsoft put together, it will have a monopoly on the calculator market larger than Andersen had on financial wizardry. It will single handedly cause retailers to clear the shelves of those old nasty Casios and TI's to make way for the new master, the only calculator anyone will ever need. In the finest traditions of the real HP, it is even more reliable than a Toyota Corolla. This calculator has no need for redundancy, you only need one. This calculator is everything to anybody, using it's superior intelligence to customize and connect itself to the brainwaves of the user for seamless and wireless mind integration. Its holographic display penetrates thoughts themselves for the fastest in computational ability. For alpha ability it can also singlehandedly run a small and possibly a medium size country be spewing endless alphanumeric characters in the pattern but at a much faster speed of most legislation. Useful for DNA calculations and patterns, it will quickly find it's way into Bioengineering. Able to calculate world optimal peace solutions, it will find its way to the International Negotiations table. It is too wise for anyone on earth to discribe, it just happened and no one really knows how, however it seems that time travel (t)yyyyyy and self cloning by the master unit

are some of its functions. Pricing has not been set by HP, however cloning seems to be of a geometric function?!

This time you've gone far...

Message #23 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 16 Apr 2002,
11:22 p.m.,
in response to message #22 by Frank

Wow!

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doscoloration of HP-71B's metal cover

Message #1 Posted by [Juergen Rodenkirchen](#) on 20 Mar 2002, 12:57 p.m.

Recently, I've got an HP-71B whose metal cover surrounding the display shows a brownish discoloration. The former owner of the machine says that this is probably due operation of the unit in a metallic protective case. I tried to get rid of this grime using both a household detergent and 94% isopropyl alcohol. Unfortunately, the results were poor and unsatisfactory! Does anyone know how to get rid of this brownish grime? Any advice would be appreciated! Thanks for your time!

Regards, Juergen

Re: doscoloration of HP-71B's metal cover

Message #2 Posted by [David Smith](#) on 20 Mar 2002, 5:37 p.m.,
in response to message #1 by Juergen Rodenkirchen

Try white gas (Coleman camping fuel). It sometimes works wonders (particularly for adhesive residues). It does not harm the plastic cases but can leave "water" marks on the keyboard background. Make sure your solvents are compatible by testing in on the back of the battery cover first.

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hp31e /34c batteries

Message #1 Posted by [Edwin Morales](#) on 20 Mar 2002, 12:53 p.m.

I have two hp31e and hp34c calculators working with alkaline batteries (2 x 1.5 Volts = 3 Volts) instead nickel/cadmium (2 x 1.25 = 2.5 Volts). Both work without problems? Is it safe?

Re: hp31e /34c batteries

Message #2 Posted by [David Smith](#) on 20 Mar 2002, 5:39 p.m.,
in response to message #1 by Edwin Morales

I have never had any problems in Spice or Woodstock series machines using alkalines. Just remember to NEVER plug in the charger... but then one should NEVER charge any batteries in a Woodstock machine.

Re: hp31e /34c batteries

Message #3 Posted by [Karl Schneider](#) on 23 Mar 2002, 3:25 a.m.,
in response to message #2 by David Smith

I just bought a 34C locally (Vancouver, WA) without a battery pack or charger (or manuals or case!). I, too, noticed that the factory- specified rechargeable AA batteries were rated at 1.25 V, while the disposable AA batteries are 1.5 V. I improvised by putting the 1.5 V batteries directly in the chamber in series, jumpered by a folded strip of aluminum foil. They fit snugly. The 34C seems to be working fine, but I was concerned about slow damage from slight overvoltage.

I visited Radio Shack this evening. The sales clerk said that freshly-recharged 1.2-V NiCd or NiMH AA cells can have 1.5-1.7 V, so there might not be a problem. Still, I'd like to know what the manual says. I guess I'll know when my CD set from the Museum arrives.

Re: hp31e /34c batteries

Message #4 Posted by [Edwin Morales](#) on 23 Mar 2002, 7:55 p.m.,
in response to message #3 by Karl Schneider

Manual says: Use of any batteries other than Hewlett-Packard battery pack may result in damage to your calculator. A manual from April 1980.

A tech problem or a business? My calculators are working fine.

Re: hp31e /34c batteries

Message #5 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 24 Mar 2002, 4:22 p.m.,
in response to message #4 by Edwin Morales

At least in my experience with a HP 25, alkalines are OK. I think that the circuitry allows for the not so large difference between a fully charged NiCD (perhaps 1.3V) and a regular alkaline (usually a little over 1.4 V).

The 1.5 V value comes from the old, zinc-carbon (non alkaline) batteries, and is used usually as a convention. A less than 10% tolerance seems almost logical.

While this makes sense to me as an Electronics Engineer, I can offer NO WARRANTY because I don't have any detailed data on the calculators circuitry and proprietary components HP used. This is just my personal opinion.

The alkalines may give you some 10 hours of service, while NiCd of the '80s offered about 2 hours, but a 500 charge-recharge cycles' life.

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Help on HP 11c

Message #1 Posted by [Bonnie Tatman](#) on 20 Mar 2002, 12:11 p.m.

I just got a HP 11c calculator... I use to have one before and on the display this one goes 2.000.000,00 instead of 2,000,000.00. Is there a way of changing the commas and periods... Thanks for your help.

Re: Help on HP 11c

Message #2 Posted by [Juergen Rodenkirchen](#) on 20 Mar 2002, 12:47 p.m.,
in response to message #1 by Bonnie Tatman

If the calculator is off, press the ON-key and hold it down, then press the decimal point key and hold it down, finally release the ON-button. That should have switched the modes.

Regards, Juergen

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hpcalc.org is closed (nt)

Message #1 Posted by [mapet](#) on 20 Mar 2002, 9:37 a.m.

nt

I want to help; how?

Message #2 Posted by [Vieira, Luiz C. \(Brazil\)](#) on 20 Mar 2002, 11:14 a.m.,
in response to message #1 by mapet

Hi;

everyone of us know well how important is having this sort of source, even for sharing info. We know it well.

Eric's provider wrote: *If we can get 50 or 60 people to help out, then we won't be stuck with a (relatively) large bill ourselves.* I want to help.

I will write him a mail offering help, I just want to know how to do it.

Is there anyone else?

Re: I want to help; how?

Message #3 Posted by [bill duncan](#) on 20 Mar 2002, 11:28 a.m.,
in response to message #2 by Vieira, Luiz C. (Brazil)

There are some "paypal" links on the site now. The site is running to a degree, with downloads mostly turned off.

Paypal is a pretty painless way of contributing. However, if you have problems with that, email Eric and perhaps he could except a check. I'm not sure if he's set up for that. I think his paypal account will even except credit cards, but again, I'm not sure.

Thanks for helping.

Re: hpcalc.org is closed (nt)

Message #4 Posted by [bill duncan](#) on 20 Mar 2002, 11:24 a.m.,
in response to message #1 by mapet

It's not closed. It's shut down temporarily while we work on some problems. I've been hosting the site for almost a year, and until January when the other mirror went down, we had always been just under my 50G/month limit. A few days ago however, I was hit with a large bill for extra bandwidth charges. With only one mirror, I was getting about 90G of traffic per month (which would've been more, had I not taken some steps for bandwidth limiting).

We are working getting one or more other mirrors into operation. In the meantime however, I'd appreciate some help in paying off the bandwidth charges we were hit with. Both Eric and I put a fair amount of effort into providing the site, and I don't think that it is fair that we should also be stuck paying for everyone's use.

So if you appreciate the site, and would like to help, we'd certainly appreciate some help with the bill. We're not making any money from the site, just looking for some cost recovery on expenses that neither of us can really afford on a "free" site which we already work hard at maintaining.

I'm sure that we'll have the site back up soon. But I'm already over the 50G March limit (up to around 65G now) and it's only 2/3 of the way through the month.

So don't leave it up to the "next" guy. If you appreciate the site being there, help us out with the bill please. We're about 1/3 of the way through getting the bill paid off from donations so far, thanks to the generosity of some of you.

Cheers.

Re: hpcalc.org - blacklisted IP addresses

*Message #5 Posted by [bill duncan](#) on 20 Mar 2002, 1:09 p.m.,
in response to message #4 by bill duncan*

There are some IP addresses which have also been blocked from accessing the site. We've had warnings about the bandwidth issue for months now, and still some people have been ripping through the site with automated downloaders. The ones which I've caught have been locked out at the firewall.

So if you're one of those people, you won't be able to access the site to contribute by the paypal links. In that case, send an email to Eric (eric@hpcalc.org) to arrange some kind of contribution. Or you can send me email with your IP address, so I can take you out of the blacklist.

Thanks!

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HP / Compaq merger in the news

Message #1 Posted by [Tom \(UK\)](#) on 20 Mar 2002, 7:57 a.m.

Go to:

http://news.bbc.co.uk/low/english/business/newsid_1881000/1881628.stm

The artical is headlined 'Close vote on computer merger' but the actual result won't be known for a few weeks.

Tom.

Re: HP / Compaq merger in the news

Message #2 Posted by [Frank](#) on 20 Mar 2002, 10:12 a.m.,
in response to message #1 by Tom (UK)

Hey, just like the Pres. election! Mr. Hewlett better have some auditors observing the counting or I think we know who will win. Perhaps Ander\$en has time.

Re: HP / Compaq merger in the news

Message #3 Posted by [Yani](#) on 21 Mar 2002, 4:22 p.m.,
in response to message #2 by Frank

Let us hope there are no hanging chads!

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Old IL-9114 disks

Message #1 Posted by [Simon Strach](#) on 19 Mar 2002, 7:08 p.m.

In the 70ties and 80ies I used to be a power-user of HP HH, starting off with the HP35 in 72.

I must have spent at least 10.000 \$ then in HP-calculators and peripherals.

I was one of the founding members of the CCD Germany, you might recall the respective module.

After the 41 CX(Y) I had an HP 48 and now I own an HP 49G.

I still believe the 41 is THE superiour machine, and hasn't found it's successor yet. HP should have developed it further, 10 times the speed and memory, but not as sophisticated as the 49G, which is too complex for my taste.

I have a question someone might be able to help with:

I used to have a 9114B IL-diskdrive, which I sold long time ago. Now with the super emulator V41 R7(a really fine job!) I would like to run extensive programs on nuklear theory which I developed in 86.

I have same 40 disks, all formatted on the 9114, which of course are not DOS/Win compatible.

I looked at various converters (LIF and others), but don't seem to get any data out of them. No program files, nor ROM-files.

Does anyone know a way to get the data via the DOS-floppy-drive to the V41 R7? I tried the converter, it ran for ages and then prompting the message no valid data (or so) found.

Tips or work-arounds are most welcome.

Simon Strach, Koeln, Germany

Re: Old IL-9114 disks

Message #2 Posted by [Dan M \(Vermont, USA\)](#) on 19 Mar 2002, 9:43 p.m.,
in response to message #1 by Simon Strach

Dear Simon:

Many thanks for your past efforts, including the (in?)famous CCD ROM. I'd like to see one of those someday.

One problem that I encountered in the past is that LIF disks formatted by the HP41-9114 cannot be read by the LIFUTIL program. The HP41 did not use or recognize disk volume labels, but the LIFUTIL program requires them. I had modified an old program from the PPC Journals to have the HP41 add a volume label to a disk. This required the Extended IO module (and a 9114 drive!), but I don't remember where I stored the program or the details... I could re-invent it easier than finding it again!

I do believe that you can rescue your old programs and run them on the V41 R7 emulator. I have had good luck with both LIF and LIFUTIL, using a PC drive to extract files from LIF (9114) disks.

I have successfully used these both quite recently, on a "modern" laptop PC with very good results. For lots of files at once, I like "LIF" (which appears to be less common) because it is run from a DOS prompt and can be set up multiple times in a .BAT file.

You should be able to extract the files from your old 9114B disks onto a PC somehow, and then use Leo Duran's most very excellent hp41uc program to convert them to .RAW files which can be directly read by the V41 R7 emulator.

Please email me or post here if you need more information.

I've been recently looking at LIF files and disks again, as I am trying to figure out how to put Tony Duell's LIF images back onto LIF disks from a MS operating system. It seems it would probably be just as easy (and more ethically satisfying) to convert myself to linux and be done with it.

Best of luck, and please don't give up.

Dan Bellows Falls, Vermont USA

Re: Old IL-9114 disks

*Message #3 Posted by [Tony Duell \(UK\)](#) on 20 Mar 2002, 5:52 p.m.,
in response to message #2 by Dan M (Vermont, USA)*

If you're having problems writing my images to physical disks under MS-DOS, you're welcome to e-mail me to ask questions. Yes, I know I GPLed stuff which implies there's not necessarily any support, but equally, I do love old HPs and will help if possible. Years ago I wrote a program for MS-DOS to read PERQ workstation (8") disks. It directly programmed the disk controller and DMA chip. Although not directly applicable to reading 9114 disks, it might give you some hints. I think the terms on that were 'copyright ARD, but distribute for the benefit of PERQ-fanatics'. I am certainly not going to object if it's used for the benefit of HP calculator hackers either. Be warned that you'll probably need a fair understanding of the PC's disk controller and DMA chip -- when I was writing both the PERQ disk program and the LIF utilities for linux, I had the IBM PC/AT TechRef, the Intel 8272 datasheet (disk controller) and the Intel 8237 data sheet (DMA chip) open in front of me...

Re: Old IL-9114 disks

*Message #4 Posted by [Dan M](#) on 20 Mar 2002, 8:25 p.m.,
in response to message #3 by Tony Duell (UK)*

Hi Tony,

Regarding your LIF image files: I had not intended to write a DOS-level disk writing program, as I have absolutely no understanding of the PC's disk controller. My idea was to write some program (C?, "VisualBasic?") to go through the image file, and extract the files into a format I'm used to (.p41, .raw, .txt, whatever). It shouldn't be that hard to do. Once I have those, I am very comfortable writing them to disk.

I would like to toy around with ROM files myself, as I am slowly trying to get into 41 m-code. I have an EPROM - ROM emulator for the 41, a variety of EPROM - ROMs, and got a great little EPROM programmer at a surplus sale the other day. I don't have a MLDL -yet- but would like to get one or build one soon. When I have the time.

Thanks for your help,

Dan M

Re: Old IL-9114 disks

*Message #5 Posted by [Tony Duell \(UK\)](#) on 21 Mar 2002, 2:06 p.m.,
in response to message #4 by Dan M*

What you are asking for already exists -- but for linux. My lifutils distribution contains programs to produce a directory of a disk or image, to extract a file from a disk or image, and to turn several types of files (HP41 programs, sdata (== HP41 data), text, etc) into printable text. OK, as I said it's for linux, but it's distributed as C source, so you're welcome to try porting it to other OSes, or to get ideas from it, or... FWIW, the best reference I've found for the _logical_ structure of a LIF disk is in the back of the HP71 IL module user manual. It's better than the official LIF specification I borrowed from the HPCC library

Re: Old IL-9114 disks

*Message #6 Posted by [Tony Duell \(UK\)](#) on 20 Mar 2002, 5:45 p.m.,
in response to message #1 by Simon Strach*

As regards which is the better calculator, if I want to do complex calculations, I use my 48. If I want a 'hackers toy' -- a fun machine to program and use, then I choose a 67, 41 or 71. I don't know what this says about me (other than I have an excessive number of HP calculators). Now for the main problem. If you were running linux I'd 'blow my own trumpet' and recommend my lifutils for linux. They certainly can read 9114 disks. They can produce directories, extract individual files, turn HP41 binary programs into listings, etc. I've not done much with ROM image files (type E070) yet -- I'm only just getting into HP41 m-code. But I have written programs to turn such an image into the '2 bytes for each HP41 word' format used by some emulators (I believe). And to scan the FAT of the latter type of file and display the functions in the ROM. Apart from that, somebody suggested the problem was a lack of volume label on an HP41 disk. If you could borrow a 9114 and some controller that allows low level access to HPIL (I would suggest either a 41 + IL module + DevIL ROM or an HP71 + IL module) then you could read in block 0, stick a volume label in the first few bytes, and write it back to the disk. Reading/writing 'alien' disks is hard under MS-DOS though. I've done it, but I didn't particularly enjoy it. You virtually have to program the disk controller and DMA controller yourself. If you want to try writing your own MS-DOS programs to read 9114 disks, you're welcome to e-mail me and I'll give any help I can (it's not really suitable for posting here, though).

Re: Old IL-9114 disks

Message #7 Posted by [Frank Glitz](#) on 21 Mar 2002, 5:11 a.m.,
in response to message #1 by Simon Strach

Hi,

I did a lot of "near hardware" assembler programming for MS-DOS PCs and might possibly be able to write a conversion program if someone can provide a detailed description of the HP-9114 disk format. Or simply tell me where to find it...

I had the same problem with LIFUTIL, it doesn't work with HP-9114 disks.

Frank

Re: Old IL-9114 disks

Message #8 Posted by [Tony Duell \(UK\)](#) on 21 Mar 2002, 2:13 p.m.,
in response to message #7 by Frank Glitz

You might look at article 260 in the articles forum. This is my documentation on the file format I used for the disk images, and how it relates to a physical disk. The disk format is 77 cylinders, 2 sides, 16 sectors per track (per side, so 32 sectors per cylinder). •HP put some odd stuff on the higher cylinders relating to bad track replacement, etc. I've never tried to decode this -- all I do is use good quality disks (so there are no bad tracks), and format them on a real 9114, so the HP stuff is put there. And then only bother with the first 77 cylinders. You don't need to understand the logical structure of a LIF disk to write one of these images to a physical disk, but if you're interested, the reference I most used when I was writing the lifutils for linux was at the back of the HP71 HPIL module owner's manual. The HP71 IL IDS was handy too, but not essential.

Re: Old IL-9114 disks

Message #9 Posted by [Frank Glitz](#) on 21 Mar 2002, 3:50 p.m.,
in response to message #8 by Tony Duell (UK)

Tony,

thanks for your reply. I'll take a look at the stuff you suggested. I just restored my old development environment and will start working asap.

The instant I have a result I'll post a message here.

Frank

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Re: hp48 ew "rules menu"

Message #1 Posted by [marc \(Brasil\)](#) on 19 Mar 2002, 1:37 p.m.

Sure it helps! Thanks again.

[Brazilian Portuguese] Eu tenho minha calculadora há 4 anos. Uma semana a mais ou a menos não é nada. Meu e-mail é shuuichi@bol.com.br Valeu mesmo!

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Remember this?

Message #1 Posted by [ARUID](#) on 19 Mar 2002, 1:32 p.m.

Remember this article?

<http://web.archive.org/web/19970709071703/www.hp.com/abouthp/features/hp35calculator/>

Its like a time machine to 1997 if you click on the link to HPs home page you get the home page used in 1997! Its almost like a snapshot of the internet.

ARUID

Re: Remember this?

Message #2 Posted by [Ellis Easley](#) on 19 Mar 2002, 6:33 p.m.,
in response to message #1 by ARUID

I was unable to download the 2.5 MB .pdf of a June 1972 HP Journal article referenced on this page. I wonder if it is the one that describes how they determined what accuracy was required?

One sentence from the HP website article: "The little "electronic slide rule" weighed only nine ounces (metric weight)." ???metric weight???

Re: Remember this?

Message #3 Posted by [Gil Petri](#) on 25 Mar 2002, 10:56 p.m.,
in response to message #2 by Ellis Easley

I have the PDFs if you want.

Re: Remember this?

Message #4 Posted by [Ellis Easley](#) on 26 Mar 2002, 12:45 p.m.,
in response to message #3 by Gil Petri

Thanks for the offer. I have ordered the PPC CD-ROM Set which should have some of the files, the website says it includes "All relevant handheld-related articles from the Hewlett-Packard Journal, 1968 to the present." and "... relevant HP Journal articles from 32 issues ranging from 1968 to 1996". The article "Algorithms and Accuracy in the HP-35" sounds like it must be the one mentioned in the thread about how y^x behaves on different models. I would appreciate you sending me that one (600 kB) in advance of the arrival of my CD-ROMs.

I tried to download the articles again, this time I clicked on the HP Journal cover which let me select past issues and then the special 25th anniversary issue, from which four .pdf's are supposed to be available: The 'Powerful Pocketful': an Electronic Calculator Challenges the Slide Rule (2.5 MB), Algorithms and Accuracy in the HP-35 (600 kB), Packaging the Pocket Calculator (600 kB), New Capabilities in Digital Low-Frequency Spectrum Analysis (2.3 MB). The first one acts like it is downloading but it never does (I let it go for a couple of hours last night!) and the others say they are not in the archive (the link is not to HP but to an archive service). Not only could I not download the .pdf's, my computer got completely hosed several times.

Re: Remember this?

Message #5 Posted by [Ellis Easley](#) on 27 Mar 2002, 5:57 p.m.,
in response to message #3 by Gil Petri

My PPC CD-ROMs arrived today and they do include all three articles about the HP-35.

Do you by any chance have the fourth article, which is about FFT analysis? "New Capabilities in Digital Low-Frequency Spectrum Analysis" (2.3 MB) I just got a piece of equipment from that era and I think it might be an early FFT analyzer. It is an HP-5480B "Memory/Display" with two plug-ins: 5485A "2 Channel Input" and 5486B "Control". The 5485A has a three position switch labeled "Histogram" and the choices are "Off Freq. Time"

Re: Remember this?

Message #6 Posted by [Tom \(UK\)](#) on 20 Mar 2002, 7:30 a.m.,
in response to message #1 by ARUID

There are some 'errors':

"weighed only nine ounces (metric weight)." really!

"Dave Hicks, an engineer at Intel Corporation in Oregon, is such an HP calculator fan, he owns every HP calculator model ever made." - Well I own an HP32Sii he does not have!!!

and perhaps they could update the text with: (my alterations in brackets)

HP continues to be first to (withdraw from the) market innovative calculator products that allow increasingly greater speed, accuracy and complexity in problem-solving ability, leading the way in (withdrawing) calculators for business, finance, science and graphics.

Hilarious!

Message #7 Posted by [Gene](#) on 20 Mar 2002, 8:20 a.m.,
in response to message #6 by Tom (UK)

Tom wrote: ""Dave Hicks, an engineer at Intel Corporation in Oregon, is such an HP calculator fan, he owns every HP calculator model ever made." - Well I own an HP32Sii he does not have!!!"

Gene: That's hilarious. :-) It just goes to show how much trouble communication can be sometimes. :-)

Thanks for the laugh!

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Here We Go Again ...

Message #1 Posted by [Larry](#) on 19 Mar 2002, 10:48 a.m.

He even snipped the watermark off of the bottom of the photo:

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1340531617>

Larry

Re: Here We Go Again ...

Message #2 Posted by [Fred](#) on 19 Mar 2002, 11:55 a.m.,
in response to message #1 by Larry

Yes , ...

But how to do when you have not the ability to make a numerical photo of what you want to sell ???

Fred

Re: Here We Go Again ...

Message #3 Posted by [Jim L](#) on 19 Mar 2002, 2:28 p.m.,
in response to message #2 by Fred

Well if you're a crook you could steal a digital camera. If you're not a crook you could post without a picture. How much use is a picture of someone else's HP12C anyway? It tells me nothing about 12Cs in general that I didn't already know and it also tells me nothing about the condition of the one being auctioned.

Re: Here We Go Again ...

*Message #4 Posted by [Glynn](#) on 19 Mar 2002, 8:02 p.m.,
in response to message #2 by Fred*

When you'd like to borrow a photograph from this source, or any other, it is polite to ask the owner if he/she would allow it.

Dave Hicks honors many such requests, with certain few conditions. Like credit for being the source, for example.

It makes sense, doesn't it, to at least indicate what you are doing and why, even if you DIDN'T get permission? But to crop off the label and leave it looking like it was something YOU photographed in person, that is DECEPTION, isn't it?

Ask now why the man would not just say, << I don't have a camera (numerical photo maker, whatever) or scanner, but here's a photo from a neat website where you can find out all about this nifty calc >>.

Of course, just because he is practicing DECEPTiON here, does not mean he is dishonest. Go ahead, send him money. (I'm certain he DOES have a calculator, hahaha he wouldn't lie about THAT, now, would he?) --- Isn't eBaying sort of an exercise in trust? How much trust can you place in someone that gets off to such a start as borrowing and altering a photo and not getting permission nor crediting its ownership?

So that's the point in making a big deal of it. If he simply acknowledges on his page that it's Dave's photo from MoHPC, the public at large is at least aware that the photo is only a representation, NOT the particular calc itself up for auction. Then nobody is FOOLED. And Dave's site benefits from the exposure. That's not too much to ask for, I think.

Re: Here We Go Again ...

Message #5 Posted by [doug](#) on 19 Mar 2002, 7:03 p.m.,
in response to message #1 by Larry

The last person that ran a photograh that obviously wasn't the calculator he had for sale I sent him a simular inquiry and he immediately said he didn't have a photograph to use so he just borrowed that one and he even updated his ad accordingly. Some people are just new at this. This gives them a chance to set things straight.

The question was asked direct enough to get an honest answer. The question was evaded. This person was given the opportunity and wouldn't answer directly until asked directly.

No its not. My calculator is actually in better condition.

-----Original Message----- From: Doug [mailto:alwaysup@att.net] Sent: Tuesday, March 19, 2002 4:13 PM To: Bob Constant Subject: Re: Question for seller -- Item #1340531617

Hi Bob, Is this the actual calculator in the photograph. Thanks, doug ----- Original Message ----- From: "Bob Constant" <bconstant@RoyalBankPA.com> To: <alwaysup@att.net> Sent: Tuesday, March 19, 2002 3:46 PM Subject: RE: Question for seller -- Item #1340531617

This calculator may have been used twice. Not a mark on it.

-----Original Message----- From: alwaysup@att.net [mailto:alwaysup@att.net] Sent: Tuesday, March 19, 2002 3:45 PM To: constant11@comcast.net Subject: Question for seller -- Item #1340531617

In the picture the calculator looks like there are not scratches, dents, or dings anywhere. So this is exactly what the calculator looks like right now? Thanks, Doug ----- Question from: doug Title of item: HP-12C FINANCIAL CALCULATOR (FREE SHIPPING) Seller: powerstack Starts: Mar-19-02 03:53:49 PST Ends: Mar-22-02 03:53:49 PST Price: Currently \$16.25 To view the item, go to: <http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1340531617>

Re: Here We Go Again ...and again

Message #6 Posted by [Ty Rogers](#) on 21 Mar 2002, 8:10 a.m.,
in response to message #1 by Larry

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1339012532>

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Re: Non-calculator 82240B Printer Use

Message #1 Posted by [John K. \(US\)](#) on 19 Mar 2002, 6:45 a.m.

Speaking of 82240B printers-- Does anybody know a (non-eBay) source for the HP F1011A 12V power brick? TIA!

Re: Non-calculator 82240B Printer Use

Message #2 Posted by [Frank](#) on 19 Mar 2002, 12:27 p.m.,
in response to message #1 by John K. (US)

Need one myself. Wouldn't HP still have also?

Re: Non-calculator 82240B Printer Use

Message #3 Posted by [John K.](#) on 19 Mar 2002, 10:09 p.m.,
in response to message #2 by Frank

I can't even get them to admit they ever made it... :^(

Re: Non-calculator 82240B Printer Use

Message #4 Posted by [David Smith](#) on 19 Mar 2002, 4:31 p.m.,
in response to message #1 by John K. (US)

I think the power plug used on these machines is 9 volt AC, 15 watt. It is apparently the same one used in the HP95LX palmtop. Any good electronics surplus store should have something that works.

Re: Non-calculator 82240B Printer Use

*Message #5 Posted by [John K.](#) on 19 Mar 2002, 10:14 p.m.,
in response to message #4 by David Smith*

Yeah, but the F1011A has that neat folding plug and is actually pretty small. One interesting thing is that, according to the numbers I have for it, it is a 12V, 0.3A supply... Hmm.

Re: Non-calculator 82240B Printer Use

*Message #6 Posted by [Ellis Easley](#) on 19 Mar 2002, 6:48 p.m.,
in response to message #1 by John K. (US)*

I've been using a transformer for an Atari 800 XL which is rated 9V 31VA and has the right size plug. The printer manual happily gave a good description of the requirement, which has a lot of latitude. I'd like to quote the manual, but I can't find it right now.

Re: Non-calculator 82240B Printer Use

*Message #7 Posted by [John K.](#) on 19 Mar 2002, 10:20 p.m.,
in response to message #6 by Ellis Easley*

Just out of curiosity, what does the manual say is the acceptable range for the power supply?

Re: Non-calculator 82240B Printer Use

*Message #8 Posted by [Frank](#) on 20 Mar 2002, 7:44 a.m.,
in response to message #7 by John K.*

That's the one thing I do have is the manual but not here. If it is 9vac I'm in good shape as I have some left from misc telephone ans machines. Also redio shach carries many ac supplies now.

Re: Non-calculator 82240B Printer Use

*Message #9 Posted by [James M. Prange](#) on 4 Apr 2002, 9:00 p.m.,
in response to message #7 by John K.*

The manuals (for both 82240A and 82240B) specify 9-12 V AC or DC; 500-1500mA. The 82241A is labeled for an output of 9V AC 13.5VA MAX. The F1011A is labeled as having an output of 12V DC 0.75A, with the outer contact positive and inner contact negative. But the printers work fine with either polarity DC.

Regards, James

Re: Non-calculator 82240B Printer Use

*Message #10 Posted by [John K. \(US\)](#) on 4 Apr 2002, 9:45 p.m.,
in response to message #9 by James M. Prange*

Thanks for the info!

That is a very wide operating range, and it seems really odd that it would accept both AC and DC power. Still, it is an HP product...

Re: Non-calculator 82240B Printer Use

*Message #11 Posted by [Andrés C. Rodríguez \(Argentina\)](#) on 5 Apr 2002, 7:16 a.m.,
in response to message #10 by John K. (US)*

It there is a rectifier bridge at the input, you can disregard polarity.

While it is stressing things a bit, you can design for AC and think about DC as AC with zero frequency

It is POSSIBLE, but I am not sure if the printer is designed this way or not.

Re: Non-calculator 82240B Printer Use

*Message #12 Posted by [John K. \(US\)](#) on 5 Apr 2002, 7:57 a.m.,
in response to message #11 by Andrés C. Rodríguez (Argentina)*

Indeed. It seems so typical of HP to devise such a baroque design for the thing. The mind boggles.

Re: Non-calculator 82240B Printer Use

*Message #13 Posted by [David Smith](#) on 5 Apr 2002, 5:26 p.m.,
in response to message #12 by John K. (US)*

Actually the bridge rectifier input design is one of the simplest possible ones. It allows any polarity input voltage and if there is a filter cap the use of AC. As long as the circuit is isolated externally from ground you can feed it any type or polarity of voltage and not worry about frying things.

Re: Non-calculator 82240B Printer Use

Message #14 Posted by [Julián Miranda \(Spain\)](#) on 20 Mar 2002, 10:15 a.m.,
in response to message #1 by John K. (US)

I have seen it at: <http://wagonphoto.com/HPCalculators.htm>

I have not buy from them but has answered some questions very politely.

Re: Thanks! Non-calculator 82240B Printer Use

Message #15 Posted by [Frank](#) on 20 Mar 2002, 5:49 p.m.,
in response to message #14 by Julián Miranda (Spain)

Thanks for the site tip on the adapter!

Re: Non-calculator 82240B Printer Use

Message #16 Posted by [John K. \(US\)](#) on 21 Mar 2002, 7:30 a.m.,
in response to message #14 by Julián Miranda (Spain)

Thanks for the info on the site, Julián! I'll give them a try.

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