HP Forum Archive 11

Welcome!

This is an archive of older posts from the HP forum.

Message Index

All Messages

(Compressed "Threads Only" Listing)

- **HP 25 Batteries**, Burma **2 responses**
- **almost the earliest 18c serial number!**, gene **0 responses**
- **? How to reattach "zebra stripe" LCD connection in TI-30Xa?**, Paul Brogger **2 responses**
- **15C basic question >>**, dbusse **2 responses**
- **HP-67 not working key & read problems**, Jon **0 responses**
- **Should I break the seals?**, Dr. Anoop Sahal **5 responses**
- **some research on the meaning of "PPC"**, Ellis Easley **1 response**
- **9114B and 2225B Battery Pack Find**, Katie **8 responses**
- **New book I found.**, Speck **4 responses**
- **Features/Functions for a calculator**, Ben Salinas **1 response**
- **How to open an HP 28S**, Marx Pio **3 responses**
- **32E dismantling**, hugh **1 response**
- **HP-9G**, Martin (UK) **7 responses**
- **HP-42S bug list?**, Gene **2 responses**
- **HP28C beep disable**, madal **2 responses**
- **28S users...question >>**, dbusse **2 responses**
- **hp graphics - comment?**, lokhin **4 responses**
- **E-mail ID stolen - please, read.**, Vieira, Luiz C. (Brazil) **23 responses**
- **To Michael Coyle: re: single-digits**, glynn **6 responses**
- **What's a PPC Rom worth?**, Tony **3 responses**
- **Recharging an HP33c**, joe **2 responses**

- **30.6001, 25 year old hack?**, hugh **10 responses**
- **HP 28C - Disabling the beep?**, Mike **2 responses**
- **Bought in haste...>>**, dbusse **6 responses**
- **HP34C case**, Howard **1 response**
- **RPN Financial calculator**, Renato **1 response**
- **82143A Printer repair?**, Steve **8 responses**
- **Disintegration of vinyl case**, Graham Whyte **8 responses**
- **Remember this: Questionable auction for 50* 39G calcs**, Mike **5 responses**
- **HP75/HP82164A**, G.Kuhn **0 responses**
- **HP-26 Minimal Calculator**, Gordon Dyer **10 responses**
- **Re: HP Virtual Museum**, Gordon Dyer **0 responses**
- **HP Virtual Museum**, Gordon Dyer **3 responses**
- **Is the 48G series a classic yet?**, Jeremy **9 responses**
- **17BII color schemes**, Dano **2 responses**
- **HP-71 and 75**, Michel Beaulieu **2 responses**
- **hp49g**, Gulu **0 responses**
- **hp48g & hp48s**, George **8 responses**
- **question on hp 42s**, lokhin **1 response**
- **HP-41C Dust in the display**, Jon **4 responses**
- **Seeking somewhat advanced HP-41 info...**, Lyle Lower **2 responses**
- **HP-39 Backup/Restore?**, Tom Cox **2 responses**
- **Give me a break... Check this out:**, joe **3 responses**
- **Newcomer has questions**, Trent Moseley **26 responses**
- **hp42s lcd replacement**, david e **4 responses**
- **hp71 HHP card reader RAM module question**, andy **3 responses**
- **11C**, MarJean **5 responses**
- **A Step in the Right Direction, Anyway...**, John K. (US) **16 responses**
- **advise on hp 28s needed**, lokhin **10 responses**
- **Easter day challenge**, hugh **6 responses**
- **HP Calculator Patents**, Tony Duell (UK) **6 responses**
- **This may not be the place for this but, >>**, David **3 responses**
- **HP 97 non-reading of Mag. cards**, Jeff Maher **4 responses**
- **This HP-34C auction not quite correct**, NH **0 responses**
- **Questionable auction for 50* 39G calcs**, Raymond Del Tondo (Germany) **4 responses**
- **HP-91 recharger problem**, Renato **2 responses**
- **NiMH battery recharging**, Ellis Easley **3 responses**
- **Using INPRT to capture IR from a 42S**, Steve **1 response**
- **Museum pictures on a auction**, Anonymous **3 responses**

- **They are remanufacturing this Classic 1977 Calculator**, NH **12 responses**
- **HP32E**, Richard Nicoletti **5 responses**
- **HP 29C problem**, Christopher Migdal **2 responses**
- **HP-41CV Keyboard/Behavior Weirdness**, Paul Brogger **4 responses**
- **Have memory, and getting "insuf memory" err mssg.**, Jes **1 response**
- **Coming Soon...?**, John K. (US) **4 responses**
- **41C with LCD problems**, Randy **5 responses**
- **Questions about Programming**, Ben Salinas **5 responses**
- **How much would an HP-35 cost in today's dollars?**, Jeremy **2 responses**
- **HP-26 Prototype Found**, Gordon Dyer **19 responses**
- **HP-41 CX went for $610 in the end**, Clive Marner **3 responses**
- **English Commodore M55 Manual**, Clive Marner **13 responses**
- **HP-94E Printing**, Erik Anderson **1 response**
- **71b bug list**, andy **3 responses**
- **Another link**, Dave Hicks **0 responses**
- **New HP Calculator**, HrastProgrammer **9 responses**
- **preview picture of H.P.'s new A.O.S. calculator**, db(martinez,california) **4 responses**
- **MoHPC manual collection**, lokhin **1 response**
- **Opinions on the 20S?**, Jeremy **5 responses**
- **The 48G saves the day.**, Jeremy **12 responses**
- **HP 32SII eBay auction**, Howard **1 response**
- **Re: HP-41 Blank Keyboard Overlays**, David Smith **0 responses**
- **HP-97 printer**, Michel Beaulieu **4 responses**
- **HP42S paint job**, David E **3 responses**
- **Earth Science Solutions Software**, Gene R. DiResta, Ph.D. **0 responses**
- **Re: HP-41 Blank Keyboard Overlays**, Dave Shaffer **0 responses**
- **crazy ebay price**, olivier croissant **4 responses**
- **Substitute Magnetic Cards for HP-97?**, Paul Brogger **3 responses**
- **HP-35 Battery Door Repair**, Monty Baugh **3 responses**
- **Curious 71b behavior**, andy **4 responses**
- **HP67-Card Reader**, Howard **1 response**
- **HP 9815A**, Fabrizio **1 response**
- **I need calc with aglebraic solver !**, mapet **7 responses**
- **poll**, mapet **11 responses**
- **HP-41 Blank Keyboard Overlays**, Donald Leonard **2 responses**
- **HP-33E batteries**, Gary Smith **8 responses**
- **ArmorAll (protectant) for HP-97 exterior?**, Paul Brogger **9 responses**
- **Question on 82120A Batt. Pack**, Ion Abraham (New Mexico USA) **1 response**

- **HP67 Card Reader**, Trent Moseley **0 responses**
- **12C on the blink**, Anand **4 responses**
- **hp-71b installing/removing memory**, Terry Ingram **4 responses**
- **old photo with hp logo or name**, Craig **13 responses**
- **HP 65 - Non functioning Card Reader Engine**, Bengt Walerud **1 response**
- **Wow. Another HP at $510 and counting!**, Gene **10 responses**
- **$510 and counting**, Gene **5 responses**
- **Nasty "Near Perfect Condition" 48SX**, Lane **3 responses**
- **Even More Uncredited MoHPC Pictures on EBAY**, Spice_Man **6 responses**
- **Problem Solved**, Jack Stafford **0 responses**
- **I picked up my 32SII today! Joy.**, Jeremy **10 responses**
- **HP-41CX Issues!**, Jeff **3 responses**
- **Ebay price of this HP-35** , George **4 responses**
- **HP-82240B Infrared Printer** , Jeff **1 response**
- **Nut Processor Clock Speed?**, Steve **7 responses**
- **Benchmarks?**, Patrick **6 responses**
- **HP-97 printer problem**, George Merriman **1 response**
- **Amazon**, Bob Noble **2 responses**
- **Two little RPN challenges (11C, 15C ...)**, Ex-PPC member **5 responses**
- **I bought Hp 42S for $100**, mapet **4 responses**
- **Statistical Bug?**, Trent Moseley **0 responses**
- **HP-10C War Prices ?**, Cr Toloss **5 responses**
- **HP-32S vs HP-32Sii**, George **11 responses**
- **Silver trim paint. Forum search**, Michel Beaulieu **5 responses**
- **HP Distributor: New Calcs Are Coming**, J.C. Randerson **6 responses**
- **Another instance of ebay madness?**, Gene **3 responses**
- **HP 34C**, Gordon Dyer **15 responses**
- **New calculators**, Vázquez **2 responses**
- **Help me decode this serial number...**, joe **9 responses**
- **HP49G ROM-Error**, Hendrik P. **2 responses**
- **Re: Statistical Bug?**, R Lion **5 responses**
- **Actually, I dont' think that's correct**, Gene **0 responses**
- **Commodore M55 Manual - Gene please read**, Clive Marner **3 responses**
- **new HP-16C emulator online preview**, Alexander Supalov **6 responses**
- **HP28S: Computing summary statistics?**, Gary E. RAFE, Ph.D. **1 response**
- **HP-21 battery terminals**, Natalie Wilkie **3 responses**
- **Statistical Bug?**, Trent Moseley **11 responses**
- **Can you tell a Halfnut by it's SN?**, Steve **3 responses**

- **HP-97**, Gary Hahn **1 response**
- **Capacitors**, Howard **4 responses**
- **OOPS**, Tom Cox **0 responses**
- **HP 84123 Printer**, Tom Cox **3 responses**
- **HP41 Magnetic Cards**, Tom Cox **4 responses**
- **HP-41 card reader "memory lost"**, Michel Beaulieu **2 responses**
- **'Halfnut' vs 'Fullnut'**, joe **7 responses**
- **HP-41 Dungeon of Doom / Frank Wales game help sought**, Gene Wright **2 responses**
- **chance to help someone in Uganda w/HP-19BII?**, gene **4 responses**
- **misleading wording on ebay 34C**, Malcolm Brooks **12 responses**
- **HP 9810**, olivier croissant **2 responses**
- **hp 25 simulator**, R Lion **4 responses**
- **HP and TI**, Joerg Woerner **2 responses**
- **Card Reader HP65 - Need help**, Bengt Walerud **2 responses**
- **Uncredited HPmuseum pic ?**, mapet **11 responses**
- **Flakey 28S**, James M. Prange **0 responses**
- **Re: HP-67 card reader reading**, Michel Beaulieu **5 responses**
- **HP98x0 machine code info?**, Tony Duell (UK) **1 response**
- **Repairing HP98x0 keyboard bezels**, Tony Duell (UK) **0 responses**
- **hp-22S open cant put back together**, David **1 response**
- **A sad story**, Juan_J **21 responses**
- **82002A charger diagnostic help**, Malcolm Brooks **4 responses**
- **HP Advantage Pak problem**, John Flinn **11 responses**
- **Hp advertising brochure** , Randy Sloyer **4 responses**
- **Good prize, isn't it?**, R Lion **1 response**
- **HP and Scholastic Launch 2003 Create-A-Calculator Contest**, J.Manrique López **14 responses**
- **hp 22s - '7' key problem**, Neil **7 responses**
- **Misc. Repairs -- SHARP**, Paul Brogger **1 response**
- **HP 100LX problem**, mapet **0 responses**
- **Molded Keys on 48G/GX**, Scuba Diver **12 responses**
- **Disintigrating 41C soft case**, Dave F **8 responses**
- **Who wants a 41CV for $120?**, Jeremy **18 responses**
- **9114B battery**, Diego Diaz **10 responses**
- **HP-33C HP-33E HP-34C HP-38C HP-38E Business vs. Engineering**, Norm **12 responses**
- **A Really Obscure (unknown?) Bug**, Katie Wasserman **3 responses**
- **NOT WORKING HP-41C**, Jon **8 responses**
- **This one's for you, Norm.**, Jeremy **2 responses**
- **The story of my collection. (super long, hopefully worth it...)**, Jeremy **5 responses**

- **HP-67 card reader Clutch BAD JOB**, Michel Beaulieu **5 responses**
- **like a man in the desert, red LED hp-34c**, Norm **2 responses**
- **HELLP! HP-34C HELLP! Plastic case problem**, Norm Hill **20 responses**
- **hp Replacement batteries**, David E **1 response**
- **Poll - Is it time to add the 32SII and 20S to the fully fledged part of the Museum?**, Jeremy **4 responses**
- **I've missed HPs heyday... (long)**, Jeremy **6 responses**
- **RPN Yoda**, Gordon Dyer **3 responses**
- **HP-85 software**, rhahm **2 responses**
- **Shipping for HP15C on eBay**, Vlad H. **11 responses**
- **Anyone looking for 85 HP-38G calculators?**, Gene **0 responses**
- **Wow. $275 and counting for a 15c**, Gene **3 responses**
- **The 'HolyGrail' of HP calculators...**, joe **27 responses**
- **HP67 Card Reader not writing**, Gene R. DiResta **6 responses**
- **ebay.de price history updated and at new adress**, Holger Weihe **8 responses**
- **Repairing HP41C**, Luis **4 responses**
- **HP-25 program line**, Michel Beaulieu **7 responses**
- **Poll - How long did it take you to gel with RPN/RPL?**, Jeremy **12 responses**
- **HP-41CV, Decimal point**, John Rutherford **5 responses**
- **Maximum Calculator**, Richard Parfitt **1 response**
- **LCDs on HP Calculators before the 41C**, Richard Garner **24 responses**
- **Can you clear out the stack?**, joe **9 responses**
- **Clearing a mistake entry...**, joe **2 responses**
- **CHPC founded in Zagreb, Croatia!**, Croatian HP Club **9 responses**
- **Problem with my HP-41**, Luis Gomez **5 responses**
- **Programming Challenge: Powers and Roots**, Patrick **4 responses**
- **What is the easiest way to build a PC-HP48 cable?**, Jeremy **7 responses**
- **hp-71b RPN capability**, Terry Ingram **5 responses**
- **HP-25**, Michel Beaulieu **5 responses**
- **HP 14B Self test**, Neil **3 responses**
- **Good grief! $56 for this part?**, Gene **12 responses**
- **82240B Repairs**, John K. (US) **6 responses**
- **Decade Anniversaries**, Masao Kinoshita **2 responses**
- **HP-41CX Manuals for $90?**, Jürgen (CH) **4 responses**
- **How about an 'RPN Excercises Page'?**, Jeremy **32 responses**
- **HP 65**, Bengt Walerud **3 responses**
- **HP67 Card Reader**, Howard **8 responses**
- **Soft Forth for the HP-71B**, J-F Garnier **7 responses**
- **Re. Most useless function**, John Mosand **0 responses**

- **How to add a 'constant' using RPN?**, joe **6 responses**
- **calculator emulator on windows?**, lokhin **8 responses**
- **9114 disk drive - battery**, Terry Ingram **6 responses**
- **Calculators I would market**, Ron Ross **25 responses**
- **OT: Need help finding 2 TI PPC Notes editors from past**, Gene Wright **5 responses**
- **Forget Yahoo, here's where I wish I invested my money!**, Steve **5 responses**
- **More Uncredited MoHPC Pictures AND Text on EBAY**, Spice_Man **4 responses**
- **HP97 Printer Idle Gear**, Chan Tran **1 response**
- **HPchess challenge**, mapet **1 response**
- **A tired hp45, tools, and a quiet night. (long)**, Jeremy **4 responses**
- **HP31E for 22EUR on eBay**, Nenad Vulic (Croatia) **5 responses**
- **Last X**, Patrick **5 responses**
- **Batteries and analog stuff (or: Hi, Norm! I'm back)** , Vieira, Luiz C. (Brazil) **19 responses**
- **HP-IL 9114 Disk drive - accessing > 128K w/HP-41?**, Gene **1 response**
- **Now Here's Something You Don't See Every Day...**, John K. (US) **2 responses**
- **HP-35 chip photos, assembly code**, Peter Monta **11 responses**
- **A couple of simple questions on the hp 45**, Jeremy **4 responses**
- **More Info:16C 68bit I Register**, Steve **0 responses**
- **Problem with HP42S**, Glenda **1 response**
- **How to: HP-IL copy all files ???**, Dave Mabry **2 responses**
- **Our Military and the 41**, Katie Wasserman **8 responses**
- **Minimal Scientific Calculator: A Modest Proposal (long!)**, Michael F. Coyle **28 responses**
- **HP-41 Software Moduls**, Robert **3 responses**
- **Cleaning a 2-part LCD**, Nathan Wendland **0 responses**
- **HP-71B Survey Module**, Stefan Hauschild **0 responses**
- **HP41 Card reader Malfunction**, Howard **2 responses**
- **Electrolytic Capacitors in 67/97**, Malcolm Brooks **6 responses**
- **Gunzen on TV**, Mark **1 response**
- **Poll: What is the most useless function on a scientific calculator?**, Jeremy **46 responses**
- **Opening HP48GX**, R.E. Greene **2 responses**
- **HP-71b + barcode wand** , Tezza **2 responses**
- **16c 68 bit Index register???**, Steve **3 responses**
- **hp-71b "HR" & "HMS" functions**, Terry Ingram **9 responses**
- **What is a Del. Serv. 1 Module???**, Steve **3 responses**
- **Little HP-15C challenge for the weekend**, Ex-PPC member **10 responses**
- **Oh, My...!**, John K. (US) **0 responses**
- **Strange turn of events**, Tony David Potter **2 responses**
- **9114B HP-IL Disk Drive - Battery replacement options?**, Gene Wright **12 responses**

- **hp48sx -> hp48gx compatibility**, juergen Rodenkirchen (GER) **14 responses**
- **HP-67, Classic or Second Generation?**, Mike Rivera **19 responses**
- **Woodstock Cases**, Garry **0 responses**
- **Repairs in Australia**, Howard **1 response**
- **Biographies Suggestion for Dave Hicks**, Fred Lusk (CA) **3 responses**
- **32Sii do the keys rub off ?**, Norm **2 responses**
- **An introduction.**, Jeremy **5 responses**
- **My HP25 really dead?**, PeterL **20 responses**
- **More Uncredited MoHPC Pictures**, Spice_Man **16 responses**
- **Nostalgic HP-34C Story**, Norm Hill **4 responses**
- **eBay -- be sure to read the small print**, Vassilis Prevelakis **4 responses**
- **41CV Emulator card / 128K RAM card for HP48** , Bobby Lapointe **2 responses**
- **HP 28c Memory Hack?**, John K. Mes **1 response**
- **More a curiosity than a challenge...**, Vieira, Luiz C. (Brazil) **1 response**
- **Challenge**, mapet **23 responses**
- **HP-12C Solutions Handbook**, John K. (US) **15 responses**
- **HP41C service in UK?**, Michael Sayers **2 responses**
- **Battery Pack for HP35/45... - a good solution found**, Jan (CH) **6 responses**
- **HP48S self test?**, barry **9 responses**
- **What happened !?**, John Smith **26 responses**
- **HP55 power supply**, Larry B **16 responses**
- **HP 48GX and the display**, Scuba Diver **8 responses**
- **The Good Old Day and Bad New Days**, Todd R. Kraemer **22 responses**
- **Zengrange Ltd Gunzen**, Emmanuel, Normandy **1 response**
- **HP-39**, Tom Cox **0 responses**
- **HP-41, HP-28s printers**, Michel Beaulieu **3 responses**
- **Repairing an hp 32sii**, John MacLean **3 responses**
- **Memory Upgrade**, George Rose **1 response**
- **How to restore a faded Voyager logo?**, Patrick **6 responses**
- **42S display problem**, Jeff **1 response**
- **71b 4K->32K Ram module conversion**, andy **2 responses**
- **Plotter HP 7470A Option 003**, Jürgen (CH) **11 responses**
- **HP-41 Video Interface Applications**, Jürgen (CH) **4 responses**
- **solver**, mapet **6 responses**
- **HP-49G, HP-48G+, 'college student' calculators**, Norm Hill **6 responses**
- **RPN on the 17BII and 19BII**, Scuba Diver **1 response**
- **Received This From HP...**, J.C. Randerson **11 responses**
- **It's official: RPN scientifics HPs are coming back!**, Jeremy **24 responses**

- **Unreasonable price for a HP-35?**, **13 responses**
- **HP42S** , Ken Shuey **3 responses**
- **TI-59 RPN Simulator Module**, Emmanuel, Normandy **2 responses**
- **what should a new RPN machine contain?**, Robert Burnham **22 responses**
- **hp 20s**, hugh **6 responses**
- **How people react on different models...**, Holger Weihe **11 responses**
- **17BII solver**, mapet **5 responses**
- **HP-71X Progress**, HrastProgrammer **0 responses**
- **Where are the HP 17BIIs & 19BIIs?**, JY **4 responses**
- **Which scientific HP should I get?**, Jeremy **8 responses**
- **HP-80 Versions: How many were there?**, Spice_Man **4 responses**
- **To 15c users: About the solver**, R Lion **10 responses**
- **HP67 display**, Richard Parfitt **2 responses**
- **Memory upgrade for 42s**, John Cadick **8 responses**
- **HP67 button and card reader help**, Malcolm Brooks **4 responses**
- **French Manuals on HPMuseum's CDs**, GE (France) **2 responses**
- **Ziplock bags considered harmful?**, Patrick **16 responses**
- **I heard from HP Executives re: complaint**, Norm **3 responses**
- **APPLAUSE, LOUD LOUD APPLAUSE, for DAVID G. HICKS**, Norm Hill **14 responses**
- **HP-32S Anniversary Version (50th)**, Norm Hill **1 response**
- **HP17BII Emulator**, Johan Verwey **1 response**
- **41CV doesn't turn on**, David Schooley **10 responses**
- **buttons on HP-25**, Stan MFarland **5 responses**
- **A "creative license" challenge**, Michael Meyer **22 responses**
- **HP 67 Card reader Troubleshooting**, Gene DiResta **3 responses**
- **In praise of the HP-41**, Mark **11 responses**
- **In praise of hp 15c :-)**, R Lion **8 responses**
- **Short & Sweet Math Challenges #6**, Ex-PPC member **7 responses**
- **Re: Building Double X-Memory**, Christoph Klug **0 responses**
- **Wow! $166 for a trashed 11C!**, Kal Schneider **6 responses**
- **HP-41CV bad I/O ports**, W. Bruce Maguire II **1 response**
- **Re: For US$78 : buy both, or as many as they have**, JOSH WOZNIAK **0 responses**
- **HP-41CX Compiled GTO's and XEQ's**, Jeff **7 responses**
- **41CV Aviation custom?**, Mike Rivera **2 responses**
- **Re: Expensive Dual X-Memory**, Guy François **0 responses**
- **Question about HP 35 versions.**, James Kelly **4 responses**
- **battery life on 10bii**, JaSon **0 responses**
- **Trade Hp32sii for HP 42s?**, JaSon **2 responses**

- **Combinations and permutation limits on Calculators**, JaSon **5 responses**
- **Discontinuing HP-12C Financial ?**, Norm Hill **23 responses**
- **Re: Yet another 41CX Display Problem...**, David Smith **0 responses**
- **Re: eBay Leaves A Lot to be Desired**, Pocketcom Mania **0 responses**
- **Drive belt for HP-41C printer 82162A**, Dave Mabry **3 responses**
- **what is this?**, Christof **6 responses**
- **CALCULATOR WATCH !**, Norm Hill **0 responses**
- **Re: eBay Leaves A Lot to be Desired**, db(martinez,california) **0 responses**
- **Re: 7 card star trek for 67/97**, Masao Kinoshita **3 responses**
- **Re: Decapitated "eight"**, db(martinez,california) **7 responses**
- **Reproduction of HPmuseum information (for "Anonymous")**, Dave Hicks **1 response**
- **Favorite calculator game(s)?**, Gene **4 responses**
- **Re: 71b CMT EPROMS**, Gordon Dyer **0 responses**
- **Re: eBay Leaves A Lot to be Desired**, David Smith **1 response**
- **Re: 7 card star trek for 67/97**, Malcolm Brooks **0 responses**
- **Degradation of old Fluorescent Displays?**, Paul Brogger **6 responses**
- **Re: Nice DVD, Dave!**, Dave Hicks **0 responses**
- **Re: 41->71 Translator and the FTH41ROM LEX file**, Kim Holm **0 responses**
- **hp71 Card Reader Pinout (and CMT multi case connections)**, andy **0 responses**
- **Re: HP-67 (soft) display trouble**, Daniel Conde **1 response**
- **Clean HP41C display**, Lgomez **1 response**
- **Re: RAM cards for the 48gx**, Steve **0 responses**
- **In all fairness..**, Steve **1 response**
- **Re: 71b Finally**, Steve **2 responses**
- **Re: Extending the Command Stack**, Kim Holm **0 responses**
- **Re: 71b i/o through card reader pins**, andy **0 responses**
- **The JPC ROM for the hp71b**, Andy **11 responses**
- **Compile LEX with HPTOOLS**, Alain (Canada) **6 responses**
- **Re: 71b Finally**, Joe Edwards **0 responses**
- **In praise of the HP-34C**, Ex-PPC member **10 responses**
- **Re: Preliminary list of my user library programs available**, Malcolm **2 responses**
- **Complain to "the new HP" at this link**, Norm Hill **1 response**
- **Re: HP21 bacteries**, Gray Wilson **6 responses**
- **Good sign? Not that 9G it's trash**, Norm Hill **3 responses**
- **HP-34C best and I'm stickin' to my guns**, Norm Hill **0 responses**

[Top of Index]

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HP Forum Archive 11

[Return to Index | Top of Index]

HP 25 Batteries
*Message #1 Posted by **Burma** on 9 Apr 2003, 3:40 p.m.*

Apologies if this is a dumb question.

What batteries can be used to replace dead ones in an HP 25?

Can a connection be made between the two battery terminals so as to make the HP 25 functional via the battery charger connected to an electrical outlet?

Can the HP 25 be made to function without batteries?

Thanks...Burma

Re: HP 25 Batteries
*Message #2 Posted by **Trent Moseley** on 9 Apr 2003, 5:31 p.m.,*
in response to message #1 by Burma

I replaced my batteries with Radio Shack's AA nicad rechargeables. Don't use the machine with the ac-adaptor without batteries.

tm

Re: HP 25 Batteries
*Message #3 Posted by **burma** on 9 Apr 2003, 5:49 p.m.,*
in response to message #2 by Trent Moseley

Thank you!

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

almost the earliest 18c serial number!
*Message #1 Posted by **gene** on 9 Apr 2003, 2:43 p.m.*

Almost. Got an 18C with a S/N of 2638A38427, which ties it according to the list for the earliest year/week.

Drat!

Gene

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

? How to reattach "zebra stripe" LCD connection in TI-30Xa?

*Message #1 Posted by **Paul Brogger** on 9 Apr 2003, 1:58 p.m.*

Off the wall, but a challenge . . .

I'm trying to resurrect a TI-30Xa calculator for my son (the one who WON'T use RPN). A few of the segments don't display in the middle digits.

Upon taking it apart, I see the LCD is connected to the PCB by a flexible multi-line connector that appears to be raised black conductors on a cream-colored "Scotch Tape" (mylar?) substrate.

It appears to simply be bonded to the surface of the LCD along one edge, and to the face of the PCB along the opposite edge. (Indeed, the LCD is attached only via this conductor, and is itself held in place against the bezel by a cushion and the calculator back case.)

By running my finger along the PCB attachement, I locate a couple (presumably) of conductors which are apparently not in contact -- when I press them, the seqments in question turn "on". When I release again, however, they go blank.

(It looks as if the PCB edge of the connector was slightly bowed as it was laid down, and contacts the PCB pads more fully on the left & right ends of the attachment, and less so in the middle.)

I'm wondering if anyone has a suggestion on how to reattach this flexible connector to the PCB traces . . . Is there a "conductive glue" or paint that might do the trick?

(Like I said, the challenge of fixing the thing is the issue, not what little value the calculator may ever have.)

Re: ? How to reattach "zebra stripe" LCD connection in TI-30Xa?
*Message #2 Posted by **Ron Ross** on 9 Apr 2003, 3:08 p.m.,*
in response to message #1 by Paul Brogger

Well you might try to just build up the compresioon side of the pressure plate with a little clear tape or clear epoxy paint(???).

On a side note, the Hp20s is far superior to the Ti-30 BS. Why sacrifice quality, even when you have to sacrifice RPN.

It is just such a nicer machine. That said, the Ti-30 series is a decent calc and is reasonalble and very easy to get. You might also consider the better Ti-36. Or even the new Hp9s.

Another calculator to consider is the BA II plus. Has better stats, has trig, and also has TVM so that Jr can learn the value of a $1 (well, okay, the value of $$$$). Of course you have to configure precidence.

I had same problem with a BA-35 and while I could fix some segments, others would then act up. I gave up after two attempts as I bought for only $2. used.

Great chance to aquire another calculator with everyones blessing. If he is into power pocket calculators, buy an Hp27s if money is not an issue (of COURSE I suspect it is). Actually, if he is in High school and they are going to require a graphics in the near future, the Hp 39G is selling awfully cheap (around $30-40 including S&H, of course they aren't all that great, but much more Horsepower than a Ti-83).

Re: ? How to reattach "zebra stripe" LCD connection in TI-30Xa?
*Message #3 Posted by **Ellis Easley** on 9 Apr 2003, 5:04 p.m.,*
in response to message #1 by Paul Brogger

That type of cable is generally called "flat flex cable". Sometimes they are made of copper strips with paper on both sides, like the ones that connect the HP97 printer. The ones used for LCDs nowadays are made of conductive ink on an insulating base and are attached with a conductive adhesive. The adhesive contains small conductive particles suspended in a gummy base so if two conductors are on either side of the thick dimension of the adhesive, some of the particles are in contact with both sides and the adhesive passes current, but the conductive particles in the space between the PCB pads aren't in contact with each other so there is no connection between the pads. BTW, Zebra strips (they have a fancy name I can't think of right now) are the three dimensional items consisting of a very tall many-layer sandwich of alternating conductive and insulating resilient material, the layers so small that there are several

conductive paths for each PCB pad that the strip is in contact with. They have to be clamped between the two surfaces they are connecting, such as by the stainless steel frame that holds the LCD to the PCB.

I once repaired a multimeter that had the conductive ink type of flat cable by using some scotch tape to hold the flat cable to the surface and then using a length of drinking straw as a resilient strip pressed against the back of the connection. Luckily, the flat cable made a loop behind the LCD that held the tube in place when the unit was assembled. If that is not the case with your calculator, maybe you can stick the tube to the surface that sits behind the connection, using some double sided tape.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

15C basic question >>
*Message #1 Posted by **dbusse** on 9 Apr 2003, 1:47 p.m.*

I just got the 15C and don't have a manual yet (coming in a few days). How do I set the number of significant digits after the decimal? Thanks.

Re: 15C basic question >>
*Message #2 Posted by **Barry Schwartz** on 9 Apr 2003, 2:32 p.m.,*
in response to message #1 by dbusse

You can set the number of digits displayed in several ways: 1. f FIX n where n can be from 0 to 9 sets the calculator in fixed mode where n is the number of digits after the decimal. 2. f SCI n where n can be from 0 to 9 sets the calculator in scientific mode where n is the number of digits after the decimal but the display shows an exponent such that there is always 1 digit to the left of the decimal. Because of the space for the exponent, the maximum number of digits displayed after the decimal is six. 3. f ENG n where n can be from 0 to 9 is similar to SCI except that the calculator shows all exponents in multiples of three. Also, n is now the maximum number of digits displayed . The displayed number of digits after the decimal will vary because the calculator only changes the exponent in increments of three.

Perfect. Thanks Barry. nt.
*Message #3 Posted by **dbusse** on 9 Apr 2003, 2:43 p.m.,*
in response to message #2 by Barry Schwartz

/

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-67 not working key & read problems
*Message #1 Posted by **Jon** on 9 Apr 2003, 12:51 p.m.*

I have to push very hard the "/" key to make it work. Does anybody know how to repair it?. Sometimes reading the card causes an "Error". I have read I should change any capacitor. Does anybody have more detailed information?

Thanks in advance

Jon

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Should I break the seals?
*Message #1 Posted by **Dr. Anoop Sahal** on 9 Apr 2003, 11:19 a.m.*

I bought an HP 41 CX. It is MIB and seems never to have been used.

My dilemma is do I break the seals to look at the manuals and overlays or leave them sealed in the original packaging?

Re: Should I break the seals?
*Message #2 Posted by **Don** on 9 Apr 2003, 12:02 p.m.,*
in response to message #1 by Dr. Anoop Sahal

Come on .... you know you want to give it try don't you?

:)

Re: Should I break the seals?
*Message #3 Posted by **David Ramsey** on 9 Apr 2003, 12:03 p.m.,*
in response to message #1 by Dr. Anoop Sahal

Break the seals. It was meant to be used.

Re: Should I break the seals?
*Message #4 Posted by **Dr. Anoop Sahal** on 9 Apr 2003, 12:07 p.m.,*
in response to message #3 by David Ramsey

YOU'RE correct!!!

I have no intention of selling on so I'll open it.

Thanks for helping me

Regards

Anoop

Re: Should I break the seals?
*Message #5 Posted by **hugh** on 9 Apr 2003, 12:52 p.m.,*
in response to message #1 by Dr. Anoop Sahal

i did. and didnt regret it. ;-)

Re: Should I break the seals?
*Message #6 Posted by **Tom (UK)** on 9 Apr 2003, 2:37 p.m.,*
in response to message #1 by Dr. Anoop Sahal

You could always buy the CD set from this site.

It will contain all that you have + lots more.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

some research on the meaning of "PPC"
*Message #1 Posted by **Ellis Easley** on 9 Apr 2003, 6:38 a.m.*

I have a PPC publication, "HP-41 HP-IL System Dictionary" and its copyright page says "Copyright 1982 Personal Programming Center, Inc." I also looked at the PPC ROM Manual on the Museum CD-ROMs, it doesn't have a copyright page per se but has a small notice that just says "Copyright PPC 1981". Then I remembered that the PPC Journal was originally called "65 Notes" (for the HP65, the first HP programmable handheld). I looked at the last issue of "65 Notes" (V4N10, Dec.1977) on Jake Schwartz' CD-ROM and it has a letter attached (on pages before the newsletter page 1 on the CD-ROM) about the need for the club to grow. In it Richard Nelson makes the following suggestions:

"1. Change The Club Name: At the present time, I favor PPC. The letters don't stand for anything special. They could mean Personal Programmer Club or Personal and Profitable Computing, or whatever ...

2. Change The Club Publication: Call it PPC Journal."

The next issue, V5N1, Jan.-Feb.1978, is called PPC Journal and under the logo in small letters it says:

"The Personal Programmers Club does Prolific and Productive Computing with Hewlett-Packard Personal Programmable Calculators." (with the capital letters "P,P,C" underlined)

The words "Personal Programmable Calculators" with underlined letters is repeated in a footnote at the bottom of the page.

The title of the Journal was changed to "PPC Calculator Journal" with V7N1, Jan.1980. It was explained as a step towards possibly splitting off another newsletter for computers, since the HP85 had just been released. The small letters under the logo were changed a little at this time, with the third combination becoming " ... Hewlett-Packard Personal Programmables from Corvallis.", perhaps because the handhelds were built in Corvallis, Oregon while the desktop systems were built at a factory in Colorado?

Re: some research on the meaning of "PPC"
*Message #2 Posted by **Raymond Del Tondo** on 9 Apr 2003, 7:33 a.m.,*
in response to message #1 by Ellis Easley

Hi,

AFAIR the book 'RCL 20' has kinda explanation, too.

Regards,

Raymond

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

9114B and 2225B Battery Pack Find

*Message #1 Posted by **Katie** on 9 Apr 2003, 2:03 a.m.*

As a public service, I thought that I'd mention that there's someone on ebay selling 100+ NIB 82199A battery packs for $4 Dutch. These are the battery packs used in the HP9114B disc drive and HP2225B ThinkJet printer.

Here's the auction: http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=31577&item=3411635573&rd=1

Re: 9114B and 2225B Battery Pack Find

*Message #2 Posted by **Andreas Müller(GER)** on 9 Apr 2003, 3:48 a.m.,*
in response to message #1 by Katie

Hi Katie,

Are you sure that this battery pack is used in both the HP9114B and the 2225B? I own them both and the mine do have different battery packs. Are there different manufacturing releases affecting the type of battery pack used?

Regards, Andreas

Re: 9114B and 2225B Battery Pack Find

*Message #3 Posted by **Ellis Easley** on 9 Apr 2003, 3:56 a.m.,*
in response to message #2 by Andreas Müller(GER)

I think these are only for the 2225B and one other ThinkJet printer - I think there is a portable parallel version as well as the HPIL 2225B. The 9114B uses a pack that contains a lead battery and these contain NiCads. According to an EduCalc catalog, the battery for the 9114 is 88014B.

Re: 9114B and 2225B Battery Pack Find
*Message #4 Posted by **Raymond Del Tondo** on 9 Apr 2003, 4:36 a.m.,*
in response to message #2 by Andreas Müller(GER)

The ThinkJet battery pack drawer doesn't fit inside the 9114. Very different drawer, and different battery cells.

Regards,

Raymond

Re: 9114B and 2225B Battery Pack Find
*Message #5 Posted by **Katie** on 9 Apr 2003, 9:36 a.m.,*
in response to message #2 by Andreas Müller(GER)

Sorry, my mistake. The 82199A just fits the ThinkJet printer.

Hope someone doesn't buy ALL of them in 1 swoop
*Message #6 Posted by **Gene** on 9 Apr 2003, 10:36 a.m.,*
in response to message #1 by Katie

Sadly, I'm afraid someone might do this. I'd like a couple. I'm sure others would too.

Gene

Re: Hope someone doesn't buy ALL of them in 1 swoop
*Message #7 Posted by **David Smith** on 9 Apr 2003, 5:57 p.m.,*
in response to message #6 by Gene

The guy said he had HUNDREDS of them... only 100 are listed. If somebody bought all 100 of them, there will probably be more to follow.

A TIP on dutch auctions
*Message #8 Posted by **Mike** on 9 Apr 2003, 1:25 p.m.,*
in response to message #1 by Katie

Until there are more than 100 bids, there is no need to bid higher than the minimum bid.

IF you do, you help setup a higher than necessary auction price.

For instance, there is a rule in dutch auctions that says you don't have to accept any items, IF you don't get all you bid for.

So, now that someone bid $20, unnecessarily, here is a situation that can result. Someone can bid $19.99 for 95 items and if he loses even one, he is not obligated to take any. On 100 items, it's very likely that someone will take one at $20 or more. So with his $19.99 bid, and qty of 95, he is not likely to get all 95 but the price is $19.99 and he can opt out. And the person that bid $20, is stuck at the higher price, because the auction price will be $19.99 or higher.

So that $20 bid has essentially run the price up. There is no reason to bid more than $4.00 and no reason to bid early, in my opinion.

continuation of Ebay discussion - touchy people don't read!
*Message #9 Posted by **Ellis Easley** on 9 Apr 2003, 5:41 p.m.,*
in response to message #8 by Mike

That was my bid. I'm going to study your argument until I understand it, I'm not much of a strategic thinker! But in the meantime, let me explain the reasoning behind my bid:

First, I'd be willing to pay $20 each - although after I placed the bid, I began to wonder if the cells inside are in very good shape, I've had brand-new NiCads that got "frosty" over time even though they were never used!

Second, since it is a dutch auction, everyone whose number of lots bid on are among the 100 highest lots bid on will get them at the lowest bid among that group of bids - I have that right, don't I? If not, I'm very sorry! I have just tried to insure that I will be among the highest 100 lots bid on. And since I'm trying to avoid spending too much time on Ebay every day (compulsive disorder!) and since my ISP connection often mysteriously locks up at the last moment when I try to snipe, I just wanted to bid once and wait till the auction is over.

In the scenario you describe, if the person who bid on 95 lots opts out, why isn't that treated like a retraction? Is it because Ebay is out of the picture at that point? I can see that it is a

different case from an auction for 1 lot, where I was the second highest bidder, and the highest bidder decided not to buy, and the seller then contacted me - in that case, I would know something happened to the winner so I wouldn't pay his winning bid, in fact I would only be willing to pay one increment more than the third highest bid, as if the winner hadn't bid at all.

But in the case you describe, since I thought I won my lots, I wouldn't know if the big bidder opted out unless the seller told me.

Wait a minute - if that big bidder opted out, how does the seller avoid paying Ebay the commission on those items without notifying Ebay (suppose there was just the 95 lot bid and a bid for 5), and if Ebay is notified, why don't they treat it as a retraction?

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

New book I found.
*Message #1 Posted by **Speck** on 8 Apr 2003, 11:32 p.m.*

Hi, everyone. I just found a book at the library titled, "Perfect Enough." It's about the rebirth of HP under Carly Fiorina. I'm on page 42, and have been enjoying the info on the birth of HP. However, I'm wondering if anyone has seen/read this book, and is it worth my time to continue reading it? If no one knows about it, I can post my thoughts about it when I finish, if anyone's interested. Not trying to turn this into a book club or anything. I only picked it up because of my interest in HP.

Any thoughts?

Speck.

Re: New book I found.
*Message #2 Posted by **Tom (UK)** on 9 Apr 2003, 2:43 p.m.,*
in response to message #1 by Speck

With Carly only taking over recently no book can realy give a good account of HP's rebirth - it's far too early to tell what effects she has had. (e.g. the jury on the Compaq deal is still out). I'd guess you'd have to wait 10 years before you can tell the true effect of a new company boss.

Who is it written by? - i.e. could it be someone who wants to support one possition or another or do they want to (re)write 'history' to favor one person or another?

Re: New book I found.
*Message #3 Posted by **Ron Ross** on 9 Apr 2003, 3:18 p.m.,*
in response to message #2 by Tom (UK)

I briefly skimmed this book this weekend. It seemed to me the author had a love affair with Carly. The book was full of BS as far as I read (but I am slightly biased), I gagged on it myself. As Tom (UK) stated, the verdict is really still out as to how good Carly really is.

But My Hp stock is in the toilet and I am an indirect causilty of her 15,000 person employee cut. As I stated in an Email to an Hp excutive, "If you buy out and take over the other company (Compaq) shouldn't you get to keep you PC and pocket PC lines instead of having to take theirs?"

That was my feeling then, I felt that if Compaq were to keep their palmtop division, they could not afford the internal competetion from any potentential competetion ie palmtop and calculator manufactoring inside HP.

Response to Tom and Ron
*Message #4 Posted by **Speck** on 9 Apr 2003, 5:37 p.m.,*
in response to message #3 by Ron Ross

I think the thing that scares me most about this whole thing is that Ms. Fiorina came from Lucent Tech., and look at what happened to them after she left. I can't say that their problems are a result of anything she's done, but it's an avenue that can't be overlooked, either.

Tom,

You asked about the author. His name is George Anders. He is listed as a Stanford graduate, and is the senior editor of Fast Company magazine (first I've heard of it). ISBN 1-59184-003-1, if you want to look for it. And I have to agree, it does seem a bit premature, but the book is out there nonetheless, and deserves analysis.

Ron,

Sorry to hear of your misfortune with HP. It must be frustrating to watch all of this. And thank you for the obeservation: I had failed to notice that the Journadas seem to have completely disappeared (I don't tend to follow the handheld computer market much; my 49G is getting me by). A shame, too, because it always seemed to me that with a name like iPAQ, Compaq was just trying to cash in on some of the successes of Apple Computer. It made me suspicious of their quality. It just seemed a cheesy thing to call a

handheld device. Guess they solved the "internal competition" issue, though, albiet in a less-than-favorable way.

history is written by the winners
*Message #5 Posted by **db(martinez,california)** on 9 Apr 2003, 5:51 p.m.,*
in response to message #4 by Speck

or in this case, the wieners.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Features/Functions for a calculator
*Message #1 Posted by **Ben Salinas** on 8 Apr 2003, 10:59 p.m.*

Here's my current list of functions to be put on my Design a calculator calculator. I have very limited engineering/math background, so i need to know waht else to put on. Right now i have as follows: a. Basic Math +, -, *, /, Cnr, Pnr, %???, x!, %CHG???, sin, cos, tan, asin, acos, atan, SQRT, x root y, y^x, x^2, 1/x b. More Complex Functions log, ln, 10^x, e^x, complex number math(using existing keys, like on the 32sii), Hyperbolic functions (using existing keys), Matrix operations(inputted how???) c. Conversions & Constants Base conversion (either 2,8,10,16, or any base), Pi, unit--> unit conversion (where u choose one unit and a second unit... might be implemented by a program) d. Stats What goes here? e. Programming Keystroke, or language(trying to decide which one... which do you think?) f. Other keys Switch (x<>y), Replace with variable (x<>), Up^, Down, Left??, Right??, Up in stack, Down in stack

I am thinking about expanding on those HP Applet type programs (for the base conversions, matrix operations, unit conversions, etc), where you can choose to have the program, or you can have extra memory. The only advantage to having them be constant features, is that when the calculator's memory is cleared (whether it be for a standardized test, or by accident), the features are still there. Looking from teh other side, you would get a less cluttered keyboard. Which is more important.

Oh, btw, this is supposed to be a powerful, programmable, pocket scientific calculator. Thanks for all your help -Ben Salinas

Re: Features/Functions for a calculator
*Message #2 Posted by **hugh** on 9 Apr 2003, 3:15 p.m.,*
in response to message #1 by Ben Salinas

is this to be an implementation? and are you referring to an ideal physical calculator or a virtual one. i have felt that the balance of functions on a real machine vs. a virtual machine (eg under windows or on a PDA) are slightly different.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

How to open an HP 28S
*Message #1 Posted by **Marx Pio** on 8 Apr 2003, 10:44 p.m.*

Can Anyone tell me how to open an HP28S?

I am considering to use a hammer ;)

Thanks in Advance

Pio

Re: How to open an HP 28S
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 8 Apr 2003, 11:04 p.m.,*
in response to message #1 by Marx Pio

Hello, my friend; where have you been? Such a long time we do not "read" from you...

Look at the top surface area over the LCD display. There is a label over there with the HP logo and the calculator's name. If you (carefully) remove it you'll see many (about eight, if I am not wrong) plastic thermal rivets. You have to find a way to unlock them to lift the upper cover.

I have a photograph with an "exploded" (not assembled) HP28S. As I find it I'm sending it to you.

Best regards (some não, meu!)

Luiz C. Vieira - Brazil

Re: How to open an HP 28S
*Message #3 Posted by **Raymond Del Tondo** on 9 Apr 2003, 4:48 a.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

Hi Luiz,

could you send me the photo(s), too?

Thanks in advance.

Regards,

Raymond

Re: How to open an HP 28S
*Message #4 Posted by **Marx Pio** on 9 Apr 2003, 12:41 p.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

Luiz meu chapa.

How u doing meu velho??

thanks for the helping hand (or should I say helping letters)

I'll try it carefully

valeu bro e thanks de novo

Abracos

Pio

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

32E dismantling
*Message #1 Posted by **hugh** on 8 Apr 2003, 6:45 p.m.*

i have a 32E that i want to open. i remove the two top screws and then... nothing. some magic is holding the thin end of the wedge in place. i can open it a bit using force, but anymore and its going to snap. i've removed the rubber feet; nothing under there. is there some knack here. i am looking for a stud or popper thats holding it, but i cant see it. any help?

Re: 32E dismantling
*Message #2 Posted by **Jon** on 9 Apr 2003, 12:47 p.m.,*
in response to message #1 by hugh

You have to insist on making force until it opens. I seems you are going to break the calculator, but is the only way I know (I have opened several spices without breaking any of them). You have more detailed information in the main page.

Cheers

Jon

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-9G
*Message #1 Posted by **Martin (UK)** on 8 Apr 2003, 4:21 p.m.*

Has anyone any experience of the HP-9G? It seems to be fairly comprehensive, and doesn't appear to have a menu system, thank goodness. I want something programmable and cheap-ish for work.

I'd take my HP-41 to work, but I'd probably break it.

Regards,

Martin

Re: HP-9G
*Message #2 Posted by **Speck** on 8 Apr 2003, 10:50 p.m.,*
in response to message #1 by Martin (UK)

The 9G seems to have memory registers ("has memory functions for storing and retrieving data and 2 clear memory options..." whatever they mean by "data."), but does not appear to be programmable. How important is that feature to you? The 9G reminds me of a great little Casio I used to have that was very similar, but also featured 400 program steps, in either 3 or 9 programs, based on memory usage. Not much space for programs, but nice nonetheless. I wish HP would have included this. But then, I wish I could program my 49G better, too, and that has more memory than I'll ever need!

Speck.

Re: HP-9G
*Message #3 Posted by **J.Manrique Lopez de la Fuente** on 9 Apr 2003, 3:56 a.m.,*
in response to message #1 by Martin (UK)

Hello,

I have one hp9g, and yes you can do some programming on it. To know more about it, I recommend you to see its website in HP Calculators Webzone:

http://www.hp-calculators.com/products/9g.phtml

It comes with a manual and a paper full of examples of how to use it, and they can be downloaded from here:

http://h20015.www2.hp.com/en/manualCategory.jhtml?reg=nam&cc=us&pagetype=manual&prodId=hp9ggraphi240096&sw_lang=en&lc=en&docparent=15200437

Best regards,

J.Manrique

#1077 HPCC Member

Re: HP-9G
*Message #4 Posted by **Les Bell [Sydney]** on 9 Apr 2003, 6:49 a.m.,*
in response to message #3 by J.Manrique Lopez de la Fuente

That's *it*? Six (admittedly largish) sides, or three pieces of paper? For both the User Guide and How-to Guide?

Sad. . .

Best,

--- Les [http://www.lesbell.com.au]

Re: HP-9G
*Message #5 Posted by **J.Manrique Lopez de la Fuente** on 9 Apr 2003, 7:03 a.m.,*
in response to message #4 by Les Bell [Sydney]

Yes,

That's all, same system for User Guide in hp30s. If you can use a city map, you would be able to use the hp9g user guide and howto.

Of course, for fun, you can search for Casio fx 6300g programs in internet, since both are the same, more or less. You know: 6+3+0+0+g = 9g

Best regards,

J.Manrique

#1077 HPCC Member

Re: HP-9G
*Message #6 Posted by **Jonas Lööf** on 9 Apr 2003, 8:30 a.m.,*
in response to message #5 by J.Manrique Lopez de la Fuente

I recently bought a casio fx-6300g, cheap, that had been sitting on a shelf in a bookstore for a while. It is actiually quite a nice calculator. The hp-9g indeed appear to be very similar, but with more features. (for example, it even has increment and decrement a'la c enabeling writing things like ' c[++a]->z[++b] '!)

One intresting observation is that while the hp-9g instructions are extremely breef, the casio came with a manual 170 pages long. That says something about the change in documentation standard since the fx-6300g was produced.

Re: HP-9G
*Message #7 Posted by **J.Manrique Lopez de la Fuente** on 9 Apr 2003, 10:15 a.m.,*
in response to message #6 by Jonas Lööf

Yes, I've written a little review of hp9g vs casio fx6300g, since I have a friend with one of these machines, and the manual that comes with the casio is big, real big. Usually he and me play with both calcs to find the differences :-)

The revision was publised in November/December Datafile from HPCC.

Best regards,

J.Manrique

#1077 HPCC Member

Re: HP-9G
*Message #8 Posted by **GE** on 9 Apr 2003, 3:33 p.m.,*
in response to message #7 by J.Manrique Lopez de la Fuente

Also Citizen released a machine recently (something like the 320G or something) with pre/post-decrementation capabilities. Its language looks like C also in the respect to statement blocks enclosed with curly braces {}. This machine has very similar capabilities from what you say about the 9G. Are you sure you got rid of menus ? The Citizen has a lot of these, you choose an option by typing a number (1 to 6 usually). I will certainly NOT buy the 9G to check this myself !!

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-42S bug list?
*Message #1 Posted by **Gene** on 8 Apr 2003, 11:35 a.m.*

Wondering if there is a good list of HP-42S bugs anywhere?

I know of a couple:

1) On some early 42s models, when in LINSUM mode (as compared to ALLSUM), LASTX returns LASTY. This may be on very early ones, as my 42s made in 1988 does not have this bug.

2) Forecasting Y-hat values in a power curve fit has a mistake. A work around was published in HPX.

Any others? Corrections?

Gene

Re: HP-42S bug list?
*Message #2 Posted by **R Lion** on 8 Apr 2003, 12:15 p.m.,*
in response to message #1 by Gene

CAUTION: you will loose your 42s memory

When in linsum, use a matrix as stat data: first you will see an odd number of data. Then use MEM and system hung ... bye bye memory!

Raul

Re: HP-42S bug list?

*Message #3 Posted by **Steve** on 8 Apr 2003, 9:11 p.m.,*

in response to message #1 by Gene

Here's a few: http://www.finseth.com/~fin/hpdata/hp42s.html

Steve

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP28C beep disable
*Message #1 Posted by **madal** on 8 Apr 2003, 11:29 a.m.*

How do I access the flag 51 to disable the beep???

Re: HP28C beep disable
*Message #2 Posted by **Chris Randle (UK)** on 8 Apr 2003, 5:36 p.m.,*
in response to message #1 by madal

Put a 51 on the stack (5 1 ENTER) then SF (for Set Flag) and ENTER. If it's set, there's no beep. If it's cleared (CF) the beep's back.

The soft menu for the flags is TEST. You'll see SF, CF and also FS? which tells you if a flag's set or not (1=Yes, 0=No)

Re: HP28C beep disable
*Message #3 Posted by **madal** on 8 Apr 2003, 5:53 p.m.,*
in response to message #2 by Chris Randle (UK)

Thanks Chris!!!

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

28S users...question >>
*Message #1 Posted by **dbusse** on 8 Apr 2003, 11:24 a.m.*

I don't have any experience with the 28S but may have the opportunity to buy one. Only problem is the "M" key doesn't work. What's the impact? Thanks, David

Re: 28S users...question >>
*Message #2 Posted by **Chris Randle (UK)** on 8 Apr 2003, 5:30 p.m.,*
in response to message #1 by dbusse

I'm not collecting expert, just a 28S fan. IMHO it's not worth it. They're not that hard to come by and just about any non-working key will spoil the calculator.

The 'M' key activates the CONTRL menu which brings up, among other things, the debug features. Also, when programming, any command with an 'm' in it would have to be entered by finding it in the soft menus rather than typing its name.

A quick look shows that there a couple of commands (CLMF, ERRM) which contain an 'm' _and_ are in the CONTRL menu set. To get to them, you'd have to invoke the CONTRL menu by using its menu number (13) followed by the MENU command, which contains an 'm' so you'd have to get to that via the MEMORY menu... You get the picture, I'm sure!

Thanks Chris. nt.
*Message #3 Posted by **dbussse** on 8 Apr 2003, 8:59 p.m.,*
in response to message #2 by Chris Randle (UK)

/

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

hp graphics - comment?
*Message #1 Posted by **lokhin** on 8 Apr 2003, 7:12 a.m.*

hello

not long ago, I started a thread about hp 28s. both jeremy, john who comment on its graphic abilities as weak. and other dont use it at all.

I read other reviews abot newer hp graphics and most reviews commented that hp graphics perform better in number chruching and weaker in graphing,even in newer model -hp 48g they said that the graph plots and much slower and zooming is more difficult than TIs. is graphing an hp weakness? what are their strength then?

seller retracted the auction I mentioned last time... no chance to get it... but the calcs that I cant get is bad, I believe.

-lokhin

Re: hp graphics - comment?
*Message #2 Posted by **Ellis Easley** on 8 Apr 2003, 9:46 a.m.,*
in response to message #1 by lokhin

The TI's come with different pixel resolutions. I have a TI83+SE which has 96 X 64. The 48's are 131 X 64. I think the higher end TI's have higher resolution than the 48's. More pixels take more time to draw (all other things being equal). This might have some bearing on the relative speed of the plotting functions. Another important factor might be the precision used to calculate the pixel coordinates. Since there are less than 256 pixels on either axis, 8 bit integer math would be sufficient. I don't think the processor in the 48's is capable of low precision math. The TI83 has a Z-80 processor and even if it is emulating high precision BCD math to evaluate the function to be plotted, it can use 8 bit integer math to calculate the physical pixel coordinates once the function value is calculated. Scaling and clipping are two steps that have to be performed for each pixel after the function is evaluated. If the TI's are doing these steps

with 8 bit integer math, it would take much less time than the full precision BCD math that the 48 has to do. One final thing that might be involved is the range checking that the 48 operating system does. As I understand it, the difference between User and System RPL has to do with this range checking that is done before every operation in User RPL, but which is bypassed in System RPL. I wonder if there is any way to specify the equation on a 48 using Sytem RPL?

Just a guess
*Message #3 Posted by **Vieira, Luiz C. (Brazil)** on 8 Apr 2003, 5:30 p.m.,*
in response to message #1 by lokhin

Hi;

I am not sure about it, but I think it's possible to find integer numbers faster than a full-precision floating point in the same expression. If so, I think it would be wise using an integer-number ploter program to evaluate the expression and give final coordinates directly. I am beguining to use a TI82 (thanks to Michel Beaulieu) and I see it creates faster table and ploted dots. I see that resolution interferes in table-building speed.

Maybe thsis is the goal: why to obtain floating point numbers from an expression if I need only integers to plot it, say, to plot pixels?

Just a guess.

Luiz C. Vieira - Brazil

Re: hp graphics - comment?
*Message #4 Posted by **hugh** on 8 Apr 2003, 6:17 p.m.,*
in response to message #1 by lokhin

the 28 has such a small graphic screen it is silly and the 48 has all the features but is just too darn slow. embarrassingly slow, in fact. i am sorry to say this because i got excited by both machines initially because they could actually do graphics at all. nowdays its commonplace.

Re: hp graphics - comment?

*Message #5 Posted by **Speck** on 8 Apr 2003, 11:08 p.m.,*

in response to message #4 by hugh

The TI's are a bit different from machine to machine. The 91/92+/V200 (being the same calc) use the same screen. I don't remember the exact numbers, but it's about 220x120 pixels. This makes it great for graphing; less so for toting around. I believe 82/85/86 use pixel resolution similar to that of the HP-48/49, but the HP utilizes screen real estate arguably better. I believe the TI-89 is somewhere between the 48/49 and the TI-92 (they had to sacrifice a few pixels here and there to make it all fit). Graphing will be task dependent. 85's have zipped past my 92 on a couple of occasions, and my 92 has zipped past PC-based programs several times, all dependent on what was being graphed. I don't have a lot of experience with graphing on the 49G, but as long as it has that capability and is easy to carry around, I'm happy.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

E-mail ID stolen - please, read.
*Message #1 Posted by **Vieira, Luiz C. (Brazil)** on 8 Apr 2003, 2:17 a.m.*

Hi, everybody;

I just received an e-mail sent by lcvieira@quantica.com.br. It's obvious I did not send an e-mail to myself. I scanned my hole net for current viruses and found nothing.

From now on, I'm not sending anything with this e-mail identification. If you receive anything from "me", please, disregard.

I'm changing it for these days.

Please, forgive "me" for any inconvinient.

Luiz C. Vieira - Brazil

Re: E-mail ID stolen - please, read.
*Message #2 Posted by **Patrick** on 8 Apr 2003, 3:01 a.m.,*
in response to message #1 by Vieira, Luiz C. (Brazil)

It is very easy to send email on a Unix system that appears to be from anybody you like. There is a particular port that you write a suitably formatted text file and that appears to be incoming mail.

Modern systems try to block this capability, but I'm not sure how successful they are.

Re: E-mail ID stolen - please, read.
*Message #3 Posted by **Les Bell [Sydney]** on 8 Apr 2003, 5:00 a.m.,*
in response to message #1 by Vieira, Luiz C. (Brazil)

Don't panic, Luiz!

It's very easy for spammers to forge the source email address on email thay they send. The SMTP protocol basically requires no authentication whatsoever, and so it has become increasingly common for spammers to use this type of trick in order to induce a curious recipient to read their email (rather than just deleting it without reading).

Just last week, I received two emails which were entitled "You Sent Me an Email - Who Are You?" (or something similar) and which - at first glance - appeared to have been sent from my own mail server. However, upon closer inspection, it was obvious that while the mail server name had been forged, the IP address could not be, and this revealed the source of the spam.

My advice, therefore, is that you do nothing at this point, particularly if changing your email address would cause you inconvenience.

Best,

--- Les Bell, CISSP [Certified Information Systems Security Professional] [http://www.lesbell.com.au]

Re: E-mail ID stolen - please, read.
*Message #4 Posted by **Ellis Easley** on 8 Apr 2003, 5:44 a.m.,*
in response to message #3 by Les Bell [Sydney]

I have 5 pieces of Spam in my inbox addressed from my own email ID, all received during last March. What I am particularly mystified by is the email I receive that isn't addressed TO me. How can that happen without the cooperation of my ISP? Frequently such email is addressed to "mailing list" something or other. I suspect my ISP is forwarding Spam to me for a fee from mass emailers. I have confronted their customer service people with this but they insist it isn't true.

Re: E-mail ID stolen - please, read.
*Message #5 Posted by **Les Bell [Sydney]** on 8 Apr 2003, 8:02 a.m.,*
in response to message #4 by Ellis Easley

>> What I am particularly mystified by is the email I receive that isn't addressed TO me. <<

Oh, that's simple. Before sending the email proper, the mail servers have a little conversation using the SMTP protocol. What's sent in the RCPT TO: line here, takes precedence over what's in the RFC 822 email header's "To:" field.

The exchange will look like this:

```
MAIL FROM: buyme@cheap-viagra.com
250 OK
RCPT TO: ehowell.easley@worldnet.att.net
250 OK
DATA
354 Send email, followed by <CRLF>.<CRLF>
Received: from fake.email.server by another.fake.email.server
From: buyme@cheap-viagra.com
To: ehow539@some-domain.com
Subject: Make Her Happy Tonight!


(Body of email follows)
.
250 OK
QUIT
220 Goodbye
```

The To: field is often just the first recipient of that particular batch of spam (as is the To:, occasionally).

Best,

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

Re: E-mail ID stolen - please, read.
*Message #6 Posted by **Ellis Easley** on 8 Apr 2003, 8:53 a.m.,*
in response to message #5 by Les Bell [Sydney]

Thanks, Les! I fetched RFC822 - it's about as old as our calculators and ought to be as much fun to study.

Re: E-mail ID stolen - please, read.
*Message #7 Posted by **Bill Smith** on 8 Apr 2003, 1:00 p.m.,*
in response to message #3 by Les Bell [Sydney]

as i imagine most folks here, i get a lot of (and increasing!) spam. results of an interesting study were published about a month? ago in the Tech/Net section of Yahoo, detailing what factors seem to contribute most. the study setup many email accounts, and then used them to perform typical online activities. the resulting spam load was then analysed.

posting to public forums like this, and using an address as a username, such as on Ebay are some of the worst actions. naturally, i have done both, and am apparently paying the price. more worrisome, i get what look like genuine email messages from Yahoo and Ebay asking for passwords, account info, and such. they (admins) are surprisingly unresponsive when i alert them to that.

i wonder why a new mail protocol hasn't been developed?

/bs

Re: E-mail ID stolen - please, read.
*Message #8 Posted by **Renato** on 8 Apr 2003, 5:11 a.m.,*
in response to message #1 by Vieira, Luiz C. (Brazil)

Luiz, This could be a spammer, or it could be a virus. If someone, with your address in his address book, gets infected by a email virus, this machine could start sending email using your address as sender.

Changing your email address will not fix this situation. Warning people like you did may help. Solution would be to find the infected machine - unfortunately I don´t know how to do that.

Re: E-mail ID stolen - please, read.
*Message #9 Posted by **Howard** on 8 Apr 2003, 6:17 a.m.,*
in response to message #8 by Renato

Since I have posted some messages on this forum I have noticed that I am getting a lot of spam. I have decided to add a little to my email address so that real persons can delete the extra letters ie. the word "spam" in my address if they want to email me. This might have been a coincidence. I don't know. It might not even the same type of problem as yours. Anyway I'll see if it stops or slows down.

Re: E-mail ID stolen - please, read.
*Message #10 Posted by **Clive Marner** on 8 Apr 2003, 7:05 a.m.,*
in response to message #9 by Howard

Great idea - think I'll try that too!

Re: E-mail ID stolen - please, read.
*Message #11 Posted by **Bill Platt** on 8 Apr 2003, 11:09 a.m.,*
in response to message #9 by Howard

Yes, the idea of putting in characters seems to be pretty effective, though I am sure some spammers are writing increasingly sophisticated routines to fetch emails--perhaps even looking for the word "spam" or the word "dot" (as in "myname@server.com" translates to "myname@serverdotcom").

I first saw this usage all the way back in 1995, on a newsgroup. As you can see, I use it here, too.

I once was guilty of clicking on a message which said "%$#% elargement" and that got my email into a list. After a number of months, much of it died down. Apparenty, just navigating to a particular web-site can give up your address somehow--does anyone who is knowlegeable on this aspect have any further information on this?

Re: E-mail ID stolen - please, read.
*Message #12 Posted by **Les Bell [Sydney]** on 8 Apr 2003, 6:42 p.m.,*
in response to message #11 by Bill Platt

>> Apparenty, just navigating to a particular web-site can give up your address somehow--does anyone who is knowlegeable on this aspect have any further information on this? <<

If your web browser is absolutely "clean" (i.e. newly installed), all that will be revealed is your IP address. For those of you on home dial-up or broadband connections, this is of little significance. For those of you on corporate networks, the web server log will reveal the IP address, and someone can do a "dig -x" command to reveal the domain you visited from, but not the email address there.

However, if your web server has been in use for some time, it will have acquired some cookies from the major ad-serving and ad-tracking networks. Some of those will be sent with every HTTP request. The cookies are generally just randomly generated tokens which allow the ad networks to track which ads you've seen and which ones you've clicked on. They don't reveal any personal information, but allow the networks to build a picture of your web-surfing habits and interests. While none of them *should* include your email address - this would be a major privacy violation - it's always possible that one might. I've never seen that happen, though.

Much worse are HTML emails. Many of these contain a "web-bug" - an embedded image request which is unique to that email, usually something like:

```
<IMG SRC="http://bad-server.spammers.com/cgi-bin/track.pl?id=01c5ed7f">
```

or similar. When you open the email, that request (which returns a 1 x 1 white pixel, so you never notice) will be sent to the related web server and logged, so now they know a live reader opened the email. You

didn't give them your email address by this, but you just confirmed that it's an active account with a human and no spam-blocking.

And while writing this, I just thought up another way by which your email address could be obtained by a malicious web site. I won't document it here, as I've never seen it used, but I will say that you are at risk if your browser is configured to send your email address when it logs into an anonymous FTP server. Make sure you use a fake address in that case, if possible.

Best,

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

TNX!
*Message #13 Posted by **Bill Platt** on 9 Apr 2003, 4:44 p.m.,*
in response to message #12 by Les Bell [Sydney]

/

Re: E-mail ID stolen - please, read.
*Message #14 Posted by **David Smith** on 8 Apr 2003, 5:57 p.m.,*
in response to message #9 by Howard

Sorry Howard... it will NEVER stop. It will NEVER slow down. Once your address gets out, it keeps getting sold and resold. These creeps NEVER remove an address from their lists... it costs them nothing to send their wonderful little messages to dead accounts.

Re: E-mail ID stolen - please, read.
*Message #15 Posted by **Ernie Malaga (Miami)** on 8 Apr 2003, 7:22 a.m.,*
in response to message #1 by Vieira, Luiz C. (Brazil)

Luiz:

>I just received an e-mail sent by lcvieira@quantica.com.br. It's obvious I did not send an e-mail to myself. I scanned my hole net for current viruses and found nothing.

I get emails by kajzero@earthlink.net all the time. All of them (no exceptions) are from spammers selling pornography or sexual services. My "in" mailbox is usually stuffed with this sort of garbage.

I just delete it without opening, but it's still bothersome. The low-lives who send those messages wouldn't like to be on the receiving end, of course, but they don't see anything wrong with broadcasting their trash. I'll bet they squawk "Free speech!" if challenged in court -- which would never happen, as it's impossible to track them down.

Once I remember I kept receiving the same email for several days, and I replied, breathing flame, that I didn't want it. I remember sending that 20 or 30 times, all in a row. It did no good whatsoever. If you reply to them they never reach them.

Be philosophical. Don't make bile unnecessarily! -Ernie

Re: E-mail ID stolen - please, read.
*Message #16 Posted by **Andrés C. Rodríguez (Argentina)** on 8 Apr 2003, 7:34 a.m.,*
in response to message #15 by Ernie Malaga (Miami)

Replying (even with flames) will only confirm to the spammers that your address is active; I would suggest not to reply, just delete the offending messages and, if possible, put the suspected addresses or domains in a "blocking" list.

Re: E-mail ID stolen - please, read.
*Message #17 Posted by **Ernie Malaga (Miami)** on 8 Apr 2003, 12:25 p.m.,*
in response to message #16 by Andrés C. Rodríguez (Argentina)

>just delete the offending messages and, if possible, put the suspected addresses or domains in a "blocking" list.

Andrés:

That's what I've been doing recently. The problem is that the spammers use different names, email addresses, and subject descriptions, so they get around my email client's junk filter. It's a losing battle.

-Ernie

Re: E-mail ID stolen - please, read.
*Message #18 Posted by **Patrick** on 8 Apr 2003, 4:03 p.m.,*
in response to message #17 by Ernie Malaga (Miami)

One of the best defences I've found is using their weaknesses against them.

Spammers try to make their crap as eye catching as possible. For this, the preferred technique is HTML mail. However, no legitimate sender EVER sends me email with HTML in it -- if they need to send HTML they'll send it as an attachment. So, I have a filter which dumps all HTML mail into the junk mail folder.

Works very well.

Re: E-mail ID stolen - please, read.
*Message #19 Posted by **Ernie Malaga (Miami)** on 8 Apr 2003, 6:18 p.m.,*
in response to message #18 by Patrick

Great idea, Patrick.

Unfortunately, my email client doesn't have the option to annihilate HTML emails.

-Ernie

Re: E-mail ID stolen - please, read.
*Message #20 Posted by **Andrés C. Rodríguez (Argentina)** on 8 Apr 2003, 6:20 p.m.,*
in response to message #17 by Ernie Malaga (Miami)

I had limited suceess blocking suspicious domains, but it is a little drastic

Re: E-mail ID stolen - please, read.
*Message #21 Posted by **David Smith** on 8 Apr 2003, 6:00 p.m.,*
in response to message #15 by Ernie Malaga (Miami)

The first thing in my email filter list is to delete any message with my email name in the address or message title. Strange that I don't get any of those messages from myself anymore.

Thanks, folks; about my concerns...
*Message #22 Posted by **Vieira, Luiz C. (Brazil)** on 8 Apr 2003, 5:18 p.m.,*
in response to message #1 by Vieira, Luiz C. (Brazil)

Hi, guys;

thank you all for your support.

I was a lot worried about the possibility taht some of you received any message from "me" with suspicious contents. I'd never send trash to anyone in here.

That's why I decided to post, because the message I received from "me" was inviting me to participate with swing or something like this. I guess if one of you receive this sort of invitation from "me" with photos or animatied GIF's...

Thank you again. I'm changing (or adding another) e-mail address for the end of this month.

Best regards.

Luiz C. Vieira - Brazil

Re: Thanks, folks; about my concerns...
*Message #23 Posted by **glynn** on 9 Apr 2003, 12:56 a.m.,*
in response to message #22 by Vieira, Luiz C. (Brazil)

LOL Luiz!!!

I don't mean to make light of what you perceive is a threat to your good name... I am laughing because the whole Internet is just such a funny, funny thing!

"Yeh, it has to be from Luiz: look-- see, he's wearing a 48GX!!"

Man, I know what you are going through. In November, while I was eBaying a lot, one of the vendors had me in their "Contacts" list in their Outlook Express. They somehow got infected with a virus. I know this, because one of the things this virus did was take that list of contacts, send an email to each of us which contained the virus, and it proceeded to infect MY computer and send MY Contacts the same...

I stopped that fast, my external modem was going crazy showing uploading, and I pulled the plug. But I might not have noticed anything otherwise, had I just been puzzled by the nonsense mail I got.

I was MAD, really angry. I had to rebuild my Windows system, bought Norton Internet Security, went to using Yahoo mail for a while, and ultimately configured Outlook Express to NOT automatically open everything that loads in or is clicked on. While I trust Norton for most things, if someone sends me something and I don't know them or it has an attachment or I am the least suspicious of it, I don't open IT-- I choose Properties and I examine the SOURCE. Or, mostly, I just delete it (practically impossible to just delete a mailbomb if you use Outlook as it comes initially configured, with that Preview pane ON).

Luiz, I was paranoid for a month-- but virii and unsolicited crap-- AND, I guess you know, your published identity, no matter how many times you change it-- are all going to swirl around this toilet bowl known as the Internet. Even my MOM has received unsolicited porn, and she's not been out there trolling for anything but gardening advice.

The best advice I know of is to keep your profile low, maybe when you put your name out there, you do it with a misdirection, like the "luizNOSPAMvieira@quantica.br" idea. Or, as in my participation here, I invite the feedback ALSO to be here, and don't post an email address. The less its out there, the less exposure to evil, and I know the mail I see in my box is actually from someone I want to hear from.

Finally, I don't OPEN (or allow Outlook to open) anything I am not confident is a legitimate correspondence.

Luiz: do whatever you feel makes you more secure... except leave the scene.

In my hometown, all my grade-school teachers were in the phonebook, and you knew where they lived. This meant, sometimes, that a little jerk like me could call and ask at 10pm: "Is your refrigerator running?" (an old joke that 11-year-olds always seem to think is funny). "Ooh, you'd better go catch it then". Unlike now, there was no "caller I.D." function. I'm sorry now, teachers. :-/

On today's Internet, Luiz, telling what came from whom is almost impossible if someone wants to decieve or be unknown. The "Caller I.D." function in email is pathetic, to say the least. Even on this board, someone can type your name or mine to their post.

But our reputations are never going to be made nor broken by others' misuse of our identities: those who know us, or need to know us, will not be misled when or if such a prank occurs.

You are not a prankster, and we all know that. While I *sometimes* am capable of pranks and foolishness, I stopped cold using any alternate pseudonyms here out of respect for Dave's Rules, when they came about. Darnit, no more "Mr. Guaca Mole", no more "Joy S. Noel", now it's only "glynn", always "glynn". And when I want to say something "arrogant" or silly, I take the flack.

No one here will ever respect you any less, if your character HERE is consistently as praiseworthy and helpful as it has always been. Notice that you, here, are QUITE respected, and have been from the moment this crowd started reading your posts. That will always continue.

Gosh, even if you're NOT a swinger... ;-D

Thank you, Glynn!
*Message #24 Posted by **Vieira, Luiz C. (Brazil)** on 9 Apr 2003, 8:43 a.m.,*
in response to message #23 by glynn

Hello, Glynn; (you disapeared for a while too, my friend)

I thought about extending my thankfullness, but I believe your words need nothing more. I'm glad (and thankfull for) being considered this way.

Thank you.

Luiz C. Vieira - Brazil

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

To Michael Coyle: re: single-digits
*Message #1 Posted by **glynn** on 8 Apr 2003, 1:06 a.m.*

Michael:

Somehow I lost track of this thread, and it slipped ignominiously into Archives. After reading your response, I did the same as you--- searching for parts which might be pressed into service. Unfortunately, I, too, have come to the conclusion that NO CURRENTLY AVAILABLE PART will do what I hoped could be accomplished.

I feel like Emily Lattela (sp?) from the old Saturday Night Live: "Oh. Never Mind..."

Not having a 55 or similar calc at hand, I had to dig for info about what display it had. It was, indeed, unusual. The characters were .11" high. This alone is unique: I might have expected, though, to follow the lead of finding the supplier (prob chinese) of the displays for the Retro LED watch made by Fossil just last year. (Fossil "RoadTrip" JR-7749 is one model). Digit size, color and brightness and encapsuation in "bubbles" made it seem close.

But HP Classic displays were unique in quite another way, too: unlike most "seven-segment" displays which actually have 7 segments to make the digit, then also a decimal point located either to the left (LH) or right (RH) of the digit elements, the displays used by HP held the decimal point INSIDE the lower digit "square". This implies, firstly, that NO OTHER DISPLAY WILL LOOK RIGHT, and also, that HP displays took what normally would have been a digit position to display the decimal alone. Very unique.

So, assuming that no display will work but for the originals, we can see WHAT and WHY they are what they are: a substrate on which the LED structure is built, with 5 digit position areas (the 5 common cathode plates), and layered or printed on top is the set of anode segments; these are tied together with clever circuit tracing so that all top horizontal segments are common, all top left vertical segments are common, and so on. I would expect that building all this in sets of fives would make yield and brightness-matching fairly easy. So digit selection was by activating the cathode, and segment selection chose the corresponding anodes on all digits. You could run through all the positions pretty quickly. All the same, this "multiplexing" would be a constant thing: the 40 segments (including the decimals) of each 5-digit display would be run through, lit or not, with each

given a bit less than 1/40th of the "display cycle". I don't know how the classic calcs were wired, but it is MOST likely that the 3 5-digit displays were operated simultaneously, rather than in sequence, so that, at any given moment, three segments of the overall display were being tended to.

Now. Could a display be custom built as a "Classic" LED replacement? Sure. If yield were unimportant, you could chance it as a garage operation; this I do NOT recommend as the MINIMUM number of wire-bonding operations (to run a little wire from anode to connecting pads) would be 240 for the 15-digit display... and so your success rate is drastically increased if you start with a Clean-room environment and closely controlled bonds.

You'd create a multi-layer "thick-film" substrate, with connected cathode pads for each segment of each digit, and pads beside each segment which run to each segment position across five adjacent digits. At this point, I think you see that it could be done as single digits, five at a time, or all fifteen at once. The difference is entirely in how you want to make the "wiring together" of these things. The description of each digit itself is a "common cathode, 8-segment" device. If *I* were doing it, the "five at a time" or fifteen at a time would be too complex-- I'd go single digit and use a circuit board outside of them to tie them in fives...

Then, of course, you'd buy "LED die", in hi-efficiency red... (One major supplier of these is Marubeni). Die are square, and not particularly sized right, at 350 micro millimeters a side. But, gluing them down with conductive epoxy and wire-bonding to the top anode side with a tiny gold wire, they would be bright enough so that one per segment is all you'd need.

Dark epoxy poured between die (50 micro-millimeters high) would secure the wires and provide some optical isolation between them. Over that, a laser-cut "mask" would provide the segment "slots" that the LEDs would shine through. If the mask is somewhat thick, and "filled" with clear epoxy, you effectively have created a diffuser/light-pipe to the outside, which will make the individual segments bars instead of points. If this clear epoxy is not just syringed in to make a light-pipe, but overflows the mask face and is shaped into an over-digit "bubble", then you have done as close a job as you can probably do to creating an HP-equivalent part without going into the Ga-As business yourself.

Weell, that's a WAY to do it, maybe there are others. If you want to do this, it would be best to use a Class what? 10000? cleanroom environment, automation for bond-welding and encapsulation, and each individual die pre-screened for brightness characteristic. Wow.

Unless the market for new displays for Classics is bigger than I'm thinking, this is not how I plan to spend MY summer. Maybe I'll just scavenge a while and try to find an undiscovered stash of HP 5082-7405's lurking out there.

Sorry now that I "off-the-cuff" figured single-digit displays existed that could be used to make a replacement display. My! The display business is certainly chock-full of suppliers, all making the

exact same BIG displays. Wonder how they all stay in business?

Re: To Michael Coyle: re: single-digits
*Message #2 Posted by **Ellis Easley** on 8 Apr 2003, 5:58 a.m.,*
in response to message #1 by glynn

glynn, you have created a great word-picture of something that has been lurking in the corners of my mind. Whenever I consider the mechanical complexity of a Teletype, I think, "Boy, they must have wanted really badly to send text!", almost - but not quite - wondering why they didn't just use a microprocessor - of course, they didn't have one! But while I can just use a microprocessor (theoretically), it's only because of all the steps vastly more complicated and precise than building a Teletype that have been performed to make a microprocessor.

Re: To Ellis: maybe not easy, but...
*Message #3 Posted by **glynn** on 8 Apr 2003, 10:01 p.m.,*
in response to message #2 by Ellis Easley

Ellis:

Thanks much for the appreciation. One thing that I *wished* to convey as I wrote was: that everything involved in making a workable substitute display was NOT magic, but DO-ABLE.

Oh, I was stupid in suggesting that somebody out there likely still made the parts. They CAN, of course, but apparently decided the market did not support making such a bird and keeping any stock of it. (I imagine Agilent, at the time they pared their parts catalog, never suspected that calculator COLLECTORS would exist to look for such things.)

I myself hadn't suspected that HP was using a design in their displays that was so deviant from the layout of OTHER seven-segment displays that it would make a difference in how the device using it sent the information to be displayed (the decimal point requiring a full digit-space).

And I plainly muffed it when I thought that somebody would still be making a seven-segment display so small (ha!! and I thought .2" WAS small!!), when about the only manufacturers that would care to buy such a product would be calculator makers, who had abandoned LED displays for LCD long ago. (The main advantage of LCD of course is its low power requirements, making LED seem way too hungry and wasteful.)

So, the simple, easy method of component replacement is no longer available, unless we stumble into a box in some old dusty warehouse, with long-overlooked tray upon tray of

5082-7405s. It could happen. Still worth looking out for.

So much for the "easy way". I wrote about the possibility of a more complicated option, and maybe ended on too skeptical a note, primarily because in my mind, the economics of it were poor as an "enterprise", even considering the eBay price of Classics. But economics can change, and even such a "Frankenstein" display as my proposal might SOMETIME be worth doing, should fully-working Classics be so desired that collectors begin to seek extra-HP solutions.

But I intended to point out that while what HP produced was a showcase example of their technological superiority (as most everything they produced back then WAS-- they showed off because they got business that way, and because THEY COULD do what others often couldn't!), that you could still investigate, understand and finally, replicate the result, if not the elegance, of the original.

Some of the tools and the tech once available only to a major concern such as HP are now the realm of small organizations in your hometown.

Agilent may still possess vast powers of "magic", but while once upon a time you'd have HAD to build your own LEDs from raw chemicals and using arcane processes to layer and etch a wafer that, hopefully, would emit light at the end of it all, NOW there are companies willing to sell you the bits and pieces that can, with some toying around, be cobbled into what you need.

These days ARE different, and though true "magicians" will always be at the sharp bleeding-edge, doing what we can't, there are a lot of good, underutilized, underemployed techies, possibly some with kit they bought at bankruptcy auction, and they've worked on the factory floor, seeing what steps get you where. Technology "booms" and "busts" do something useful; they spread last year's models around and take suppliers' smug disapproval of dealing with small businesses down a peg.

There are design and automation tools that would really have BEEN "magic" only a few years ago. There's the internet, which allows us to bounce around techniques past all, from professional to tinkerer. There are businesses whose mission is to support and supply esoteric materials to "the rest of us". There is a lot of business devoted nowadays to providing and supporting various scales of production. And stuff that makes production work efficiently often has the effect of making entry-level, minimum-wage workers able to take over tasks that once required extensive training.

So, while I agree that some of what I described sounds daunting, and it IS a lot easier NOT to do it if you don't absolutely HAVE to, nothing I've described would be impossible (or even improbable) for one who was looking for the way to get the job done.

Heck, you can RENT the equipment to produce wire bonds and drop glue down and encapsulate in epoxy and cure it-- in any reasonably-sized city in most places in the world, a trip to the phone-book will find the resources needed to get the job done. You can MAKE it more complex than is absolutely necessary-- and sometimes you'll want to, when it would make the work go faster, easier, more fruitful.

But Ellis, in about two hours peering down the microscope, making practice wire-bonds and testing them, you'd have the technique pretty well down. You'd be on your way to making a display, one segment at a time.

Placing the right-size drops of glue and getting the die right side up and in the spot you want them to be-- if you can play video games reasonably well, you can be a pro at this WITHOUT a degree or years invested in learning all about it. It is developed and applied technology now, and whether doing it one die at a time with micro-tweezers or going someplace where they do it a hundred times faster with automated suction placement gear, it's NOT "rocket science" and not any more complex than the same equipment used in many modern medical labs for automated sample testing.

That's why I looked at this way of doing it: making your own GaAs wafers (usefully) is a bit beyond the "lone techie" or the small club without a couple of years and a fortune to waste; but "hand" assembly of an array of die sourced from a carefully controlled wafer-fab IS WITHIN REACH, if the economics make sense enough to make it worth your while.

So, if enough owners of HP "Classic" calculators want for displays, and they want them BAD enough to pay for the costs, and a techie wants to shepherd the process and make this his "project", it CAN be done. Without running to Agilent and begging on your knees. Without a lot of silicon-doping and vapor-deposition and advanced chemical knowledge. Without building an empire of technical, marketing and financial genius.

I once watched, and marvelled at the sheer madness involved, as a friend of mine molded, carved upon and painted, using the tiniest of brushes, a small part of a model-railroad station. Using bright lights and magnifying glasses, lilliputian details were sculpted and finished to the point where, using a camera with a macro lens, you would swear you were there. Signs advertised on the wall, and they were fully readable and professional. The figures wore plaid and denim and had hair and pearlescent buttons on their shirts and real, rosy expressions on their faces. The wood all had grain and was weathered. A rocking-chair was poised ready to tread on the tail of a peacefully-napping dog. Norman Rockwell would have been proud to have portrayed such a scene, if only Mr. Rockwell had been about 80mm tall. My friend used dental tools and picks and almost daily made revisions and reworked some part of it, gradually bringing the scene closer to his vision of what the passengers of his train would see as it pulled in to this station. The engine and train of cars was equally painstakingly detailed.

I had always thought that you just bought some machine-made, pre-printed station, plunked it down beside a pre-built track, and ran a pre-built train past it. Seeing this little diorama evolve over a couple of years, I had to admit: hobbyists and enthusiasts can be stark-raving nuts, yet what they can do when they are totally involved in their passion is astounding and admirable.

What someone determines if it is worth doing? Only the do-er.

But many things I would not have thought do-able on a limited budget and within a reasonable time have BECOME so, for both corporations and individuals who still strive to create.

Take care-- g.

I didn't say "magic" ...
*Message #4 Posted by **Ellis Easley** on 9 Apr 2003, 5:30 a.m.,*
in response to message #3 by glynn

... just complicated. A teletype is very complicated. But making a microprocessor is more complicated, and requires more precision, taking into consideration all the steps. Once the microprocessor is built (and memories and logic etc.), making a terminal is easier than building a teletype.

I once helped salvage some "first silicon" ASICs that had a metal layer inadvertently connected to an analog output. We passed some current between two pins to burn out the metal, and the designer was able to test the output! (on some of the chips)

Re: To Michael Coyle: re: single-digits
*Message #5 Posted by **Michael F. Coyle** on 8 Apr 2003, 4:40 p.m.,*
in response to message #1 by glynn

Hi Glynn!

Thanks for your excellent post. I have, as usual, many comments.

1. I'm sorry you couldn't find suitable LEDs either. And I doubt Fossil will be forthcoming about their supplier. (It looks like their Web site has no LED watches any more -- I guess they were discontinued.)

2. *...the displays used by HP held the decimal point INSIDE the lower digit "square". This implies, firstly, that NO OTHER DISPLAY WILL LOOK RIGHT, and also, that HP displays took what normally would have been a digit position to display the decimal alone.*

You are correct. The decimal point is inside the digit and does indeed use an entire digit position to display. (In the Classics only -- see below.)

3. *...it is MOST likely that the 3 5-digit displays were operated simultaneously, rather than in sequence, so that, at any given moment, three segments of the overall display were being tended to.*

This is not correct. Each of the fifteen digits were turned on just one at a time, and in fact it appears that each of the segments in the digit is also driven one at a time (to reduce cathode driver current). HP designed a very clever circuit which involved charging an inductor and then discharging it through the LED. The charge time limited the current, which is more efficient than a current-limiting resistor. This is all described in detail in the HP-45 patent, but I have not analyzed the circuit in detail.

4. Your description of LED stick manufacturing is correct as far as I can tell. I have a similar display in my junk box, an HP HDSP-6508, an 8-character LED with segments in a "starburst" pattern (and two dots for making a colon or decimal point). All the LEDs and bond wires are clearly visible. I can't tell if the segments are one-piece or made of shorter bars, though.

5. I don't think garage maunfacturing is likely. Not by me anyway!

6. Different HP calculators use different LEDs. The Classic LED displays are as described above. Woodstocks used a 12-digit display. From the MoHPC photos, they look like one big assembly of 12 digits in one long molded package. They also have the more common right-hand decimal points. Spice machines (34C, etc.) apparently have bigger digits, but fewer of them -- the picture makes it look like they are one-piece 11-digit displays (limiting the display to 7 digits in scientific mode). There is also a single dot in the left-hand position just above the "-" sign, used as a low-battery warning. I also seem to remember reading that the decimal points had tails so they could display commas, European style.

It's too bad these displays are no longer available.

- Michael

Re: To Michael Coyle: re: single-digits

*Message #6 Posted by **glynn** on 8 Apr 2003, 10:50 p.m.,*

in response to message #5 by Michael F. Coyle

Howdy Michael--

Re: 1. You are right-- LED watches had a short season in retro-land. I think everyone realized that, no matter the nostalgia, you STILL had to press a damn button to read the time!

Re: 3. Aha!! Okay, so scanning 120 segments singly instead of 120 as 3 groups of 40. This makes a difference in the timing, of course, not in the construction of the display itself-- but it is really important to know how much of a duty-cycle and how fast it runs... the LED on for 1/120th of a cycle puts out a lot of light in that short of a time, and...

BUT WAIT!! Did you say there was an inductor in there? Hmmm.

Y'know, it IS possible that the purpose of that inductor was twofold: to both limit the current, and to stretch out the timing/duration of the pulse delivered to the segment... wait, that might not be right-- was there an inductor PER SEGMENT, or one PER DIGIT?

Re: 4. Yeh, my proposal was a bit of a kluge, since HP can do vapor-dep and etching to get bars, circles, stars or whatever they dang well please as an anode. I would content myself with a point-source (well, a square) that was available for purchase, then "form" the light from it by blocking some of it with a mask and making the light INTO a bar shape with diffusion. Not elegant, but would do the job. What you see under the magnifier is a layer of LED anode, the light-producing bit, and for long-bar or stripe versions of this they would have segmented it so it was, as it were, multiple parallel LEDs. I imagine that larger displays have to do this sort of thing more than a .11" version would have. In any case, they were not relegated to gluing down bits of die, as I would be; well, not unless they did so for an economic reason.

Re: 5. Dang. Your garage was PERFECT. We only had to move the car out for a while-- say, three or four months? ;-)

Re: 6. Yes, it's funny, though: I hear of Classics with display problems more frequently than of any other type. Maybe the others die memory-chip death before they can develop display problems, I dunno. I know that if I could select three things for HP to manufacture as replacement parts (assuming not calcs, but parts for them) I'd put in requisitions for battery doors for 41's, 28's and Spices, displays for Classics, and rubber anythings for anything HP has ever used rubber for. They were bad, bad guys in the rubber department. (I have a 9144a

tape drive which turned completely to goo, ruining my one valid OS tape; a 9100a with its card-reader wheel, cracked and swelled; a 97 with a card reader that SMOKED rubber the first time I tried it... etc etc etc)

Hey, if not your garage, a spare room perhaps?

Re: To Michael Coyle: re: single-digits
*Message #7 Posted by **Michael F. Coyle** on 9 Apr 2003, 12:10 a.m.,*
in response to message #6 by glynn

Hi Glynn,

I hate to break the news to you but there are *no* spare rooms at my house. I have my father and his wife here, with all their possesions, and together we're using about 110% of the available space. (Good thing I'm single, I guess. :))

Anyway my mechanical skills are minimal. Maybe you should get your model railroad friend to put together LED displays in his spare time.

According to the patent, one diagram showed one inductor per segment. If you are really interested, you can download the patent (US Patent No. 4,001,569) from Peter Monta's Web page at http://www.pmonta.com/calculators/. It's written in English, not patentese, and makes for interesting reading.

Displays of the type we're looking for could be made by just about any LED manufacturer. We wouldn't have to go begging if we were to put up all the required money up front. It might be a lot of money, though. Hybrid IC houses might be able to do it too.

Nothing will happen on this front for a while, as we aren't sufficiently desparate yet. If calculator prices keep going up, I think you will start to see small garage junk dealers appear. At some point it will become profitable to buy busted calculators, strip them down to their component parts, and sell the pieces. It works for cars -- if I need a water pump for an '86 Ford, my mechanic knows about 10 junkyards and dealers to call.

This doesn't create new parts but it does get the existing parts into circulation more efficiently.

- Michael

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

What's a PPC Rom worth?
*Message #1 Posted by **Tony** on 7 Apr 2003, 11:54 p.m.*

I know it's worth what someone will pay for it.

Anyone had any recent experience though?

Thanks Tony

Re: What's a PPC Rom worth?
*Message #2 Posted by **Ernie Malaga (Miami)** on 8 Apr 2003, 12:30 a.m.,*
in response to message #1 by Tony

Tony:

They were $90 for two modules in 1981, for those who had pre-ordered them. I got my two modules. Sadly, one went with a 41C that someone stole from me. And the other I gave to a friend of mine.

FWIW, the manual alone is valuable. It shows what calculator manuals _should_ be like -- in every respect except cosmetically.

-Ernie

Re: What's a PPC Rom worth?
*Message #3 Posted by **Raymond Del Tondo** on 8 Apr 2003, 4:32 a.m.,*
in response to message #2 by Ernie Malaga (Miami)

>FWIW, the manual alone is valuable. It shows what calculator manuals _should_ be like > -- in every respect except cosmetically. > I second this. The PPC ROM manual was an extremely good source for many things back then in the early eighties when I got mine.

Raymond

Re: What's a PPC Rom worth?
*Message #4 Posted by **David Smith** on 8 Apr 2003, 6:04 p.m.,*
in response to message #1 by Tony

If it has the manual, figure $100 +/- $50.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Recharging an HP33c
*Message #1 Posted by **joe** on 7 Apr 2003, 9:11 p.m.*

How does one go about recharging an HP33C? There is one on ebay for sale, with no charger (of course). I kinda like the critter and was wondering if one of you guys would give me an idea here...

I know, I'm giving away the source for a good calculator but heck, you guys probably already have plenty of 33C's...

Any info would be appreciated.

joe

Re: Recharging an HP33c
*Message #2 Posted by **hugh** on 8 Apr 2003, 6:42 p.m.,*
in response to message #1 by joe

if its the same as the 32, then the battery pack is two AA cells held together by a meta clip. its possible to carefully remove the cells from the clip and replace them with new ones (ie ni-cads).

alternatively, what i do is charge the batteries outside the calculator and not use the main adapter. this way i can use ni-mh batteries.

thats one idea anyway.

HP33c just stuff in AA cells

*Message #3 Posted by **Norm** on 9 Apr 2003, 7:50 a.m.,*

in response to message #2 by hugh

Hi,

Why recharge it. Just stuff in AA batteries, Alkaline, Energizer, Duracell, etc. and calculate for a long time. Throw the cells out when they die out. Thats what I've been doing since I acquired a 34C .

Seriously because its an AA fit, you can get AA cells of your choice (NiCad if you like) and just stick them into there.

Remember that the + terminal is the one closest to the center of the calculator. Suggest marking it into there with a black fine-point permanent marker.

To bridge the far end, you use some sort of very thin metal foil. Aluminum in a pinch, though its kind of soft and crumbly. I have a piece of thin copper-braid in there presently, you know, its called "Solder Wick". Some .003" nickel foil would be perfect.

If you put in NiCad AA cells, you can charge the same way that HP had in mind originally.

Good luck !

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

30.6001, 25 year old hack?
*Message #1 Posted by **hugh** on 7 Apr 2003, 7:30 p.m.*

formulae for date calculations always involve the mystery number 30.6001

[quick recap. problems involving date arithmetic are solved by converting a d/m/y date into a julian day number (# of days since 4716BC) or some offset absolute day# eg from 1/1/1900, adding & subtracting from that number and then converting back to d/m/y. thus two subroutines are needed date->julian and julian->date].

30.6001 is the days per month approximation (365-31-28)/10 (ie av month days without jan & feb).

so what?

this number is used in most modern books eg. montenbrucks's astronomy book, also in peter duffett-smith's book. both come from Meeus' earlier works, first published 1979.

now, i happen to know that all the computations using 30.6001 work just fine using 30.6. so, whats the deal with the small adjustment.

i thought i had got to the bottom of this when i read meeus' to reveal 30.6001 was a *workaround* for the numerical errors in his hp-85 microcomputer from 1978 (he says this in his book). 1978 is before ieee floating point standardization. so basically, you needed small number hacks to manually ensure correct roundoff. so this hack has been carried forward 25 years with no one noticing.

but wait!

here's the hp29c/19c applications book from july 1977. p44 and the *same* hack is used before meeus' publication. could it be that hp originated this hack all along. and where did it really start?

Re: 30.6001, 25 year old hack?
*Message #2 Posted by **Trent Moseley** on 7 Apr 2003, 11:49 p.m.,*
in response to message #1 by hugh

Hugh,

I don't know the answer to your question, however I'm looking in my files.

Now what Montebruck said (translated from German in his book (Practical Ephemeris Calculations pub. by Springer-Verlag in 1987 pg 34)"In all computers with clean arithmetic 30.6001 can be replaced by 30.6. This is usually, however, the case only for pocket computers."

Now the date we are counting from for the Julian Day Number is Noon 1 January 4713 B.C. not 4716 B.C.

Re: 30.6001, 25 year old hack?
*Message #3 Posted by **Bill Wiese** on 8 Apr 2003, 2:10 a.m.,*
in response to message #2 by Trent Moseley

Folks..

> Now what Montebruck said (translated from German in > his book (Practical Ephemeris Calculations pub. by > Springer-Verlag in 1987 pg 34)"In all computers > with clean arithmetic 30.6001 can be replaced by > 30.6. This is usually, however, the case only for > pocket computers."

I assume the term 'clean arithmetic' is implying BCD floating-point math, not binary floating-point (which most computers use).

So if you're running on a decent calc or a computer using BCD F.P. math (HP71B, HP75, etc.) you're OK. Funny that mention was made of this being done for the HP85 - because HP85 BASIC, I'm pretty sure, uses BCD FP math!

Having a vague recollection of doing date math with Julian dates, the 0.0001 is probably added so that we avoid problems with taking INT() and FRAC() functions on results in the digit form of N.999999... instead of (N+1).000000. This just biases the error upward a bit.

This may not just be due to BCD vs binary floating-point math. Most BCD math engines have at least 8 or 10 digits of precision, while quite a few programming languages had a 'float' data type that was 32bits wide including the exponent - meaning 24 bit mantissa gives about 7.2 digits of precision (bits used in a base = log(base)/log2). So we have some

difference there.

Bill Wiese San Jose, CA

Re: 30.6001, 25 year old hack?
*Message #4 Posted by **hugh** on 8 Apr 2003, 1:00 p.m.,*
in response to message #3 by Bill Wiese

according to my calculations 30.6 will work fine on any BCD math and also on ieee754 floats. the BCD math means that it should always work on a calculator.

the problem 30.6001 is trying to avoid in binary is that floor(10*30.6) = 305 when 30.6 is actually 30.599999... internally as it cant be exact in binary. however, floating point math would be useless if 10*30.6 != 306 and so ieee rounds the last bit correctly.

montenbruck is correct. i assume "clean" arithmetic means either BCD representation or correct treatment of rounding the last binary digit.

reading meeus more closely; yes hp85 was BCD, but he is complaining about other basics (presumably binary) like the hp-intergral hp-ux technical basic 5.0 (what was that?). so appologies to the hp85.

30. 6 vs. 30.6001...
*Message #5 Posted by **Andrés C. Rodríguez (Argentina)** on 8 Apr 2003, 7:32 a.m.,*
in response to message #1 by hugh

If I recall correctly, the calendar program in the HP25 Applications Book used 30.6 (perhaps just to save precious program steps); the HP41C Standard Applications Pac used 30.6001 (there was much more program space available).

Re: 30. 6 vs. 30.6001...
*Message #6 Posted by **hugh** on 8 Apr 2003, 12:50 p.m.,*
in response to message #5 by Andrés C. Rodríguez (Argentina)

thats interesting because 30.6 would work. the 29c book uses 30.6001 *but* it is stored in a register, so the program cost is avoided.

Re: 30. 6 vs. 30.6001...
*Message #7 Posted by **Trent Moseley** on 8 Apr 2003, 5:46 p.m.,*
in response to message #5 by Andrés C. Rodríguez (Argentina)

Andres,

You are right about the HP-25C Applications Book. They did use 30.6 but they could have used 30.6001 because the listed program used only 46 steps!

tm

Re: 30. 6 vs. 30.6001...
*Message #8 Posted by **hugh** on 8 Apr 2003, 6:21 p.m.,*
in response to message #7 by Trent Moseley

perhaps they knew, 30.6001 was bogus. what date is the 25c applications book? the 29c is 1977.

Re: 30. 6 vs. 30.6001...
*Message #9 Posted by **Trent Moseley** on 8 Apr 2003, 6:50 p.m.,*
in response to message #8 by hugh

Hugh,

1975

tm

Re: 30. 6 vs. 30.6001...
*Message #10 Posted by **Trent Moseley** on 9 Apr 2003, 5:37 p.m.,*
in response to message #8 by hugh

Hugh,

Does knowing the 25C's Appications Programs book was printed in 1975 using 30.6 throw any further light on your investigation?

tm

Re: 30. 6 vs. 30.6001...

*Message #11 Posted by **Andrés C. Rodríguez (Argentina)** on 8 Apr 2003, 6:22 p.m., in response to message #7 by Trent Moseley*

OK, I was just trying to remember details which are 25 years old!

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP 28C - Disabling the beep?
*Message #1 Posted by **Mike** on 7 Apr 2003, 6:51 p.m.*

I've had my HP 28C for years, but it sat in a closet for a few of those years, unused. Now that I'm using it regularly again, I can't remember all the bells and whistles. I've got the Museum's CD to replace my lost manual, but I still can't find one piece of info:

How do I disable the error beep? (For instance, if I hit DROP twice when there's only one entry on the stack, it'll beep once for the extra DROP.)

Thanks, Mike

Re: HP 28C - Disabling the beep?
*Message #2 Posted by **Chris Randle (UK)** on 7 Apr 2003, 8:08 p.m.,*
in response to message #1 by Mike

On the 28S you set flag 51. Might be the same for the 28C.

Re: HP 28C - Disabling the beep?
*Message #3 Posted by **Mike** on 7 Apr 2003, 8:34 p.m.,*
in response to message #2 by Chris Randle (UK)

Yep, that's it! Thanks for pointing me in the right direction. I was thinking it was a key combination (like ON and "+" for the contrast).

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Bought in haste...>>
*Message #1 Posted by **dbusse** on 7 Apr 2003, 3:18 p.m.*

In what seemed like a shady DEAL on the wrong side of the tracks, I just bought an HP 15C for 36 bucks. What's wrong with it you ask. Bezel a bit scuffed and scratched. Keyboard dusty. Missing HP 15C emblam. However, self & keyboard tests pass. Does anyone know where I can get an "HP 15C" emblam? Can anyone direct me to instruction on cleaning the unit myself or, do you recommend having it done professionally?

Thanks much for any help, David

It's junk. You'd better sell it to me for $20... >>
*Message #2 Posted by **Jeremy** on 7 Apr 2003, 7:51 p.m.,*
in response to message #1 by dbusse

Just kidding. You grabbed a good deal!

As for cleaning a dusty keyboard, I just use an old toothbrush. It will get the dust and grime out of hard-to-reach nooks and crannies with ease. Even if you don't have one handy, it is worth the money and time to go and buy one. While you're at it buy one for your toolbox too, you might be surprised how often they come in handy.

-Jeremy

Re: It's junk. You'd better sell it to me for $20... >>
*Message #3 Posted by **Ellis Easley** on 8 Apr 2003, 6:05 a.m.,*
in response to message #2 by Jeremy

I use a vacuum cleaner with the soft brush attachment and hold the unit with keys facing down to allow gravity to help the suction.

cleaning keyboard - additional
*Message #4 Posted by **Ellis Easley** on 8 Apr 2003, 6:42 a.m.,*
in response to message #3 by Ellis Easley

If you use a brush or Q-Tips too vigorously running between the keys horizontally and vertically, you will end up with a criss-cross pattern slightly, but very noticably, worn into the keyboard bezel.

I hear you, but...
*Message #5 Posted by **Jeremy** on 8 Apr 2003, 6:42 p.m.,*
in response to message #4 by Ellis Easley

If the grime in his keypad was as bad as the grime in the keypad of my HP45, a vacuum cleaner and brush won't budge it. That is a good point about the light scratching though...

-Jeremy

Re: I hear you, but...
*Message #6 Posted by **Ellis Easley** on 9 Apr 2003, 5:47 a.m.,*
in response to message #5 by Jeremy

If it is really grimy, I use a similar technique first using a wide, soft bristle brush loaded with a little soap suds (minimal water). The brush I use is about 3" by 4" with bristles about 1/2" long. I hold the calculator upside down and rub it lightly on the brush in small circles. Then I use the same brush just barely damp a couple times to rinse, keeping the calculator upside down all the time (you can lay it keys down on a towel between scrubbings), then I use the vacuum cleaner to dry it out well.

Thanks for the help guys. Much appreciated. nt.
*Message #7 Posted by **dbusse** on 8 Apr 2003, 8:33 a.m.,*
in response to message #1 by dbusse

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[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP34C case
*Message #1 Posted by **Howard** on 7 Apr 2003, 10:10 a.m.*

This is mainly for Luis. Could you post the photograph of the case assembly for HP34C. I've looked in the archives and I've can read the article but the photograph is not available in the article. If you want to email me, please remove the "spam" from my email address. Thank you.

Dismantling HP-34C, my 2 bits
*Message #2 Posted by **Norm Hill** on 7 Apr 2003, 4:44 p.m.,*
in response to message #1 by Howard

About taking apart the HP-34C (spice series) case.

My two bits are one, and zero. ha ha.

Seriously, the dental-floss idea sounds promising though I haven't tried it.

The single most important tool, for sure, is to understand mechanically what it really is, in order to be able to separate the two halves. Not understanding it will only cause breakage of the plastic.

LASTLY I would like to suggest to anybody about this topic that a calculator can, and should, be ever so slightly trimmed. Just take away 5 thousandths of an inch with the X-acto knife, so that it will separate a little easier for subsequent take-aparts. I found all points of trimming the plastic are on the bottom-half.

I hope these comments are useful.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

RPN Financial calculator
*Message #1 Posted by **Renato** on 7 Apr 2003, 12:47 a.m.*

It is on auction in Brazil: http://www.mercadolivre.com.br/org-img/original/MLB/7428311_484.jpg

A Financial RPN calculator - you can see ENTER, RDN, X<>Y keys on the picture. It is being advertised as "HP-12 equivalent".

I think it is manufactured by Aurora, model is FN1000. Does anyone have more information on this ?

Re: RPN Financial calculator
*Message #2 Posted by **Massimo Gnerucci (Italy)** on 7 Apr 2003, 6:40 a.m.,*
in response to message #1 by Renato

It's a clamshell style calc, have a look here http://www.aurora.com.cn/HTML/english/db.asp?Type_Name=Calculator&Ver=EN

Look like it is poorly finished, I haven't spotted other RPN style items.

Thanks for the hint!

Greetings, Massimo

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

82143A Printer repair?
*Message #1 Posted by **Steve** on 6 Apr 2003, 3:39 p.m.*

I have an 82143A printer that prints the right most character lighter than the rest of the print line. In the middle intensity setting, it's barely readable, while the rest of the line is fine. If I set the intensity to the highest setting, it's readable, but the rest of the line is a little darker than it needs to be. I'm assuming there is some sort of alignment problem and I'm wondering if there's a way to correct it. Thoughts?

Steve

Re: 82143A Printer repair?
*Message #2 Posted by **David Smith** on 6 Apr 2003, 5:16 p.m.,*
in response to message #1 by Steve

About the only thing it could be is the spring loaded platen that sits behind the print head. It is a strip of metal with a rubber liner. It has a notch along its length that sits over a ridge on the printer mechanism. Sometimes it becomes knocked out of alignment. A related item is the teflon impregnated strip of fiberglass that is draped over the platen. Make sure it is not folded, etc.

Re: 82143A Printer repair?
*Message #3 Posted by **Steve** on 6 Apr 2003, 6:37 p.m.,*
in response to message #2 by David Smith

Is it possible to get at the platen easily? How do you remove the plastic backing? Thanks,

Steve

Re: 82143A Printer repair?
*Message #4 Posted by **David Smith** on 6 Apr 2003, 10:11 p.m.,*
in response to message #3 by Steve

The platen is easily visible from the front of the printer. It just sits behind the printhead where it is held in place by sping tension. You should be able to see if it is in place and adjust it with your fingers. Press along the path that the printhead travels and you should feel the spring loaded platen bar.

Just a suggestion
*Message #5 Posted by **Vieira, Luiz C. (Brazil)** on 6 Apr 2003, 11:13 p.m.,*
in response to message #1 by Steve

Hi;

I completely agree with David's analisys, because I had another possibility in mind and did not think about it. At least so far. Thank you, David; yours is a very reasonable solution.

What I remember is that I had a roll of thermal paper and I noticed that at the leftmost characters were dimmer than the rest of the "printing". But this was just in the first 1/5 of the roll. It seems the thermal chemicals in the paper surface reacted with atmosphere or with any other agent (sunlight, temperature, etc.). This is also noticeable when using stocked thermal paper for the first tiem: the first two-three turns of paper are lighter than the rest of the roll.

Just try with another roll before proceding with the disassembling. If necessary you should do it, but checking first for this possibility may save time and labor.

Hope this helps.

Luiz C. Vieira - Brazil

Re: Just a suggestion
*Message #6 Posted by **Steve** on 7 Apr 2003, 12:27 p.m.,*
in response to message #5 by Vieira, Luiz C. (Brazil)

I tried an experiment, I cut the right edge (1/2" or so) off the paper. After several attempts of the paper getting jammed, I finally got it to print on the narrow paper. The result was the same, with the right most character being lighter than the rest of the line. This was a good suggestion however, since the paper I'm using is old and it's storage over the last 20 years is not known to me. So, thanks Luiz.

I then attempted to gently move the right side of the platen closer to the print head (while the head was on the left side). Since it is spring loaded, it pretty much returns to it's original position, and the result was the same, the right most character was lighter.

I'm going to experiment more tonight, but I don't really see a way to adjust the platen permanently. Thoughts?

Steve

Re: Just a suggestion
*Message #7 Posted by **Vieira, Luiz C. (Brazil)** on 7 Apr 2003, 12:50 p.m.,*
in response to message #6 by Steve

Hi, Steve;

I'm sad you did not get success so far. Unfortunately I see no other way than disassembling the printing mechanism and removing the platen so you can work with fair "space".

Maybe I am wrong in this following analisys, so I ask for others knowledge and correction, plese. Topcats (HP91, 92 and 97) and the HPIL printer HP82162A use a printing mechanism that is close to the one in the HP82143A with a few differences. If they all have the same platen to adjust paper pressure, it's not going to be hard to find a replacement. In this very forum, some months ago, at least two of the contributors mentioned having printers with problems: one HP82143A and another one having a topcat, don't remember which. If you find an HP82143A with electronic problems, you may replace the entire printing assy and then you will have enough time to repair the other unit and keep it as a spare. If there is one with problems in the printing head (and that's what I read about here) then you'll have to replace the head with yours.

Not so much of help, but it is another possiblity.

Hope you have success.

Luiz C. Vieira - Brazil

Re: Just a suggestion
*Message #8 Posted by **Renato** on 7 Apr 2003, 4:30 p.m.,*
in response to message #6 by Steve

Seems to me that a misaligned platen would produce a continuous fading - that it is : each character closer to the right edge would get lighter. Even the rightmost character would have a leftmost column darker that the righmost column. If that is not happening, my guess would be dirt on the pins that carry the printhead, causing the printhead to move away from the platen at the rightmost position. I´ve completely dismantled a topcat printer, and managed to get it togheter ok. This was my first experience on this, and having a exploded parts drawing helped a lot. I got this drawing on the HP Journal article about the HP-91, from a PPC cd set. I don´t think I have a drawing for the 82143, sorry.

Re: Just a suggestion
*Message #9 Posted by **David Smith** on 8 Apr 2003, 6:09 p.m.,*
in response to message #8 by Renato

The basic mechanics of the 82143A printer and the HP9x printer are the same, but they are quite different in several respects. The 82143A is belt driven and uses a different print head. Also the head sensor is different. Both printers are built on the same mechanical frame though.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Disintegration of vinyl case
*Message #1 Posted by **Graham Whyte** on 6 Apr 2003, 3:32 p.m.*

I have not used my 33-E for about six months and when I opened the vinyl case today I found the inside of the case is in the process of disintegrating. This has shed a black dusty deposit all over the calculator.

Question - is this disintegration common, and any ideas what causes it happen? The calculator is normally stored in a cool dry place.

Thanks.

Re: Disintegration of vinyl case
*Message #2 Posted by **Gordon Dyer** on 6 Apr 2003, 4:51 p.m.,*
in response to message #1 by Graham Whyte

The same thing is happening to my 41CV case. Disintagrating inside and producing black dust, so I have stopped using that one. It was like that when I bought it 6 months ago. I guess it is caused by damp, or maybe inappropriate washing, but I'm not sure.

Re: Disintegration of vinyl case
*Message #3 Posted by **David Smith** on 6 Apr 2003, 5:18 p.m.,*
in response to message #1 by Graham Whyte

This is very common. The backing to the lining turns to dust. Just take the case and toss it in the washing machine. Then prop open the case and let it air dry. In tough cases you may have to wash a second time.

Re: Disintegration of vinyl case
*Message #4 Posted by **Raymond Del Tondo** on 7 Apr 2003, 3:24 a.m.,*
in response to message #3 by David Smith

One of my HP-41 soft cases shows the same black dust.

How many degrees (Celsius) can the case handle, if put in the washing machine? Or is 30 degrees Celsius sufficient?

Re: Disintegration of vinyl case
*Message #5 Posted by **Norm** on 7 Apr 2003, 4:45 p.m.,*
in response to message #4 by Raymond Del Tondo

Did anybody ever compare the size of a 41C to a 48G+ ? Long shot, but maybe a 41C would fit into the case that is sold for a 48G+ or a 49.

Then a person could probably buy a brand-new case from spare parts. But I dont know if it would fit.

Re: Disintegration of vinyl case
*Message #6 Posted by **Richard Garner** on 7 Apr 2003, 5:27 p.m.,*
in response to message #5 by Norm

The 41c+card reader is the same size as the 48g, so the cases can be used for either.

I would think it would be very loose w/o the reader though... (NM)
*Message #7 Posted by **Jeremy** on 7 Apr 2003, 7:53 p.m.,*
in response to message #5 by Norm

!@#$

Re: I would think it would be very loose w/o the reader though... (NM)
*Message #8 Posted by **Michael F. Coyle** on 8 Apr 2003, 2:05 p.m.,*
in response to message #7 by Jeremy

Just add a big spring!

Re: Disintegration of vinyl case

*Message #9 Posted by **David Smith** on 7 Apr 2003, 10:29 p.m.,*

in response to message #4 by Raymond Del Tondo

I'm pretty sure 30C would be fine. I set my washing machine to HOT, but tend to keep the house water heater set fairly low compared to most people... I don't like the idea of people being able to scald themselves... but still need to dial in cold water to take a comfy shower.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Remember this: Questionable auction for 50* 39G calcs
*Message #1 Posted by **Mike** on 6 Apr 2003, 11:09 a.m.*

Remember this post about a questionable auction?

Well, the auction appears to have been cancelled for violations. It has been completely removed which is what happens when rules violations happen.

Who cares?
*Message #2 Posted by **Nenad (Croatia)** on 6 Apr 2003, 12:11 p.m.,*
in response to message #1 by Mike

Simply, I don't find eBay (and its rules) that important at all.

Re: Who cares?
*Message #3 Posted by **George** on 6 Apr 2003, 4:51 p.m.,*
in response to message #2 by Nenad (Croatia)

I care to some extent as Ebay seems to provide the most access to vintage Hewlett Packard calculators. Using and collecting HP calculators has become a pleasurable hobby.

I care, but not to the extent that Mike does.
*Message #4 Posted by **Jeremy** on 7 Apr 2003, 8:00 p.m.,*
in response to message #2 by Nenad (Croatia)

I think Mike just wanted to make us all aware of something. It could also be the case that his pointing this issue out is what got the illegal (and devious) sale pulled from eBay. Bravo for that. As for posting every shady deal offered on eBay here, I think that is a waste.

My theory is that if you see something like that, point it out to eBay, but keep us out of it. They will take care of it, and we here are aware that things like this happen.

Last but not least, if the auction was posted by a member of MoHPC, he/she might be a bit bitter that you ruined his/her auction. He/she might not have done it on purpose and you might have just made an enemy unnecessarily. That is a long shot, but better to be on the safe side, right?

-Jeremy

I didn't ruin it
*Message #5 Posted by **Mike** on 8 Apr 2003, 4:50 p.m.,*
in response to message #4 by Jeremy

In fact, I was high bid on it. :-) I have dealt with this seller before. I'm sure it was an innocent mistake.

Re: I didn't ruin it
*Message #6 Posted by **David Smith** on 8 Apr 2003, 6:10 p.m.,*
in response to message #5 by Mike

Probably not quite so innocent... looks like an nice attempt to reduce Ebay's cut of the fees.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP75/HP82164A
*Message #1 Posted by **G.Kuhn** on 6 Apr 2003, 11:09 a.m.*

Hi, I would like to know what the the HP75 commands are, to "talk" to a HP82164A RS232 interface, please? Private replies much appreciated.

{moderator repost}

[Return to Index | Top of Index]

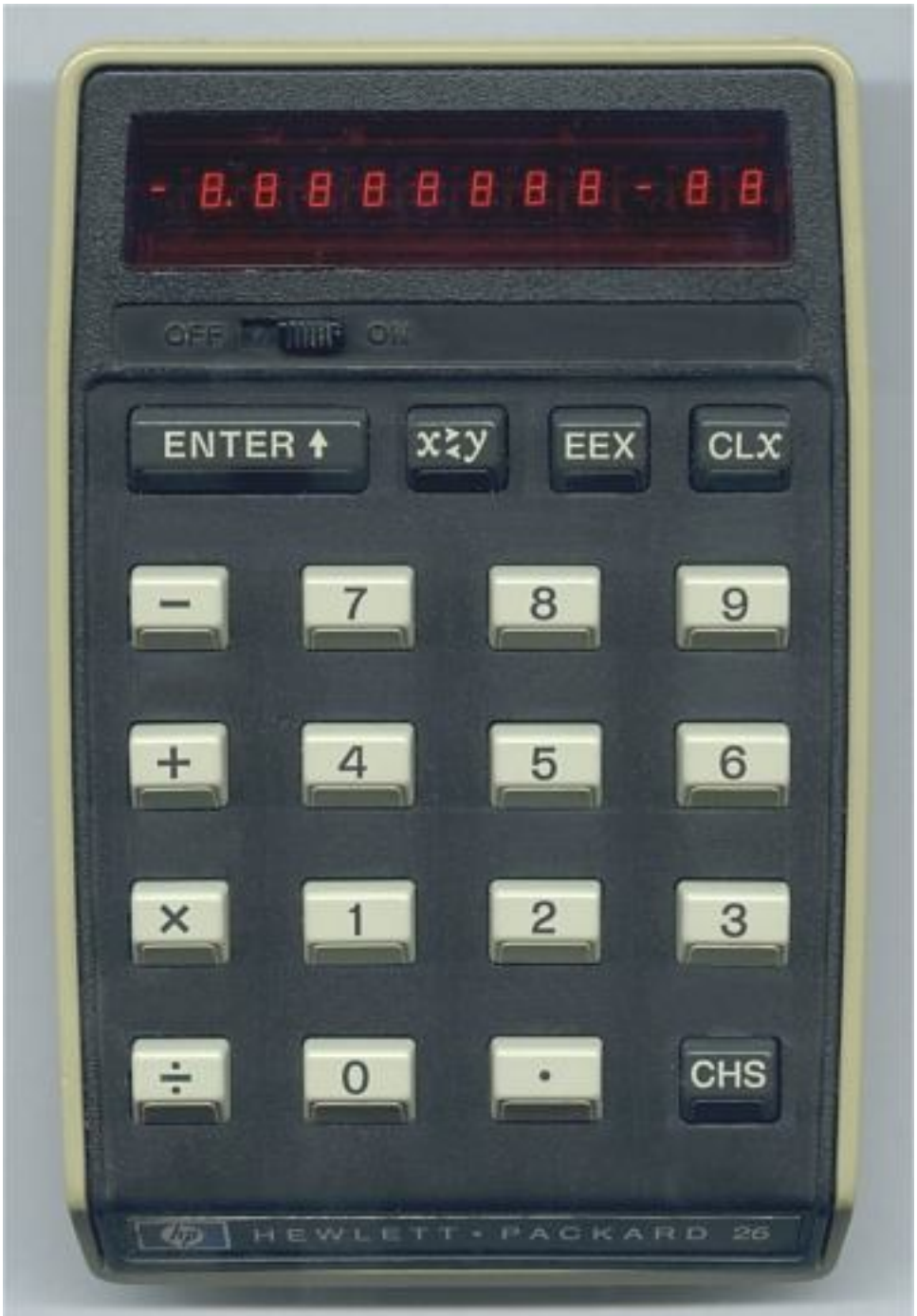
HP Forum Archive 11

[Return to Index | Top of Index]

HP-26 Minimal Calculator

*Message #1 Posted by **Gordon Dyer** on 5 Apr 2003, 8:53 p.m.*

After reading comments in the past about minimal calculators, I though you would like to see one which I think HP should make today...



Re: HP-26 Minimal Calculator
*Message #2 Posted by **Raymond Del Tondo** on 7 Apr 2003, 3:30 a.m.,*
in response to message #1 by Gordon Dyer

Very nice!

Re: HP-26 Minimal Calculator
*Message #3 Posted by **Masao Kinoshita** on 7 Apr 2003, 7:49 p.m.,*
in response to message #2 by Raymond Del Tondo

That's a nice job with the HP 26!

I built a wooden mock-up of a minimal RPN scientific calculator back in the 1980's. I gave it to John Ball, the author of "Algorithms for RPN Calculators." It had purple and green shift keys on it. I wonder if HP ever saw it? John wrote back that he would put in on his desk. (Of course, I didn't put Hewlett-Packard or HP anywhere on it.)

I like it!
*Message #4 Posted by **Jeremy** on 7 Apr 2003, 8:07 p.m.,*
in response to message #1 by Gordon Dyer

I'm afraid LEDs are out for good on calculators. Unless the organic ones that Veira mentioned become cheap somehow. Still, it won't quite be the same old-world charm. Also, I think that HP sees themselves as being too far above such a simple calculator.

There are so many vintage things coming back into style, I wonder if it will ever go back to calculators? I doubt it. There are too few people who appreciate the style and character over size, cheap price, and convenience... It's a shame too.

Now you have got me to thinking. I wonder if you could actually build a calc like that with some creative surgery...?

-Jeremy

Re: I like it!
*Message #5 Posted by **Ernie Malaga (Miami)** on 7 Apr 2003, 10:11 p.m.,*
in response to message #4 by Jeremy

>There are so many vintage things coming back into style

You can say that again. Even Ford Motor Company seems to be caught in the "it's bold to be old" current -- the company is supposed to sell brand-new Model T cars to celebrate its 100 years. This piece of news was on the web a while ago, and although it wasn't posted on April 1st or December 28, it may have been an April/December Fool's Day item.

Wouldn't it be nice, though? I'd buy one Model T, no questions asked, without even glancing at the price tag. Just as long as I can hear that "chugga-chugga-chugga" and "ah-OOOOO-ah!"

-Ernie "T" Malaga

Re: I like it!
*Message #6 Posted by **Michael Meyer** on 7 Apr 2003, 11:56 p.m.,*
in response to message #5 by Ernie Malaga (Miami)

Now, THAT'S what I'm talkin' about!

A "real" car. When a good, loud "ah-OOOOO-ah" meant something!! (Like, "get out of my way, the brake's failed again...")

Actually, for me, it'd be much more fun restoring an old one with a complete set of replacement parts available...

Now, there's an idea! We've been trying to get HP to build 15C's, 42S's, and 34C's and others. We should make it MUCH easier for them:

If only they'd make available a fresh supply of cases, keys, main circuits boards and chips, LED modules, etc., I'd be happy to save them the trouble of producing an assembled unit! (What's the code for an Omaha built 29C...?)

Oh, wait a minute. I'm awake again. :(

Re: I like it!
*Message #7 Posted by **Michael F. Coyle** on 8 Apr 2003, 2:03 p.m.,*
in response to message #6 by Michael Meyer

Good idea. I wish it would happen but it seems unlikely. I remember reading somewhere (this forum?) that years ago, Educalc tried to obtain from HP the molds and tooling for the battery packs, so they could manufacture new ones. HP turned them down.

I suspect if Bill or Dave had still been running the company, things would have been different. They would have asked, "Does this provide something of value to our customers?" and proceeded accordingly. Sadly that kind of thinking is no longer in fashion.

(Anyway, circuit boards and chips are not the problem. The tough part are the cases, keys, and other mechanical items. And displays, whether LED or custom LCD.)

Nice dream, though.

- Michael

Re: I like it!
*Message #8 Posted by **Daniel Kekez** on 8 Apr 2003, 1:56 a.m.,*
in response to message #5 by Ernie Malaga (Miami)

Does that mean that on the 100th Anniversity in 2072, we'll get a new HP-35? =)

Re: I like it!
*Message #9 Posted by **Michael F. Coyle** on 8 Apr 2003, 1:50 p.m.,*
in response to message #8 by Daniel Kekez

Sure, and if I make it to 114, I'll be the first on line for one!

(And I suppose the Stones will still be touring, too.)

- Michael

Re: HP-26 Minimal Calculator
*Message #10 Posted by **Gordon Dyer** on 8 Apr 2003, 8:18 p.m.,*
in response to message #1 by Gordon Dyer

Glad you all liked it!
Is it more useful to have a x<>y key or a Roll down??
I spent ages trying to decide and I am still not sure.

Re: HP-26 Minimal Calculator
*Message #11 Posted by **Michael F. Coyle** on 8 Apr 2003, 11:30 p.m.,*
in response to message #10 by Gordon Dyer

x<>y is more useful than Roll down here, IMHO.

But suppose you made it a shift key instead. Then you could add 19 functions. But that might not be in the spirit of the minimal calculator.

The 26 does seem like the smallest RPN calculator that could do useful work. But maybe it needs to be a 26C instead. Still minimal but without the amnesia.

- Michael

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Re: HP Virtual Museum
*Message #1 Posted by **Gordon Dyer** on 5 Apr 2003, 8:36 p.m.*

Here is a link to the wood and paper HP-35. Click on the six views link for more pics.
http://www.hp.com/hpinfo/abouthp/histnfacts/museum/personalsystems/0033/index.html

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[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP Virtual Museum
*Message #1 Posted by **Gordon Dyer** on 5 Apr 2003, 7:18 p.m.*

If you haven't seen this it is worth a look, and it gives some nice pics (I wonder how long it will be before they are used to sell calc on ebay?)
http://www.hp.com/hpinfo/abouthp/histnfacts/museum/personalsystems/0043/index.html

Re: HP Virtual Museum
*Message #2 Posted by **Gordon Dyer** on 5 Apr 2003, 8:34 p.m.,*
in response to message #1 by Gordon Dyer

Here is the Home Page of the HP Museum.
It really is worth a browse and there are lots of interesting pics and articles.

Re: HP Virtual Museum
*Message #3 Posted by **Gordon Dyer** on 5 Apr 2003, 8:38 p.m.,*
in response to message #2 by Gordon Dyer

Ooops! I missed out the link for the HP Museum homepage, here it is:
http://www.hp.com/hpinfo/abouthp/histnfacts/index.html

Re: HP Virtual Museum
*Message #4 Posted by **db(martinez,california)** on 5 Apr 2003, 8:48 p.m.,*
in response to message #1 by Gordon Dyer

dave menitoned one of these pages on april 1. it's worth looking around there.

and now that you mention it i guess we will have to add the question "is this a paper model?" to the list of questions we ask ebay sellers.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Is the 48G series a classic yet?
*Message #1 Posted by **Jeremy** on 5 Apr 2003, 2:39 p.m.*

I don't think so, but I think it will be soon. It is only a matter of time before they discontinue it with the 49G out. Buy one on eBay for cheap while you still can.

A buddy of mine at work told me that where he comes from (Argentina) at least 40% of engineering students have one. Nice... It sounds like a classic over there already.

-Jeremy

that depends on how beat up it is
*Message #2 Posted by **db(martinez,california)** on 5 Apr 2003, 2:46 p.m.,*
in response to message #1 by Jeremy

i have an sx that is positivly antique.

Re: Is the 48G series a classic yet?
*Message #3 Posted by **Bill Wiese** on 5 Apr 2003, 3:54 p.m.,*
in response to message #1 by Jeremy

No - nothing with RPL will ever be a classic. 4-level stack or nothing, baby!

32S, 42S, etc.: yes. 48/49, no.

If I needed a 48/49 to solve a problem, I'll grab a damned PC.

Bill Wiese San Jose, CA

Re: Is the 48G series a classic yet?
*Message #4 Posted by **Les Bell [Sydney]** on 5 Apr 2003, 5:31 p.m.,*
in response to message #1 by Jeremy

They've apparently discontinued the HP-6S. Does that make it a classic?

One has to draw the line somewhere. And IMHO, the 48 - and even more so, the 49 - are on the far side of that line.

Best,

--- Les [http://www.lesbell.com.au]

> **Re: Is the 48G series a classic yet?**
> *Message #5 Posted by **Jeremy** on 6 Apr 2003, 12:30 p.m.,*
> *in response to message #4 by Les Bell [Sydney]*
>
> I guess I would include the 48 series in there. Anything with the HP keypad makes the cut. When they switched to the TI keypad, they're out.
>
> -Jeremy

HP48 in Argentina
*Message #6 Posted by **Andrés C. Rodríguez (Argentina)** on 5 Apr 2003, 6:55 p.m.,*
in response to message #1 by Jeremy

Many students and professionals have bought HP48 or, for that matter, other electronic goods in the period 1992-2001, since the exchange rate made it possible. Now, as also it was many years ago, is rather hard to buy any imported goods here.

A theory about COMPLX economy...

*Message #7 Posted by **Andrés C. Rodríguez (Argentina)** on 6 Apr 2003, 6:48 p.m.,*
in response to message #6 by Andrés C. Rodríguez (Argentina)

The previous comment brings along my theory (only partially proven yet), which intends to explain our economy using complex numbers (as used in AC circuits). Our money seems to have a "real" part, but some "devices" may make it "imaginary" (locked in banks, where you could only made imaginary transactions with other imaginary accounts); and it is also possible (by means of repetitive multiplication by a complex interest rate) that your "real" money became... negative!

In fact, there are many, many reported cases in which you can open a new account in a bank, deposit $ 1000 in it, then withdraw $ 500, and the balance will be negative (sadly, no joke)

In such an economy, "phase" (timing) is as much as important as "amplitude" (wealth). Indeed, timing may be deemed as more important than the absolute value of a money amount.

Nyquist stability criteria, root locus and such approaches may also be applicable...

Our economy may be a good test field for a HP54V, which could be combination of a HP12C with a HP42S.

From time to time, the issue of a common Mercosur currency appears in the press. Our Brazilian neighbors (Hi!, Luiz and others) have a most appropriate currency sign, the "Real" or "R$". Hence, ours could very well be the "Imaginary Peso", denoted by the "(0+1i)$" expression in rectangular form; or "$;(pi/2)" in polar notation, etc.

Re: A theory about COMPLX economy...
*Message #8 Posted by **Paul Brogger** on 7 Apr 2003, 1:45 p.m.,*
in response to message #7 by Andrés C. Rodríguez (Argentina)

Now *that's* funny! This is the sort of insight that, with a bit of amplification, becomes a whole *series* of books, and a 'round-the-world tour on the lecture circuit. (Remember "Mars and Venus" in the relationship arena?)

If you haven't copyrighted this approach, you should do so quickly, and get to work!

8^)

Thank you!
*Message #9 Posted by **Andrés C. Rodríguez (Argentina)** on 8 Apr 2003, 6:24 p.m.,*
in response to message #8 by Paul Brogger

Paul and db: thank you again for your comments!!

Re: Is the 48G series a classic yet?
*Message #10 Posted by **Speck** on 8 Apr 2003, 11:26 p.m.,*
in response to message #1 by Jeremy

Has it been discontinued? Is there still demand for it? They may continue to make it, if enough people want it. Recently, one of the top-of-the-line Sony world band radios was a veteran radio designed and first built in the early 80's (ICF-2010). Enough people still wanted them that Sony kept making them until a year or two ago.

I just hope HP's newer offerings don't look and feel quite as "cheap" as some of their more recent oferings. TI needs some serious competition.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

17BII color schemes
*Message #1 Posted by **Dano** on 5 Apr 2003, 1:15 p.m.*

Can anyone comment on the two color schemes I've seen for the 17BII? One appears to be the "tan" style with a tan border around the LCD and tan around the menu keys and a brown background for the rest of the keyboard. The "black" style has a black border around the LCD and an all black background to the keyboard. I've only seen Indonesian 17BIIs with the black style and the new s/n format. But I have seen some Indonesian late model tan style units too. Anyone know if the black style was the last units made or are they less common than the tan style? Are there any other differences in these units? Thanks Dan

Re: 17BII color schemes
*Message #2 Posted by **Randy** on 5 Apr 2003, 4:38 p.m.,*
in response to message #1 by Dano

Black units were among the last batches of 17Bii's made. Pretty uncommon actually, if only based on the total number of units built.

During the last few years of production in Indonesia, they changed the colors on the three remaining (17Bii, 20S and 32Sii) Pioneers to black. I think the 17Bii was the last to be changed over. They also repackaged the CPU chip in a conventional molded plastic smd, it had been a TAB package and shared a common pc board with the 42S.

IMO the black 17Bii has lower contrast yellow shifted function labels. I think the gold/brown/orange color combination of the original is much richer.

Re: 17BII color schemes
*Message #3 Posted by **mapet** on 7 Apr 2003, 3:56 a.m.,*
in response to message #2 by Randy

Also the LCD contrast of the black model is lower.

HP Forum Archive 11

[Return to Index | Top of Index]

HP-71 and 75
*Message #1 Posted by **Michel Beaulieu** on 5 Apr 2003, 12:18 p.m.*

I have a HP-71 and a HP-75. I recently purchase some magnetics cards for my 75 and on the card it's writter that i can use them on the 71! I look on my 71 but don't see any slot to enter the card? Is there an error on the cards on where is the reader on the 71??? Perhaps it's a HP-71XXX made with card reader built in? Don,t laught if it's me don't looking at the right place on my 71... ;-) There are a lot of covers ans "ports" on the 71 and near the 71B lettering there is a kind of slot but where is the exit for them?

Thanks Michel

Re: HP-71 and 75
*Message #2 Posted by **Ellis Easley** on 5 Apr 2003, 12:53 p.m.,*
in response to message #1 by Michel Beaulieu

The card reader is optional on the 71, it goes under the "HP71B" label. Other companies made RAM and EPROM modules that could go there, too. BTW, The 71 and 75 can't read each other's writing on the cards.

Re: HP-71 and 75
*Message #3 Posted by **Jim L** on 5 Apr 2003, 12:57 p.m.,*
in response to message #1 by Michel Beaulieu

Take a look at the pictures on the 71B page on this site.

The card reader is an option which is installed in the upper right just below the logo. You can also see it from the back on the rear view picture.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

hp49g
*Message #1 Posted by **Gulu** on 5 Apr 2003, 11:11 a.m.*

1. how can i make the 49g to "expand" an analytic function? for example: from (3x+3)/(x+1)/(x+2) to 1/(x+1)+2/(x+2)

2. where can i find good help files about matrix operations? 3. where can find cotrol system tool boxes ?

Thanks, Oren

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

hp48g & hp48s
*Message #1 Posted by **George** on 5 Apr 2003, 9:38 a.m.*

I own several 48gx and 48sx calculators because of the expansion ports that allow me to install commercial software. But I have never seen in person a 48g or 48s. Are these models noticeably thinner due to the absence of the expansion ports? For me the biggest detractor to the hp48 is the size of the calculator. I would like to see a Pioneer size calculator that accepted MMC or SD memory cards put on the market by HP.

Re: hp48g & hp48s
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 5 Apr 2003, 9:43 a.m.,*
in response to message #1 by George

Hi;

despite of the fact the HP48G/G+ and the HP48S have no expansion ports, they keep the same thickness observed in their "sisters". The only visible difference, except for the logo, is that the front port cover is replaced bi a single, not removalble IR lens. I have an HP48SX and two HP48G.

Hope this is the answer you're looking for.

Best regards.

Luiz C. Vieira - Brazil

Re: hp48g & hp48s
*Message #3 Posted by **Chan Tran** on 5 Apr 2003, 12:06 p.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

I don't wish my 48's to shrink down to Pioneer size but I wish that the cases for them has belt loop so I can wear them like the old classic. I have an SX and a GX. I like the case that came with the SX better but still now belt loop.

A belt loop would be very easy to sew on yourself.
*Message #4 Posted by **Jeremy** on 5 Apr 2003, 12:34 p.m.,*
in response to message #3 by Chan Tran

Although not too many people wear calculators on their belts any more...

You probably don't care what other people think though, do you? Just don't wear it while looking for a date and you'll do OK. ;)

-Jeremy

Thieves and belt loops...
*Message #5 Posted by **Vieira, Luiz C. (Brazil)** on 5 Apr 2003, 1:30 p.m.,*
in response to message #4 by Jeremy

Hi;

I am not sure about others concerns for using or not, but I do not "wear" calculator cases with belt loops anymore because with a small cutting device (knife) they are easily "removed" (stolen) when you're surrounded by people. Also, there are two minor reasons: the belt loop itself getting rough because fo the continuous moviment, and the external exposure, say, all sorts of objects can smash your your calculator if you are transporting it in a case with loop belt, or even whip it out of your belt.

There was a time when only the two minor reasons were significant... and this I miss.

Luiz C. Vieira - Brazil

Re: Thieves and belt loops...
*Message #6 Posted by **John** on 5 Apr 2003, 3:41 p.m.,*
in response to message #5 by Vieira, Luiz C. (Brazil)

The best case for any 48 is the one made for a 41. It is very well made, with a zipper, fits nicely and has a sturdy belt loop! I appreciate a loop for field use, not for the street...

Re: Thieves and belt loops...
*Message #7 Posted by **Wayne Brown** on 6 Apr 2003, 4:51 a.m.,*
in response to message #6 by John

I agree. My son puts his 48GX into his 48CV case when he takes his 48 to school, although he keeps them in their own proper cases at home. I've done the same a few times myself at work.

Re: Thieves and belt loops...
*Message #8 Posted by **John** on 6 Apr 2003, 1:07 p.m.,*
in response to message #7 by Wayne Brown

Wayne, you said "48CV case". You probably meant "41CV case"?

Re: Thieves and belt loops...
*Message #9 Posted by **Wayne Brown** on 7 Apr 2003, 7:04 a.m.,*
in response to message #8 by John

Yes, I meant "41CV." That's what I get for posting early in the morning, before I'm awake... :-)

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

question on hp 42s
*Message #1 Posted by **lokhin** on 5 Apr 2003, 8:47 a.m.*

hello,

sorry but this question might sound silly... :

the hp 42s is hp 41c compatible

is it possible the combination below to port hp 41c rom applications to hp 42s?

HP 41C ROM, HP 42S and MoHPC ROM [Manuals] or [Solution]

does MoHPC ROM [Manuals] or [Solution] contains programs?

does compatibility means the hp 41c programs can be directly typed into an hp 42s and used without other work?

-lokhin

Re: question on hp 42s
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 5 Apr 2003, 10:24 a.m.,*
in response to message #1 by lokhin

Hi;

any ***user*** program written for the HP41 will run in any HP42S. There are fewer exceptions, mostly when some sort of errors occur, illegal math operations that would lead to erros when real numbers are your result set and some particular status flags are used. If you want full compatibility in math and stat you may "adjust" the HP42S to show only real numbers and to deal with fewer statistical registers. anyway, because of a bigger mantissa, expected rounding errors in original HP41 programs may not occur when they are loaded and ran in an hP42S. All of these facts must be taken into account.

If you intend using, say, X-Functions or any other system-related ROM routines, as far as I know it has not been done yet, because the only means to enter data in an HP42S is by using the keyboard. Even having access to RAM data directly (memory browser) and having the chance to directly alter bytes, you'll have to do it everytime memory is cleared. If you have to type in more than a couple of thousand "system" program lines, I think this is not pleasant. Anyway, dealing with matrices (and complex matrices) is easier than dealing with data files in X-Memory. And the basic HP42S has more memory than an HP41CX with two X-memory modules.

Many HP41 resources are available in the HP42S. If your HP42S is upgraded to 32K, better. But I cannot see an easy way to add new "functions" to the available internal set that is not time consuming (key strokes). Also, one should know a lot about the HP42S internals, and the first name that comes to mind is J.F. Garnier.

Anyone else?

Sorry not helping that much.

Luiz C. Vieira - Brazil

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-41C Dust in the display
*Message #1 Posted by **Jon** on 5 Apr 2003, 3:14 a.m.*

I have a working HP-41C thanks to the help I got in this forum (connection problems). Now I see it has dust in the display. It seems a common problem in these calculators. So, may be somebody knows how to remove it.

Thanks in advance

Jon

Re: HP-41C Dust in the display
*Message #2 Posted by **Randy** on 5 Apr 2003, 8:42 a.m.,*
in response to message #1 by Jon

Canned air will usually blast it out. Never use air from an air compressor, it will always contain moisture and oil. Just direct it in around the top and sides of the lcd. If it's a full-nut, remove the plastic strip along the top of the lcd for better access.

You can fish a strip of paper into the lens area to dislodge stubborn specs. I use a piece of plastic coated paper since it slides easily and holds it's column strength for a while. The paper off the back of an address label works well.

HP-32S DUST IN THE DISPLAY and my 2-bits worth

*Message #3 Posted by **NH** on 5 Apr 2003, 3:42 p.m.,*

in response to message #2 by Randy

HEY I have got several HP-32S that I bought around 1990, and those stinkers almost IMMEDIATELY began to accumulate household dust in their display.

Now one guy just said "dont use an air compressor it always contains oil and moisture" and I want to disagree with that. If you happen to have chosen an oil-less air compressor you can get some really nice dry air out of it. I chose oil-less for my garage-shop and have no regrets that the air is always clean & dry. Some of the metal-shop guys chastise me because the air-tools dont get lubricated. Thats what a hand-oil-can is for. Just put some drops right into the inlet of the tool. And about dryness, humidified air loses its moisture under pressure, thats why a puddle of water accumulates in a compressed air tank. Thats why any knowledgeable owner of an air compressor installs an easy-access ball-valve at the bottom and operates it often. Its even a safety issue to reduce the likelihood of a tank rust-through. Meanwhile when the air comes out the gun it is DE-pressurized, it is very dry because its been thru, effectively, a pressurized dehumidification process. The remaining risk is specs of debris in the hose, but the odds are in your favor there wont be much of that. Therefore at my shop, the air compressor is the FIRST THING I would reach for, not the last.

LASTLY, does anybody else have further info about how to clean out a 32S ?? I am not real enthused about the compressed air because it does not solve the real problem. I think you need to get in there and clean it out for real and maybe seal it, IF thats possible, I never tried but wondering if anybody else did (for reasons of house dust).

Although we are supposed to bow down and worship the might HP Calculator Gods, I think they are buffoons in regards to dust getting in the display. I was disappointed even around '92 when the dust in the display was appearing, I mean, '92 was hardly a medieval era, and it was a substandard design to have something so ridiculous as the display get dirty from the inside.

Modern equipment tests for new designs include

(a) test for electro-static-discharge immunity with a spark gun

(b) test for radio-frequency susceptibility or transmissions

(c) test for durability. This is often done by putting the unit in a tumble-dryer with a variety of objects and some house dust and grit. It has to get tumbled awhile and still be useful in the end.

Looks to me like HP didn't do any of that for their supposedly superior modernized "LCD" calculators or I wouldn't be asking about the dust in the display. I'd wager that the red LED HP-34C is more likely to pass the dust-in-the-display test. (NO you cant test mine!)

The 32S - It was supposed to be a low cost unit...
*Message #4 Posted by **Randy** on 5 Apr 2003, 5:27 p.m.,*
in response to message #3 by NH

Disagree all you want. Arguments are down the hall, second door on the left.

I seriously doubt the average Joe with an air compressor in the garage went through the same decision tree as you in selecting their unit and accessories.

When it comes to cleaning an expensive, vintage piece of electronic equipment, I defer on the side of safety. Even with clean air and an OSHA safety gun, I think the pressure delivered from a compressor could do some major damage to a calculator. Blow the rubber zebra strips out of place, knock the keyboard discs off center, etc,etc. Not to mention the static potential of air at that speed. Is it worth the downside risk to save $4? Not to mention the fact that a 3/8" diameter air chuck isn't going to get you very close to the fine gaps around the display as well as a 0.090" flexible tube. Use the right tool for the job is my motto.

As for your dusty 32S, it does usually blow out if you stick the flexible tube in the side of the case. Takes a while, but it can be done. You can always check the archives for Paul Brogger's article on how to open a Pioneer, it does make make the job easier if you dare. I suppose you could try to seal the LCD area, would not be too hard to do once the back was off. I would be concerned about condensation once closed though.

The first versions with the double lens unit was pretty quickly changed to eliminate the dust collector. I guess Hp felt it was better to scratch the surface of the LCD than to have dust collect between the two surfaces. I prefer the later version, not because of the dust issue, but because the recessed LCD does not reflect overhead light as badly, making for easier viewing on the desktop.

Opening the case on 32S better ...

*Message #5 Posted by **Norm** on 7 Apr 2003, 12:56 a.m.,*

in response to message #4 by Randy

Suggest that rather than get into all the various issues about an air compressor, it might be better to figure out how to open the case on the 32S.

I did try it just now. This air compressor that I have confidence in, it also has 2 connections on it... raw pressure from the tank, and then another that was dropped thru a regulator.

The tank pressure is about 130 psi. I dialed the regulator down to 40 psi and tried it. It really didn't seem to help with the old and dirty-looking display problem on the 32S.

Suggest that probably the best thing would be to open the case up, and clean it manually from the inside out. I'd be interested in starting a chat thread, about how you open the case on a 32S.

Thanks.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Seeking somewhat advanced HP-41 info...
*Message #1 Posted by **Lyle Lower** on 5 Apr 2003, 12:05 a.m.*

Greetings All,

May I say I bought my 41-CX in 1984 and have worshipped faithfully at the altar of RPN ever since? ;-P

I have read passing references, here and there, about such things as 2x clocking your 41C, and installing modules inside the calculator, and stacking 2 or even 3 modules in one module case, and etc., etc.

Can anyone point me to specific, detailed, information about such things?

Many thanks in advance!

Lyle

Re: Seeking somewhat advanced HP-41 info...
*Message #2 Posted by **Ellis Easley** on 5 Apr 2003, 11:20 a.m.,*
in response to message #1 by Lyle Lower

The best source is the PPC Journals which you can get on CD-ROMs here:

http://www.waterw.com/~jakes/index.html

Re: Seeking somewhat advanced HP-41 info...
*Message #3 Posted by **Lyle** on 6 Apr 2003, 11:48 p.m.,*
in response to message #2 by Ellis Easley

Thank you for the tip, Ellis.

L

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-39 Backup/Restore?
*Message #1 Posted by **Tom Cox** on 4 Apr 2003, 9:04 p.m.*

Does the HP-39 have any way to back-up to computer the Programs/Applets, etc. that are in memory. I realize that this can be done one file at a time -- but how does one do it all at once? I know that HP-48GX has a BACKUP/RESTORE capability as long ago I had a HP-48GX. And at current pricing of $135 on HP Shop Online it might be worth getting again -- or should I wait and see what comes from HP later this year.

Re: HP-39 Backup/Restore?
*Message #2 Posted by **John K. (US)** on 4 Apr 2003, 9:57 p.m.,*
in response to message #1 by Tom Cox

I think you can backup a 39 using the HPGComm tools. Take a look at the HP 39/40 stuff on the hpcalc.org site. I haven't tried it myself, but the 39G does have a serial port (same connector as the 49G) and I know that new software can be uploaded to it, so it makes sense that it would work.

Re: HP-39 Backup/Restore?
*Message #3 Posted by **Gordon Dyer** on 5 Apr 2003, 5:48 a.m.,*
in response to message #1 by Tom Cox

Since HP will still be subcontracting new calcs, I do not feel at all confident that they will be able to return to the quality which they were famous for up to the 48 series.
I keep hoping that they will, but it seems unlikely!
So get a 48GX and then see what happens in the future. You won't loose out.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Give me a break... Check this out:
*Message #1 Posted by **joe** on 4 Apr 2003, 7:31 p.m.*

Guys check this out:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=11713&item=3015863878&rd=1

This is amazing - heck the thing did not even work! I guess the case must really mean something for somebody...

joe

Re: Give me a break... Check this out:
*Message #2 Posted by **Michel Beaulieu** on 4 Apr 2003, 8:30 p.m.,*
in response to message #1 by joe

If you transplant a HP-12 LCD in that 16C you get a "cheap" 16C for the death of a 12C... ;-)

I don't think so
*Message #3 Posted by **Randy** on 4 Apr 2003, 9:32 p.m.,*
in response to message #2 by Michel Beaulieu

The newer 12C’s were redesigned with a different pin-out, the LCD’s are not at all compatible. But, if you had a good logic board and a bad case, it might make sense as the case,keys and bezel looked to be in good shape.

Re: Give me a break... Check this out:
*Message #4 Posted by **db(martinez,california)** on 4 Apr 2003, 9:33 p.m.,*
in response to message #2 by Michel Beaulieu

and if you have a trashed 12c with a good screen of that type you're out nothing, or nothing except having to bid more than one well known sniper.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Newcomer has questions
*Message #1 Posted by **Trent Moseley** on 4 Apr 2003, 5:29 p.m.*

A newcomer asks:

What is an ex-PPC member? Also I know what RPN is since I own a half dozen old HPs,but what is RPL?

tm

RPL is...
*Message #2 Posted by **Jeremy** on 4 Apr 2003, 6:41 p.m.,*
in response to message #1 by Trent Moseley

what the newer HPs are, like the 48G and 28C, etc. It is similar to RPN, but it has some differences. For instance, the instant you type something into an RPN calculator, it is in the X register and everything else is shifted up one. With an RPL calculator, it is held in limbo and only goes into a register when you hit enter or get a result from a one key operation. On an RPN calculator, I think the stack is usually only four levels. If you fill up the stack, the top layer is copied down when you drop something from the bottom level. With RPLs, I believe the stack is pretty much infinite and it remembers all of what you have in it. Some people have a preference one way or the other. I don't. I just like being able to see more than one layer of the stack at once, as in the 48G.

I don't know what an ex-PPC member is.

-Jeremy

Re: Newcomer has questions
*Message #3 Posted by **Ernie Malaga (Miami)** on 4 Apr 2003, 7:06 p.m.,*
in response to message #1 by Trent Moseley

Trent:

An ex-PPC member is a person who used to be a member of PPC. PPC was an organization of HP calculator enthusiasts founded by Richard Nelson during the heydey of the HP-65.

PPC used to publish a typewritten magazine 10 times a year, named "PPC Calculator Journal" or PPCCJ for short. It was always full of important (and useful) information.

PPC members were an odd lot (imagine a bunch of geeks pushing keys in little handheld devices) and quickly discovered unsupported features in the machines. This was particularly so for the HP-41C, released in July 1979, and PPC members developed what came to be known as Synthetic Programming -- the coding (and usage) of program codes not found anywhere in the manuals, such as STO M and TONE 89. PPC also had HP manufacture a ROM module full of synthetic instructions, which was accompanied by a 5000+ page manual.

PPC had members all over the world. Today, there is a similar organization called HPCC in the United Kingdom. The original PPC ceased operations many years ago.

-Ernie (An ex-PPC member)

Re: Newcomer has questions
*Message #4 Posted by **George** on 4 Apr 2003, 7:11 p.m.,*
in response to message #3 by Ernie Malaga (Miami)

What does "PPC" stand for?

Re: Newcomer has questions
*Message #5 Posted by **John K. (US)** on 4 Apr 2003, 9:06 p.m.,*
in response to message #4 by George

> What does "PPC" stand for?

To the best of my knowledge, it stands for **P**ersonal **P**rogrammable **C**omputer. (I might have the two P's reversed.) It was founded in the days before "personal computer" was a common term, and "software" still sounded kinda' funny.

Re: Newcomer has questions
*Message #6 Posted by **Vieira, Luiz C. (Brazil)** on 5 Apr 2003, 12:41 a.m.,*
in response to message #5 by John K. (US)

Hi;

I thought the "C" stood for "Club" instead. Like in Computer Club Deutschland, or CCD.

Good to know!

Luiz C. Vieira - Brazil

Re: Newcomer has questions
*Message #7 Posted by **John K. (US)** on 6 Apr 2003, 9:12 a.m.,*
in response to message #6 by Vieira, Luiz C. (Brazil)

> I thought the "C" stood for "Club" instead.

I don't think so, not in this case. There does seem to be some confusion as to whether it stands for "computer" or "calculator". I *thought* it stood for computer, but now I can't find the reference, so I might be misremembering. Perhaps ex-PPC Member might be able to provide additional enlightenment...?

Re: Newcomer has questions
*Message #8 Posted by **Ernie Malaga (Miami)** on 6 Apr 2003, 11:23 a.m.,*
in response to message #7 by John K. (US)

John:

The meaning of PPC was always debatable. Richard Nelson himself stated in one of his editorials that it had no official meaning. He gave several examples of what it _might_ mean.

Among those, "Personal Programming Center" was perhaps the most widely used.

-Ernie (PPC member 6594)

Re: Newcomer has questions
*Message #9 Posted by **John K. (US)** on 7 Apr 2003, 5:04 a.m.,*
in response to message #8 by Ernie Malaga (Miami)

Hi Ernie,

Well, that certainly explains some of the conflicting information I've seen. Thanks!

From me, thanks too!
*Message #10 Posted by **Vieira, Luiz C. (Brazil)** on 7 Apr 2003, 12:39 p.m.,*
in response to message #8 by Ernie Malaga (Miami)

;-)

Re: Newcomer has questions
*Message #11 Posted by **Ellis Easley** on 5 Apr 2003, 11:41 a.m.,*
in response to message #4 by George

Actually, it stands for Personal Programmable Calculators, according to Jake Schwartz, who supplies the journals on CD-ROMs and who also distributes a CD-ROM with the first twenty years of the UK HPCC journals, "Datafile". You can read about it here:

http://www.waterw.com/~jakes/ppccdrom.htm

Of course, it is well documented that HP called some machines calculators instead of computers because customers found it was easier to get their companies' approval to buy a calculator. This has been said at least about the 9825.

Re: Newcomer has questions
*Message #12 Posted by **Trent Moseley** on 5 Apr 2003, 1:07 a.m.,*
in response to message #3 by Ernie Malaga (Miami)

I must give thanks to Jeremy and Ernie Malaga for the quick response to my questions! I don't know if I would care to use a RPL machine because it would be necessary to learn a new programing language, or am I wrong in this?

tm

Re: Newcomer has questions
*Message #13 Posted by **Ernie Malaga (Miami)** on 5 Apr 2003, 2:56 a.m.,*
in response to message #12 by Trent Moseley

Trent:

>I don't know if I would care to use a RPL machine because it would be necessary to learn a new programing language, or am I wrong in this?

No, you are NOT wrong. Programming an RPL machine is a totally different proposition. For example, suppose the following HP-41 program to add all integers between 1 and a given limit, N:

```
LBL'ADD
STO 00
0


LBL 01
RCL 00
+
DSE 00
GTO 01


END
```

Now compare that with a typical RPL program to do the same:

```
<< -> n
   << 0
      1 n FOR i
         i +
      NEXT
   >>
>>
```

To make matters worse, after you've entered the program, the calculator removes all new lines and all indentation, and you get the following mind sloth stored:

```
<< -> n << 0 1 n FOR i i + NEXT >> >>
```

Cute, huh? Of course one can get used to anything, and you may even learn to understand this sort of thing. Personally, however, I don't like coding in RPL because half the statements must be coded backwards. RPL is what you get when BASIC and RPN decide to have a baby. 8^)

-Ernie

Re: Newcomer has questions
*Message #14 Posted by **Vieira, Luiz C. (Brazil)** on 5 Apr 2003, 8:00 a.m.,*
in response to message #13 by Ernie Malaga (Miami)

Hi, Ernie;

I'd rather think of RPL as an *structured* way of programming in RPN. In fact, I see RPL more as a C and RPN babe than a BASIC and RPN one. When programming in an RPL-based calculator, LBL, GSB (CALL) and GTO are not used, but programs developed to RPN-based calculators do. I tend to use RPL more than RPN mostly because one *sees* the program logic (structure) easier when looking at it. Your own example shows it. Depending on how a program is written in RPN-based calculators, even if you indent it, you may find GTO in the middle of a loop, ceasing and breaking it up. RPL does not allow it.

There are some advantages in this particular fact, even C provides ways to do it. But I still prefer defined structures, I do not know.

Understanding an RPL program from someone else is sometimes difficult. Understand someone else's RPN programming is sometimes almost impossible. If you go to the HP67/97 and the HP11C/15C, where GTO (i) accept negative numbers as arguments. causing jumps to program step numbers... Wow! It's almost impossible to track/trace.

Just my thoughts.

Luiz C. Vieira - Brazil

RPN vs RPL
*Message #15 Posted by **Ernie Malaga (Miami)** on 5 Apr 2003, 10:02 a.m.,*
in response to message #14 by Vieira, Luiz C. (Brazil)

Luiz:

>I'd rather think of RPL as an structured way of programming in RPN. In fact, I see RPL more as a C and RPN babe than a BASIC and RPN one.

Of course RPL is structured and RPN is GTO-happy. But it's RPL's implementation what I dislike. The syntax of the language is very confusing. For instance, in my example I use the FOR command. The structure does _not_ begin with FOR, but it begins two entries before, since FOR needs two parameters. I bought an HP-28C when it was released and still have it, but every time I need to program something I go back to my trusty 41CX or 32S.

I guess part of the problem is the enormous complexity of RPL. Another problem is that, although structured, there's no way to store programs in such a way that the system preserves newline feeds and indentation, thus negating a large part of the advantages of structured programming.

I wish HP would make a calculator (or handheld computer) that can be programmed in Pascal. IMHO, that would be the ultimate.

By the way, the programs I coded in my example were written in my head only; they may not work! 8^(

-Ernie

Re: RPN vs RPL - an old, instead current issue
*Message #16 Posted by **Vieira, Luiz C. (Brazil)** on 5 Apr 2003, 10:17 a.m.,*
in response to message #15 by Ernie Malaga (Miami)

Hello, Ernie;

> I wish HP would make a calculator (or handheld computer) that can be programmed in Pascal. IMHO, that would be the ultimate.

I'd liek to have one of these, too.

> By the way, the programs I coded in my example were written in my head only; they may not work!

It doesn't matter. You got what you want: ilustrate the diference. And your axamples master it. They are so clear I based on them to show what I meant, too.

> there's no way to store programs in such a way that the system preserves newline feeds and indentation, thus negating a large part of the advantages of structured programming.

I agree. The system "compiles" your source and indents/adds newline feeds for itself when it is eddited, clearing your own "coded source". If you add specific newlines or indents to remember something later, forget it: compilation will remove them all.

Because of this I write bigger programs elsewhere, mostly because of the small screen. No space to see the "big picture".

> I bought an HP-28C when it was released and still have it, but every time I need to program something I go back to my trusty 41CX or 32S.

I sometimes feel as being between the cross and the sword...

And for my own, I do not "see" RPL as complex; maybe it has so many alternative ways that we never see the best one until we try all of them, and most of the times, there is no "time" to do it all. I see RPN-programming as a Reduced Instruction Set of Commands, and RPL as a Complex Instruction Set of Comands. If the complexity of commands leads to the complexity of the environmetn, than I agree with you.

It's good reading good, thoughtfull texts like yours.

Thanks for the valuable enlighments.

Luiz C. Vieira - Brazil

Re: Pascal Handheld
*Message #17 Posted by **Bill Platt** on 7 Apr 2003, 4:43 p.m.,*
in response to message #15 by Ernie Malaga (Miami)

Now that is a thought that has occurred to me more than once, too, as PASCAL is the only language I learned "formally" in school.

Perhaps we could find Pascal compilers for a PDA: Palm, CLie etc??

Re: Pascal Handheld
*Message #18 Posted by **Ernie Malaga (Miami)** on 7 Apr 2003, 10:24 p.m.,*
in response to message #17 by Bill Platt

>Perhaps we could find Pascal compilers for a PDA: Palm, CLie etc??

Perhaps -- although I've never seen anything in or for Pascal for many years. What's worse, I've begun forgetting the language syntax from lack of use.

Is Pascal dead? My only beef with it was the somewhat confusing issue of the semi-colons: sometimes they're needed, other times they aren't. I never did figure them out and had to rely on the compiler to bail me out.

-Ernie

Re: Pascal Handheld
*Message #19 Posted by **Chris Randle (UK)** on 8 Apr 2003, 6:27 p.m.,*
in response to message #18 by Ernie Malaga (Miami)

Borland's community site has a freely available download of Turbo Pascal v5.5 for DOS at http://bdn.borland.com/article/0,1410,20803,00.html

It should run on a PocketPC or WinCE machine under PocketDOS (not free) http://www.pocketdos.com/. I'll give it a go and report back.

All Pascal statements end with a semicolon. Multiple statements are blocked with a begin... end pair and the block is then treated as a single statement, therefore a semicolon after the end. The semicolon is optional on the last statement within a program or block.

The one "funny" area is if...then and if...then...else. Pascal treats them as two separate structures and differentiates by looking for a semicolon after the then statement. For example...

```
if {condition} then {statement1};
if {condition} then {statement1} else {statement2};
```

There's no semicolon after statement1 in the second case because it's part of one big if... then...else construct and that's how Pascal knows to expect the else clause. Pretty consistent, on the whole.

Pascal is not dead. It's alive and well with object oriented extensions to its syntax in Borland's Delphi. I think it's a beautiful language but then again I like the 28S, so what do I know ;-)

Re: Pascal Handheld
*Message #20 Posted by **Paul Brogger** on 8 Apr 2003, 7:49 p.m.,*
in response to message #15 by Ernie Malaga (Miami)

Sharp, IIRC, has made a line of C-speaking handhelds, but they're apparently marketed only overseas.

An old Z-80 Pascal compiler ported to the TI-83+SE would be interesting . . . Or maybe an M68000 version and the TI-89? *(There he goes again!)*

But, in general, (as someone else has so wisely observed) handheld devices are not the best vehicles for data *entry*, so would you really want to program on one enough to make it worthwhile? (Maybe program *to* a handheld for special applications?)

Re: Pascal Handheld
*Message #21 Posted by **Gordon Dyer** on 8 Apr 2003, 8:24 p.m.,*
in response to message #20 by Paul Brogger

....but Pascal on an HP-71B would be good.
If you want a quick easy Pascal look here:
http://www.vpascal.com/

Re: Newcomer has questions
*Message #22 Posted by **Michael F. Coyle** on 5 Apr 2003, 11:34 a.m.,*
in response to message #13 by Ernie Malaga (Miami)

I find that properly-documented RPL programs are not difficult to understand. On the other hand, large RPN programs are almost incomprehensible. RPL is your friend. It takes a fully structured approach to programming and allows for named variables, local variables, good flow control with if/then/else, case, while/repeat, do/until, and four types of counting loop. Add the much richer choice of variable types and for me it's no contest.

Is RPL perfect? No, some things about it are a bit kludgy and there are one or two design choices I'd make differently. Still, for meduim and large programs RPL makes a lot of sense and will repay the effort made in learning it. But RPN is still handy for small programs.

I agree that the loss of formatting in the calculator is a problem. With memory so cheap and plentiful now, maybe future machines could have an option to store the program as text and not modify or alter it. (This would preserve comments, too.) Or maybe a prettyprinter that would display the tokenized program with indenting put back, etc. But the storage/display issue is not a language issue *per se* but an implementation issue.

For now, if I need to write a big RPL program it makes more sense to type it all up on my PC and beam it down to the 48.

- Michael

Re: Newcomer has questions
*Message #23 Posted by **Chan Tran** on 5 Apr 2003, 12:01 p.m.,*
in response to message #22 by Michael F. Coyle

I write my user RPL application using Program Development Link from HP. I treat the program that is in the calculator as if it is compiled code. Whenever I want to edit the program I go back to the code that is stored in the PC. That way I do not lose formatting information.

Re: Newcomer has questions
*Message #24 Posted by **James M. Prange** on 6 Apr 2003, 4:55 a.m.,*
in response to message #13 by Ernie Malaga (Miami)

Well, I'd write the program as:

```
Calculator: 48GX
Checksum: # CCC9h
Bytes: 34
Execution time with argument of 1000: 5.45 seconds


%%HP: T(3)A(R)F(.);
\<<
  0
  1 ROT
  FOR n
    n +
  NEXT
\>>
```

Why in the world would I want to store the argument in a local variable just to put two numbers on the stack before I put it back on the stack and never use it again? Why make things more complicated than they need to be?

And of course any of your formatting is lost when the source code is compiled. What would you expect? RPL *compiles* programs; it doesn't save the source code. When you recall the program to the stack or editor, what you see is the program decompiled for display or editing, not the original source code. And by the way, some formatting is restored in the editor; why would you want fancy formatting when a program's on the stack?. If I really wanted to keep the program from being compiled, I could embed it within a character string and even keep comments in it:

```
Calculator: 48GX
Checksum: # 3C6Bh
Bytes: 905
Execution time with argument of 1000: 5.84 seconds


%%HP: T(3)A(R)F(.);
\<<
```

```
  "                       @ Opening character string delimiter.
@ Program to add all integers from 1 through a given limit.
    \<<                   @ Opening program delimiter.
      0                   @ Start sum with 0.
      1                   @ Start loop index at 1.
      ROT                 @ Rotate argument for ending loop index from
                          @ level 3 to level 1.
      FOR n               @ Loop with index named n.
        n                 @ Place the loop index value on the stack,
        +                 @ add it to the current sum.
      NEXT                @ Has loop index reached the ending value? If
                          @ no, then increment the index and loop again;
                          @ if yes, then discard the index and continue
                          @ with next object.
    \>>                   @ Closing program delimiter.
  "
  STR\-> EVAL
\>>
```

If I store this program in a variable, then all formatting within the character string, including the ridiculously detailed comments, is retained for editing. When the program is run, the character string goes on the stack, STR\-> "executes" the string, decompiling the embedded program, and EVAL executes the program.

But seriously, for programs that are simple enough that I'm writing them directly on the calculator, I don't feel any need for fancy formatting or comments; RPL is simple and straightforward. As long as I use a variable name descriptive enough that I remember what the program was written for in the first place, it's easy enough to see how it works. For programs that I write on the PC, I don't delete the PC file when I download the program, so no formatting or comments are lost as long as I think that the source is worth keeping.

Personally, however, I don't like coding in RPL because half the statements must be coded backwards.

Well, by all means stick with what you like.

But I thought that the "RP" in both "RPN" and "RPL" stood for "Reverse Polish". Doesn't that mean arguments first, operator last? Notice how many of the arguments in your program come *after* the operators? Now that's what I call backwards.

Ok, I know that the 41 gets a lot of things right (I can remember when I really wished that I could afford one), but it seems inconsistent to me that it so often needs the argument after the operator.

RPL is what you get when BASIC and RPN decide to have a baby.

Notice which program has LBL and GTO in it. That sort of reminds me of BASIC.

But maybe you were thinking of the 49G's "Algebraic" mode? More like a miscarriage in my opinion. And then add the lack of IR, crippled serial I/O, flakey keys, poor keyboard layout, lack of keyboard overlays, big ugly chunk of plastic over the display, hard to read lettering on the faceplate, numerous operating system bugs....

Regards,
James

Re: Newcomer has questions
*Message #25 Posted by **Ernie Malaga (Miami)** on 6 Apr 2003, 11:45 a.m.,*
in response to message #24 by James M. Prange

James:

I think you're missing my point.

> Why in the world would I want to store the argument in a local variable just to put two numbers on the stack before I put it back on the stack and never use it again? Why make things more complicated than they need to be?

As I mentioned in an earlier post, I wrote the example programs off the top of my head without testing or optimization.

>why would you want fancy formatting when a program's on the stack?

And that points to another design flaw. Programs are meant to be read by _people_, because they have to be understood by _people_ if they are to be modified, improved, or what-have-you. Removing the "fancy formatting" removes understandability and confuses the programmer. Good coding standards _require_ use of comments and indentation whenever possible.

Please don't take this as a direct attack against RPL. RPN is equally at fault -- it can't be indented or commented.

>If I really wanted to keep the program from being compiled, I could embed it within a character string and even keep comments in it

Come, now, who's making things more difficult than they have to be? 8^)

>RPL is simple and straightforward.

Debatable and subjective. It's equally possible to argue that RPL is complicated and convoluted.

>As long as I use a variable name descriptive enough that I remember what the program was written for in the first place

RPL variable names are, in practice, limited to 4 or 5 characters because more than that won't fit in a menu key label. Sometimes my HP-28C can't put more than 3 characters! One cannot be descriptive when limited to such short variable names. I should know -- I've been an RPG programmer for 20 years, and RPG II and RPG III program variables are limited to 6 characters. Yech!

>But I thought that the "RP" in both "RPN" and "RPL" stood for "Reverse Polish". Doesn't that mean arguments first, operator last? Notice how many of the arguments in your program come *after* the operators? Now that's what I call backwards.

As mentioned above, programs are meant to be read by _people_. People use human speech (with a

given language) to communicate ideas. When you say "store in register 01" you use a verb in the imperative tense ("store") and an object or "parameter" ("in register 01"). That's the _natural_ way to speak. Like Yoda of the "Star Wars" saga, you can say "In register 01 store," but taking this backwardness as far as that doesn't clarify a program in the least.

For that reason, I feel that RPL is more backwards than RPN. IMHO, HP took Lukasiewicz's invention just too far. But, as you yourself said, "stick with what you like."

>And then add the lack of IR, crippled serial I/O, flakey keys, poor keyboard layout, lack of keyboard overlays, big ugly chunk of plastic over the display, hard to read lettering on the faceplate, numerous operating system bugs...

You just gave a precise description of the HP-49G! 8^)

-Ernie

Re: Newcomer has questions
*Message #26 Posted by **Trent Moseley** on 7 Apr 2003, 12:39 a.m.,*
in response to message #3 by Ernie Malaga (Miami)

Ernie,

Your note rings a bell. I can remember years ago in the HP newsletter "Key Notes", something about "synthetic programing" for the HP-41. I have no idea what what it was all about. For better or worse I never did buy one using my 25C, 67, 15C, and later on the 42S.

tm

Re: Newcomer has questions
*Message #27 Posted by **Vieira, Luiz C. (Brazil)** on 4 Apr 2003, 8:16 p.m.,*
in response to message #1 by Trent Moseley

Hi;

If you are talking about the guy who posts as Ex-PPC member, than you're talking about Mr. V.A., an ex-PPC member that prefers to identify himself this way. At least it's ben like this so far.

AFAIK, he likes Voyagers very much (HP10C, 11C, 12C, 15C and 16C) and I second him in this particular taste: I have at least one of each except for the highhly desirable, collectible-prefered HP10C, and I like them very much, too.

From time to time, Mr. V.A. (ex-PPC member) posts interesting challenges and many of them are related to some Voyagers' features. I myself have many of them as interesting ones, but sometimes I feel as if there is no pratical use for some of them except as for answering the challenge itself. Just my way of seeing things, sorry. As mentioned by another contributor, his challenges cause people to think about how to solve a particular problem first, than going to the calculator. By this point of view I accept I'm wrong, his challenges are teasing.

Hope this clears up a bit.

Luiz C. Vieira - Brazil

HP Forum Archive 11

[Return to Index | Top of Index]

hp42s lcd replacement
*Message #1 Posted by **david e** on 4 Apr 2003, 4:20 p.m.*

my lcd is in really bad bad shape. can i replace this with any other lcd screen? like a 10b or 20s?

Re: hp42s lcd replacement
*Message #2 Posted by **Frank** on 4 Apr 2003, 4:21 p.m.,*
in response to message #1 by david e

Try the 17BII

Re: hp42s lcd replacement
*Message #3 Posted by **david e** on 4 Apr 2003, 4:27 p.m.,*
in response to message #2 by Frank

thx....is there any cheaper calc I could use lol...the hp42 i have is not the greatest condition, so I'm not looking for mint...

Re: hp42s lcd replacement
*Message #4 Posted by **Paul Brogger** on 4 Apr 2003, 4:38 p.m.,*
in response to message #3 by david e

Randy Sloyer answered this pretty completely in: this post -- no, you need another LCD from an HP-27s, or an HP-17B or BII. (... or, of course, another HP-42s.)

Look under "Repairs and Batteries" for my "Pioneer Repairs" article, where you'll find limited coverage of how to swap out the LCD. Post any additional questions here.

Good luck!

Re: hp42s lcd replacement

*Message #5 Posted by **Iqbal** on 4 Apr 2003, 6:39 p.m.,*

in response to message #4 by Paul Brogger

Or you could have a pro fix it. http://www.fixthatcalc.com/index.htm

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[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

hp71 HHP card reader RAM module question
*Message #1 Posted by **andy** on 4 Apr 2003, 10:40 a.m.*

I have a 96K Handheld Products (HHP) ram module for the 71. It plugs into the card reader port.

When I free its memory (by typing "free port(5.00)" and free port(5.01)") it breaks up into a 64K port and a 32K port.

Does anyone know if there is a way to make port(5.00) the 32k port and port(5.01) the 64k port?

Does anyone have an HHP ram module documentation?

Thanks,

Andy

Re: hp71 HHP card reader RAM module question
*Message #2 Posted by **Emmanuel, Normandy (France)** on 4 Apr 2003, 11:24 a.m.,*
in response to message #1 by andy

I have one somewhere. Will scan and mail it. Yours.

Re: hp71 HHP card reader RAM module question
*Message #3 Posted by **Gordon Dyer** on 4 Apr 2003, 4:11 p.m.,*
in response to message #2 by Emmanuel, Normandy (France)

I would like a copy of the RAM module manual too. Please email it when you are ready. Thanks....

Re: hp71 HHP card reader RAM module question

*Message #4 Posted by **Ellis Easley** on 5 Apr 2003, 12:20 p.m.,*

in response to message #1 by andy

I have a Hand Held Products brochure with cover letter that came in the box with a 71B (but not the module!) The cover letter offered a discount effective in August and September, 1988. The 96K RAM Module is listed in the items discounted but it is not mentioned in the brochure. However, the brochure says this:

"Hand Held Products' 71 M/M Series extended RAM modules can be utilized in two ways:

(1) Main Memeory

When the module is in place, you have instantly added 160K, 128K, 64K or 32K bytes of memory to your HP71's main RAM.

(2) Independent Memory

Your increased memory may also be partitioned or placed in independent RAM, residing in port 5 of the HP71. Memory is partitioned in 32K byte increments and addressed in these locations:

* 32K ... Port 5.0

* 64K ... Ports 5.0 and 5.01

* 128K ... Ports 5.0, 5.01, 5.02, and 5.03

* 160K ... Ports 5.0, 5.01, 5.02, 5.03, and 5.04"

BTW, the 32K RAM was $165 reduced to $125, 64K was $295 reduced to $275, 96K was $395 reduced to $350 and the 128K RAM was $625 reduced to $450. The 160K wasn't mentioned in the discount letter but the brochure has all the same regular prices plus the 160K for $750.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

11C
*Message #1 Posted by **MarJean** on 4 Apr 2003, 7:31 a.m.*

I would like to get my hp 11C repaired. It has no response when turned on and I have replaced batteries. The self test does not work. Can anyone help or give me ideas. MarJean

Re: 11C
*Message #2 Posted by **Randy** on 4 Apr 2003, 9:25 a.m.,*
in response to message #1 by MarJean

The obvious: Be certain the new batteries are indeed good.

If the problem appeared when you replaced the batteries, that is, it was working before you installed new batteries only to have no response, try the following:

Remove the batteries from the unit. Inside the battery compartment, short the (+) and (-) connections for the batteries together with a bent paper clip. Just a few seconds is all that is required.

Re-install the batteries and try. It should be okay.

Re: 11C (That is, the connections in the CALCULATOR . . .)
*Message #3 Posted by **Paul Brogger** on 4 Apr 2003, 12:34 p.m.,*
in response to message #2 by Randy

If I may be so bold as to clarify (to avoid a possible misunderstanding) . . .

I think Randy meant to short the (+) and (-) connections in the calculator. (Touch a bent paper clip or other conductor to them both simultaneously -- this clears any residual voltage in the internal circuitry, to reset the calculator.)

Just in case there's any confusion, those are "the connections **for** the batteries" in the calculator (not *on* the batteries).

(Maybe I'm the only one who might have read it the other way!)

Re: 11C - an old issue
*Message #4 Posted by **Vieira, Luiz C. (Brazil)** on 4 Apr 2003, 1:15 p.m.,*
in response to message #2 by Randy

Hi, Randy, folks...

In many situations like this one I recomend keeping batteries in place and BRIEFLY shorten their poles. I read soem sutff about it and I think there is some reason on it.

As voltage suppliers, batteries have low internal resistance, so if you touch one pole and you have electrostatic charges, both poles will be equaly charged because batteries are an easy, low-resistance way to connect them. In other hands, if you touch one pole a tenth of a second before connecting to the other and there is electrostatic charges in your finger (or whatever instrument you have used to connect them), chances are that if ESD occurs the calculator will remain in the same "resting" state.

The user's manual for all Voyagers suggests the same: keep batteries in place and briefly shorten their terminals. As they are in place, both batteries and calculator terminals are the same, right Paul? Also, after this discharging procedure, try [ON] and [y^x] keys in the same time. Sometimes this procedure "wakens them up".

Just my US$0.01.

Success.

Luiz C. Vieira - Brazil

Re: 11C - "Shorting Terminals"
*Message #5 Posted by **Paul Brogger** on 4 Apr 2003, 1:45 p.m.,*
in response to message #4 by Vieira, Luiz C. (Brazil)

Luiz:

I generally defer to anyone who uses techincal jargon with more than three syllables.

;^)

Sounds good to me!

Re: 11C - Anyway, you're right...
*Message #6 Posted by **Vieira, Luiz C. (Brazil)** on 4 Apr 2003, 5:11 p.m.,*
in response to message #5 by Paul Brogger

Sorry;

you're right:

ESD stands for ElectroStatic Discharge.

Thanks.

Luiz C. Vieira - Brazil

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

A Step in the Right Direction, Anyway...
*Message #1 Posted by **John K. (US)** on 4 Apr 2003, 1:17 a.m.*

For those who are interested, it looks like HP just finshed a *major* rewrite of ther HP Calculators Web Zone site. Lot's of new content, including FAQs, "Usage Guides", manuals, etc. in PDF format.

There's even an introduction to RPN...

Re: A Step in the Right Direction, Anyway...
*Message #2 Posted by **Ernie Malaga (Miami)** on 4 Apr 2003, 1:33 a.m.,*
in response to message #1 by John K. (US)

John:

It would be a step in the right direction if HP hadn't dropped the HP-48 from the web page. I've tried both the "scientific" and "technical" links, and they both display the same calculators -- including the HP-12C (!).

First HP expectorated the 49G. Is it the 48's turn now? Hopefully it's just an oversight when re-designing the page.

-Ernie

Re: A Step in the Right Direction, Anyway...
*Message #3 Posted by **John K. (US)** on 4 Apr 2003, 2:18 a.m.,*
in response to message #2 by Ernie Malaga (Miami)

Well, it's still there (look for the text link just above the footer), it's just not very obvious. They're probably planning on dropping it too. But until then, they're offering it for a pretty good price.

I'm not sure I agree with you about the 49G though. I've developed an appreciation for it recently. Sure, it looks stooopid. And it's got mushy rubber keys and a display that nobody really likes, but it's got a lot of memory, and the flash ROM is a nice touch. Built-in MetaKernel, upgradable (and replaceable!) OS, up to seven visible stack levels... Too bad it doesn't have a real ENTER key... :^/

In any event, the point was that HP looks like they're gearing up for a product launch. After all, if you've given up on a product category, why develop a new site to promote it? It's reason to hope, anyway.

A Step in the Right Direction => an emulator!
*Message #4 Posted by **Mike (Stgt)** on 4 Apr 2003, 5:29 a.m.,*
in response to message #1 by John K. (US)

And they offer an emulator: http://www.hp-calculators.com/resources/emulators.phtml

Ciao.....Mike

Re: A Step in the Right Direction => an emulator!
*Message #5 Posted by **lokhin** on 4 Apr 2003, 6:19 a.m.,*
in response to message #4 by Mike (Stgt)

but it was released when the hp 10bii first released. nothing new yet actually.

Re: A Step in the Right Direction => an emulator!
*Message #6 Posted by **John K. (US)** on 4 Apr 2003, 6:47 a.m.,*
in response to message #5 by lokhin

>nothing new yet actually.

I don't recall seeing the "Usage Guides" before. Did they release those earlier, on the old site?

Re: A Step in the Right Direction => an emulator!
*Message #7 Posted by **lokhin** on 4 Apr 2003, 1:15 p.m.,*
in response to message #6 by John K. (US)

seems to me that they are new...

Re: A Step in the Right Direction => an emulator!
*Message #8 Posted by **Gordon Dyer** on 4 Apr 2003, 5:04 p.m.,*
in response to message #7 by lokhin

The User Guides were available on the older web pages.
I have the following ones:

HP 6S User Guide.pdf
HP 6S Spec Sheet.pdf
HP 6S solar User Guide.pdf
HP 9G How To Guide.pdf
HP 9G Manual.pdf
HP 9G User Guide.pdf
HP 9S User Guide.pdf
HP 10B Manual.pdf
HP 10BII Manual.pdf
HP-12C Spec Sheet.pdf
HP 20S Spec Sheet.pdf
HP 30S Spec Sheet.pdf
HP 30S User Guide Examples.pdf
HP 30S User Guide.pdf
HP 39G 40G User Guide.pdf
HP 48GX Spec Sheet.pdf
HP 49G Spec Sheet.pdf
HP 49G User Guide.pdf
XpanderUsersGuide.pdf

If anyone would like a copy of any of these let me know and I will email them to you, but if there are a lot of requests it may not be instant!

Re: A Step in the Right Direction => an emulator!
*Message #9 Posted by **John K. (US)** on 4 Apr 2003, 8:36 p.m.,*
in response to message #8 by Gordon Dyer

> The User Guides were available on the older web pages.

Well, these aren't the **User's** Guide(s), but rather **Usage** Guide(s). I've looked at a couple of them for various calcs and they seem to be instructions on how to do specific things (like calculate a mortgage with a balloon payment) on a specific machine (say, the 12C or 10BII). They're kind of like excerpts from the old Solutions Guides and Handbooks.

Re: A Step in the Right Direction => an emulator!
*Message #10 Posted by **Mike (Stgt)** on 6 Apr 2003, 4:22 a.m.,*
in response to message #5 by lokhin

The emulator looks new, the formerly was offered on a French site of HP and had a time limit of some days (60?) to test. If I only could find it again. :(

Ciao.....Mike

Re: A Step in the Right Direction => an emulator!
*Message #11 Posted by **Raymond Del Tondo** on 7 Apr 2003, 3:42 a.m.,*
in response to message #10 by Mike (Stgt)

Hi Mike,

just drop me a line to my private email account, and I'll send it to you.

But it seems the new version is smoother, and uses less resources.

The old version I have dates from October 2000.

Regards,

Raymond

Re: A Step in the Right Direction => an emulator!
*Message #12 Posted by **Mike (Stgt)** on 7 Apr 2003, 5:16 a.m.,*
in response to message #11 by Raymond Del Tondo

TIA!

Ciao.....Mike

Re: A Step ... that nauseates me!
*Message #13 Posted by **W. Bruce Maguire** on 5 Apr 2003, 1:21 p.m.,*
in response to message #1 by John K. (US)

What a joke! They better be coming out with an RPN model pretty quick... >:-P

The "Introduction to RPN" states:

HP provides full RPN ... The 48G+ and 48GX scientific and HP12C financial calculator (SIC) use RPN exclusively ... the 17BII and 49G can be switched between [RPN and algebraic]...

Lets see... Out of the FIVE calculators they mention, THREE are no longer available (are they even "supported"?) and ONE---the 48GX---is on its way out *so fast* that they didn't even bother to include it in the "Products" section! I guess that leaves... **ONE RPN calculator!** Isn't it ironic that the old *engineering* company that introduced RPN calculators to the world now only sells *one* RPN calculator...and it's for *finance!?!* >:-P

Sheesh! If they are *not* going to be introducing an RPN machine soon, then this RPN cheerleading is absolutley *revolting!*

Personally, I've come to terms with it. HP no longer exists. It is fruitless to even *hope* for a new calculator from them, because whatever they sell will be a piece of Chineses *crap* made by someone else with a spiffy "HP" logo slapped on (crookedly).

HP is *gone*. As far as I'm concerned, we all here have about as close a connection with the new HP as we do with Sharp, or TI, or Casio. The HP *we admired* was spun-off and called Agilent, and they are *not* in the calculator business.

The 'pops-up-once-in-a-long-while'
Bruce.

Re: A Step ... that nauseates me!
*Message #14 Posted by **Vieira, Luiz C. (Brazil)** on 5 Apr 2003, 1:35 p.m.,*
in response to message #13 by W. Bruce Maguire

Hi, W. Bruce;

based on what you wrote and in previous posts about HP and replying messages service, it seems all around calculators has been passed to thirdy-part offices that have no idea about what does RPN stand for.

This way, you're right feeling sick about this.

Luiz C. Vieira - Brazil

Re: A Step ... that nauseates me!
*Message #15 Posted by **Renato** on 7 Apr 2003, 12:23 a.m.,*
in response to message #13 by W. Bruce Maguire

Old HP no longer exists, because current market is different from the old market. Current inkjet printers are sold with ink cartridges that contains half as much ink as replacement cartridges. This is a market standard. How would old HP survive in such a market ? In my opinion, HP or its management is not guilty for what it has become - in order to survive it had to become something different from the company we admired and respected. Would this company be alive if it did not adapt to a new era ?

Sometimes I think I am wrong, by being attached to products, companies and markets that ceased to exist years ago...

Something to be considered seriously...
*Message #16 Posted by **Vieira, Luiz C. (Brazil)** on 7 Apr 2003, 12:41 a.m.,*
in response to message #15 by Renato

Hi, Renato;

I have the same concerns and thoughts; for me, you're right.

What I believe that others are thinking is: *does it worth loosing the best they ever had?*

If it is to survive, we know the answer.

It reminds me Apple and IBM/Microsoft...

Luiz C. Vieira - Brazil

Re: A Step ... that nauseates me!
*Message #17 Posted by **Howard** on 8 Apr 2003, 8:46 a.m.,*
in response to message #13 by W. Bruce Maguire

Personally I think I don't mind if HP continues with RPN or not. The important thing for me is that I know how it works. I get a certain amount of satisfaction in knowing that I know something that not everybody knows. This might sound smug - well OK I'm being smug and a snob. I think all of us have a certain amount of this in us or else we wouldn't collect calculators that are nowhere near as productive as the later models. I have several of the later models that I rarely take out of the drawer. They can do the lot in spades - but I would rather have my HP65 reading a card or my HP41CX calculating away. They are great. It is a lot like collecting old watches or old stamps - they are useless compared to the new ones but they have a great value to those who are intereted in them. Their value is in their rarity.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

advise on hp 28s needed
*Message #1 Posted by **lokhin** on 3 Apr 2003, 8:18 p.m.*

hello, fellow hp users,

I am relatively new and know little about hp history. I was 3 when hp 28s first introduced.

I got a chance to take part in an online auction for an hp 28s starting from us$25 in my city.

any comments on the hp 28s? is it good to be used as a graphic calculator? and do you prefer it to an hp 42s or hp 32sii??

yes, I have read the hp 28s article in the museum

-lokhin

I don't like them, but don't let that stop you.
*Message #2 Posted by **Jeremy** on 3 Apr 2003, 9:04 p.m.,*
in response to message #1 by lokhin

I don't have one, but I have handled one. The screen doesn't look big enough to really do any graphing, but I think it's probably fine for everything else. I also don't like how many of the basic scientific functions are shifted or in a menu somewhere.

I bought a 32SII on eBay a week or so ago, and I really like that one. I also have a 48G, which is pretty good for graphing. I have to admit, for graphing, I like the TIs better. They are much faster and it is easier to zoom in and such.

I haven't figured out how to program either of my programmable HPs yet. Ironically, it is because I don't have time on account of my school work. I have to spend time writing lab reports and studying the texts rather than HP manuals.

Another thing that bugs me (again, no personal experience in this) is that since there are keys on

both sides, there are either bending conductors are wiper contacts. This makes the 28 series more prone to wearing out than many other HPs. (The less moving parts, the more reliable)

On the flipside, the 48G series is very complicated and hard to use compared to many other HPs. But if you could only get one, I would get one of those. Since you wouldn't be spending time messing around with all these others, you could spend some time and learn how to use it to the utmost.

Sorry for all the babbling.

-Jeremy

Re: advise on hp 28s needed
*Message #3 Posted by **Gray Wilson** on 3 Apr 2003, 11:24 p.m.,*
in response to message #1 by lokhin

I've used my 28S for 12 years as my daily calculator. I've found it a fine machine. Don't be fooled by its clean appearance - it's a very powerful scientific calculator. But I don't use it for graphing; Mathematica or MathCad programs are much better for that.

I really like its viewable unlimited stack and RPL programming style. I think the keyboard is one of the best ever produced by HP - the keys presses are gently click-positive, more like the later 32SIIs, without being "heavy" like the 42S or 48G. And the layout is clean and uncluttered, like the 42S and unlike the 32SII and 48G.

I think all 28S's were made in the USA or Singapore and certainly have superior external quality to the later 48Gs and 32SIIs. Although the 28S screen is not as crisp as the latest "black" screens of the Gs, it is perfectly legible.

Also, unlike the 32SII and 42S you can't hold it in one hand and have easy access to the keyboard. It's possible, but cumbersome. Also, unlike other HP calcs, the display doesn't show thousands separators, which can make numbers in the range 1E6 to 1E12 difficult to read.

Also, unlike the 48G the only way to input programs is via the keyboard.

In my opinion, the 28S is a much under-appreciated machine. It is very like the 48G in its programming style, but doesn't have the PC connectivity, expandability (of the 48GX)and much larger memory capacities of the 48GX and G+. But I've found its 32K more than enough for the programs I've written over the years. The 32SII only has 360 some bytes and the 42S about 7K.

If you do get the calculator make sure you get the owners manual and reference manual, both of

which came standard with the calculator.

Re: advise on hp 28s needed
*Message #4 Posted by **John K. (US)** on 3 Apr 2003, 11:34 p.m.,*
in response to message #1 by lokhin

For the most part, I agree with Jeremy. For $25 though, it's not a bad buy -- more so if it comes with manuals. In a direct comparison, the 48 (of any flavor) wins in nearly every category: speed, durability, memory, screen size, I/O, and so on. To top it all off, the "N" size batteries used by the 28 (it requires three of them) are becoming increasingly difficult to find -- in the US, at least.

Still, they have their fans. The extra keys make it marginally easier to program (you don't have to exit alpha mode to get at the soft-keys) and they are slightly smaller in overall dimensions. Plus, HP made a really nice leather pouch for them which is still available from at least one vendor that I'm aware of.

If you decide to buy one, be sure to find out the condition of the battery door and the plastic surrounding the battery compartment opening. Ask for pictures, if possible. The plastic in that area is notoriously weak and the contact springs are **very** stiff making it the most likely point of failure during normal use.

Re: advise on hp 28s needed
*Message #5 Posted by **lokhin** on 4 Apr 2003, 6:17 a.m.,*
in response to message #4 by John K. (US)

hello,

thanks for the input.

it seems that the hp 28s strengths are the relatively large memory and the larger keyboard, and its weakness are the lack of I/O, the weak battery door and clean keyboard. i am not sure if the foldable design is a weakness or strength.

is it a good choice, provided that it is cheap??

some more questions come to my mind...:

i know and have an hp 32sii, and think that it is a very well designed calculator. may i know in what way the hp 42s keyboard design is better than that of an hp 32sii? I tried the emulator and a lot of menus are involved... the hp 32sii has a less cluttered keyboard (has 2

shift keys) which is more preferable?

thank you again

-lokhin

Re: advise on hp 28s needed
*Message #6 Posted by **John K. (US)** on 4 Apr 2003, 7:08 a.m.,*
in response to message #5 by lokhin

> it seems that the hp 28s strengths are the relatively large memory[.]

Large memory relative to the 32SII? Yes. Relative to the 48? In the case of the 48SX, 48G+ or 48GX, no. Still, 32K (in the case of the 28S -- the 28C only had 2KB, which really isn't enough for an RPL system) is pretty good, considering the I/O limitations.

> is it a good choice, provided that it is cheap??

Just to play with RPL? Sure, I'd go for a sub-US$30 28S. I might even pay a US$5 premium for manuals. Too much more than that, though, and you'd be better off looking for a 48, in my opinion.

> may i know in what way the hp 42s keyboard design is better than that of an hp 32sii? I tried the emulator and a lot of menus are involved... the hp 32sii has a less cluttered keyboard (has 2 shift keys) which is more preferable?

This is really a matter of taste. Some feel that the 32SII keyboard is visually confusing, others don't like to have to wade through the 42S's menus. The 42S does have the advantage of customizable soft-keys, so you can assign up to 24 commands or programs to a menu key. And if you use the programmable menus creatively, there is really no limit to how many things you can assign to the top row.

Personally, I like the 42S better than the 32SII overall. But the 32SII is what rides around in my backpack. ;^)

I hope this helps.

Re: advise on hp 28s needed

*Message #7 Posted by **John Smith** on 4 Apr 2003, 7:30 a.m.,*

in response to message #1 by lokhin

The HP28S (and its former incarnation, the HP28C) is a truly revolutionary calculator, a milestone in calculator art, and as such it is immensely valuable for us collectors.

But its value as a daily-use calculator is debatable. It's got lots of good points, of course, but the bad ones are truly bad, namely:

1) Many basic functions not directly available, you must use menus all the time

2) quite big and heavy, it doesn't fit comfortably in the hand at all

3) the double keyboard is more of a nuisance than a help, actually, and the flexible connector wears out eventually

4) the battery compartment & door design is a real crime: either the batteries inside are just too loose, and make eventual bad contact, so RAM is cleared and you lose all your programs and data, or else fit inside so tightly that there's no way you can remove them (specially the innermost one) before the capacitor discharges, so losing again all your data.

5) Further, the battery door and its surrounding plastic is incredibly hard to put in place and breaks extremely easy, thus making battery replacement utterly difficult, ending most of the time in memory lost. And of course, having 32k full of programs and data is next to useless if you get to lose them and having to re-key them each and every time you have to change batteries. You'll only need to do this every few months or so, depending on use, but combined with the risk of damaging the battery door, thus rendering the calculator useless, that's just too much.

In other words, from a collector's perspective, get one as fast as you can, NIB preferably. But for actual use, you'll be best advised to get an HP42S if you can live without graphics, and some 48/49 model otherwise.

Re: advise on hp 28s needed
*Message #8 Posted by **lokhin** on 4 Apr 2003, 12:56 p.m.,*
in response to message #1 by lokhin

it seems that the hp 28s graphics is not very usable, how does it works?

in the stat mode, i know that it can plot scatter plots, but can it plot regression lines?

it seems that it does not have a solver?

-lokhin

Re: advise on hp 28s needed
*Message #9 Posted by **dano** on 4 Apr 2003, 9:24 p.m.,*
in response to message #8 by lokhin

I have both a 28S and a 48G - actually many other hp calcs too but I keep both the 28S and 48G handy by the computer. As they are both the later generation RPL calc, their internals are rather similar. The 28S (and the C) do have the solver. An excellent source on the 28 series is the August 87 issue of the Hewlett Packard Journal that is on CD 3 of the HP museum on CD. It includes articles on the mechanical design, RPL, and the new solver that debuts on this model. The folding hinge is discussed in detail and once you see how it's made, you will have no doubt that it will last. They don't mention the battery door at all and I must say it is by far the weakest point of the calc - or any of the HP calcs I own. I cringe every time I have to open and close it up. Frankly I like the 28S better than the 48 but only if you have some desk space to lay it out - A quick read through the 28 manual and you will be amazed at what it can do. The 48 just seems too cluttered. Also, I never needed to program or graph on either one so I can't really comment on that (I use the 41 and 42S for programming).

Re: advise on hp 28s needed
*Message #10 Posted by **lokhin** on 5 Apr 2003, 8:29 a.m.,*
in response to message #9 by dano

yea

any comment on hp 42s programming then?

I think the 2 cases are similar, no way to input without using the calculator keyboard, but lots of room to program, for the 2 machines...

but is the feature that hp 42s is compatible with an hp 41c program an advantage??

-lokhin

Re: 42S, 41 programming
*Message #11 Posted by **dano** on 5 Apr 2003, 12:54 p.m.,*
in response to message #10 by lokhin

I learned to program with the 41, it was my first RPN calculator back in college. I got pretty good at it and found I had a lot of programs so I bought a card reader. But that was years ago and now if I need any EE analysis I do it on the computer. I really like the size and form of the pioneer series so I got a 42S and I love it but I probably don't use 1/10th of it's capabilities. If I need a quick and dirty program, I'll do it on the 42s. It's fully compatible with the 41 so I don't have to learn anything new. But honestly, I don't do much programming any more and I wouldn't write a long program on the 42s because if the batteries died - it's gone unless you print it out on the 82240 (which I have) but you end up having to type it in again. Dan

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[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Easter day challenge
*Message #1 Posted by **hugh** on 3 Apr 2003, 7:45 p.m.*

it will soon be easter. this year, easter sunday is on April 20. the idea is to write an easter sunday calculation program valid for years 1900-2099 on the 25C (ie in 50 steps or less!).

to make it more interesting, i've already had a go, but my answer is incomplete. completely different approaches are allowed as long as they work! i've managed to simplify a formula down to the following logic:

d =(204 - 11*(y%19))%30; if (d < 28) ++d; return d+27-(5*y/4+d)%7;

where `y' is the input year. the result `d' is the day number from march, where d > 31 implies april (d-31). after some struggle, i write:

sto0 1 9 / int 1 9 * rcl0 - 1 1 * 2 0 4 + sto1 3 0 / int 3 0 * sto-1 2 8 sto2 rcl1 x>=y? gto35 1 + rcl0 5 * 4 / int sto-2 + 7 / int 7 * rcl2 +

which works but always returns the answer + 1 :-) be sure to test 1954 (which is April 18).

happy easter!

Re: Easter day challenge
*Message #2 Posted by **hugh** on 7 Apr 2003, 5:33 p.m.,*
in response to message #1 by hugh

i finally done this in 46 steps. wow, 3 steps to party! but the program's about as vicious as a cornered rat.

Re: Easter day challenge
*Message #3 Posted by **glynn** on 7 Apr 2003, 11:03 p.m.,*
in response to message #2 by hugh

Did you scope out the algorithm at:

http://aa.usno.navy.mil/faq/docs/easter.html

Quoting here:

Computing the Date of Easter:

The rule is that Easter is the first Sunday after the first ecclesiastical full moon that occurs on or after March 21. The lunar cycles used by the ecclesiastical system are simple to program. The following algorithm will compute the date of Easter in the Gregorian Calendar system.

Please note the following: This is an integer calculation. All variables are integers and all remainders from division are dropped.

The algorithm uses the year, y, to give the month, m, and day, d, of Easter. The symbol * means multiply.

c = y / 100

n = y - 19 * (y / 19)

k = (c - 17) / 25

i = c - c / 4 - (c - k) / 3 + 19 * n + 15

i = i - 30 * (i / 30)

i = i - (i / 28) * (1 - (i / 28) * (29 / (i + 1))

* ((21 - n) / 11))

j = y + y / 4 + i + 2 - c + c / 4

j = j - 7 * (j / 7)

l = i - j

m = 3 + (l + 40) / 44

d = l + 28 - 31 * (m / 4)

For example, using the year 2010,

y=2010,

c=2010/100=20,

n=2010 - 19 x (2010/19) = 15,

etc. resulting in Easter on April 4, 2010.

The algorithm is due to J.-M. Oudin (1940) and is reprinted in the Explanatory Supplement to the Astronomical Almanac, ed. P. K. Seidelmann (1992). See Chapter 12, "Calendars", by L. E. Doggett.

Re: Easter day challenge
*Message #4 Posted by **hugh** on 8 Apr 2003, 1:13 p.m.,*
in response to message #3 by glynn

hi glynn,

i had seen the oudin version. but it is way to large for 50 steps. instead i found a formular by Carter valid only for 1900-2099 then simplified it a bit more and tied that.

Re: Easter day challenge

*Message #5 Posted by **eamonn** on 8 Apr 2003, 3:02 a.m.,*

in response to message #2 by hugh

Hugh,

I had a look at your original algorithm and ran a quick check of the values for d that are generated before the 'if' statement. Oddly enough, for years in the range 1900 to 2099, d never equals 27. So, your algorithm can be rewritten:

```
d =(204 - 11*(y%19))%30;
if (d < 27) ++d;
return d+27-(5*y/4+d)%7;
```

This leads to a simple change to your original HP-25C code - replace the '8' in step 28 with a '7' and now the result is no longer off by one.

I also experimented with storing some of the constants in the algorithm in memory registers. Doing this allowed me to free up about 10 lines of program space, which in turn allows an epilogue to your code to return the month in the X register and the day in the Y register.

Unfortunately, I don't have an actual HP-25C myself, but I was able to test the code on the HP-25C simulator at http://www.rskey.org/hp25.htm and it seems to work fine for all they years I threw at it. I've pasted the code below. Note that the registers need to be initialized with the values shown before the program is run for the first time. Since the program doesn't modify R3 to R7, they do not need to be initialized again for subsequent runs of the program.

Good challenge.

Eamonn.

Store the following values in registers R3 to R7:

```
R3 = 19
R4 = 204
R5 = 30
R6 = 27
R7 = 1.25
```

And here's the code, with some comments.

```
01  sto0  ; Store year in R0 for later
02  rcl3  ; R3 = 19
03  /
04  int
05  rcl3
06  *
07  rcl0
08  -     ; X = -(year mod 19)
09  1
10  1
11  *
12  rcl4  ; R4 = 204
13  +
14  sto1  ; 204 - 11 * (year mod 19) stored in R1
```

```
15  rcl5  ; R5 = 30
16  /
17  int
18  rcl5
19  *
20  sto-1 ; d stored in R1
21  rcl6  ; R6 = 27
22  sto2  ; store 27 in R2 for later
23  rcl1  ; recalls d
24  x>=y? ; if d>=27 then ...
25  gto28 ;    ... goto 27.
26  1     ; Add 1 to d
27  +
28  rcl0  ; Recall the year
29  rcl7  ; R7 = 5/4 = 1.25
30  *     ; X = y * 5/4
31  int   ; X = floor (y * 5/4)
32  sto-2 ; Store 27 - floor(y * 5/4) in R2
33  +     ; X = d + floor(y * 5/4)
34  7
35  /
36  int
37  7
38  *     ; X = 7 * floor( (d + (y * 5/4) ) / 7 )
39  rcl2  ; X = 28 - (y * 5/4)
40  +     ; X = 28 - (y * 5/4) + 7 * floor( (d + (y * 5/4) ) / 7 ), the result from
the original code.
41  3
42  1
43  x<y   ; result > 31?
44  gto48 ; if so, then skip to line 48
45  Rv    ; Place result back in X
46  3     ; Month is march
47  gto00 ; Done
48  -     ; Subtract 31 from result
49  4     ; Month is April
```

Re: Easter day challenge

*Message #6 Posted by **hugh** on 8 Apr 2003, 1:11 p.m.,*

in response to message #5 by eamonn

hey, i like it!

i didnt think of the 27 trick. you had seen how i had tried to reuse the same constant but out by 1. also, the idea of storing some of the constants in registers and then using the space to discriminate march/april is a cool idea. what i did in the end is recode the problem again using FRAC instead of INT. last time i tried this (which saves space) it got the wrong answer for certain cases. you see frac(x/7)*7 is often wrong. but x - int(x/7)*7 is always right. this is due to small rounding errors. here's my version:

sto1 1 9 / frac 2 0 9 * 2 0 4 - chs 3 0 / frac 3 1 * 2 8 x<>y x>=y? gto 29 1 + rcl1 5 * 4 / int sto2 + 7 / int 7 * rcl2 - + 1 -

the beauty is /30 then *31 which makes the number ever-so-slightly larger. later on the INT throws away the oversize part and there is no loss of bits.

but wait! i can use your 27 idea, because i do the -1 on the end here. this now gives me 5 spare steps. the question is, can

i put in the month discriminator as well!

i'll try that later.

Re: Easter day challenge
*Message #7 Posted by **eamonn** on 9 Apr 2003, 2:40 a.m.,*
in response to message #6 by hugh

Looks good Hugh, though I think you'll have difficulties getting the month and day displayed correctly with only five steps remaining. I both like and dislike the multiply by 31 trick - kinda ugly, but it gets the job done and it looks like it should work for all cases. Admittedly, when you have limitations such as having only 50 steps available, you sometimes have to resort to tricks like this. By the way, I really like the way you calculate the d+27-(5*y/4+d)%7 part of the algorithm. Not obvious, and it took a few minutes to write out the equations to understand what you were doing, but 100% correct.

With your changes bringing the program down to 44 steps, I'm guessing, you could store the constants 204 and 209 in registers, freeing up four steps and allowing the display of the month and date at the end. This is more efficient the five registers I used. Also, I see you only use two storage registers in your new code, compared to three in the original code.

It's going to be hard to beat that.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP Calculator Patents
*Message #1 Posted by **Tony Duell (UK)** on 3 Apr 2003, 5:31 p.m.*

Thanks to Paul (I think), I found the HP9820 patent (US3839630) which does, indeed, contain a lot of useful information about this machine, including the instruction set (which I was looking for), scheamtics, ROM source, and so on. I also found the HP9810 patent (US3859635 I think) which is similarly detailed. I have 2 more questions (a). Does anyone know of any other 'useful' HP calculator patents that contain ROM source or schematics. I am told there's one for the 9830, but I've not tracked it down yet (b) Is there a way to get these patents as a single PDF (I assume) file, rather than the page-at-a-time files from espacenet?

Re: HP Calculator Patents
*Message #2 Posted by **David Smith** on 3 Apr 2003, 5:48 p.m.,*
in response to message #1 by Tony Duell (UK)

You might want to try www.uspto.gov

Re: HP Calculator Patents
*Message #3 Posted by **Richard Freeman (Australia)** on 3 Apr 2003, 6:44 p.m.,*
in response to message #1 by Tony Duell (UK)

US patent no 4,075,679 is for the 9825 it is actually quite useful as it contains all the circuits etc - but as you said it is 1 PDF per page - I suspect this is to force you to buy a copy of the patent if you are serious but they can still claim that the Patents are freely available on the net

The circuits are useful but are not neccasarily of the latest version nor do they contain all the information required to identify components etc - might I suggest that if someone does work on an HP calculator they take notes with a view to subitting them as a partial Service Manual which will probably save other people Time in the Future ... If anyone is interested I have (had I havent had time for a couple of months now) been working out the Servo Circuit for the 9825 Tape drive I could write up a few notes, component numbers etc. If Dave is interested such Notes could be included in Future MOHP CDs - the short coming of this idea being that unless someone is really keen Notes are likely to be of one section of the Machine at a time

Regards Richard Freeman

Re: HP Calculator Patents
*Message #4 Posted by **Gordon Dyer** on 3 Apr 2003, 8:32 p.m.,*
in response to message #1 by Tony Duell (UK)

Try patent 4,437,156 for the HP 9825.

I dont know how to get a single .pdf, sorry!

Re: HP Calculator Patents
*Message #5 Posted by **Gordon Dyer** on 3 Apr 2003, 9:09 p.m.,*
in response to message #1 by Tony Duell (UK)

This is an index of all HP patents with Calculator in the title since 1976:

PAT. NO. Title
1 5,530,234 Hand held calculator having a retractable cover
2 4,885,714 Calculator having a user-accessible object stack for the uniform application of mathematical functions and logical operations to a multiplicity of object types
3 4,821,228 Method and apparatus for computation stack recovery in a calculator
4 4,566,072 Programmable calculator including means for digitizing the position of an X-Y plotter pen
5 4,546,448 Programmable calculator including program variable initialization means and definition means array
6 4,480,305 Programmable calculator including editing capability
7 4,456,964 Calculator including means for displaying alphanumeric prompting messages to the operator
8 4,455,618 Programmable calculator
9 4,455,607 Programmable calculator having keys for performing angular measurement unit conversion
10 4,437,156 Programmable calculator
11 4,412,300 Programmable calculator including alphabetic output capability
12 4,384,328 Programmable calculator including magnetic reading and recording means
13 4,381,554 Calculator for storing source data and evaluating numerical answers to problems
14 4,330,839 Programmable calculator including means for automatically processing imformation stored on a magnetic record member
15 4,322,816 Programmable calculator having structure for controlling an x-y plotter
16 4,309,761 Calculator for evaluating numerical answers to problems
17 4,291,385 Calculator having merged key codes
18 4,281,390 Programmable calculator including means for performing computed and

uncomputed relative branching during program execution
19 D256,133 Casing for an electronic calculator
20 4,203,152 Programmable calculator including key-log printing means
21 4,198,684 Electronic calculator with keyboard-controlled unary function capability
22 4,197,586 Electronic calculator assembly
23 4,187,547 Programmable calculator including means for controllably introducing blank lines on a printed record during program execution
24 4,181,966 Adaptable programmed calculator including a percent keyboard operator
25 4,181,965 Programmable calculator including program trace means
26 4,180,854 Programmable calculator having string variable editing capability
27 4,178,633 Programmable calculator including multifunction keys
28 4,177,520 Calculator apparatus having a single-step key for displaying and executing program steps and displaying the result
29 4,177,518 Programmable calculator including scrolling alphanumeric display means
30 4,164,039 Programmable calculator including a key for performing either a subtraction or a unary minus function
31 4,164,019 Programmable calculator including alphanumeric display means
32 4,162,532 Programmable calculator including data format display control means
33 4,161,031 Programmable calculator including boolean flag variable means
34 4,159,525 Programmable calculator employing computed memory addresses
35 4,158,285 Interactive wristwatch calculator
36 4,158,233 Programmable calculator including means for performing implied multiply operations
37 4,158,231 Programmable calculator including program listing means
38 4,158,228 Programmable calculator including alphanumeric error display means
39 4,156,921 Adaptable programmed calculator including automatic decimal point positioning
40 4,156,918 Programmable calculator including means for performing computed jumps during program execution
41 4,156,917 Programmable calculator including separate user program and data memory areas
42 4,156,285 Programmable calculator including keyboard functions whose argument may be a numeric constant, a storage register, or an arithmetic expression
43 4,156,282 Programmable calculator including relational operator means
44 4,152,774 Programmable calculator including keyboard function means for raising the number ten to any designated power
45 4,152,773 Programmable calculator including means for establishing a priority for executing algebraic operations
46 4,152,771 Programmable calculator including display means for signalling the user to indicate the exhaustion of a printer paper supply
47 4,152,770 Programmable calculator including means for programmably controlling magnetic storage units
48 4,152,769 Programmable calculator including means for permitting data entry during program execution
49 4,145,752 Programmable calculator including separate line numbering means for user-

definable functions
50 4,145,742 Programmable calculator including user-definable keys
51 4,127,897 Programmable calculator having extended input/output capability
52 4,126,898 Programmable calculator including terminal control means
53 D249,243 Wristwatch calculator
54 4,109,315 Wristwatch calculator with selectively scanned keyboard
55 D249,090 Casing for an electronic calculator
56 4,099,246 Calculator having merged key codes
57 4,091,270 Electronic calculator with optical input means
58 4,089,059 Programmable calculator employing a read-write memory having a movable boundary between program and data storage sections thereof
59 4,078,257 Calculator apparatus with electronically alterable key symbols
60 4,075,679 Programmable calculator
61 4,063,221 Programmable calculator
62 4,059,750 General purpose calculator having selective data storage, data conversion and time-keeping capabilities
63 4,055,757 Calculator apparatus with annuity switch for performing begin-and end-period annuity calculations
64 D245,810 Casing for an electronic calculator
65 4,047,012 General purpose calculator having factorial capability
66 4,037,092 Calculator having preprogrammed user-definable functions
67 D245,107 Electronic calculator
68 4,035,627 Scientific calculator
69 D244,862 Casing for an electronic calculator
70 4,028,538 Programmable calculator employing algebraic language
71 4,012,725 Programmable calculator
72 4,009,379 Portable programmable calculator displaying absolute line number addresses and key codes and automatically altering display formats
73 4,001,569 General purpose calculator having selective data storage, data conversion and time-keeping capabilities
74 3,996,562 Programmable electronic calculator for evaluating mathematical problems
75 3,987,290 Calculator apparatus for displaying data in engineering notation
76 3,971,925 Adaptable programmed calculator having provision for plug-in keyboard and memory modules
77 3,955,074 General purpose calculator having keys with more than one function assigned thereto
78 3,946,218 General purpose calculator with capability for performing yield-to-maturity of a bond calculation

Re: HP Calculator Patents
*Message #6 Posted by **Peter Monta** on 3 Apr 2003, 9:15 p.m.,*
in response to message #1 by Tony Duell (UK)

> Is there a way to get these patents as a single PDF (I assume) file, rather than the page-at-a-time files from espacenet?

Yes---do a search for "patent pdf" under freshmeat.net. I've used the shell script, pat2pdf; the other project listed is just a GUI wrapper for it I think.

By the way, thanks for your very informative notes on the hardware internals of the HP Classics.

Cheers, Peter Monta

Re: HP Calculator Patents
*Message #7 Posted by **Achim Buerger** on 7 Apr 2003, 11:16 a.m.,*
in response to message #1 by Tony Duell (UK)

I have some 98xx related patents from USPTO converted to single PDF file. It makes about 30MB per patent. I did upload some of them to the MoHPC for inclusion in the latest CD/DVD but somehow they where omitted. The 9810/20/30 patents contains very usefull schematics and functional descriptions. With these schematics I successfully repaired three machines. They also contain ROM listings as binary dump and assembler code. E.g. from analyzing the assembler code and the schematics I built a PC-based 9862 plotter emulator for the 9810.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

This may not be the place for this but, >>
*Message #1 Posted by **David** on 3 Apr 2003, 3:06 p.m.*

The price/rarity chart shows easy and moderate for 11C and 15C respectively. Well....besides proud amounts on ebay, I don't know where else to look. Are these calcs really that hard to find? Not that it would be surprising. Any hints or help would be greatly appreciated. Thanks in advance, David

Re: This may not be the place for this but, >>
*Message #2 Posted by **Ron Ross** on 3 Apr 2003, 4:02 p.m.,*
in response to message #1 by David

I think the chart is fairly accurate, especially concerning the 11c and 15c. These two are fairly easy to find, just not affordable. If you were to stipulate Cheap and easy to find, no Hp can be found cheaply via Ebay. Even Hp trash (Hp 6s, Hp 10Bii, Hp30s, and other recent Hp's bring almost list price, NOT bargains) sells for almost list.

Re: This may not be the place for this but, >>
*Message #3 Posted by **Chan Tran** on 3 Apr 2003, 7:24 p.m.,*
in response to message #2 by Ron Ross

What about the 48's. I thought you can get a 48 on Ebay cheap.

You can. I did.

*Message #4 Posted by **Jeremy** on 3 Apr 2003, 9:08 p.m.,*

in response to message #3 by Chan Tran

My 48G with manual and quick start book was $40 on Buy it Now. it is not mint, probably fair to good condition, but it works perfectly, and will never leave me wanting features.

Compare that to the 32SII, which I picked up for $125. (ouch) The 32SII doesn't do 1/5 of what the 48G does, so it was not a deal at all. What I do like about the 32SII though is not worrying about when my batteries will die. If they start to fade out, I can still use them for hours more before they crap out. With the 48G, it wouldn't be so long. I really like being able to see the first four registers of the stack though. That is the biggest advantage to the 48G in my opinion.

-Jeremy

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP 97 non-reading of Mag. cards
*Message #1 Posted by **Jeff Maher** on 3 Apr 2003, 2:31 p.m.*

I have a Hp 97 and love it, however when I go to read in a program form a Mag. card it will sometimes read in the first side, but not the second. The display will come up and say error. I would like to know is this just a matter of cleaning the cards, or does this require more serious work? Thank you for the assistance

Re: HP 97 non-reading of Mag. cards
*Message #2 Posted by **David Smith** on 3 Apr 2003, 5:52 p.m.,*
in response to message #1 by Jeff Maher

Assuming that you have already replaced the reader drive roller rubber, it could be (in estimated order of likelyhood) dirty cards, dirty reader head, flakey reader switch contacts, slipping worm gear shaft coupling, failing little blue tantalum capacitor on the reader board.

Re: HP 97 non-reading of Mag. cards
*Message #3 Posted by **Jeff maher** on 3 Apr 2003, 6:39 p.m.,*
in response to message #2 by David Smith

Dave: Thanks for your response, what do you clean your cards with? As far as cleaning the card reader, do I need to disassemble the unit to do this? Or canI just spray some contact cleaner into the slot? I tried running the abrasive cleaner through the slot. Afterwards the reader started making noises. Any thoughts on this? Thanks again. Jeff

Re: HP 97 non-reading of Mag. cards
*Message #4 Posted by **David Smith** on 4 Apr 2003, 6:12 p.m.,*
in response to message #3 by Jeff maher

You can use Windex for cleaning the cards.

I think the noise that you got after running the abrasive card through may indicate your rubber roller or work gear coupling is bad. You may have to do a reader rebuild...

One good way that I have found for cleaning the heads is to wet a card well with 91% isopropyl alcohol and then insert it into the (powered off) card read. Push and pull it around several times. Dry off the card. Insert and remove a few more times. Repeat everything a few times. The alcohol left in the reader will cause the reader to slip until it drys. You can speed up the process by using canned "air" (NEVER an air compressor). Finally use the head cleaning card.

Re: HP 97 non-reading of Mag. cards
*Message #5 Posted by **Jeff Maher** on 4 Apr 2003, 8:07 p.m.,*
in response to message #4 by David Smith

David:

Thanks again for your suggestions, and I will give it a try this weekend.

Jeff

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

This HP-34C auction not quite correct
*Message #1 Posted by **NH** on 3 Apr 2003, 2:13 p.m.*

This HP-34C auction is not quite correct now.....

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=11713&item=3015878712&rd=1

Item #3015878712

This auction is not quite correct now, because the seller uses photographs from the HP Museum, but does not state them to NOT be the unit for sale.

This is a faux pah to say the least. On that auction even if you check all the pages, you can't really determine the level of wear on that calculator.

Except for the "mint" pictures of the perfect 34C unit from the Museum. OOO LAAA LAAA I wonder how much Mr. Hicks wants for THAT calculator in THAT picture too bad its not the one in the auction.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Questionable auction for 50* 39G calcs

*Message #1 Posted by **Raymond Del Tondo (Germany)** on 3 Apr 2003, 12:25 p.m.*

Could it be that this auction is kinda 'illegal' ?

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3016440454&ssPageName=ADME:B:RECO:US:3

As I understand the text, it is *one* auction for 50 (fifty) units of this calc, but the description says the high bid is per calc, and the high bidder is obligued to take *all* units. So the 'winner' has to pay 50 times the winning bid...

Did I miss something?

Raymond

Doubtful that this is legal

*Message #2 Posted by **Mike** on 3 Apr 2003, 1:23 p.m.,*
in response to message #1 by Raymond Del Tondo (Germany)

I bet this is an illegal auction, per eBay rules. It certainly wouldn't hurt the bidder, since it is clear what is going on.

If the math is done by the seller and the buyer, then ebay is paid only based on the single unit price.

This is an illegal auction, in my opinion.

MIGHT BE OK -- DUTCH AUCTION

*Message #3 Posted by **NH** on 3 Apr 2003, 2:17 p.m.,*

in response to message #2 by Mike

Hello fellow comrades:

I did NOT study that auction terms, but it MIGHT be OK. The thing is, eBay allows and defines what they call a "DUTCH AUCTION".

This means he has got a whole bunch of units all the same. You enter your bid (probably for 1, although you may be able to state a quantity more than 1).

At the very end, the seller has a list of all the bids. He sells them off to the highest bidders.

Again, a "DUTCH AUCTION".

I didn't say I like a Dutch auction. I only said that such terms are legitimate. I dont see why a seller would do it, but they do. One worry point is if he has a whole bunch of units that are NOT QUITE THE SAME. Who gets the best one, the one w/o the scratch, which one was photographed then, etc etc etc .

I'm sure a Dutch auction is at its best on new-old-stock or other truly identical batches of items.

NOT a Dutch Auction

*Message #4 Posted by **Mike** on 3 Apr 2003, 2:26 p.m.,*

in response to message #3 by NH

This is clearly NOT a Dutch Auction.

First, it would say dutch auction, if it was.

Second, if it were dutch auction, there would be two fields to enter a bid. One for amount and one for how many you want.

Third, a dutch auction can have multiple winners. This auction has only one.

Fourth, the final fee is based on the total amount the seller receives. On this auction, eBay only sees the automated single piece bid.

It has been cancelled

*Message #5 Posted by **Mike** on 6 Apr 2003, 11:05 a.m.,*

in response to message #3 by NH

Looks like the auction has been cancelled for violations of ebay rules.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-91 recharger problem
*Message #1 Posted by **Renato** on 3 Apr 2003, 12:02 p.m.*

I have a friend with a problem in his HP-91 (No, he will not sell it).

1. HP-91 works ok with battery

2. HP AC adapter works ok on another calculator (HP-97)

3. HP-91 does not work when HP AC adapter is connected - it does not turn on. Voltage across battery terminal is 1V when AC adapter is connected and power switch is in "ON".

My friend and I agree that this is probably a recharging circuit problem. I would like to help him, but we are on different continents.

Can someone advise on a solution ? Calculator is fine, except for this problem, so there is no reason for messing too much with it. My friend does not have too much experience with electronic circuits, and he does not possess many electronic tools either, but he can try some simple procedures.

Thanks

Renato

Re: HP-91 recharger problem
*Message #2 Posted by **Katie** on 3 Apr 2003, 12:51 p.m.,*
in response to message #1 by Renato

When you measure "1 volt" is that on a DC range of your meter? Take a look at the voltage on AC, I'll bet it's 10+ volts. If so, the problem is one or more bad diodes in the charging circuit on the main board inside the calc. I believe that the 91 uses a full-wave, unfiltered bridge like the 97 does, so there are 4 diodes to test. Replace any open or shorted ones with 1N4001 or equivalent parts -- you can get them at Radio Shack or any of a million other places.

HP-91 recharger problem

*Message #3 Posted by **Renato** on 3 Apr 2003, 1:54 p.m.,*

in response to message #2 by Katie

Katie,

Thank you very much. I forwarded your message to my friend, and asked him to post at this thread.

Renato

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

NiMH battery recharging

*Message #1 Posted by **Ellis Easley** on 3 Apr 2003, 11:03 a.m.*

What's the recommended way to recharge NiMHs? I know they can be recharged in existing equipment just by increasing the time but what is the efficient method? I bought an Eveready package containing 8 AA cells and a recharger that can handle 2 or 4 cells, either NiCd or NiMH. I can't resist opening things up to see how they are made and the recharger has an IC and two transistors and even 4 1% resistors. I thought this meant it was using an intelligent method to determine when charging is complete. I don't know the recommended way to recharge NiMH but I know the two best ways for NiCads are sensing when the temperature starts to rise and sensing when the voltage starts to drop (after rising through most of the charging cycle). I traced out the circuit - saved looking up the IC till the end - and the control function turns out to be just a timer! The IC (4541) is a 16 bit counter with built-in RC oscillator, the 1% resistors are the oscillator timing resistors for NiCd (7 hours) and NiMH (14 hours), and the transistors form an invertor to switch an LED from red to green. The label says it charges at 140 mA, which would be near the .3C fast charge rate for NiCads, then switches to a trickle charge, it doesn't say what the current is but I see a 39 ohm resistor in parallel with the transistor that turns the full charge on. There is no difference in the charging current for NiCd or NiMH. I'm disappointed it isn't any "smarter"! I like the general idea of a timer for a dumb recharger but what bothers me is that if the unit is plugged in and the cells are at full charge and the power fails briefly, the cells will go through another complete recharge cycle.

Re: NiMH battery recharging

*Message #2 Posted by **Kim** on 3 Apr 2003, 11:30 a.m.,*
in response to message #1 by Ellis Easley

First - disclaimer I'm NOT an expert.

What you have to look for is the term -dV/dT. You can charge the NiMH until the voltage starts dropping (in mV). The you can turn to trickle charge. Otherwise you would have to know the capacity and use that for the timer.

There are a cople of really smart chargers out there but expect to pay $100 to $200 for a good

one. But you get discharge, regenerate, flash charge, capacity measure and such 'good stuff'.

The simple way is to charge them with a 10% of capacity current, which most good ones should withstand for years on end. This is like a constant trickle charge.

My 'about half of 2 cents'

Kim

Re: NiMH battery recharging
*Message #3 Posted by **Chan Tran** on 3 Apr 2003, 12:25 p.m.,*
in response to message #2 by Kim

Ellis, There is a good article on charging NiMH battery on the Eveready website. It said the best method is to monitoring the temperature rise as you said.

Re: NiMH battery recharging
*Message #4 Posted by **Ellis Easley** on 5 Apr 2003, 2:01 p.m.,*
in response to message #3 by Chan Tran

I guess they are not too much different from NiCads. I was surprised to see the Eveready website only has NiCads in the discontinued section.

This little charger was essentially free - the package was about $20 with the 8 AA cells. And a timer is better than no timer!

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Using INPRT to capture IR from a 42S

*Message #1 Posted by **Steve** on 3 Apr 2003, 8:46 a.m.*

Is there any way to clean up the received IR byte stream from a 42S to the 48GX running INPRT? I get non-printing characters when printing the stack, alpha reg, or a program, when captured by INPRT. When I use my 17Bii to send the current date/time, it is captured fine without additional characters. Is there a flag on the 42s to get rid of these characters? Thanks,

Steve

Re: Using INPRT to capture IR from a 42S

*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 3 Apr 2003, 10:15 a.m.,*
in response to message #1 by Steve

Hi, Steve;

INPRT is intended to capture the HP42S coded character set when printing text. I remember I edited a copy of INPRT (I still have an HP48SX copy of it) and I saw two character strings: one had an ASCII seqence and the other was almost the same, with some characters in diferent postions. I changed the second one so both were identical and I called this INPRT copy and INGRAPH. If I had to capture LCD, I used it. Instead, I used the original one.

When printing graphics using IR port, all calcualtors send bytes equivalent to an 8-bit column. When psinting text, each character is received an 8-bit code. What happens is that the HP42S has a different "character map" so INPRT "translates" the different codes and I guess it uses those strings: locate character in first string, get the character in the other string in the same position. When I changed the second one to be like the first one, translation returns the same character ever.

My INGRAPH version (same as INPRT with those changes) runs only in the HP48SX. If it is of any use, let me know.

Success.

Luiz C. Vieira - Brazil

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Museum pictures on a auction
*Message #1 Posted by **Anonymous** on 2 Apr 2003, 8:54 p.m.*

See http://www.mercadolivre.com.br/brasil/ml/org_prod.p_main?it_s=MLB&it_n=7450404

Thanks but I'm totally clueless
*Message #2 Posted by **Dave Hicks** on 3 Apr 2003, 3:26 p.m.,*
in response to message #1 by Anonymous

I'd appreciate it if someone who understands the site could send a message requesting that the source be credited. I couldn't figure out how to do it.

Mr. Hicks --- TWO AUCTIONS USING MoHPC IMAGES ...
*Message #3 Posted by **Norm** on 3 Apr 2003, 7:11 p.m.,*
in response to message #2 by Dave Hicks

Hello Mr. Hicks,

its not just the foreign auction of the 42S. There is a 2nd auction (34C) that also has posted MoHPC images.

If you go upwards a few posts, you'll see I've mentioned an "auction not quite correct" using your 34C pictures, w/o explaining that the pictures ARE NOT the calculator being auctioned.

That was true as of today in the AM. I could imagine that since me and others have queried the seller, he'll probably modify his auction page.

Re: Thanks but I'm totally clueless

*Message #4 Posted by **Paul Brogger** on 7 Apr 2003, 2:22 p.m.,*

in response to message #2 by Dave Hicks

Dave:

I went to the site and figured the following

Este produto está violando a política do MercadoLivre? Por favor, nos informe: produtos_proibidos@mercadolivre.com

means something like "Is this product a violation of the policies of Mercadolivre? Please inform us at: ..."

I sent a message indicating that the pictures were taken without permission from the MoHPC web site, and that if they are to be used, proper acknowledgement should be made.

Their response (there was indeed a response!) is:

Obrigado por nos informar sobre este produto.

Nossa equipe de Políticas & Regras investigará esse caso o mais rápido possível, e tomará as medidas necessárias. Agradecemos por sua preocupação em tornar nossa comunidade cada vez mais segura.

Se tiver interesse em conhecer mais sobre as políticas para cadastramento de produtos no MercadoLivre.com, lhe convidamos a visitar nossa página do MercadoSeguro, clique aqui.

Atenciosamente,

Equipe de Políticas & Regras www.mercadolivre.com Onde você compra e vende de tudo!

I don't know Portugese (that is the language of Brazil, right?), but the Google translation service gives:

Debtor for in informing them on this product. Our team of Politics & Rules will investigate the this in case that fastest possible, and will take the measures necessary. We are thankful for its concern in becoming our community more each time insurance. If it will have interest in knowing more on the politics for cadastre of products in the MercadoLivre.com, we invite to it to visit our page of the MercadoSeguro, click here. Yours truly, Team of Politics & Rules www.mercadolivre.com Where you purchase and vende of everything!

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

They are remanufacturing this Classic 1977 Calculator
*Message #1 Posted by **NH** on 2 Apr 2003, 6:15 p.m.*

HP, finally recognizing the un-beatable layout and fit & finish of various late 1970's calculators, has finally agree'd to start a limited re-manufacturing run of this 1977 model:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3124723083&category=1185

A representative from executive relations stated:

"HP built user-friendly calculators with very powerful mathematics features in the late 1970s. But for remanufacture in 2003 with SAT scores and math aptitudes having declined significantly, we chose a calculator of the classic vintage but suitable for today's math aptitudes nationwide".

eBay #3124723083

Poll: Revive which 1970's Calculator?
*Message #2 Posted by **Michael F. Coyle** on 2 Apr 2003, 8:51 p.m.,*
in response to message #1 by NH

I remember that one. It never worked for me, though.

But since there's no way to key in numbers, I guess it didn't need an ENTER key either.

But semi-seriously now, suppose by some kind of magic, HP decided to remanufacture one of it's 1970's calculators. Which one should it be? No "updates" allowed to the machine's design.

(I'd vote for the 29C with the 25C as a second choice. Woodstock ergonimics just can't be beat!)

- Michael

The hp 55.
*Message #3 Posted by **Jeremy** on 2 Apr 2003, 10:23 p.m.,*
in response to message #2 by Michael F. Coyle

To me, it had the right mix of very useful features, and the keypad wasn't too cluttered or busy. The quartz timer was just the icing on the cake.

You said late 70s, I know. This one was introduced in the early-mid 70s, but was produced through 1977, which is late. So there. ;)

-Jeremy

Re: The hp 55.
*Message #4 Posted by **Masao Kinoshita** on 3 Apr 2003, 5:28 p.m.,*
in response to message #3 by Jeremy

The HP 55 died prematurely.

If The Woz and company hadn't stuffed programmability into HP 25, the 55 would have lived longer. The original scope for the 25 didn't included programming. Don't get me wrong, I think The Woz did a great thing! :-)

BTW, the HP 41C *was* introduced in the late 70s, 1979 to be exact. That's my vote, the HP 41C. And _they_ might as well give it five times the memory of the 41C and call it the 41C5, but use the Roman numeral for 5, i.e., 41CV! ;-)

Re: The hp 55.
*Message #5 Posted by **Ernie Malaga (Miami)** on 3 Apr 2003, 9:09 p.m.,*
in response to message #4 by Masao Kinoshita

>If The Woz and company hadn't stuffed programmability into HP 25, the 55 would have lived longer. The original scope for the 25 didn't included programming. Don't get me wrong, I think The Woz did a great thing!

The Woz? Are we talking about the same person here? "The Woz" is what Apple Computer personnel (and Macintosh fans) call Steve Wozniak, the co-founder of Apple Computer (along with Steve Jobs).

If you're talking about the same person, how did Wozniak end up having decision powers over Hewlett-Packard calculators? As far as I know, there has never been any link between Apple and HP, except as far as HP's printers is concerned.

-Ernie

Re: The hp 55.
*Message #6 Posted by **John K. (US)** on 3 Apr 2003, 11:07 p.m.,*
in response to message #5 by Ernie Malaga (Miami)

Woz worked for HP for a while during the mid 70's before leaving to work full-time for Apple. IIRC, he sold his HP 45 (and Steve Jobs sold his VW Bus) to raise the initial capital to begin producing the Apple I.

Steve Jobs worked for Atari for a while prior to starting Apple, and he and Woz (probably more the latter) designed the original "Break Out" arcade game.

Re: The hp 55.
*Message #7 Posted by **Ernie Malaga (Miami)** on 4 Apr 2003, 1:37 a.m.,*
in response to message #6 by John K. (US)

John:

One learns something new every day!

Thanks for the information. It's pretty interesting. Perhaps I shouldn't have been so amazed at the news, considering that both Apple and HP are in the same geographical area and both make electronic products.

-Ernie

Re: The hp 55.
*Message #8 Posted by **John K. (US)** on 4 Apr 2003, 3:03 a.m.,*
in response to message #7 by Ernie Malaga (Miami)

Ernie,

For some additional insight into Woz's sideline "activities" while working for HP, you may want to read this HP Memories article by Andrew Burg.

Re: The hp 55.
*Message #9 Posted by **Masao Kinoshita** on 7 Apr 2003, 4:56 p.m.,*
in response to message #8 by John K. (US)

I apologize for not checking the Forum for a while.

Yes, both HP Advanced Products Division (APD) and Apple were in Cupertino, California (USA). I think I heard about The Woz and the HP 25 from Paul Ceruzzi. Paul works at the Smithsonian Institution.

Thanks.

Re: Poll: Revive which 1970's Calculator?
*Message #10 Posted by **db(martinez,california)** on 2 Apr 2003, 11:16 p.m.,*
in response to message #2 by Michael F. Coyle

imho: 70's 80's or 90's - it's all the same. the 41 is one of the three or four finest implements ever designed by the eye and hand of man. for one example; there were a few calculators which like the 41 were powerful and reliable enough to be used for air and sea navigation. one was even a ti. the list of calculators trusted to fly spacecraft gets real short. and if you don't like something about the 41 then stroke the user key and change it.

i just got one with a standard applications book and i'm in love. guess it shows.

but what if its not the same ?
*Message #11 Posted by **Norm** on 3 Apr 2003, 12:05 a.m.,*
in response to message #10 by db(martinez,california)

Well, in addition to the 6-button special that is in fact being remanufactured,

my vote is that they should re-manufacture the HP-34C. The HP-34C is on-par with something Biblical, like, handed down thru the clouds to Moses.

MEANWHILE, about that re-manufacture, as a topic, they do re-manufacture gadgets from time-to-time, but the remanufactured version is often strikingly inferior to the original. So, what if its not the same ?

---------->>>

I bought one of those "Mattel Football" games that has been remanufactured. Despite

obviously higher complexity, they changed the display all around, maintaining outward appearances but different by design.

The original used real LED's, dirt-cheap little segments to represent the game.

The new one (presumably since there aren't any more LED's) is actually based upon an LCD. There are continuously illuminated "backlighting" red LED's. The LCD ports thru an obviously tiny fraction of that energy, by letting a bit of light thru where the LED's were supposed to be.

For all that stinkin' foolin' around, they could've just remanufactured the genuine item. BUT NOOOO they had to build it with an LCD, because presumably they could just download the computer file to "NIPPON CUSTOM LCD FACTORY" by using the internet, and be real lazy, and not figure out how to actually build anything.

So, it really doesn't act quite the same. And on my unit, if you rub your finger over the plastic, it will temporarily "erase" the whole display due to static charge having an overwhelming effect on the LCD.

For these reasons, if you want one of those 6-button Mattel Classic Calculators, you'd be well-advised to go seek an original. Mr. Grubby Enron MoneyBux can't even replicate his own recipe for success in this and many other situations.

41C and NASA
*Message #12 Posted by **frank** on 4 Apr 2003, 4:10 p.m.,*
in response to message #10 by db(martinez,california)

And speaking of 41C and space, Since I am working with NASA currently part time, I had this web page marked, can't recall if Dave has a link to it or not. See: http://www.nasm.si.edu/nasm/dsh/artifacts/GC-hewlett-.htm

Never gonna happen
*Message #13 Posted by **Mike** on 3 Apr 2003, 4:21 p.m.,*
in response to message #2 by Michael F. Coyle

Why do you think they stopped making them? Cost!

Successive models came out because they could be made cheaper.

HP Forum Archive 11

[Return to Index | Top of Index]

HP32E
*Message #1 Posted by **Richard Nicoletti** on 2 Apr 2003, 4:17 p.m.*

Dear Sir or Miss,

I was refered to you by HP. I am trying to find someone who can repair an old HP32E Scientific Calculator. It is over 20 years old and the battery corroded away the terminals in the calculator.

I should explain that this calulator was awarded to my wife in 1981 for a science contest she won. My wife was recently killed in an automobile accident and this calculator has taken on an enormous sentimental value to me.

I'd greatly appreciate it if you could tell where I might be able to get it repaired and the battery replaced.

I will fix it for you. (no charge)
*Message #2 Posted by **Jeremy Zorns** on 2 Apr 2003, 5:29 p.m.,*
in response to message #1 by Richard Nicoletti

I'm very sorry to hear about your having lost your mate. It is tragic, and something that no one should have to live through, but people do. Try to hang in there.

If you pay for shipping both ways, I will repair it for free. Fair enough? If it is more than corroded battery terminals, I will have to have a look, but I'm pretty sure I can fix it. In the meantime, don't plug the charger into it in an attempt to see if it still works, or you might blow it up.

-Jeremy

PS - If you hover the cursor over my name in this window where it says: "Posted by Jeremy" my email address will appear on the bottom edge of the window. Email me and we can exchange addresses and such.

Re: I will fix it for you. (no charge)
*Message #3 Posted by **John Cadick** on 2 Apr 2003, 7:56 p.m.,*
in response to message #2 by Jeremy Zorns

You're a nice person Jeremy

John

Thanks | -)
*Message #4 Posted by **Jeremy** on 2 Apr 2003, 10:43 p.m.,*
in response to message #3 by John Cadick

I'm a sucker for a romantic story, even if it is a very sad one.

I know how I would feel if I lost my girlfriend, and I have only been with her for 5 months. I can't even imagine the pain of losing her as a wife of many years.

So if there's a small thing I can do to ease his pain, I'm all over it.

-Jeremy

Re: I will fix it for you. (no charge)
*Message #5 Posted by **Spice_Man** on 3 Apr 2003, 7:14 a.m.,*
in response to message #2 by Jeremy Zorns

Jeremy: It sounds like the terminals are gone, so you may have to rebuild the terminals using Katie Wass' instructions on remanufacturing/rebuilding the terminals using available parts. Either that, or replace the entire terminal/PCB/Flex assembly with one from a good Spice unit.

Spicey

Re: I will fix it for you. (no charge)
*Message #6 Posted by **dano** on 4 Apr 2003, 9:39 p.m.,*
in response to message #5 by Spice_Man

Hey Spicey (or any one else who knows) Can you point me to Katie Wass' instructions on the rebuild of spice terminals? Thanks Dano

HP Forum Archive 11

[Return to Index | Top of Index]

HP 29C problem
*Message #1 Posted by **Christopher Migdal** on 2 Apr 2003, 3:50 p.m.*

I have owned my HP 29C calculator since it was new. I still use it all the time. A while back I noticed that when I turned the calculator on it would occasionally come up with the "Error" message indicating continuous memory was lost. This happened more and more often until it pretty much happened all the time in the last few days.

Then when I turned it on today, after I cleared the Error message, the calculator was in ENG 2 display mode. I cannot get it out of this mode. Everything else about the calculator works fine. Calculations work and it runs programs fine.

Has anybody seen this and can offer a diagnosis and a prognosis ?

Thanks.

Re: HP 29C problem
*Message #2 Posted by **Spice_Man** on 3 Apr 2003, 7:17 a.m.,*
in response to message #1 by Christopher Migdal

First thing I'd check is your rechargeable batteries. Does the problem persist if you keep it on AC? (be careful with the AC... AC can fry your electronics if you don't have good batteries to attenuate the AC power)

Spicey

Re: HP 29C problem
*Message #3 Posted by **Christopher Migdal** on 3 Apr 2003, 12:36 p.m.,*
in response to message #2 by Spice_Man

I tried it with the AC adaptor. The behaviour was unchanged. It is still unhappy.

HP Forum Archive 11

[Return to Index | Top of Index]

HP-41CV Keyboard/Behavior Weirdness

*Message #1 Posted by **Paul Brogger** on 2 Apr 2003, 10:13 a.m.*

I think I've read the repair & reset articles about the HP-41, but am not sure whether my unit's behavior will be addresed by those techniques.

When first turned on, it seemed to be operating o.k. (With the batteries in the first time, it came up with "MEMORY LOST".) Fine. Then I thought, "I wonder how this thing programs?" I push PRGM, and the first display looked like a programming interface -- a line # in the 230-ish range, with some symbol that looked appropriate, but which I can't remember.

I started to SST, and things got weird. there are two or three three-digit numbers (generally, I think, in the 233-9 range) arranged on the screen, and as I SST, they shift to the right and change values . . . Very bizarre user interface, if that's what was intended.

Anyway, after having done this, I go back to normal mode and the keyboard is all messed up. I push a "1" and get a "9" -- I push the "2" and get a "." -- very quickly the cursor shifts to the exponent digits on the right -- bizarre non-alphanumeric characters appear . . .

I tried the "reset" techniques described in the MoHPC article -- the simultaneous back-arrow/enter/ON thing seemed to work once -- the keyboard started behaving normal-ish. But when I went back to PRGM mode and started SST (some people never learn!) the same result happened, and the keyboard is messed up again. (That, and the back-arrow/enter/ON technique hasn't worked a second time.)

Other things I've tried: -- varying degrees of tightness on the screws; -- cleaning the contacts with 91% isopropyl alcohol; -- shorting the outside battery contacts. (If prayer is recommended, I might consider "getting religion" . . .)

I'm faced with a partial refund situation here -- if the "soldering-the-cpu-to-the-keyboard" approach might help here, I would keep the calculator. If it looks like PRGM memory or ROM is messed up, locking the calculator, then I suppose I'll cut my losses.

Any other suggestions/links?

(BTW, this is Fullnut S/N 2408S41073.)

Thanks . . .

Re: HP-41CV Keyboard/Behavior Weirdness
*Message #2 Posted by **Diego Diaz** on 2 Apr 2003, 4:50 p.m.,*
in response to message #1 by Paul Brogger

Hi Paul,

I'm not really one of the experts you can find here, anyway I'll do my best to help.

First, most of the 41's failures comes from two main issues: 1) corrosion, not only in the battery contacts but inside the calc. 2)contacts between the processor board (you said it's a Fullnut) and the keyboard as well as between this and the battery-I/O block.

My advice is to take the 41 apart and carefully clean every one of the above mentioned (some diluted acid to clean corrosion and some IsoPropylAlcohol to remove the acid residue), next is to pay atention to the zebra conector (the one that is between the processor board and the keyboard) some were made of a rubber tube with thin golden wires around, try to "fexibilize" them again pressing'em gently with your fingers (again, clean'em with IPA prior to reinstall).

Needless to say that poles and screws must hold both halves tigth, so if some are loosen or broken it also have to be repaired, you can find here in the MoHPC some good methods to achieve this task.

Hope you get you 41 running soon ;-)

Kind regards from the Canary Islands.

Re: "Middle Row" of HP-41 Keyboard/CPU "Interconnects"?
*Message #3 Posted by **Paul Brogger** on 3 Apr 2003, 5:59 p.m.,*
in response to message #1 by Paul Brogger

Folks:

I'm getting ready to connect my HP-41CV CPU and Keyboard via soldered wires as detailed in Stefan Vorkeotter's article, but I'm confused on (at least!) one point:

He mentions a "middle row" of four contacts which need to be connected in addition to outer rows of 14 and 16 contacts. He also talks about "three flexible CPU board to keyboard interconnects" . . . (He is apparently describing an HP-41CX, if that's important.)

My HP-41CV has two rows of gold "zebra stripe" squishy connectors, held together with what seems to be clear-ish mylar, helped by a black plastic stiffener, and all sitting over & around the two lower screw posts. There's no way the middle row of four contacts (which do seem to be on the CPU board, but not the keyboard) are currently being connected to anything with this arrangement. (My keyboard seems to have two rows of 16 contacts each.)

Is the CX setup an older arrangement, and are these connections no longer maintained in the CV? Should I solder wires to these four even though there appears to be no connection for them currently? (I'm thinking not . . .)

And, does anyone have a torque spec for these all-important screws? (I'm going to buy a *teeny* little torque wrench . . .)

Re: "Middle Row" of HP-41 Keyboard/CPU "Interconnects"?
*Message #4 Posted by **Diego Diaz** on 4 Apr 2003, 4:52 a.m.,*
in response to message #3 by Paul Brogger

For your last post I have supposed that my "cleaning advice" did not fix the weirdness of your 41.

Regarding those infamous four "middle row" contacts, I've (re) read the 41's Service Manual throughoutly and have found nothing about such item.

May Stefan could explain this in detail if you can contact him...

Back to your 41, you said it has two rows 16 contacts each, wich is consistent with what's stated in the Manual, so you'd only need to solder the resulting 32 contacts in total.

Nevertheless, as soldering is a one way trip, I'll keep on trying to recover the golden zebra stripe functionality or even look for some substitute, there are hardware shops where you can find a sort of "all-rubber" contact stripe (as those used to connect LCD's to PCB's) you can cut to the desired length, so you can keep the "modularity" of your 41.

Again my best wishes from the Canaries.

Re: HP-41 CPU/Keyboard Interconnect
*Message #5 Posted by **Paul Brogger** on 4 Apr 2003, 9:30 a.m.,*
in response to message #4 by Diego Diaz

Diego:

Thanks for your advice and help. Your responses have been helpful, and I appreciate you taking time to offer advice. (And "from the Canaries" sounds so exotic!)

No, everything I tried with the gold squishy thing didn't seem to help much. What gave me hope was that, after trying those things, if I squeezed the bottom end of the assembled calculator *just right* it would start to behave normally -- keypresses resulted in the right action, and I could even do a CAT 0 and see the functions scroll by. That convinced me that the problem was indeed a flakey CPU/Keyboard connection, and that if I eliminated that variable, everything would come together . . .

Well, 32 pieces of wire-wrap later (have you ever tried to strip 1/8" off the ends of a half-inch piece of wire-wrap wire?) it mis-behaves ***exactly*** as before! I press "1", I get "9"; I press "2", I get "."; I press "3", it's as if I pressed "EEX"; I press "Roll Down", I get (of all things) "ASN" . . . Pretty disheartening!

I put the pieces in a basket, and I'll try again this weekend. The next thing to test is the continuity and separation of all my connections, and whether, with the connections soldered, "squeezing" helps. If so, I'll have to assume I'm transferring stress to the CPU board, keyboard, LCD connections or power/module strip -- stress which somehow makes things right. Then, I suppose I'll have to see if I can find out what that *something* is . . .

I had a chance to get most of my money back (I'd disassembled the calculator before testing it -- WRONG!), so now I'm feeling like the gambler who's lost his bet. Ironically, all this fiddling with the calculator has made me want a working unit even more . . . I'd always thought 41's were kind of ugly-looking -- and I now have a very low opinion of the way things are lashed together inside. But the keyboard feel harkens back to the Spice, Woodstock and Classic models -- it would have been nice to have such a hefty

unit to "go to" when doing calculations at the office . . .

Thanks again -- I'll consider undoing the wires and trying some zebra stuff, but of course the gold pads are now covered with solder, and I'm now doubting that the keyboard/CPU connnection was ever the problem in the first place.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Have memory, and getting "insuf memory" err mssg.
*Message #1 Posted by **Jes** on 2 Apr 2003, 4:25 a.m.*

1) on 48G, I have written code worth 16K bytes; 20K free Bytes.

I typed "triangle solver" program from a known commercial program house (which should use < 8000 Bytes, when arriving at a line where local-var's are assigned:

-> dep <-p2 <-p3 .... for a total of 24 variables

and I save (enter), I got "insuf memory" messg. I skipped that line and continued keying till the end of the program, and saved without problem. (I skipped a second assignment instance). Returning to key-in the "assignment" above , the error-messg persisted. I am blcoked there.

Since, there IS memory free 20KB, could anyone tell me what the pb maybe?

2) How does one skips to a particular program line; to avoid jumping 1 line at-a-time?

Re: Have memory, and getting "insuf memory" err mssg.
*Message #2 Posted by **James M. Prange** on 2 Apr 2003, 5:41 a.m.,*
in response to message #1 by Jes

I'm not completely clear on what you're saying. I take it that the problem occurs when attempting to save the program (with the ENTER key); not when trying to run the program.

I also take it that you have a copy of the program, with some parts left out, already stored in a global variable.

I'm not sure, but you might get by with less memory if you put the quoted (surrounded by ' ' delimiters) name and the stack and then press EDIT (which has an effect similar to the 48S series VISIT) rather than placing the program itself on the stack before editing it.

I'd check for unneeded variables, and purge any found to free up some memory. Consider

temporarily copying some variables to another device (your PC if you have the cable, otherwise by IR to another 48, or to a 49G that has the 49G to 49G cable plus the 48 series adapter).

If that doesn't do it, then note that by default, ENTER saves a copy of the stack, and for commands that take arguments from the stack, a copy of the arguments (or the argument count for commands like \->LIST or DROPN that take an indefinite number of arguments). This can use up some memory.

So press LeftShift MODES, then MISC, and then press STK and ARG, to free up some memory by disabling saving the last stack and arguments (enable them again when you're all done).

If that still doesn't do it, then note that ENTER also, by default, saves a copy of each of the last 4 the command line strings.

So from the same menu, press CMD twice to discard the last command lines that are currently saved, and try again.

If that still doesn't do it, then press CMD once to temporarily disable last command lines saving, but note that I'm not sure what would happen if there's still not enough memory to put the program on the stack; I believe the result would be that the command line would be lost, so save this for the last resort.

Well, now you see why some of us consider 32K to be "not enough" for some things.

By "skip to a particular program line", do you mean when single-stepping? If so, then edit the program to place a HALT command before that line, and when single-stepping, press CONT (LeftShift ON) to get to the HALT command.

Regards
James

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Coming Soon...?
*Message #1 Posted by **John K. (US)** on 2 Apr 2003, 4:05 a.m.*

I was looking at the HP Calculator site when I accidentally clicked on some "blank" space and ended up here. Interesting.

HP says "RPN" in so many letters!
*Message #2 Posted by **Ellis Easley** on 3 Apr 2003, 10:28 a.m.,*
in response to message #1 by John K. (US)

The big green "RPN" button on that page is a good sign! Takes you to an RPN tutorial.

Weeell? Isn't That special???
*Message #3 Posted by **RR** on 3 Apr 2003, 11:07 a.m.,*
in response to message #2 by Ellis Easley

Nice little propaganda section. However, looking over the calculators provided at that site shows only a 12c available that is RPN. ie the 48G series was absent. I am NOT going to hold my breath. I do hope for a new RPN from Hp, and I will buy, even if it is a low quality Hp30s derivitive. This is what I expect from HP. I wish I could expect more and I do hope they deliver better.

But I expect only a Casio type keypad with an algebraic/RPN selection with the enter key in the lower right, standard size and no tacktile feedback.

I would almost prefer the HP20s to be re-released, since a quality keyboard is as important as the entry method.

Re: Weeell? Isn't That special???
*Message #4 Posted by **John K. (US)** on 4 Apr 2003, 12:54 a.m.,*
in response to message #3 by RR

Wow, they've changed the site considerably since I posted the original message... :^/

Re: Weeell? Isn't That special???
*Message #5 Posted by **Frank** on 4 Apr 2003, 4:20 p.m.,*
in response to message #4 by John K. (US)

Yes, so far to their headers I'd say we are still waiting for calculators for Science and Engineering and Technical Professionals, rather than the little calculator kiddy toys (excepting the 12C) shown in the photos! I don't think they are done, however from the #'s previously discussed of new releases, and a new RPN in a user friendly but capable format would be nice to see. The robustness and design/manufacture of years past would really be a snice surprise!

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

41C with LCD problems

*Message #1 Posted by **Randy** on 1 Apr 2003, 10:08 p.m.*

I finally got an older 41C with the steep faced keys. It's in great shape, except for the LCD. It will only display characters while you hold a key down. Release the key and the LCD goes blank. I checked and resoldered the LCD connections with no change in operation. I found there is no sawtooth waveform on the OS1 pin of the display. I would guess this is problem and since the signal appears to be generated inside the LCD module, is it safe to assume the module is the problem? I just wanted to check with the experts before I cannibalized another 41 just to prove my hunch.

Re: 41C with LCD problems

*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 2 Apr 2003, 12:54 a.m.,*
in response to message #1 by Randy

Hello, Randy;

can you check if the OS1 pin has the signal when you have a key pressed? Just to suggest a starting point.

I do not remember what is this LCD's OS1 signal for, but if you have a reaction when a key is presed, than something in the mainboard wakes the LCD up and bypasses this condition. Have you chaecked for the mainboard connections?

Anyway, if you have another HP41C, you may test this steep faced's mainboard in the other one, instead. I think it's safer and you'll get to some conlcusion about the sleepy LCD.

Hope this helps.

Best regards.

Luiz C. Vieira - Brazil

Just another hunch

Re: 41C with LCD problems
*Message #3 Posted by **Randy** on 2 Apr 2003, 12:34 p.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

Hi Luiz,

I did swap out the cpu, it works fine in another unit.

Re: 41C with LCD problems
*Message #4 Posted by **David Smith** on 2 Apr 2003, 6:02 p.m.,*
in response to message #1 by Randy

This is a fairly common HP41 problem. When the machine is idle the system is clocked by the display. When it is calculating or a key is pressed it is clocked by the CPU. The problem can be caused by a bad CPU or a bad display module not doing the clock handoff properly.

But, I have found that the most likely cause seems to be some solder flux or invisible cooties on the back of the LCD module or among the module pins. Clean the back of the LCD and around the pins with 91% isopropyl alcohol. Be VERY careful not to get any alcohol on the display window or you will then have to unsolder it and polish off the white stains. After cleaning the module you may have to wait overnight for the fix to work.

Re: 41C with LCD problems
*Message #5 Posted by **Randy** on 2 Apr 2003, 7:45 p.m.,*
in response to message #4 by David Smith

Thanks David.

I had cleaned things up last night with Chemtronics Flux-off. Everything was spotless. It made no difference then or now, 24hrs later. I was hoping for a miracle, looks like I better keep praying, as it is beginning to look like a bad lcd.

I'll re-clean everything again and give a day. If I have no joy, it's time to take a good CV and make it a parts machine... Anybody need a battery/port connector?

Don't ask twice...

*Message #6 Posted by **Vieira, Luiz C. (Brazil)** on 2 Apr 2003, 9:32 p.m.,*
in response to message #5 by Randy

Hello, Randy;

A friend of mine (ours, of course) needs a battery door, as many others that I know and would like to ask not to be mad at me. But this one - Daniel Sancho - asked me about it and I told him I had none. In fact, now I have two HP41 in the box - not new, not mint, working and stored in a box - without the battery door/compartment. And one of them has no I/O connector, too.

But I have three other HP41's working fine and complete. I believe others need these parts most.

If you think you can, contact Daniel Sancho. This is one of his posts.

Just a way to help someone, I think.

Best regards.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Questions about Programming
*Message #1 Posted by **Ben Salinas** on 1 Apr 2003, 9:17 p.m.*

Ok, I have a few questions about programming. I am familiar with the 32sii's keystroke programming. What type of programming was used on the 41 or 42. Was it keystroke, or was there a language. If there was a langauge, did you choose commands from menus, or type them in? I am trying to figure out rather to use keystroke, or a language for my HP Design a Calculator entry.

Currently, the calculator is going to be a scientific calculator, with a 2 line display (more than likely). It is going to pseudo-graph, (basically provide a table of values), but not actually display the line. It is going to have all of the basic (and more advanced) scientific functions, and be RPN, with an option of Algebraic entry (to increase possible sales). I am also contemplating how much memory to include. I am thinking, that it would probably be much more cost effective to just include a large amount of memory (like maybe 1 meg or so), and not have it expandable. Are there any real reasons to make it expandable? It will have IR or some sort, and USB to connect calculators together, or to a computer. (or other external devices)

It will probably be marketed to people who want a good scientific, "shirt pocket" calculator. A portion of the market will also be high school students, especially here in Texas, where we have calculator contests, and literally everyone uses the 32sii (well just 90% of everyone... the top 90%) That's all for now. Any other comments/suggestions would be appreciated -Ben Salinas

Re: Questions about Programming
*Message #2 Posted by **Randy** on 1 Apr 2003, 11:21 p.m.,*
in response to message #1 by Ben Salinas

The 41 is keystroke to a point, functions that are not on the keyboard have to be entered by typing the name in alpha mode.

The 42S is keystroke, all functions are available through menu selections, sometimes faster than the 41, but if you don't know the grouped functions, you'have to scroll through every function in the list to find it.

I think both methods have their merits.

For my 2 cents worth, I'm an simplistic kind of guy, so I can't begin to imagine what I would do with a meg of memory in a calculator. Heck, I can't fill 8K in a 42S.

BTW - the I/R was left out of the later machines due to concerns from the education market that it could be used to cheat. I like I/R and I don't think RF is calculator ready. USB is nice, but the micro-sized connectors used on today's cameras would NEVER withstand normal use by surveyors and others who need to get to their data. If the 48 has a mechanical flaw, it's the 10 cent 2 mm connector used for I/O which can break if anything hits or bends the cable. The cable could be re-designed to help prevent this as it is partially due to the big heavy plug that makes a great lever. Seems to me no I/O system is perfect, but I think I/R is less problematic for heavy use. IRDA is available on a chip, it's fast and it's cheap.

Re: Questions about Programming
*Message #3 Posted by **R Lion** on 2 Apr 2003, 7:52 a.m.,*
in response to message #2 by Randy

I can't begin to imagine what I would do with a meg of memory in a calculator. Heck, I can't fill 8K in a 42S

My 42s has 40% of memory free: I can't imagine what more I could program... but my 48gx has more than 640Kb filled with programs!. More features, more memory, more programs...

Raul

Re: Questions about Programming
*Message #4 Posted by **Paul Brogger** on 2 Apr 2003, 11:03 a.m.,*
in response to message #3 by R Lion

If the 42s had a an *INPUT* port or IR capability, there'd be no hassle at all finding something to fill its memory. The 8K is hard to fill with *programs* because they all have to be entered by physical keystrokes.

I imagine people interested in, for example, discovering primes could use more 42s memory for data that is generated "out of the blue" in the investigation of mathematical theory . . . But any empirical data itself has to be keyed in to the 42s.

So, no computer connection imples limited need for memory. But computer connectivity implies essentially unlimited desire for memory. If it's to have an input port, users will

find a use for more memory than is (originally) designed in.

Re: Questions about Programming
*Message #5 Posted by **R Lion** on 2 Apr 2003, 12:51 p.m.,*
in response to message #4 by Paul Brogger

I agree, Paul. Although I'm a 15c addict, with an input port in the 42s, I'd look for someone that expand its memory to 32Kb ;-)

Raul

Re: Questions about Programming
*Message #6 Posted by **Dave Shaffer** on 2 Apr 2003, 3:19 p.m.,*
in response to message #1 by Ben Salinas

Ben,

I'm not original with this idea - others have suggested it here when "new" calculators have been fantasized:

Have memory expansion be basically optional - via the memory cards (compact flash, etc.) used for digital cameras and the like. Or, similar to the USB "thumb drives". These would let the user decide how much memory he/she needs, as well as offer connectivity to computers (and other electronic devices).

Good luck with your submission!

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

How much would an HP-35 cost in today's dollars?
*Message #1 Posted by **Jeremy** on 1 Apr 2003, 8:09 p.m.*

According to the American Institute for Economic Research

http://www.aier.org/cgi-bin/colcalculator.cgi

It would cost $1,745.45. (Assuming a $400 price in 1972)

Wow. I should be happy to get one on eBay for $100. I should be doubly happy to have gotten a 48G for $40. That certainly puts in perspective how spoiled we are now, doesn't it?

-Jeremy

Re: How much would an HP-35 cost in today's dollars?
*Message #2 Posted by **andy** on 2 Apr 2003, 12:35 p.m.,*
in response to message #1 by Jeremy

Wow...an hp9100 would cost ~$24,000 today.

Re: How much would an HP-35 cost in today's dollars?
*Message #3 Posted by **db(martinez,california)** on 2 Apr 2003, 3:06 p.m.,*
in response to message #1 by Jeremy

and if your only other choice today was to do your job with a curta and a book of trig tables; $1700 would look like a bargin. i can see myself in that alternate universe. i'd hold out till 2004 to get the hp 45. it will have polar/rectangular conversions! it just can't get any better than that, can it?.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-26 Prototype Found
*Message #1 Posted by **Gordon Dyer** on 1 Apr 2003, 5:58 p.m.*

I have sent a picture of a rare prototype HP-26 I found, particularly relevent to the discussions a while ago about a minimal function HP...
I emailed the pic to Dave as I am not able to host it here, so I hope he inserts it in this message for you.

Sure
*Message #2 Posted by **Dave Hicks** on 1 Apr 2003, 6:28 p.m.,*
in response to message #1 by Gordon Dyer

In fact I worked on the "simplification team" on this one.

Re: Sure

*Message #3 Posted by **Gordon Dyer** on 1 Apr 2003, 6:47 p.m.,*

in response to message #2 by Dave Hicks

Post mine aswell and let the jury decide which they would buy....

Buy?
*Message #4 Posted by **Dave Hicks** on 2 Apr 2003, 7:08 p.m.,*
in response to message #3 by Gordon Dyer

If that wasn't an April Fools joke, you picked the wrong day for your urgent request to me to post it ;-)

Re: Buy?
*Message #5 Posted by **Gordon Dyer** on 3 Apr 2003, 8:15 p.m.,*
in response to message #4 by Dave Hicks

...of course it was an April fool... but my version was never posted!...sob... :-(

Re: Sure
*Message #6 Posted by **Y K Wong (Singapore)** on 1 Apr 2003, 7:40 p.m.,*
in response to message #2 by Dave Hicks

Dave,

Is this another HP 67CX for April 2003 ;-)

Cheers!

Re: Sure
*Message #7 Posted by **Ernie Malaga (Miami)** on 2 Apr 2003, 1:42 a.m.,*
in response to message #6 by Y K Wong (Singapore)

No, it isn't. Judging by its features, it ought to be called an HP-00!

-Ernie

Re: Sure
*Message #8 Posted by **Michael F. Coyle** on 1 Apr 2003, 8:33 p.m.,*
in response to message #2 by Dave Hicks

Hey, a minimal calculator!

(So what happened, ENTER wouldn't fit?)

- Michael

Re: Sure
*Message #9 Posted by **Michael Meyer** on 1 Apr 2003, 9:42 p.m.,*
in response to message #2 by Dave Hicks

Nice.... but the exponential display would never happen... not on an 'ole 4-banger!

Re: Sure
*Message #10 Posted by **Ernie Malaga (Miami)** on 2 Apr 2003, 1:39 a.m.,*
in response to message #2 by Dave Hicks

Y E C C C H !!!

I'll bet Messrs. Hewlett and Packard are turning in their graves!

Have you taken your Valium recently, Dave? 8^)

-Ernie

Re: Sure
*Message #11 Posted by **Raymond Del Tondo** on 2 Apr 2003, 3:31 a.m.,*
in response to message #2 by Dave Hicks

Hi Dave,

nice thing!

Soemhow reminds me of an old CBM 'RPN-like' calculator, the Minuteman 6* (6X*).

Regards,

Raymond

Re: Sure
*Message #12 Posted by **Steve** on 2 Apr 2003, 7:46 p.m.,*
in response to message #11 by Raymond Del Tondo

What's hard to see in this picture is that each key rotates on it's own axis and actually has EIGHT surfaces! There are all kinds of wonderful functions on those other surfaces!!!

Re: Sure
*Message #13 Posted by **Dvaid Smith** on 2 Apr 2003, 6:06 p.m.,*
in response to message #2 by Dave Hicks

Why does it have a CLX key? This machine is cleared by turning it over and shaking.

Re: HP-26 Prototype Found
*Message #14 Posted by **Gordon Dyer** on 1 Apr 2003, 6:45 p.m.,*
in response to message #1 by Gordon Dyer

but at least mine was believable ....?

Re: HP-26 Prototype Found
*Message #15 Posted by **Mark** on 1 Apr 2003, 6:55 p.m.,*
in response to message #14 by Gordon Dyer

And wouldn't you know it, some daring collector has put one up for auction on eBay. Bidding is up to $5364.01 and there's six days left on the auction! When will the madness end!

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3601013990&category=4103

Re: HP-26 Prototype Found
*Message #16 Posted by **Mike** on 1 Apr 2003, 9:48 p.m.,*
in response to message #15 by Mark

Bidding is up to $5364.01???

It's closed at $31 with no retractions or cancellations. What's with the $5364?

Re: HP-26 Prototype Found
*Message #17 Posted by **Gordon Dyer** on 1 Apr 2003, 7:27 p.m.,*
in response to message #1 by Gordon Dyer

I think you all should know that the curator of this museum has decided to censor a Forum submission by adding an = key to a rare and valuable Woodstock.
Has he had a lobotomy???

Re: HP-26 Prototype Found
*Message #18 Posted by **Daniel Sancho** on 2 Apr 2003, 2:03 p.m.,*
in response to message #17 by Gordon Dyer

:-)

Wonderfull Prototype. With 16 keys a good name for this machine is HP-16.

It seems like another wonderful RPN machine: the National Semiconductor 600 (http://www.teclas.org/img/NationalSemiconductor_600_01.jpg), but with better quality.

The NS-600 + key has also the ENTER function (there is no need to print on it an =)

OFFTOPIC: Anybody knows any electronic calculator with less keys?.

14 keys !
*Message #19 Posted by **Joerg Woerner** on 2 Apr 2003, 4:39 p.m.,*
in response to message #18 by Daniel Sancho

Try thin one:

http://www.datamath.org/Related/Corvus/CheckMaster.htm

Adds and subtracts - no ENTER key !

Regards, Joerg

Re: HP-26 Prototype Found
*Message #20 Posted by **Raymond Del Tondo** on 3 Apr 2003, 2:29 a.m.,*
in response to message #18 by Daniel Sancho

The Mathbox has one key less, and is still a fully functional four-banger. Too bad it has terribly low quality keys...

http://www.vintagecalculators.com/html/novus_650__mathbox_.html

Raymond

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-41 CX went for $610 in the end
*Message #1 Posted by **Clive Marner** on 1 Apr 2003, 4:04 p.m.*

HP-41 CX. Sold to someone in the UK. Us Brits are nutters, aint we?

Re: HP-41 CX went for $610 in the end
*Message #2 Posted by **Gordon Dyer** on 1 Apr 2003, 6:12 p.m.,*
in response to message #1 by Clive Marner

It wasn't me! but it was 1st April.....

Carly knows best
*Message #3 Posted by **NH** on 2 Apr 2003, 12:06 a.m.,*
in response to message #2 by Gordon Dyer

At $610 a calculator, there is obviously no demand for classic HP calculator designs, and nobody willing to pay prices that could justify manufacturing them. It is best to not sell any. After all, no company could make any money manufacturing a thing like that for $610.

Re: HP-41 CX went for $610 in the end
*Message #4 Posted by **Dr Anoop Sahal** on 8 Apr 2003, 12:02 p.m.,*
in response to message #2 by Gordon Dyer

Ahem! It was me! The "nutter" that paid $610 for the 41 CX see my other post about the manuals

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

English Commodore M55 Manual
*Message #1 Posted by **Clive Marner** on 1 Apr 2003, 3:58 p.m.*

For anyone else that wanted it there's one here.

And, Katie has the N60 manual...
*Message #2 Posted by **Gene** on 1 Apr 2003, 4:04 p.m.,*
in response to message #1 by Clive Marner

Katie, want to put the link out there?

Viktor was kind enough to scan the M55 and S61 manuals after I sent them to him.

I think Viktor should put a link on his site to your N60 manual, if you're ok with it.

Gene

Re: And, Katie has the N60 manual...
*Message #3 Posted by **Katie** on 1 Apr 2003, 4:25 p.m.,*
in response to message #2 by Gene

Gene,

Sure. I've got a few, non-copyrighted manuals here:

http://www.wass.net/manuals/

Viktor, feel free to point to the N60 manual or copy it to your site, if you'd like.

-Katie

I need manual too Gene
*Message #4 Posted by **Chan Tran** on 1 Apr 2003, 8:02 p.m.,*
in response to message #3 by Katie

Hi Gene, Do you have the manual for the TI-58. I particularly need instructions on how to use the program chip that came with the calculator.

The TI-58/59 manual is coming within next few weeks/months
*Message #5 Posted by **Gene** on 2 Apr 2003, 7:24 a.m.,*
in response to message #4 by Chan Tran

It is in a stack being scanned and will be posted when it is done.

Re: The TI-58/59 manual is coming within next few weeks/months
*Message #6 Posted by **GE (France)** on 2 Apr 2003, 2:08 p.m.,*
in response to message #5 by Gene

Hello, I wonder if it is bad Internet citizenship to download these big files from someone's site ? Isn't bandwidth paid by the bytes sent ? I just downloaded some of those nice manuals... Also, as volume permits, we would like a CD with some extras (from someone who does not producxe any 'extra'...). Gene, we're eagerly awaiting your TI-related series of CDs. No threats, just some friendly pressure of course ! Thanks to all these dedicated people !!!

Re: The TI-58/59 manual is coming within next few weeks/months
*Message #7 Posted by **Gene** on 2 Apr 2003, 3:47 p.m.,*
in response to message #6 by GE (France)

The real helpers are the ones doing the scanning. :-)

I'm just providing the manuals...they are the people doing all the work.

I just couldn't stand it if the TI calculator stuff disappeared. :-)

Gene

My calculators in order of purchase:

SR-16II (TI) SR-51A (TI) SR-52 (TI - used) TI-58C (TI) HP-41C (HP and never looked back...well, not TOO much)

Re: The TI-58/59 manual is coming within next few weeks/ months

*Message #8 Posted by **Joerg Woerner** on 2 Apr 2003, 4:41 p.m.,*
in response to message #7 by Gene

FYI:

I scanned about 25 TI manuals...

Just ask.

Regards, Joerg

But these are in JPG format? Can that be converted easily to PDF somehow?

*Message #9 Posted by **Gene** on 2 Apr 2003, 5:38 p.m.,*
in response to message #8 by Joerg Woerner

Anyone know? I think Joerg said these are in JPG format.

Any easy way to convert these to PDF?

Gene

Re: But these are in JPG format? Can that be converted easily to PDF somehow?

*Message #10 Posted by **John Cadick** on 2 Apr 2003, 8:02 p.m.,*
in response to message #9 by Gene

jpg can be converted to pdf using Adobe Acrobat. I am afraid that the files might be bigger than if they are scanned in directly as pdf. Not sure until it is tried.

John

Re: But these are in JPG format? Can that be converted easily to PDF somehow?
*Message #11 Posted by **Vieira, Luiz C. (Brazil)** on 3 Apr 2003, 8:11 a.m.,*
in response to message #10 by John Cadick

Hello, John;

I'll tell you how do I mannage to create PDF from image files.

I do not use JPG format directly, I'd rather convert them to TIFF if they are B&W or GIF (16 or 256 colors). I use Windows Imaging to build the final image set (it's esy to use and allows "shrink and stretch"). After the document is finished, I use Acrobat Exchange's Printer. It's a printer driver that generates the PDF file as if it's been "printed" to the hard disk. I remember some DOS-based programs also allowed this sort of file to be generated.

Final PDF file usualy goes 10% of the original TIFF/GIF set generated by Imaging.

Hope this adds a bit more information.

Luiz C. Vieira - Brazil

Re: But these are in JPG format? Can that be converted easily to PDF somehow?
*Message #12 Posted by **John Cadick** on 3 Apr 2003, 9:11 a.m.,*
in response to message #11 by Vieira, Luiz C. (Brazil)

Good method, Luiz. I have Adobe Acrobat (the program not the reader) and it allows me to build Acrobat documents by importing most of the major formats including jpeg, gif, tiff, etc.

I also scan directly into Acrobat which seems (with the small amount of research I have done) to generate smaller files that importing. If I get a chance today, I'll compare a file built by importing directly, one generated using a

printer driver (as you describe), and one that is scanned in.

John

Re: The TI-58/59 manual is coming within next few weeks/months
*Message #13 Posted by **Bill Wiese** on 2 Apr 2003, 9:58 p.m.,*
in response to message #5 by Gene

It'd be nice if the scans were in some kind of continuous document - as opposed to separate page-by-page downloads.

Warren Rurlow has lots of nice info on HP41Cs but each page has to be treated separately; hard to bulk download.

BTW: for image files, might NOT want JPeG files but .GIFs or .TIF files insteads. JPeG does not offer great performance on black & white w/limited grey images (i.e., those that are not continuous tone).

Bill Wiese San Jose, CA

Re: The TI-58/59 manual is coming within next few weeks/months
*Message #14 Posted by **Ellis Easley** on 3 Apr 2003, 9:52 a.m.,*
in response to message #13 by Bill Wiese

I found some websites that support the BBC computers and most of the manuals there are OCR'ed to make them compact, with GIFs or JPEGs for drawings. The OCR leads to some funny results!

Most of the BBC interest seems to be running the games on BBC emulators on PCs for the sake of nostalgia.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-94E Printing
*Message #1 Posted by **Erik Anderson** on 1 Apr 2003, 2:30 p.m.*

Has anyone ever successfully connected a printer to the HP-94?

I have several running HP-94s with inventory application software that supports printing. I would like to use the application to keep an inventory of my HP calculators. Application is really for data entry and not display. Therefore I would like to print.

What printer was usually connected? Any info on connecting this or another printer?

Also application supports downloading of data through the a modem connection. Any information?

Thanks, Erik

Re: HP-94E Printing
*Message #2 Posted by **Katie Wasserman** on 1 Apr 2003, 3:14 p.m.,*
in response to message #1 by Erik Anderson

Erik,

Printing from the 94 is entirely application specific. I would assume that your application requires a serial printer connection since there is no built-in firmware for any other printer communication scheme. The default serial port communication speed for the 94 is 9600 baud, even parity, 7 data bits, 1 stop bit. If the application is in BASIC it will automatically set this when BASIC starts (unless it's changed in the application). If it's not in BASIC, you can set this from the startup prompt by entering 'B1.6' (The 1 indicates 9600 baud, the 6 indicates the other parameters, there's a table in the manual showing all the possibilities.)

But the logic levels are non-standard and may need level conversion to work with your printer. The 94 outputs 0 and 5 volts as the mark and space, the add-on level converter shifts these to -9 volts and +9 volts. Many PC's can handle the 0-5 levell okay but I don't know if most printers can, so you might have to do something about that.

Modem connections have exactly the same issues.

I'd love to get a copy of that software if you have it available. If you can send that to me I'll instrall it on one of my 94's and work on getting the printing going.

-Katie

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

71b bug list
*Message #1 Posted by **andy** on 1 Apr 2003, 9:42 a.m.*

I am looking for a 71b buglist, in particular for rom version 1bbbb. I have all of Jake Schwartz's CD's so if there was a bug list published in PPC or Datafile, please post the reference.

Thanks,

Andy

Check CHHU listings or the PPC Computer Journal
*Message #2 Posted by **Gene** on 1 Apr 2003, 10:17 a.m.,*
in response to message #1 by andy

Joe Horn may have had such a list. His "Titan File" was always very helpful with the 71B.

Re: 71b bug list
*Message #3 Posted by **Ex-PPC member** on 1 Apr 2003, 10:18 a.m.,*
in response to message #1 by andy

Have a look at John R. Baker's article (John is Ex-PPC member #618) featured in CHHU Chronicle, V2N2, March 1985, Page 25. There he states that there are over 50 bugs in the HP-71B ver. 1BBBB ROMs and describes several of the very worst.

Re: 71b bug list

*Message #4 Posted by **J-F Garnier** on 1 Apr 2003, 11:03 a.m.,*

in response to message #3 by Ex-PPC member

Although there may have a lot of bugs in the 1BBBB version (I don't have a full list), few are serious problems. Many are related to stack overflow (--> Memory Lost, because address 0 is the cold start entry point!) in complex expression involving UDF (User Defined Function like DEF FNF(X)=...).

J-F

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Another link
*Message #1 Posted by **Dave Hicks** on 1 Apr 2003, 3:02 a.m.*

I think this link was what db intended.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

New HP Calculator
*Message #1 Posted by **HrastProgrammer** on 1 Apr 2003, 2:50 a.m.*

During the weekend I had a chance for exclusive test of a new HP calculator called HP-33ZX.

Just look at the images ...

;-)

Re: New HP Calculator
*Message #2 Posted by **Massimo Gnerucci (Italy)** on 1 Apr 2003, 5:00 a.m.,*
in response to message #1 by HrastProgrammer

Happy Birthday ?!?!?

What was that grey made of?

Massimo

Re: New HP Calculator
*Message #3 Posted by **HrastProgrammer** on 1 Apr 2003, 6:01 a.m.,*
in response to message #2 by Massimo Gnerucci (Italy)

Thanks, Massimo :-)

I think it is just a simple cream with a little strange color ... but the inside was full of strawberries :-)

Re: New HP Calculator
*Message #4 Posted by **Massimo Gnerucci (Italy)** on 1 Apr 2003, 11:49 a.m.,*
in response to message #3 by HrastProgrammer

Two weeks ago, when I scored 10 years more than yours, my wife was not witty enough to cook such a cake... :(

I'd prefer a black chocolate 41 though ;)

Massimo (the envious)

Re: New HP Calculator
*Message #5 Posted by **Renato** on 1 Apr 2003, 12:30 p.m.,*
in response to message #4 by Massimo Gnerucci (Italy)

Massimo, that would be a chocolate and NUTs ? Then your wife would be really supportive.

Renato

Re: New HP Calculator
*Message #6 Posted by **Vieira, Luiz C. (Brazil)** on 1 Apr 2003, 6:19 a.m.,*
in response to message #1 by HrastProgrammer

Hey, Hrast;

Happy birthday!

I think this is the best way to celebrate... and with the best ones (at home) who acknowledge such a great day!

(are you 33 Y.O.?)

Best wishes!

Luiz C. Vieira - Brazil

Re: New HP Calculator
*Message #7 Posted by **Renato** on 1 Apr 2003, 10:34 a.m.,*
in response to message #1 by HrastProgrammer

Congratulations ! Both for the birthday, and for a great, humorous and supportive family.

Renato

Merger Rumors must be true
*Message #8 Posted by **Dave Hicks** on 1 Apr 2003, 12:54 p.m.,*
in response to message #1 by HrastProgrammer

Rumors of the HP - Sara Lee merger are apparently true.

Re: New HP Calculator
*Message #9 Posted by **John K. (US)** on 2 Apr 2003, 12:42 a.m.,*
in response to message #1 by HrastProgrammer

Happy Birthday!

As for the new calculator, I hope that what it lacks in "durability" it makes up for in "taste!" :^)

Re: New HP Calculator
*Message #10 Posted by **Paul Brogger** on 2 Apr 2003, 7:12 p.m.,*
in response to message #1 by HrastProgrammer

HP/Compaq Marketing-Type: "We need AOS -- if you want to add RPN, well that'll just be frosting on the cake."

Rookie HP/Compaq Engineer (all the experienced calculator people have been let go): "I understand. We'll have a mockup in two weeks . . . "

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

preview picture of H.P.'s new A.O.S. calculator
*Message #1 Posted by **db(martinez,california)** on 1 Apr 2003, 1:45 a.m.*

Re: preview picture of H.P.'s new A.O.S. calculator
*Message #2 Posted by **Nenad (Croatia)** on 2 Apr 2003, 2:09 a.m.,*
in response to message #1 by db(martinez,california)

Why not?

If it just had "ENTER" instead of "=", "X><Y" instead of "OFF", "ROLL DOWN" instead of "CE/C", "ON/clx" instead of "ON" (it can automatically turn off) and Donald Duck instead of Mickey Mouse.

Re: preview picture of H.P.'s new A.O.S. calculator
*Message #3 Posted by **Vieira, Luiz C. (Brazil)** on 2 Apr 2003, 5:39 a.m.,*
in response to message #2 by Nenad (Croatia)

Hello, Nenad;

based on recent facts, Goofy would represent it better... :-(

Oh, what to do??!!!?? (Yak, yak)

Luiz C. Vieira - Brazil

luiz: (off piste entry)
*Message #4 Posted by **db(martinez,california)** on 2 Apr 2003, 12:27 p.m.,*
in response to message #3 by Vieira, Luiz C. (Brazil)

sometimes luiz and me talk about language. for his part; he has taught me a couple of portuguese words i can use outside of a bar and corrected my english spelling. i thank him for that. the rest of you can just ignore this.

micky mouse is a noun of course. in english slang (that's "modisimo in spanish" - i don't know the portuguese) mickey mouse can also be a verb or adjective.

you know the noun: the guy with the ears in cartoons.

have you ever been up-river into the andean countries and seen some of the cars? i'm talking a flatbed truck with a bus roof welded onto it, the missing metal body parts replaced with the wood from old packing crates, and the broken suspension splinted with a piece of scrap steel and held together with bailing wire. well, someone really did a mickey mouse repair job there. that's your "adjetivo".

an example of the verb could be "i need to market a calculator. i'll just mickey mouse some cheap rubber buttons and these funky contacts that i have laying here and since i have no respect for my customers needs or intelligence i'll put an = key on it".

come to think of it; it could be an adverb too, if you mouse build your sentences like i do.

goofy is a good second choice.

Re: luiz: (off piste entry)
*Message #5 Posted by **Vieira, Luiz C. (Brazil)** on 2 Apr 2003, 5:50 p.m.,*
in response to message #4 by db(martinez,california)

Hola, D.B.!

Gracias! As always, it's been a thoughtfull "conversation".

Unfortunately, in Brazil we have many people that misuse other language's expressions, mostly slangs. Well, I can say that without fear, because I live and work surrounded by students, and sometimes we hear some sort of creepy things.

About mickey mouse as an expression: the only mention I saw so far was in the book CMOS Coockbook (Don Lancaster, SAMS Publishing), p. 186, under Mickey-Mouse Logic (M^2L). I felt it so interesting as a concept, the same one you mention here, that I never forgot that. I tried to relate M^2L as a simplification to my students but many of them did not even take care for the expression. Sometimes one asks: "Is Mickey-mouse that little mouse? What does it have to do with digital logic?" I once tryed to explani, but I was not successfull.

In Portuguese, the equivalent term for slang is "gíria" and we have the expression "na onda", or "na moda" for fashion-like, teenage-common expressions. We also have "modismo" as an adverb. "Na moda" and "na onda" are also updated for new ones I do not remeber now (they are updated so fast that when we learn one this means another one already exists).

Hey, db, thanks mentioning! We have room for any valid cultural expression in here. Tha't's quite good, indeed.

Best regards.

Luiz C. Vieira - Brazil

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

MoHPC manual collection
*Message #1 Posted by **lokhin** on 1 Apr 2003, 12:03 a.m.*

will the newer pioneer manuals be included in the MoHPC manual collection in the near future?

I am looking for the hp 17bii manual...

-lokhin

Re: MoHPC manual collection
*Message #2 Posted by **Dave Hicks** on 1 Apr 2003, 12:13 a.m.,*
in response to message #1 by lokhin

I don't think that I would say *near* future but surely in the future. According to HP's site, this manual is still available from them, Part number 00017-90046.

Hopefully this link will work.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Opinions on the 20S?
*Message #1 Posted by **Jeremy** on 31 Mar 2003, 10:14 p.m.*

Yes yes, I know it's not RPN. However, I would like to get a nice HP as a gift for my brother. He would probably use it to balance his checkbook and maybe do some metric/Imperial conversions from time to time. I don't think he will ever convert to RPN, either, since he's not the engineering type.

I think 20S's have been discontinued too, no? But they are still selling for peanuts on eBay, so I was thinking now might be the time to pull the trigger on one (or two, hehehe)

I wonder if any of you hardcore HP users secretly use one of these as a daily 'beater'...?

-Jeremy

Re: Opinions on the 20S?
*Message #2 Posted by **Karl Schneider** on 1 Apr 2003, 1:01 a.m.,*
in response to message #1 by Jeremy

Jeremy --

I just got an unused 1997 warranty replacemnt unit (complete with manual and cover) on eBay for $28, which I intend to use as my "traveling calc" -- nice display, built-in conversions and programmable.

The downside to its programmability is that, if you load any of the six "special functions" from its ROM (integ, root, complex math, 3x3 matrix ops, quadratic solutions, curve fitting), program memory is wiped out. That "LOAD" function might be a unique feature among HP calcs.

Several of my co-workers have the HP-20S, so I knew a little beforehand.

Re: Opinions on the 20S?
*Message #3 Posted by **mapet** on 1 Apr 2003, 5:18 a.m.,*
in response to message #1 by Jeremy

It is a very good and powerful calc. I love it as all functions are available form the keyboard. And in my opinion, it has probably the lowest degree of useless function among all newer HP calcs. It's algebraic with precedence.

Re: Opinions on the 20S?
*Message #4 Posted by **hugh** on 1 Apr 2003, 7:49 a.m.,*
in response to message #1 by Jeremy

ive always thought the 20s to be a pretty good machine. its built fairly well, the screen is even clearer than the 32sii because its segments and its programmable in the normal way. oh, and its a lot cheaper.

as a machine to carry about, pick up and use and not have to worry _too_ much about it getting broke, its the answer.

Re: Opinions on the 20S?
*Message #5 Posted by **Paul Brogger** on 1 Apr 2003, 7:15 p.m.,*
in response to message #1 by Jeremy

I've tended to think of it and the 10B as good sources of keyboard parts for battle-worn 32s & 42s units . . .

But I must admit, I've never used the one I have. Having RPN calculators available makes (for me) the Algebraics unnecessary.

Re: Opinions on the 20S?
*Message #6 Posted by **Bill Platt** on 3 Apr 2003, 1:18 p.m.,*
in response to message #1 by Jeremy

Well, it really is a great design. I bought one just recently because of its low price. Then a co-worker bought it off me 'cause he liked it so much. So I bought another couple!

Its only problem is its being algebraic.

20s is in some ways nicer than my favorite 32sii, for instance, the "load" feature--being able to download useful programs from permanent memory to the program space is really great--if you

need to do a variety of tasks with a small, cheap) calculator (without lots of memory), and happen to need to do curve-fitting one day, and complex numbers another time, etc it is actually a superior machine to the 32sii, because the "overhead" required to key in the (functionally equivalent) programs on the 32sii is time-consuming. But if you are at your desk, curve-fitting is automatically an spreadsheet task.....

The lack of menus is also nice--for instance, getting statistics results is only 2 keystroke, rather than 3 (32sii requires going to the menu).

And the segmented display is GREAT in low-light.

The fact that it is a keystoke programmable ALGEBRAIC, is quite facsinating.

However, being a total RPN thinker, I find it cumbersome and error-prone for involved calculations, and the programs I have concocted myself require more lines, and more de-bugging than is the case with the 32sii -- but the latter is entirely due to my RPN preference.

But the end-game is already here as far as calculators go. Except for really cheap (say, less than $40 or so) there is just no reason to build powerful calculators:

If you buy a handspring, or a palm, or a Clie etc, you can load ALL SORTS of very good RPN machines (including the 48g series--the EMU48 or a similar em has been ported) right on--and there is GOBS of memory. And it is only a matter of (not very much) time before the high-powered $250+ machines with nice (really!) built-in keyboards (they click like an HP) are down to the $100 level.

the world is really changing fast.....

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

The 48G saves the day.
*Message #1 Posted by **Jeremy** on 31 Mar 2003, 9:52 p.m.*

This morning, while getting ready for school, I was deciding whether I should pack the 48G or my new 32SII which I didn't have the manual for (yet). I put the 32SII in my back and unpacked the 48G, then thought better of it. Quiz day is not the day to find out you made a poor decision.

This class I'm taking is fiber optics. The instructor's policy is that we can't use any notes or anything, not even a formula sheet. He said he would put everything we need in the board. Fair enough. He didn't put one very necessary formula up though. He obviously forgot it, but being a senior professor, his ego couldn't handle admitting that, so he just claimed that we should have had that one memorized. (jerk)

The other thing he forgot to put up was the mass of an electron. That cost a lot of people the problem, but since I had the good fortune of having my 48G handy, I just calmly went into the constant library and plopped it into the stack. That problem was the difference between an A and a B. Thanks HP!

-Jeremy

PS - Next time, I think I will fill up a program in my TI-85 with all the formulas I will really need, hehehe. To me there is no difference between having a formula sheet and having it electronically saved in the calculator. To me, engineering is not about memorizing formulas, but how to use them.

Re: The 48G saves the day.
*Message #2 Posted by **James M. Prange** on 1 Apr 2003, 12:03 a.m.,*
in response to message #1 by Jeremy

Why not save the formulas on your 48G? You could save them as algebraic objects, text (character strings), RPL programs, or same combination of these.

Regards,
James

I don't know how to do any of those things yet...
*Message #3 Posted by **Jeremy** on 1 Apr 2003, 7:50 a.m.,*
in response to message #2 by James M. Prange

Is there a way to do it where I could recall them all into one 'window' and scroll down through it? That's what I have in mind.

FWIW, I think TI's version of BASIC that's included in the TI-85 is outstanding. Very intuitive. Don't get me wrong, I still love the HP, but it is not nearly as easy to program.

-Jeremy

Re: I don't know how to do any of those things yet...
*Message #4 Posted by **R Lion** on 1 Apr 2003, 8:09 a.m.,*
in response to message #3 by Jeremy

Give a chance to RPL: you don't want BASIC anymore!!

Raul (Daily user of a 48GX)

Re: I don't know how to do any of those things yet...
*Message #5 Posted by **John K. (US)** on 2 Apr 2003, 12:37 a.m.,*
in response to message #3 by Jeremy

> Is there a way to do it where I could recall them all into one 'window' and scroll down through it?

There is, but it would probably be easier to simply enter them on the stack, either directly or using the equation editor ([L-Shift] [ENTER]), then save them to a variable in a specific directory. Then, when you need to use it, recall it from the variable by pressing the appropriate soft-key ([A]-[F]) on the top row. Once the equation object is at level one on the stack, you can then save it to a variable called 'EQ' ('EQ' [STO] or, if 'EQ' is already defined in the current directory, [L-Shift] <[A]-[F]>), for use by the solver ([R-Shift][7][F]).

Re: I don't know how to do any of those things yet...
*Message #6 Posted by **James M. Prange** on 2 Apr 2003, 2:28 a.m.,*
in response to message #5 by John K. (US)

Or I suppose that you could embed the algebraic object within a program or list, followed by a character string with notes on its use.

But of course, don't use this method to cheat in class; that's the reason that certain calculators are forbidden in many classes.

Regards,
James

Re: I don't know how to do any of those things yet...
*Message #7 Posted by **James M. Prange** on 2 Apr 2003, 2:34 a.m.,*
in response to message #6 by James M. Prange

PS:

On second thought, keep your "cheat sheet" on the TI-85, so that if you're caught, it'll be the TI that gets outlawed for the class.

Regards,
James

Re: I don't know how to do any of those things yet...
*Message #8 Posted by **John K. (US)** on 2 Apr 2003, 3:35 a.m.,*
in response to message #6 by James M. Prange

> Or I suppose that you could embed the algebraic object within a program or list, followed by a character string with notes on its use.

Indeed. For maximum flexibility, it should then be packaged as a library, stored in port memory (of limited value in the case of a 48G, but useful in the other models), and ATTACHed as necessary.

But that would be substantially more involved than storing them as symbolic objects. :^)

Re: I don't know how to do any of those things yet...
*Message #9 Posted by **James M. Prange** on 2 Apr 2003, 6:06 a.m.,*
in response to message #8 by John K. (US)

And let's not forget some sort of "Fake Memory Cleared" program, to "prove" that no notes are stored on the calculator.

Of course, it might be better to have a 48GX and archive HOME to a RAM card which could be concealed in a pocket, and do a real memory clear.

Regards,
James

Re: The 48G saves the day.
*Message #10 Posted by **your professor** on 1 Apr 2003, 2:43 a.m.,*
in response to message #1 by Jeremy

Jeremy:

Kiss that A goodby.

the "jerk"

Graphing Calculators Are Now Banned
*Message #11 Posted by **"The Jerk"** on 1 Apr 2003, 7:30 a.m.,*
in response to message #1 by Jeremy

Aren't you clever? You just can't keep your mouth shut, you sniveling, bragging little cheater. Well, graphing calculators and their memory capabilities are now banned. For cheating, you flunk the course. Brag about that next time, you whining little loudmouth.

Re: The HP unFair advantage!
*Message #12 Posted by **Ron Ross** on 1 Apr 2003, 8:58 a.m.,*
in response to message #1 by Jeremy

That's what it's about.

However, you might not want to boast to loudly as you have left your name and address (area of the country) on your Bio sheet. Any jealous fellow classmate or whatever, may RAT you out.

Don't be to critical of professors EVER, until after you graduate, as they read this group too. Jeremy isn't that common of a name.

Did you consider using your Eq. Lib. also for reference as it also has Optics eq. that could have been loaded into the solver for quick and easy solutions and answers if any were of use.

The guy is pretty sharp, I'm sure he's aware.
*Message #13 Posted by **Jeremy** on 1 Apr 2003, 12:46 p.m.,*
in response to message #12 by Ron Ross

I think he just puts the equations on the board for the people who are just using normal scientific calculators.

He knows that calculators are programmable nowadays, so this is nothing new.

I'm pretty sure he doesn't read this forum, and who says my name is really Jeremy? Hehehe.

-Jeremy

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP 32SII eBay auction
*Message #1 Posted by **Howard** on 31 Mar 2003, 6:05 p.m.*

Look at this auction: http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3016336648&category=11713

That's a NICE price!! lucky guy :P wish I had seen it earlier. Obviously the seller did not know the value of a brand new hp 32sii right now... either that or the auction's a fraud?

HP 32SII psycho low price
*Message #2 Posted by **Norm** on 31 Mar 2003, 9:32 p.m.,*
in response to message #1 by Howard

That's a psycho low price. Looks like $14 . Yeah the seller didn't have a clue.

I almost e-mailed the seller and told him but, whats the use. Why would I want to be the one to bring the bad news.

In eBay, everybody is still obligated to complete their transactions.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Re: HP-41 Blank Keyboard Overlays
*Message #1 Posted by **David Smith** on 31 Mar 2003, 6:03 p.m.*

There are places that have laser, water jet, or computer controlled knife cutters that can do the job very well... might be a bit pricey though for the setup fees, but really not too bad... definitely less than a punch. Mayby check some sign makers.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-97 printer
*Message #1 Posted by **Michel Beaulieu** on 31 Mar 2003, 5:54 p.m.*

I have a HP-97 in good condition except the printer : It prints whell but the paper don't feed, if i give a little hepl to the paper it feeds normaly but it's not very funny to always do that :-)

What to do?

Thanks Michel

Re: HP-97 printer
*Message #2 Posted by **Robert Blaschke** on 1 Apr 2003, 3:44 a.m.,*
in response to message #1 by Michel Beaulieu

Hi Michel,

i made positive experience with the following advice I found somewhere here in an archive:

open the calculator (6 screws), remove the printer carefully (3 screws, lift the attached small pcb) and clean the pin rollers using Q-Tips and isopropyl alcohol (also called isopropanol, available in drugstores / pharmacies).

Be careful when reassembling: do not bend the contacts when attaching the small pcb again; and do not stress the flexible ribbon pcb.

Hope this helps, Robert

Re: HP-97 printer
*Message #3 Posted by **David Smith** on 1 Apr 2003, 5:59 p.m.,*
in response to message #1 by Michel Beaulieu

If cleaning the drive rollers does not help there are a few other things to try:

1) Try using a substance called Rubber ReNue (sp?) from MG chemicals. It contains methyl salicylate which softens rubber and makes it sticky. Similar products are sold for use on slot car tires. Keep it off the plastic parts... it will melt them. It helps to use the printer regularly... otherwise the feed cam will harden up and develop flat spots again.

2) With a lot of fiddly work and great care you can remove the feed cam (hint: you first have to remove the print head) and then gently sand the flat spots off the rollers. Then roll the cam rollers back and forth across coarse sandpaper (like 80 grit). Keep sideways tenstion on the cam so that the clutch teeth are kept apart. Clean the rollers with alcohol and/or Rubber Renue.

3) Replace the cam with one from an 82143A printer. Same fiddly mechanical work as above times two... be evry careful reinstalling the head... it can be cracked very easily if it is not seated properly when you tighten the screws.

Re: HP-97 printer
*Message #4 Posted by **db(martinez,california)** on 2 Apr 2003, 1:06 a.m.,*
in response to message #1 by Michel Beaulieu

i had the same problem with a former bosses 82143 and it just had a lot of dried lubricant and dust clogging it up. the cleaning that RB mentioned was all that was needed for it. i put a little triflon on all the gear-ish parts afterward and it worked fine. if i wuz u: i'd try this first to see if it works before david smiths more serious treatments for more serious ailments.

Re: HP-97 printer
*Message #5 Posted by **David Smith** on 2 Apr 2003, 6:13 p.m.,*
in response to message #4 by db(martinez,california)

Yes, try the cleaning first... but from the sound of the problem it is a hardened or flatened roller problem. Often cleaning will help for a short time... longer if you use the printer regularly.

If the machine was stored for a very long time, the rollers will develop a flat spot where they rested against the paper. This shows up as the machine printer messing up every fourth line. The other problem is the rollers become hard and no longer grip the paper. This causes the mentioned problem where you need to keep some tension on the paper to keep it feeding

properly. I have seen people clip one of those big metal paper clamps on the end of the paper and hang it over the side of a table to make the paper feed properly.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP42S paint job
*Message #1 Posted by **David E** on 31 Mar 2003, 5:46 p.m.*

The upper list of functions are kaput on my hp42S. I have a bright idea of painting the top row and applying some stick on letters. Should I use a protective coating on top of the paint? ALso, I have searched the net and cannot find any stick on letters. I think 6pt. Helevita(sp) should work fine....but I cannot find this. Anyone know where? Or does anyone have any advice on what to do? thanks

Re: HP42S paint job
*Message #2 Posted by **Paul Brogger** on 31 Mar 2003, 8:14 p.m.,*
in response to message #1 by David E

What do you mean by the "upper list"? "kaput"? Do the keys not work at all, or is it the shifted functions (sigma +, y**x, etc.)? (The latter would be *real* weird . . .) If the keys don't work, why apply letters? (What purpose would the letters serve anyway?) I'm curious -- I'm sure you have your reasons . . .

On my 42s-in-a-17B-wrapper, I painted the keyboard with flat black enamel, then used 600 grit sandpaper to re-expose the keytops I wanted to see. I haven't seen the paint wear through yet, after years of (albeit occasional) use.

It seems to me there have been press-apply lettering kits with which one rubs the desired letter image with a hard, smooth implement, and the letter is transferred to the surface underneath. Someone will know where to look for such. Maybe office supply stores? You might try hobby shops -- I know such lettering is (or used to be) used for model airplanes, though the choice of fonts there will be limited!

Re: HP42S paint job
*Message #3 Posted by **David E** on 31 Mar 2003, 9:14 p.m.,*
in response to message #2 by Paul Brogger

sorry, i meant the functions and the paint in that area is really bad...i would like to paint over that like you said, but cannot sand off paint to show the functions cause they themselves are gone.....thats why i wanted to know how to put the function names back there.....

thx for any advice?

Re: HP42S paint job -- "dry transfer lettering"?
*Message #4 Posted by **Paul Brogger** on 1 Apr 2003, 12:40 a.m.,*
in response to message #3 by David E

I think what you're looking for is "dry transfer lettering". A Google search with those terms turns up a number of hits -- among them: this.

What I remember of these is that they're sorta' printed backwards on thick translucent plastic or wax-paper-like paper. You position the letter or symbol you want over the spot you want it, then rub firmly. The letter or symbol is transferred from the backing paper to the surface -- hopefully where you want it to be.

Presumably, you'd then want to cover it with a matte "fixative" (clear spray) -- probably from an art supply store. (You'd want to mask off the rest of the calculator -- especially the display!)

Buuuuuuuuttttt . . . I've not done any of this on a calculator, so don't take MY word on it -- maybe someone with some real experience will chime in.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Earth Science Solutions Software
*Message #1 Posted by **Gene R. DiResta, Ph.D.** on 31 Mar 2003, 5:18 p.m.*

Does anyone have the Earth Science Solutions Book? It is not part of the museum's DVD collection. I need the section on Atmospheric Thermodynamics: equations, program instructions, etc. Willing to purchase book for reasonable price.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Re: HP-41 Blank Keyboard Overlays
*Message #1 Posted by **Dave Shaffer** on 31 Mar 2003, 2:40 p.m.*

Jeff,

re: "The problem, which I have yet to overcome, is how to cut out the key holes so it does not look like crap."

Try your local craft (Michael's or JoAnn's) or leather shop and look for a punch which matches the size and shape of the hole you need to make. If nothing found, and it's real important, a local tool and die maker ought to be able to make you a punch (essentially a cupped (concave) end of a piece of metal with a sharp rim). I needed a round punch like this once upon a time, about 3/16" in diameter, and my Dad machined one for me. Took him longer to chuck it up than to actually cut it!

Use it by placing your plastic sheet on a relatively firm surface you don't care about (scrap wood or tablet backs work fine), put the punch where you want a hole, and hit it with a hammer. (Helps reduce stress and anxiety, too!) Practice first on some spare material, to get the feel for the right amount of whack.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

crazy ebay price
*Message #1 Posted by **olivier croissant** on 31 Mar 2003, 1:02 p.m.*

is n it crazy ? [http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=11713&item=3014707551]

Re: crazy ebay price
*Message #2 Posted by **db(martinez,california)** on 31 Mar 2003, 1:35 p.m.,*
in response to message #1 by olivier croissant

yes, it is a crazy price. i have one that i paid a buck for. however; there are a couple of things to consider. the one in the auction looks new (it's original owner probably found it a drag to use and bought an rpn). buying a ti from that seller would be like buying an hp from dave. if joerg says it is perfect then it is; he would know. it is a pity that he did not have a battery to go with it but the lack of a charger is easy to explain: do you want to buy and pay for shipping for a 220v adapter that has a plug pattern we don't use here? all said you are right; some people have too much disposable income. but notice the starting price; i don't believe the seller thought it would be that desireable either.

Re: crazy ebay price - Maybe not that much
*Message #3 Posted by **Gene** on 31 Mar 2003, 1:57 p.m.,*
in response to message #1 by olivier croissant

The SR-51 original version is tough to find in anything close to good condition.

The SR-51A revised version came out within 6-10 months of the SR-51 being available.

The silver trim that is on the SR-51 wears off VERY easily.

And, Jorge is a very reputable seller so the buyers should know that what they see is what they get.

Good for Jorge and good for the buyer, who obviously wants a good SR-51.

Me, I'm still seeking a good working SR-60 desktop. :-)

Re: crazy ebay price - Maybe not that much
*Message #4 Posted by **Chan Tran** on 31 Mar 2003, 2:51 p.m.,*
in response to message #3 by Gene

Yeah it's crazy but I once sold a 51A for $150. The buyer said he wanted a 51 and offer $200 but I had only the 51A so he agreed to pay $150. He lived in Australia and had a brother in law lived about 15 miles from my home. The 51A I sold was in very good conditon with the bad battery pack, manual and case. Yes, I tested the unit and made sure that is was working. I paid $1 for the thing at a yard sale. I sold it because I am not a TI collector.

Re: crazy ebay price: finally 227.5 !
*Message #5 Posted by **olivier croissant** on 31 Mar 2003, 6:43 p.m.,*
in response to message #4 by Chan Tran

So some people value this thing that much !

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Substitute Magnetic Cards for HP-97?
*Message #1 Posted by **Paul Brogger** on 31 Mar 2003, 11:27 a.m.*

I'm assuming magnetic cards for the HP-67/97 are getting hard to find. I've got only two.

Has anyone tried to cobble together a workable substitute? Say, by sticking a piece of magnetic tape to a strip of to a piece of a playing card? Cutting up subway tickets? Other?

No need
*Message #2 Posted by **Mike** on 31 Mar 2003, 1:10 p.m.,*
in response to message #1 by Paul Brogger

It's not worth the bother, even if possible, as they are still around.

Here's one source
*Message #3 Posted by **Dave Mabry** on 31 Mar 2003, 1:31 p.m.,*
in response to message #1 by Paul Brogger

If you haven't already been notified, here is one place that you can get HP magnetic cards. I believe the seller is a frequent poster here, so he might contact you directly.

E-bay auction for 160 cards...started with a "buy-it-now" price of $20.

Re: well, I just assumed . . .
*Message #4 Posted by **Paul Brogger** on 31 Mar 2003, 8:58 p.m.,*
in response to message #3 by Dave Mabry

Thanks!

I'm not looking for *eighty*, but it's nice to know they're still available.

-- Paul B.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-35 Battery Door Repair
*Message #1 Posted by **Monty Baugh** on 31 Mar 2003, 10:36 a.m.*

I am restoring an HP-35, and need a suggestion on repairing the battery door. One of the sliding tabs is broken, so that it does not protrude into the case and latch the door on that side. Any suggestions on repairing or replacing the tab?

Re: HP-35 Battery Door Repair
*Message #2 Posted by **David Smith** on 31 Mar 2003, 5:55 p.m.,*
in response to message #1 by Monty Baugh

If you have the piece that broke off, you can rebond it using a plastic welding solvent that melts the plastic. You brush it on each side of the joint and quickly press the pieces together. Then wait 24 hours before putting any stress on it. The solvent contains methylene chloride (dichloromethane) and is available in small bottles at most hobby shops. Hobbytown carrys the Tenax brand.

You could use a door from any other first series calc
*Message #3 Posted by **Jeremy** on 31 Mar 2003, 9:46 p.m.,*
in response to message #1 by Monty Baugh

I'm pretty sure they are identical. It might be a very expensive part though.

I don't think a repaired part would hold up.

-Jeremy

Re: You could use a door from any other first series calc
*Message #4 Posted by **David Smith** on 1 Apr 2003, 6:02 p.m.,*
in response to message #3 by Jeremy

If the plastic weld is done well, it holds up just as good as new. No adhesive will hold though.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Curious 71b behavior

*Message #1 Posted by **andy** on 31 Mar 2003, 10:03 a.m.*

I noticed the following curious behavior on one of my older model 71b's (I think it is rom 1bbbb...it has a metal back).

I plugged a HHP 96K ram module into the card reader port. I free'd port 5.00 and 5.01. On the hhp 96K module, this results in a 64K port and 32K port respectively. When I tried to copy a file to port 5.00, I received the error "Insufficient Memory". I can copy files to port 5.01 just fine.

Here's where it gets more interesting. If my forth/assembler rom is present, I can copy to port 5.00.

Also, I have a newer 71b (plastic back) and the HHP 96k ram module works fine in it.

Does my older 71b have a bug which prevents it from utilizing the 64K free'd port? Is this bug somehow overcome with the forth/assembler rom?

Thanks,

Andy

Re: Curious 71b behavior

*Message #2 Posted by **J-F Garnier** on 1 Apr 2003, 6:09 a.m.,*
in response to message #1 by andy

I remember that version 1BBBB had some problem regarding memory configuration with 64k ports. As you noticed, it doesn't show up if a hard-adressed module (like Forth/Ass) is present. There may be other workarounds (after all, the HHP 96k was used with version 1BBBB, too).

What is the result of MEM(5)? of SHOW PORT command?

J-F

Re: Curious 71b behavior
*Message #3 Posted by **andy** on 1 Apr 2003, 9:04 a.m.,*
in response to message #2 by J-F Garnier

MEM(5.00) returns 64K. MEM(5.01) returns 32K.

Let me also re-emphasize, when I just have the hhp 96K module in and ports 5.00 and 5.01 are free'd, I can only write to port 5.01. However, if I plug my 4th/assembler rom in, I can write to 5.00 and the 71b still recognizes both ports.

I have 3 71 version 1BBBB and they all behave the same with the HHP.

It would make sense that it has trouble with the 64K free'd port.

Also, I have a version 1CCDCC and the HHP module works fine on it.

Re: Curious 71b behavior
*Message #4 Posted by **J-F Garnier** on 1 Apr 2003, 2:01 p.m.,*
in response to message #3 by andy

Andy,

You should try to use PORT(5) as 32k and PORT(5.01) as 64k.

J-F

Re: Curious 71b behavior
*Message #5 Posted by **andy** on 1 Apr 2003, 4:50 p.m.,*
in response to message #4 by J-F Garnier

How do I free port 5.00 as 32K instead of 64K? It defaults to 64K when I type "free port(5.00)".

Thanks,

Andy

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP67-Card Reader
*Message #1 Posted by **Howard** on 31 Mar 2003, 9:55 a.m.*

Well - I've replaced the "gummy wheel" and the card pulls through OK. I've replaced the three capacitors but still I get the message "error" when I read a card. I don't get that message when I write to a card but I have no way to test if it is actually writing to the card. I'm at a loss to figure out what to do next. Can anybody help. Do the actual magnetic heads become worn? If they do are they the standard ones that are found in battery operated tape recorders? They look very similar. Any suggestions will be greatly appreciated. Howard.

Re: HP67-Card Reader
*Message #2 Posted by **David Smith** on 31 Mar 2003, 5:59 p.m.,*
in response to message #1 by Howard

Have you cleaned the heads with 91% isopropyl alcohol? Also use the red colored head cleaning card. Also you might try demagnetizing the heads with a tape head demagnetizer.

Also check the head continuity. There are two windings. They should measure around 40 ohms. The black wire should measure zero ohms to the metal head case.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP 9815A
*Message #1 Posted by **Fabrizio** on 31 Mar 2003, 9:04 a.m.*

Hi, I've just recovered an HP 9815A, it's in very good condition, the problem is that when you switch it on the display shows only a roe of minus and nothing else. Does someone has an idea of what can I try to repair it? Thanks Fabrizio

Re: HP 9815A
*Message #2 Posted by **Tony Duell (UK)** on 1 Apr 2003, 7:00 p.m.,*
in response to message #1 by Fabrizio

The row of dashes is generated in hardware (on the keyboard/display interface PCB) if the CPU board is not driving the display. So your problem could well be CPU/ROM/RAM related, it could be the power-on reset circuit, etc. The CPU (amzingly for HP) is a standard part -- a Motorola 6800. The other 40 pin chip on the CPU board is a 6820 or 6821 PIA -- and it shouldn't be hard to tell which is which. I'd start by looking at the signals round the CPU to make sure it's clocking, that it's not stuck in the reset state, etc To work on this maching you need to make up a 4 wire extender cable for the power cable to the CPU board. You can then work on the machine with hte keyboard/CPU folded forwards. Leave the 24 pin DIL plug plugged into the PSU board. Ignore the 2 26 war ribbon cables (unplug them at the CPU end and leave them disconnected) -- theyr'e just for the I/O slots and the machine will run without them.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

I need calc with aglebraic solver !
*Message #1 Posted by **mapet** on 31 Mar 2003, 6:02 a.m.*

I need scientific HP calc, preferably Pioneer that has algebraic solver (as 17BII) but as well fractions, RPN notation and trigs. Any thoughts?

Re: I need calc with aglebraic solver !
*Message #2 Posted by **Terry Ingram** on 31 Mar 2003, 8:19 a.m.,*
in response to message #1 by mapet

Probably should consider a 32sii.

Terry

Re: I need calc with aglebraic solver !
*Message #3 Posted by **Ron Ross** on 31 Mar 2003, 8:25 a.m.,*
in response to message #1 by mapet

The Hp32sii would fill all of your requirements. That said, it is a very high priced calculator at the moment.

An Hp48G would be your cheapest alternative and also has all of the above. Aside from its size (it is after all a graphics), it would work.

If you COULD give up fractions, an Hp19bii would also work. It actually has the same solver as the 17bii with the addition of trig functions.

All of the above also have units conversions, the 48G has an extensive set of conversions.

Hp 32SII has algebraic or RPN solver ?
*Message #4 Posted by **mapet** on 31 Mar 2003, 9:14 a.m.,*
in response to message #3 by Ron Ross

Hp 32SII has algebraic or RPN solver ?

Re: Hp 32SII has algebraic or RPN solver ?
*Message #5 Posted by **Vieira, Luiz C. (Brazil)** on 31 Mar 2003, 9:30 a.m.,*
in response to message #4 by mapet

Hi;

I consider any SOLVER as a transparent procedure, a general-purpose algorithm. I'd rather think that any calcualtor wiht SOLVER will accept or not algebraic expressions as input data. About the HP32SII, I think of it as an RPN calculator with a SOLVER that accepts algebraic expressions as input data.

Hope this allows you to "see" it in another perspective.

Luiz C. Vieira - Brazil

Re: Hp 32SII has algebraic or RPN solver ?
*Message #6 Posted by **Chan Tran** on 31 Mar 2003, 12:00 p.m.,*
in response to message #5 by Vieira, Luiz C. (Brazil)

The 48G/+/GX has very good solver. It has trig functions and has RPL (not RPN) but I think it's not too much of a compromise since it's much less expensive than the 32SII. Yes, the 48 solver does algebraic.

Re: Hp 32SII has algebraic or RPN solver ?
*Message #7 Posted by **R Lion** on 31 Mar 2003, 2:53 p.m.,*
in response to message #4 by mapet

Both!

You can store the equation in a RPN program or in "algebraic way"

Raul

Re: Hp 32SII has algebraic or RPN solver ?

*Message #8 Posted by **James Stephens** on 2 Apr 2003, 9:45 a.m.,*

in response to message #4 by mapet

Yes, the hp32sii has an algebraic solver.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

poll
*Message #1 Posted by **mapet** on 31 Mar 2003, 2:56 a.m.*

What is your favorite Pioneer calc?

Re: poll
*Message #2 Posted by **Raymond Del Tondo** on 31 Mar 2003, 3:36 a.m.,*
in response to message #1 by mapet

From the Stretch-Pioneers: HP-48GX, from the classic Pioneers: HP-42S

Raymond

32SII
*Message #3 Posted by **Jeremy** on 31 Mar 2003, 8:46 a.m.,*
in response to message #2 by Raymond Del Tondo

Also, for the price, you can't beat a good used 48G. I know, they're thicker and slower, but seeing the stack is nice and even if you don't untilize it 100%, it's a hell of a deal. -Jeremy

Re: poll
*Message #4 Posted by **Vieira, Luiz C. (Brazil)** on 31 Mar 2003, 10:41 a.m.,*
in response to message #2 by Raymond Del Tondo

Hi;

I second Raymond.

Regards.

Luiz C. Vieira - Brazil

Re: poll - 42S
*Message #5 Posted by **Richard Garner** on 31 Mar 2003, 11:38 a.m.,*
in response to message #1 by mapet

I vote for the 42S.

Re: poll -- HP-32s
*Message #6 Posted by **Paul Brogger** on 31 Mar 2003, 11:41 a.m.,*
in response to message #1 by mapet

As noted elsewhere, I'm a 32s fan.

I appreciate the 42s for its power and two-line display, but day-to-day, I use the 32s and it's the final one I'd sell on eBay to keep food on the table.

Re: poll -- HP-32s
*Message #7 Posted by **Chan Tran** on 31 Mar 2003, 12:03 p.m.,*
in response to message #6 by Paul Brogger

I agree with Raymond and Luiz. I think the 48's is better than the 32. I have a 32SII for many years that I rarely ever used. I bought it just to have it(for the real price of $58). I used the 48GX very often. I don't use the 48SX much. I used the 41CX as often as the 48GX.

Well put, Paul. (NM)
*Message #8 Posted by **Jeremy** on 31 Mar 2003, 9:58 p.m.,*
in response to message #6 by Paul Brogger

!

Re: poll
*Message #9 Posted by **Christoph Giesselink** on 31 Mar 2003, 12:27 p.m.,*
in response to message #1 by mapet

The HP32SII is my travelling calculator. For all other work I use my old HP48SX. When I need a mixture of both, the HP28S is my first choice.

Christoph

Re: poll
*Message #10 Posted by **R Lion** on 31 Mar 2003, 2:33 p.m.,*
in response to message #1 by mapet

Pioneers? 48GX and 42S

Raul (but I use the 15c, not the 42s)

Re: poll
*Message #11 Posted by **Erik Ehrling (Sweden)** on 1 Apr 2003, 11:16 a.m.,*
in response to message #1 by mapet

HP-42S, no question about it. (Still having a small hope that HP would some day realise that they could start production of a HP-42SX with 32K RAM, 4MHz Saturn and a serial I/O with virtually no development costs at all...)

Why don't you build one yourself?
*Message #12 Posted by **Jeremy** on 1 Apr 2003, 12:53 p.m.,*
in response to message #11 by Erik Ehrling (Sweden)

and make a fortune. (or lose your fortune if it turns out there ISN'T money to be made in that market...

Sometimes, it is hard for us to realize that even though people like us would buy it, that is not enough for HP to turn a profit on it. There have to be thousands of other people who would also choose it over a TI graphing calculator.

Sad, but true.

-Jeremy

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-41 Blank Keyboard Overlays
*Message #1 Posted by **Donald Leonard** on 30 Mar 2003, 11:06 p.m.*

I have watched ebay for three months and spent two days on the net trying to locate a source for blank HP-41 keyboard overlays. I've even had a WTB notice in the ads section here, but no responses. Does anyone here know who or where I can contact to buy some? The only known source other than HP (which doesn't have them) was 'Dallas Development Systems' which seems to have disappeared. Any help is greatly appreciated. Don

Re: HP-41 Blank Keyboard Overlays
*Message #2 Posted by **Katie Wasserman** on 31 Mar 2003, 1:55 a.m.,*
in response to message #1 by Donald Leonard

There's a blank overlay set on ebay right now:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3015359593&category=11713

Re: HP-41 Blank Keyboard Overlays
*Message #3 Posted by **Richard Garner** on 31 Mar 2003, 9:38 a.m.,*
in response to message #1 by Donald Leonard

Have you tried to scan a blank overlay in and then use some graphic program to type commands for the key assignments, then print it on card stock and cut it to fit.

Just a thought.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-33E batteries
*Message #1 Posted by **Gary Smith** on 30 Mar 2003, 2:46 p.m.*

I have an HP-33E that is missing the battery pack. What can I replace it with and is there something that bridges the two batteries on the side opposite the contacts?

thanks

Re: HP-33E batteries
*Message #2 Posted by **Jon** on 30 Mar 2003, 3:27 p.m.,*
in response to message #1 by Gary Smith

Gary:

You can use two AA rechargable batteries (or even alcaline). Of course you have to bridge the oposite contacts (3V aprox. are needed). Take care with the polarity. The (-) is the contact closest to the keyboard side. You can get more detailed information about batteries and chargers in the main page.

Jon

Re: HP-33E batteries
*Message #3 Posted by **David Smith** on 30 Mar 2003, 3:55 p.m.,*
in response to message #2 by Jon

Minus (-) is closest to the top edge of the calculator.

Re: HP-33E batteries
*Message #4 Posted by **Jon** on 1 Apr 2003, 9:26 a.m.,*
in response to message #3 by David Smith

Sorry for the wrong information. David is right. Minus (-) is closest to the top edge of the calculator.

I have repaired four spices. I use the metalic structure of the original battery pack. Then I place two new rechargable batteries. I can charge them externally (with an standar charger) or even inside the calculator with the original charger.

I all of them the plastic connector was corroded and I had to replace it with wires. I had also to rebuilt the contacts (the most difficult thig is opening the calculator)

Cheers

Jon

Whoooahhh Horsey HP-33E Nickel foil ?
*Message #5 Posted by **Norm** on 30 Mar 2003, 4:04 p.m.,*
in response to message #2 by Jon

Hi,

Describing the battery polarity this way is worrisome:

"Take care with the polarity. The (-) is the contact closest to the keyboard side."

Due to the various angles & things, it seems somewhat vague.

I would suggest:

"The + contact is the contact closest to the central part of the calculator".

ALSO, about bridging the AA batteries at the far end ? I have been really wanting some .003" thickness nickel foil for that purpose. It would be nicely corrosion resistant, and very thin.

Not having my first choice, I have been using a piece of "solder wick". It's the very finely braided, flattish copper mesh material. You can use many different things so long as they

are THIN.

I have used aluminum foil, BUT, it tends to start shredding apart and leaving little pieces around.

Or, you could do what I did...

*Message #6 Posted by **Jeremy** on 30 Mar 2003, 7:56 p.m.,*
in response to message #1 by Gary Smith

Which is to hardwire a AAA battery holder to the circuit board. Then, you can use alkalines, Ni-MH rechargables, Ni-Cad rechargables, etc. and you don't even need to have the HP charger or equivalent. It seems to me that the risk of blowing up the calculator because of a simple mistake of plugging the charger in w/o a good battery pack in place is an accident waiting to happen. Going from AA to AAA you do lose some battery life, but you never have to jerk around with the charger again unless you want to...

Do you have the charger? If I had the charger, I would:

1. Buy a battery pack for a cordless phone that is made of 2 AA Ni-MH cells. (again, at Radio Shack or equivalent)

2. Cut the wires of this battery pack right next to the connector and throw that connector out.

3. Neatly solder a 9V battery connector to the leads you just exposed. (you guessed it, the 9V connectors are available at Radio Shack for < $2 for a pack)

4. Hardwire another 9V battery connector to the points on the HP circuitboard where the battery terminals are wired to. (Make sure you attach it with the polarity reversed. Since you're hooking two of them together, it will switch to polarity when you plug them together)

5. Run that connector into the battery compartment.

Now, when you want to replace the battery pack again, (10 years from now?) all you have to do is buy a cordless phone battery pack, and replace its connector with a 9V connector and you're ready to rock. Of course, that ruins the originality of the calculator, but it is more practical and lets you get 50% more life out of each battery charge, since they didn't have Ni-MH batteries in the 70s.

If you ever want to sell the calculator on eBay, you won't get a collector's sum for it, but you might get more bidders, since they won't have to also look for the !@#$ HP battery pack.

-Jeremy

There could be a problem...
*Message #7 Posted by **Larry Corrado USA (WI)** on 30 Mar 2003, 8:12 p.m.,*
in response to message #6 by Jeremy

With using a standard 9 V connector for a 3 V connection down the road when someone replaces the batteries. Granted, the person who makes the modificaion is not likely to accidently attach a 9 V battery, but if the calculator is sold or being used by someone else, who knows.

Just a thought...

Larry

You're right, but...
*Message #8 Posted by **Jeremy** on 30 Mar 2003, 9:04 p.m.,*
in response to message #7 by Larry Corrado USA (WI)

when you sell it, you include directions and a good battery pack, you've done all you can do.

If I were to sell such a modified machine, I would detail exactly what I did, and the buyer would be made aware of it from the getgo. If he/she is not smart enough to heed my warnings, then he deserves to hear his newly purchased calculator go BZZZT! (with the whisp of smoke soon following)

Still, maybe it would be a good idea to put a label inside the battery compartment giving a warning not to attach a 9V battery... I'll think about it more if I ever decide to sell an HP, hehehe.

-Jeremy

Re: HP-33E batteries

*Message #9 Posted by **David Smith** on 30 Mar 2003, 9:51 p.m.,*

in response to message #1 by Gary Smith

The easiest thing to do is go down to your local Batteries Plus or Batteries Etc and get them to spot weld two AA batteries together. I like to use 1800 maH NiMH cells. They will give you a 15+ hour run time on a full charge.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

ArmorAll (protectant) for HP-97 exterior?
*Message #1 Posted by **Paul Brogger** on 30 Mar 2003, 12:20 p.m.*

Norm (the 34C zealot) inspired me to get back to the one HP LED unit I've got: a beat-up HP-97 that I wasn't sure would work again.

In fact, though, it was the battery pack which was the problem, and after rebuilding it (actually, after stuffing four Radio Shack sub-c's into the plastic housing) and charging for a bit, it works ***wonderfully!***

During the process of cleanup, I used "Armor All" to un-stick the "form feed" button, and to generally clean up and treat the exterior, after using enamel paint thinner to remove some dried-up old tape stickum that was visible in places. The result looks fantastic! While there are certainly a few dings & scratches, the finish looks brand new-ish.

But (only) then I got to wondering -- is a protectant like Armor All really a good idea, long-term? Does anyone have an opinion or relevant experience?

Re: ArmorAll (protectant) for HP-97 exterior?
*Message #2 Posted by **Bill Wiese** on 30 Mar 2003, 1:34 p.m.,*
in response to message #1 by Paul Brogger

Hi... Congrats on your restoral, good show! I don't think the ArmorAll will *hurt* anything in the sense of dissolving plastic, etc.

However it could cause build-up after drying and accrete under the keys, and the keys could stick again.

I don't think it's corrosive, and is prob close to pH neutral since it's used on cars.

I love ArmorAll (and the STP equivalent, Son-of-A-Gun). Good for shoe shines, etc.

ArmorAll and others also offer some tire-shine/wheel gloss compounds that are not the same as

regular ArmorAll. (I'm talking about the clear stuff often used at car washes.) WATCH OUT for this stuff: it's tires/wheels only. Don't use it on seats, dashboards or HP97s!!

Bill Wiese San Jose, CA

Re: ArmorAll (protectant) for HP-97 exterior?
*Message #3 Posted by **Dave Shaffer** on 30 Mar 2003, 7:46 p.m.,*
in response to message #2 by Bill Wiese

As far as I'm concerned, ArmorAll is wonderful stuff. It is basically a re-plasticizer. Any chemists here should step in, but as I understand it, plastic gets "old" when the long-chain hydrocarbon molecules which comprise the stuff break into shorter molecules. ArmorAll helps reverse the process. Basically, it soaks in - I've never seen any evidence of residue, at least on plastic surfaces.

I once got a completely unsolicited compliment at the Sears car shop on how good my 10-year old 1966 Mustang back seat looked after I ArmorAll-ed it.

I learned about it from a friend of mine who used it on his airplane consoles. If it's safe there, it's probably OK for your calculators!

Re: ArmorAll (protectant) for HP-97 exterior?
*Message #4 Posted by **db(martinez,california)** on 30 Mar 2003, 7:52 p.m.,*
in response to message #2 by Bill Wiese

just a question - i'm no chemist: back in the 70's, i and others used armor all on vinal dashboards and seats that were old but intact. they softened and got new looking but in a month or two they cracked. this may only be a problem with flexible &/or uv damaged "naugahide" but could it be a problem for calculators?

btw: what's a "nauga" and have they become extinct? you don't see them used in upholstery any more.

naugahide
*Message #5 Posted by **Norm** on 31 Mar 2003, 12:21 a.m.,*
in response to message #4 by db(martinez,california)

Naugahide is carefully trimmed & tanned leather-like hide of the ferocious Nauga-beast. These creatures are found only in the tidal lowlands of the country of Naugandia.

Re: naugahide
*Message #6 Posted by **Richard Garner** on 31 Mar 2003, 9:59 a.m.,*
in response to message #5 by Norm

Naugas are the last true remnance of Dragons on Earth and it takes the tallance of a Dragonslayer to slay one.

The Naugahyde website
*Message #7 Posted by **Norm** on 31 Mar 2003, 3:10 p.m.,*
in response to message #6 by Richard Garner

OK, no more joking around about Naugahide. (Its Naugahyde, not naugahide).

Leave the joking to the company that makes it. They have a website as well as a FAQ list.

Obviously, they wished to have a clever name for a vinyl product.

http://www.naugahyde.com

and now we know the rest of the story
*Message #8 Posted by **paul harvy** on 2 Apr 2003, 1:25 a.m.,*
in response to message #7 by Norm

the 34C zealot

*Message #9 Posted by **Norm** on 31 Mar 2003, 12:29 a.m.,*

in response to message #1 by Paul Brogger

Well here, I am, Norm the 34C zealot.

Just got back from a long day of Sunday doorbelling. Going thru the neighborhoods on my bicycle with suit and tie, and an HP-34C and color xeroxes of HP calculator brochures in my briefcase. I knock on the door...

"howdy ma'am, I'm here to tell you about the life-changing virtues of the RED LED calculator. Have you got any RED LED calculators already in your household?"

* SLAM! *

Next house, different people, same story. Sometimes I wonder if its worth keeping the faith.

Then I get off my bicycle and knock on the door of the Brogger residence. "Howdy Ma'am, I'm here to tell you about the life-changing virtues of the RED LED calculator and how they will save you from headaches and sorrows and bad eyesight of LCD calculators"

"HEY PAUL SOMEBODY AT THE DOOR FOR YOU".

Howdy Sir, have you got any believers in the RED LED calculators in this household?"

"WHY CERTAINLY, I was just trying out some Armor All on my HP-97".

"Ah yes, an older model unit but that one does have RED LED's. I'm here on your doorstep today to declare to the world that it is ONLY the HP-34C that is the one and true RED LED calculator".

"Why JUST WHAT do you think you are saying, I happen to like HP-97 just fine".

"Certainly sir, but please allow me to leave you with a genuine 1979 brochure for the HP-34C, and one of our other 34C zealots will contact you in a month or 2".

"WELL OK".

As an HP-34C zealot, it was a long day of getting the door slammed in my face, but, the marginally goood reception at the Brogger residence allowed me to breathe easy until it all starts over again next weekend.

Re: The 34C zealot strikes again!

*Message #10 Posted by **Paul brogger** on 31 Mar 2003, 9:40 a.m.,*

in response to message #9 by Norm

Norm:

I was going to suggest that you need to get out more often, but now it appears that *you do!* I'm now at a loss for treatment options . . .

(I'm glad you accepted the title in the spirit with which it was granted!)

;^)

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Question on 82120A Batt. Pack
*Message #1 Posted by **Ion Abraham (New Mexico USA)** on 30 Mar 2003, 11:45 a.m.*

Hello,

With apologies in advance for bringing up this hardy perennial yet again, could you folks give me the current scoop on rebuilding a rechargeable battery pack (82120A) for the 41C?

That is, what batteries are currently available that fit the pack, and any other important details about how one goes about doing this.

I have a dead pack that I've had for quite a while, and I ought to get it rebuilt.

Thanks very much,

Ion Abraham Albuquerque, New Mexico

Re: Question on 82120A Batt. Pack
*Message #2 Posted by **Randy** on 30 Mar 2003, 7:35 p.m.,*
in response to message #1 by Ion Abraham (New Mexico USA)

I've recently rebuilt several with 1/3AAA Gold Peak ni-mh cells. I used the 120 mah cells, I understand there are now 160 mah cells available as well. There is room to spare in the pack, I have found a piece of 1/16" x 1/2" double sided foam tape the perfect filler. Cutting the pack open with a single-edged razor blade (Thanks Dave!) will not remove any material and it goes back together with a little plastic solvent cement.

I've been running my 41C now for two months on the first charge and the pack voltage has only dropped about 100mv. I thought the self-discharge rate was higher than that!

I bought my cells from the Battery Station, they are listed here on the Museum site. Total cost per pack was less than $15.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP67 Card Reader
*Message #1 Posted by **Trent Moseley** on 29 Mar 2003, 6:37 p.m.*

I'm new to the Forum and enjoy it very much. Is there any place I can sent my HP67 to have the card reader repaired? I'm not adept at fixing things with small parts.

tm

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

12C on the blink
*Message #1 Posted by **Anand** on 29 Mar 2003, 3:28 p.m.*

Hi

my 12C stopped working after i dropped it (on the carpet). i changed batteries (it has only 1 battery). If i press with my fingers the area around the LCD, the display comes on and it works, but if i release the pressure on the area around the LCD, the screen goes blank.

Can i do anything to fix this?? Everyone i talk to, tell me that the 12c can never break, but mine has gone on the blink after just 2 yrs of use ...

any help will be much appreciated..

Anand

Re: 12C on the blink
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 29 Mar 2003, 5:59 p.m.,*
in response to message #1 by Anand

Hello, Anand;

please, can you tell us what sort of battery does your HP12C use? Is it the one with one single, flat-buttom type battery?

I've repaired some Voyagers (HP10C, 11C, 12C, 15C, 16C) and all of them showed a good capacity to resist to external harm. I could repair almos all of them, except one: an HP11C with a deffective CPU. This one was the donnator of an integrated circuit (IC) used in all earlier Voyagers to scan the keyboard. I used this scan IC in my first HP16C that had two key columns dead. A few months ago I mixed an HP11C with an HP15C and I rebuilt the HP15C with parts of both machine. A true Franken-Voyager. As you may see, these little babes are indeed unbreakable.

About the HP12C. Last year I got one HP12C that had the following symptom: when batteries were inserted one could see randomly blinking lit segments. I opened it - a mid-type with three batteries and one single IC - and resoldered all IC's terminals. Its owner told me it is working fine after about one year.

They are indeed unbreakable.

It seems to me your 12C has a problem related to bad contact in the battery polse. Have you noticed if you press the area closed to battery? The battery lies under the right side of the LCD if you look at the calculator's front side. Maybe you are in fact pressing the batteries contacts instead of the LCD's contacts. If yours is a single-battery type, slightly tighten the battery compartment screws (two little ones you see when removing the battery cover) may bring yours back to normal operation. These two small screws are Phillips-type, and you'll need a small Phillips screwdriver.

I hope you have success.

Luiz C. Vieira - Brazil

my 12C story
*Message #3 Posted by **Ellis Easley** on 30 Mar 2003, 2:39 p.m.,*
in response to message #1 by Anand

I found a 12C in the street on election day 1988. I was waiting for the bus to go to work after voting. I always find interesting things in the gutter and this time I saw a button cell and nearby a couple more. Next I saw the aluminum bezel from the display and then a few feet away, the rest of the calculator! (I knew what it was because my company provided a 16C to use at work.) The plastic under the bezel showed white stress marks over the screw bosses, indicating it must have been run over, I think, but it was not deformed. The battery cover was missing. I scanned the gutter and the pavement nearby looking for the battery cover with no luck. I saw the bus coming a few blocks away and figured I would have to give up. Then a car drove past me and I heard a tiny tinkling sound in the middle of the road - it was the battery cover!

On the bus, I installed the batteries and everything worked except one segment of the display. Later I disassembled the unit (it is the single PCB version) cutting all the heat stakes holding the keyboard together to reseat the LCD and the missing segment began working. Of course, then I had to deal with how to reassemble the unit, but the experience made me an HP calculator fanatic and readied me for the day when I discovered the HP Museum!

Re: my 12C story
*Message #4 Posted by **Larry Corrado, USA (WI)** on 30 Mar 2003, 3:55 p.m.,*
in response to message #3 by Ellis Easley

Ellis:

More than once I've found myself walking down the street, day-dreaming about finding an HP-16 in the gutter. Your story has built up my hopes. Thanks!

Larry

PS, Now about that HP-16 you had at work... :-^

Re: my 12C story
*Message #5 Posted by **Ellis Easley** on 30 Mar 2003, 6:52 p.m.,*
in response to message #4 by Larry Corrado, USA (WI)

That HP16C I left at work, although at the end I don't think there was anyone left who would have missed it! I have wondered what happened to it. But while I was still working there I got my own 16C in the form of a warranty replacement unit from EduCalc. They used to send out catalogs quite frequently and one time on the inside front cover they advertised HP15C's for $35 and 16C's for $30, just the calculators, warranty replacement units - like the 42S's HP Parts sold a few months ago. I tried to order one of each but by the time I called they were out of 15C's.

I just dug up my collection of EduCalc catalogs to refresh my memory. They first show up in catalog #56, Summer 1992. HP11C for $29.95, 15C and 16C for $34.95 (calculators only, with 1 year warranty - at least with the 11C and 15C) and 82240A IR printer complete for 74.95 (because the -B had replaced it for $115.95 [$135 list]). In catalog #57, Fall 1992, they only had the 16C and the 82240A, same prices. I don't remember if I asked about the 11C. I was familiar with the 15C because a co-worker had one. Another co-worker had a 71B and three others had 41C's, although two of them owned the same one serially, which I then became owner of! Around this time Educalc was letting people trade-in their older HP calculators toward an HP48S/SX and then selling the used calculators. I got a 71B with HPIL for $89 and a 41CX, what would now be considered "NIB" down to the pamphlets, for $80. I also got various memory modules, application pacs, HPIL, wand, etc. for the 41 as used or closeout. I ordered an 82240A at the closeout price when I got a 41C IR module and they sent me a -B!

EduCalc was great. I got a few more bargains when Jim Carter had a final closeout of his remaining stock (as reported here - this was several years ago) including another

warranty replacement unit - a 14B, which is a pretty decent little financial calculator, the first Pioneer I owned. I think he was selling them for $5! When the box arrived, I found he had thrown in several EduCalc coffee mugs and a leather HP48 memory card pouch - maybe one day I will be able to afford a card to put in it!

As I recall the trade-in program, I wonder if they were taking in any LED calculators? They were taking 41C's and the 34C came out the same year, I think. I guess I wasn't aware of the LED calculators and didn't think to ask. Thumbing through the catalogs, I see they were selling batteries and chargers for the older units.

Another thing I wonder about the trade-in program - how many people got caught up in the hoopla about the 48, traded in the 41C's and 71B's, and then regretted it?

I looked up the details of the trade-in program in catalog #56 and they actually had two programs: $45 credit for a 19B, or $55 for a 19BII, towards a 95LX; or $45 credit for a 41CV, or $60 for a 41CX or 28S, towards a 48SX ($274.95, $350 list). It doesn't specifically say you can trade-in towards a 48S ($154.95, $199 list). It also says that if you prefer to keep your old machine until the new one arrives, you can send it in later and they will send a refund. All trade-ins had to be in working order with all manuals. In the same catalog #56 the only used calculators they were advertising for sale were 17B ($49.95) and 19B ($79.95) - with manuals and EduCalc 6 month warranty - and the HP75D/9114B disk drive/2225B printer package ($279) with manuals and 30 day warranty (yes, I bit on that one too). Catalog #57 had the same trade-in programs and used calculators plus a page of 71B's both used ($89.95) and new surplus ($159.95), both including HPIL module and 1 year EduCalc guarantee (manuals extra), along with a list of accessories.

By catalog #61, Fall 1993, the 16C's and 82240A's were gone, the trade-in programs were: $45 credit for a 41CV, or $60 for a 41CX or Card Reader, or $50 for a 48S, or $95 for a 48SX towards ... doesn't actually say but it is on the page after the 48G ($134.95, $165 list) and 48GX ($274.95, $350 list), and $200 credit for a 95LX with 1MB RAM towards a 100LX ($719). The used calculators were 28S ($79.95), 48S ($65), 48SX ($129), and 95LX1BM (call for price), and the 71B new/used reduced to $129.95/ $79.95.

Going back a little, catalog #54, Winter 1992, had the same trade-in programs as #56 but the only used equipment advertised was the 75D package and they were still selling 41CX new for $184.95 ($249 list) although it says HP had already discontinued it. Also mentions EduCalc had a separate 41C/71B/HPIL catalog.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

hp-71b installing/removing memory
*Message #1 Posted by **Terry Ingram** on 29 Mar 2003, 2:55 p.m.*

Hello all,

Can someone provide instructions (if any) for preparing the hp-71b to accept 4k or 32k ram memory modules.

I recently inserted a 4k memory module which resulted in a memory reset. I have removed the 4k memory module, and now the 71b seems to be locked. I am unable to turn off the machine.

I am assuming the memory modules were originally supplied with paper instructions for proper use, which I do not have.

Thanks, Terry Ingram

Re: hp-71b installing/removing memory
*Message #2 Posted by **Raymond Del Tondo (Germany)** on 29 Mar 2003, 3:37 p.m.,*
in response to message #1 by Terry Ingram

Hello,

maybe you could try the INIT key combinations (see HP-71B manual), or simply remove the batteries for an hour or so. My experience is that the 71B configures additional RAM w/o any problems, initially as part of main RAM. If the RAM is freed (as PORT memory) it should even work to remove it w/o 'Memory Lost'. Only if the RAM module is configured as part of main memory a removal will result in a memory loss.

Raymond

Re: hp-71b installing/removing memory - resulting with hp-il problems
*Message #3 Posted by **Terry Ingram** on 29 Mar 2003, 8:31 p.m.,*
in response to message #2 by Raymond Del Tondo (Germany)

After removing the batteries, I shorted the battery contacts and the 71b powered up fine.

As your suggestion, I issued FREE PORT(1), before pulling the memory module, and everything worked okay. No memory reset. Upon re-inserting the memory module, the 71b automatically configured the memory as main ram.

Another problem I've noticed during this episode, is now the hp-il module doesn't work. The hp-il module doesn't respond to "CONTROL OFF" or "RESET HPIL" commands.

Any suggestions for the hp-il problem? Are there any way to physically reset the hp-il module?

Thanks for the help, Terry Ingram

Re: hp-71b installing/removing memory - resulting with hp-il problems
*Message #4 Posted by **Raymond Del Tondo (Germany)** on 30 Mar 2003, 8:05 a.m.,*
in response to message #3 by Terry Ingram

Hello,

I'm not a hardware expert, but does your HP-IL module work with other commands, like COPY to/from tape, and does the module show up in the VER$ list?

Maybe pulling it off the machine then reinserting could help, of course while the HP-71 is off:-)

Another idea: Is the loop closed?

Raymond

Re: hp-71b installing/removing memory - resulting with hp-il problems
*Message #5 Posted by **Terry Ingram** on 30 Mar 2003, 11:04 a.m.,*
in response to message #4 by Raymond Del Tondo (Germany)

No, the hp-il doesn't work with any commands at all. Not even the "reset hpil". I've pulled and re-inserted the module, but the operation is still the same.

I've tried the closed loop test as described on page 211 of the hp-il owner's manual, and do not receive either the screen cursor indicated a good module, or the "self test failed" message indicating service is required. The 71b just remains in a frozen state until I press the ON key several times.

The hp-il module is recognized with the VER$ command, "HPIL:1A".

Unless there is a physical way to reset (short contacts?), I think it may be time for a new hp-il module.

Thanks for your help, Terry Ingram

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

old photo with hp logo or name
*Message #1 Posted by **Craig** on 29 Mar 2003, 2:06 p.m.*

Hi. I know this probably isn't the place for this, but I'm looking for old photos (like 40's, 50's) that includes the HP name or logo. they need to be 800x600 or better so I can transfer them to video with good quality. Anyway, thanks for the help.

{moderator repost}

Re: old photo with hp logo or name
*Message #2 Posted by **Vassilis Prevelakis** on 29 Mar 2003, 6:44 p.m.,*
in response to message #1 by Craig

While we are on the subject, can someone with an HP 19C **please** take a close up picture of the hp logo on the decimal dot.

I used to own an 19C and I remember freaking out when I noticed that.

I think that it would also make a worthy addition to the MoHPC web site.

**vp

Re: old photo with hp logo or name
*Message #3 Posted by **Katie Wasserman** on 30 Mar 2003, 12:01 a.m.,*
in response to message #2 by Vassilis Prevelakis

That's a tough picture to take without a really good closeup lens. But here's my best attempt so far with a magnifying glass and a junky digital camera.

http://www.wass.net/pictures/hp-1.JPG

Re: old photo with hp logo or name
*Message #4 Posted by **Wayne Brown** on 30 Mar 2003, 8:44 a.m.,*
in response to message #3 by Katie Wasserman

For a "junky" camera, that's a pretty good shot!

Re: old photo with hp logo or name
*Message #5 Posted by **Katie Wasserman** on 30 Mar 2003, 3:52 p.m.,*
in response to message #4 by Wayne Brown

It's an old 1.3 megapixel Olympus camera. It's the use of a tiny 10x magnifying glass positioned on short price of tubing that allowed me to focus really close to it. The pciture greatly exaggerates the size of the decimal point relative to the digits -- which the camera alone was unable to give a sharp focus on.

"HP" on decimal point
*Message #6 Posted by **Michael F. Coyle** on 30 Mar 2003, 2:20 p.m.,*
in response to message #3 by Katie Wasserman

Are there any other machines that have this feature? Surely that same display must have been used in other machines, the 29C perhaps?

Re: "HP" on decimal point
*Message #7 Posted by **Katie Wasserman** on 30 Mar 2003, 3:45 p.m.,*
in response to message #6 by Michael F. Coyle

Just the HP-10(A). Curiously, one of the 19C's that I have deosn't have the "hp" on it's decimal points. I wonder how many of them they made without it and whether any of the 10's were made without the "hp" too.

Re: "HP" on decimal point
*Message #8 Posted by **Michael Meyer** on 31 Mar 2003, 11:51 p.m.,*
in response to message #7 by Katie Wasserman

Katie,

Half of the 19C displays I have don't have the "hp" decimal point. Fortunately, I used the parts from 4 to make 2 functional 19C's. So, I have a couple of displays like the one you found...

Michael

Re: "HP" on decimal point
*Message #9 Posted by **Katie Wasserman** on 1 Apr 2003, 1:59 a.m.,*
in response to message #8 by Michael Meyer

Michael,

I've got 2 out of 3 19C's with the "HP" on the decimal points and 1 out of 1 HP-10 with the "HP".

The serial number prefixes are:

19C 1803S - has "HP" 1802A - has "HP" 1905S - no

10A 1804S - has "HP"

Could it be that the later model's don't have the "HP"? Perhaps we can collectively figure this out.

-Katie

Re: "HP" on decimal point
*Message #10 Posted by **Gene** on 1 Apr 2003, 7:34 a.m.,*
in response to message #9 by Katie Wasserman

My 19c has a S/N of 1712A and no HP in decimal point.

Re: "HP" on decimal point
*Message #11 Posted by **Massimo Gnerucci (Italy)** on 1 Apr 2003, 12:18 p.m.,*
in response to message #9 by Katie Wasserman

HP-10A 1808S... and HP-19C 1801S... both with "*hp*" on decimal point.

Massimo

Decimal dot of the HP-10
Message #12 Posted by on 1 Apr 2003, 4:18 p.m.,
in response to message #2 by Vassilis Prevelakis

http://pic6.picturetrail.com/VOL174/1018455/1901076/22653601.jpg http://pic6.picturetrail.com/VOL174/1018455/1901076/22653610.jpg http://pic6.picturetrail.com/VOL174/1018455/1901076/22653619.jpg http://pic6.picturetrail.com/VOL174/1018455/1901076/22653614.jpg

Re: Decimal dot of the HP-10
*Message #13 Posted by **Katie** on 1 Apr 2003, 10:28 p.m.,*
in response to message #12 by

Who's lurking out there? (as if I didn't know) Nice Pictures! How did you get that close in and stay in focus?

-Katie

Re: Decimal dot of the HP-10
Message #14 Posted by on 2 Apr 2003, 1:57 a.m.,
in response to message #13 by Katie

<Who's lurking out there? (as if I didn't know)>

It's just another HP-calculator collector.

<How did you get that close in and stay in focus?>

The camera was triggered by a timer and fixed on a microscope.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP 65 - Non functioning Card Reader Engine
*Message #1 Posted by **Bengt Walerud** on 29 Mar 2003, 2:02 p.m.*

Trying to get my old HP 65 in full working condition. It's been stored away a number of years. I've cleaned out the battery compartment and ordered new Ni-Cd batteries to restore the battery pack. I have also opened up the case and checked the Card Reader. One of the screws attaching the motor to the chassie was completely loose and the other partially loose. I reattached these. Now the problem: When inserting a card nothing happens - the motor doesn't run and the display flash "0.00" and gets dark. Pressing "Clx" resets this. What would the next step be in order to fix the Read Reader? I know that the Reader worked before putting the calculator in storage a number of years ago.

{moderator repost}

Re: HP 65 - Non functioning Card Reader Engine
*Message #2 Posted by **David Ramsey** on 30 Mar 2003, 1:07 p.m.,*
in response to message #1 by Bengt Walerud

As it happens, I just finished servicing (gummy wheel) an HP-67 card reader last night... assuming things are similar on the HP-65 card reader:

There 9 (I think) wires that plug into the card reader controller board. They plug into odd litter terminals that protrude vertically from the board. It's easy for these wires to come unplugged!

The first check would be to make sure the red and black wires from the card reader motor are securely plugged in. On the 67 card reader, the read and black power leads from the batter/AC are right next to the card reader motor leads, and the black leads from each are adjacent (from the top of the controller board it's power red, power black, card reader black, card reader red).

If that's not it, it could be a blown controller board or a problem with the little switch the card pressed to activate the motor. The latter consists of a tiny nylon ball that presses copper fingers onto a contact.

HP Forum Archive 11

[Return to Index | Top of Index]

Wow. Another HP at $510 and counting!
*Message #1 Posted by **Gene** on 29 Mar 2003, 11:16 a.m.*

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3014764203&category=11713

I mean, I like the 41CX too, but ...

Re: Wow. Another HP at $510 and counting!
*Message #2 Posted by **Raymond Del Tondo (Germany)** on 29 Mar 2003, 3:41 p.m.,*
in response to message #1 by Gene

Sometimes it's crazy. The seller drives a web site (classiccalculators.com) where you can purchase a NOS 41CX from the very same stock for much less...

Raymond

Re: Wow. Another HP at $510 and counting!
*Message #3 Posted by **R Lion** on 29 Mar 2003, 3:58 p.m.,*
in response to message #2 by Raymond Del Tondo (Germany)

...although the 41cx is currently out of stock there, Raymond, this machine does not worth that amount of money (IMO).

Raul

Re: Wow. Another HP at $510 and counting!
*Message #4 Posted by **Raymond Del Tondo (Germany)** on 29 Mar 2003, 5:33 p.m.,*
in response to message #3 by R Lion

Hi Raul,

it depends: If it were the only NOS 41CX, things would be different. But AFAIK this (and maybe other) stocks consisted of hundreds of NOS units, which may relativate it.

However, back then in the early eighties when I bought my first NIB 41CX (fullnut) I think I paid a similar price.

Regards,

Raymond

Re: Wow. Another HP at $510 and counting!
*Message #5 Posted by **Chan Tran** on 29 Mar 2003, 9:00 p.m.,*
in response to message #4 by Raymond Del Tondo (Germany)

Both the C and CV were introduced at $350. I don't think that the CX was ever sold new for $500.

Carly is right, at $510
*Message #6 Posted by **Norm** on 30 Mar 2003, 2:54 a.m.,*
in response to message #5 by Chan Tran

Carly is right, at $510 a calculator, there is no money to be made in this business. Everybody should use personal PC's instead, so that HP does not have to build stuff like that.

Re: Wow. Another HP at $510 and counting!
*Message #7 Posted by **Raymond Del Tondo (Germany)** on 30 Mar 2003, 8:15 a.m.,*
in response to message #5 by Chan Tran

When it was introduced, the HP-41CV was sold for about 900 DM here in Germany, which is approx. 450 Euros.

At that time, I bought my first 41C with Quad mem module for exactly 735 DM, which is approx. 367 Euros, and it was a discount price then. Remember that HP calculator prices were/are higher in Germany than in the USA.

I don't recall the exact price for the CX, because I made a trade-in for my C with some accessories, but it was comparable to the CV when it as new.

Raymond

Re: Wow. Another HP at $510 and counting!
*Message #8 Posted by **Ellis Easley** on 30 Mar 2003, 12:22 p.m.,*
in response to message #7 by Raymond Del Tondo (Germany)

When I studied German in high school in the early 1970's, I think the exchange rate was about 4DM to 1USD. If it is now about 2DM to 1Euro to ~1USD, maybe in the 1980's it was around 2.5DM to 1USD which would make 900DM close to 350USD.

Re: Wow. Another HP at $510 and counting!
*Message #9 Posted by **Classic Calculators** on 30 Mar 2003, 3:56 a.m.,*
in response to message #2 by Raymond Del Tondo (Germany)

Just to make a clarification. Neither I nor my company Classic Calculators has EVER sold any HP 41CX units on E Bay. The seller of this unit is NOT me and is NOT associated with Classic Calculators. There are apparently quite a few different people with access to this batch of unused old stock calculators.

Classic Calculators has only ever sold these units from our web site at a fixed price (Aprox $399 inc worldwide shipping) and with a 30 day money back guarantee. We are currently out of stock having sold a significant number although I kept a few units back for any possible service or support problems our customers might have.

I have had a few people come to me after buying from other sellers on e bay asking for

support or service but I have had to explain that we are NOT associated with anyone selling these units on EBAY and thus cant provide free support on their purchases!

Our success in selling these units has been communicated to HP (We are an official HP calculator dealer in the UK)with the suggestion that there IS obviously a market for this sort of high quality product at a premium price!

Laurence Carr, www.classiccalculators.com

Re: Wow. Another HP at $510 and counting!
*Message #10 Posted by **Jürgen (CH)** on 30 Mar 2003, 4:44 p.m.,*
in response to message #9 by Classic Calculators

> Our success in selling these units has been communicated to HP
> (We are an official HP calculator dealer in the UK)with the suggestion
> that there IS obviously a market for this sort of high quality product at a premium price!

Thank you much for showing HP the right direction. Please, insist!!!

Perhaps we should start collecting signatures to support your suggestion...

Regards, Jürgen

Re: Wow. Another HP at $510 and counting!
*Message #11 Posted by **Raymond Del Tondo (Germany)** on 30 Mar 2003, 5:00 p.m.,*
in response to message #9 by Classic Calculators

Hello Mr Carr,

I sent you a mail this evening. Unfortunately, it seems to be sent three times... Sorry for the inconvenience.

Regards,

Raymond Del Tondo

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

$510 and counting
*Message #1 Posted by **Gene** on 29 Mar 2003, 10:53 a.m.*

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3014408857&category=11713

Wow.

Re: $510 and counting
*Message #2 Posted by **hugh** on 29 Mar 2003, 11:38 a.m.,*
in response to message #1 by Gene

what bugs me is the seller has no feedback. that's not to cast aspersions on this seller, but let me tell you a story.

last year, i bid around $450 for a supposedly mint hp65 box, manuals everything. there's no way im sending that kind of cash to a seller ive never dealt with before. this seller was based some miles away so i arranged to collect and pay cash. the seller mysteriously disappeared on learning this making a succession of excuses.

these high prices will attract now more and more frauds. beware.

Re: $510 and counting
*Message #3 Posted by **Raymond Del Tondo (Germany)** on 29 Mar 2003, 3:46 p.m.,*
in response to message #2 by hugh

AFAIK the seller (december...) is well known for the NOS 41CX's. I have one of these units, and it's really NEW old stock. Only the box has some shelf wear.

Raymond

Ooops, wrong thread;-)
*Message #4 Posted by **Raymond Del Tondo (Germany)** on 29 Mar 2003, 5:39 p.m.,*
in response to message #3 by Raymond Del Tondo (Germany)

I mixed up threads because the price of the 41CX and the HP-65 was both $510...

Sorry.

Raymond

Re: $510 and counting
*Message #5 Posted by **David Smith** on 29 Mar 2003, 4:53 p.m.,*
in response to message #1 by Gene

Ahh, I was wondering where Mr Oil has been lately. For a while there he was placing some rather outrageous bids on some HP calculators that were not in the best of condition.

But nice fully accessorized HP65 units do regularly fetch in the $375-$400 range. Add in the Keynotes, etc and you are not that far off from being reasonable at $500. It does look like the label corners have been peeled back at one time (reader rebulit?).

Re: $510 and counting
*Message #6 Posted by **Jürgen (CH)** on 30 Mar 2003, 4:37 p.m.,*
in response to message #5 by David Smith

Mr Oil was not lucky this time; out of practice?!. I've got my HP-65 (complete, with a terrific serial no.) for free :-)))

But I must admit: if I would have 600 bucks left at the end of the month, I probably would spend it for HP calcs ;-)

Have a nice week, Jürgen

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Nasty "Near Perfect Condition" 48SX
*Message #1 Posted by **Lane** on 29 Mar 2003, 8:01 a.m.*

I was wondering if anyone here has had a bad experience buying an HP calculator on Ebay.

I bought a 48SX that was reportedly in "near perfect condition" that, upon receiving it yesterday, looks like it sat in a vat of jelly for a few days. It has about 20 keys that don't click properly because of whatever goo is underneath them. And of course the best part is, it doesn't even turn on! I have emailed the seller letting him know I want my money back but of course he has not yet responded. Other than telling him to "pucker up" and kiss his 100% good feedback rating goodbye, does anyone have any other advice for me?

eBay Advice (and an eBay story of mine)
*Message #2 Posted by **Jeremy** on 29 Mar 2003, 8:24 a.m.,*
in response to message #1 by Lane

1. Don't lose your cool or it will not work out well. 2. Keep on him with an email every day until he responds 3. If he doesn't respond in a week or so, report him to eBay. and see what THEY can do about him. One bad feedback is not career threatening, but if you report him to eBay and THEY take action, they could suspend him and make him start from scratch. THAT is career-threatening.

There are people who claim their items are near mint and work 100% just by looking at them. I bought a calc from just such a guy. (A Canon 5-function Palmtronic) The damn thing had exploded batteries in the compartment. Even after I cleaned all that crap up, it didn't work. I didn't see any way to get it apart without making it obvious I had it apart, so I just complained to the guy. I asked him how he could guaruntee that it works '100%' without even turning the ! @#$% thing on??!! The guy was so rude it was unbelievable. He explained that he got these things by the hundred and just to send it back and he would refund my money. The guy couldn't be bothered to actually take 1 minute to check the item he was selling. He also told me not to bid on any of his auctions in the future. Apparently, I was a bad customer because I complained about an item that didn't work. He also waited a week after receiving payment to ship.

All through his insults and misbehavior, I kept my cool. My plan was to keep my cool until I got my money back, then give him the negative feedback. But he wrote me an email before he sent the money back apolgizing for his rudeness and offered to keep his eyes peeled for a calculator I wanted. Incidentally, he is also one of those sellers that doesn't give feedback to his buyers until they give him feedback. So I decided I would wait 89.9 days before leaving his feedback to avoid the retaliatory feedback. But I softened up a bit after his apology. Then a week later, he left positive feedback for me even though I was "obsessive-compulsive about my $10 item" So I figured he did stand by his guaruntee, and although that doesn't excuse his rudeness, I would overlook that small detail.

So play it cool and follow the proper channels. If that doesn't work, (give eBay time to respond) leave him a negative feedback, but with no trace of anger or malice. You lose credibility that way. If you just state facts, people will see that you're not angry and will be much more likely to believe you.

If worst comes to worst, I bet it wouldn't be too bad to fix. If you search the HP48 sites, there is one with directions on how to disassemble a 48G (basically the same as yours) without any outward evidence of having done so. It is probably just a matter of taking it apart and cleaning the Coke off of the contacts with alcohol.

If it comes to that point, let me know and I will do my best to find that link for you.

-Jeremy

P.S. - I will take this opportunity to gripe again that HPs are no longer put together with screws... :(

Re: eBay Advice (and an eBay story of mine)
*Message #3 Posted by **Chan Tran** on 29 Mar 2003, 8:57 p.m.,*
in response to message #2 by Jeremy

I know that the 48 can be taken apart. But it was not designed to be taken apart. So although you can, taking the 48 apart is difficult and can damage to the calculator

Re: eBay Advice (and an eBay story of mine)
*Message #4 Posted by **Lane** on 30 Mar 2003, 12:39 p.m.,*
in response to message #3 by Chan Tran

I am happy to report that the seller has already refunded my money. Well, he didn't refund the shipping but I'm hardly interested in fighting over that. Thanks for your help Jeremy and Chan Tran. He did tell me to keep the calculator. So, I guess it would only be smart to get it in someone's hands who could fix it. Or, I could fix it myself with Jeremy's help of course. ;O) Now that I have nothing to lose, it seems to be an option.

Lane

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Even More Uncredited MoHPC Pictures on EBAY
*Message #1 Posted by **Spice_Man** on 29 Mar 2003, 7:26 a.m.*

HP 11C on EBay with Uncredited MoHPC Pics!

Spicey

It's not COMPLETELY uncredited...
*Message #2 Posted by **Jeremy** on 29 Mar 2003, 8:32 a.m.,*
in response to message #1 by Spice_Man

It does have the 'MoHPC' logo in the lower left of the field.

By the way, I don't think many of us are shocked that people are doing that. The pix of these calcs on this site are great pictures of excellent samples of the breed. If I were selling a mint vintage HP, I would ask for Dave's permission to use his pic, along with a note that the pic is from MoHPC and that the pic is not the actual one I'm selling. I bet he would grant permission, too.

In the future, I think that if I see that, I will just report it to Dave and let him take whatever action he thinks is necessary. He seems like a laid-back type of guy...

There is a owner of a watch forum I frequent that puts his emblem right on the picture. He manages to place it such that it can't be easily cropped out, but usually doesn't interfere too much with the picture. It does interfere a bit though. His logo suggests that if the guy was willing to steal his picture, he was probably also willing to steal the watch he's selling... ;) A nice touch.

-Jeremy

Re: It's not COMPLETELY uncredited...
*Message #3 Posted by **George** on 29 Mar 2003, 10:06 a.m.,*
in response to message #2 by Jeremy

Only the angled view has the MoHPC on the picture. But the front view that everyone is looking at doesn't have the "stamp". I think these type auctions are VERY misleading, especially to Ebay newcomers.

Re: It's not COMPLETELY uncredited...
*Message #4 Posted by **Wayne Brown** on 30 Mar 2003, 9:07 a.m.,*
in response to message #3 by George

I wonder if there might be a way to embed a "time bomb" in the image somehow, perhaps with an animated GIF... so that if the picture isn't updated by a top-secret program running on Dave's site at least once every 24 hours, it would display "This picture was stolen from MoHPC!!!" in big bold letters across the image. :-)

(See http://ars.userfriendly.org/cartoons/?id=20030324&mode=classic for an example of a GIF that changes automatically after a set time period, in this case 25 seconds. It's actually a part of the image, because if you download a copy to your own PC, it still works even without a connection to the Web site.)

Re: It's not COMPLETELY uncredited...
*Message #5 Posted by **Spice_Man** on 29 Mar 2003, 5:09 p.m.,*
in response to message #2 by Jeremy

The biggest problem I had with this ad (aside from the fact that the pictures were uncredited) was that the seller failed to mention that these are not pictures of the actual item.

The seller says item is "near mint" yet shows pictures of a "mint" unit. That could be a big problem for the buyer, if he/she expected to receive a unit that looked like the one pictured.

Spicey

You're right, and it's a shame. (NM)
*Message #6 Posted by **Jeremy** on 30 Mar 2003, 2:09 a.m.,*
in response to message #5 by Spice_Man

-

Thanks

*Message #7 Posted by **Dave Hicks** on 30 Mar 2003, 3:10 p.m.,*

in response to message #1 by Spice_Man

He has added something now.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Problem Solved
*Message #1 Posted by **Jack Stafford** on 29 Mar 2003, 12:28 a.m.*

Several weeks ago I posted a question refering to a problem of getting double or multiple digits per keypress on my HP-12C.

Responses suggested I try new batteries and I am very happy to report that solved the problem.

Thank you Dave and forum members for this interesting, friendly, and very helpful resource.

Jack :)

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

I picked up my 32SII today! Joy.
*Message #1 Posted by **Jeremy** on 28 Mar 2003, 9:21 p.m.*

I just got back from the Post Office to pick this up. There are some great things about it and some others that are not so great.

GREAT THINGS: 1. Nice keyboard layout 2. Conversion features are so easy and accessible! Nice. 3. Easy to read dot-matrix display

YUCKY THINGS: 1. Viewing angle on display is a bit finnicky. compared to my 48G, you have to get it right. Fortunately, most of the time it just happens. Maybe they knew what they were doing after all... 2. No manual. Can anyone help me with this? Maybe lend me yours to photocopy and return to you? Possibly send me an electronic copy or a link to where I might find one? I checked HPs site, and they don't have it in English; only Spanish and some other language. (That is part of how I got it for the bargain price of $130.) 3. The case is not held together with screws. After I got my hp 45, I was under the impression that HPs were well built and meant to be serviced, if necessary. Then I got my 48G. No screws, and reading articles about having to slice through plastic posts to take it apart without bending the aluminum front panel was disappointing. Now, I have the 32SII, and it is the same story. A snap-together chassis, and if you haven't had one apart before, you will have to guess as to how to do it without damaging things.

I can't be sure of anything at this point, but I think that all of my future HPs will be older LED models. When I was working on my HP 45, I really appreciated how nicely everything was made and how easy it was to get to things. I'm afraid that is not so with the newer models. :(

In the meantime, fear not! I will give you more impressions as I learn more about it. I'm sure you're all waiting with baited breath, right? ;)

-Jeremy

Re: I picked up my 32SII today! Joy.
*Message #2 Posted by **John Cadick** on 29 Mar 2003, 7:48 a.m.,*
in response to message #1 by Jeremy

Manual is on Ebay for $25 buy it now.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3015869872&category=11713

John

Re: I picked up my 32SII today! Joy.
*Message #3 Posted by **David Smith** on 29 Mar 2003, 4:58 p.m.,*
in response to message #2 by John Cadick

I have purchased a few different manuals from the Ebay seller that you mentioned and they were brand new in the shrink wrap and rather reasonably priced.

older LED classics more pleasant
*Message #4 Posted by **Norm** on 30 Mar 2003, 2:44 a.m.,*
in response to message #3 by David Smith

Like the other guy said, the LED classics are more pleasant and easy to work with. You have to own a few of the new ones as well as a few classics, for comparison purposes. I've been comparing 34C to 32S and 32Sii to see just how exactly the keystrokes are different to do things. How is the panel different. Then you start to see where the mistakes were made on the newer "cereal box" models.

By comparing them, you can see that the earlier units were really brilliantly and individualistically prepared, w/o the foul smell of a bureaucracy. And that is why they are so endearing. I made a grand sweeping entrance to this HP Museum chat board by declaring the corporation should be making the 34C EXACTLY as it was before, factory new, sold as such to those with wit & wisdom enough to buy it. No, I don't mean to discourage those who want a 41C or a _____ or a graphing calculator, but I say the market for such a charming thing as a 34C is still there to this day.

And though that idea may seem unreasonable, this other guy comparing 32Sii to the older units may see where I am coming from.

32sii contrast/viewing angle
*Message #5 Posted by **Dan M** on 29 Mar 2003, 7:58 a.m.,*
in response to message #1 by Jeremy

hold down "on" and then press "+" or "-" to change contrast/viewing angle.

Enjoy your new calc, but try to get a manual!

Even though its not an LED display, you should try the 41C/CV/CX. They are very nice calculators. Get the CX if you have a chance.

Dan M

Re: I picked up my 32SII today! Joy.
*Message #6 Posted by **John Cadick** on 29 Mar 2003, 8:02 a.m.,*
in response to message #1 by Jeremy

Jeremy:

I tried to email a pdf of the manual (8.55 MB) and your email server rejected it because it is too big. Any thoughts?

John

Could you please send it to...
*Message #7 Posted by **Jeremy** on 29 Mar 2003, 8:43 a.m.,*
in response to message #6 by John Cadick

...my work address? I have sent it to your email. (Not that I don't trust the rest of you, but I don't want that address to be harvested for SPAM by unwelcome visitors)

I would have just bought a manual on eBay, but I can't really afford it right now. (spent the money on too many HPs, hehehehe)

Thanks a lot for your efforts.

-Jeremy

Re: I picked up my 32SII today! Joy.
*Message #8 Posted by **lokhin** on 29 Mar 2003, 10:31 a.m.,*
in response to message #6 by John Cadick

may i have a copy too? i have contacted you through email.

thanks

Re: I picked up my 32SII today! Joy.
*Message #9 Posted by **John Cadick** on 29 Mar 2003, 8:02 a.m.,*
in response to message #1 by Jeremy

Jeremy:

I tried to email a pdf of the manual (8.55 MB) and your email server rejected it because it is too big. Any thoughts?

John

Could you please send it to...
*Message #10 Posted by **Jeremy** on 29 Mar 2003, 8:43 a.m.,*
in response to message #9 by John Cadick

...my work address? I have sent it to your email. (Not that I don't trust the rest of you, but I don't want that address to be harvested for SPAM by unwelcome visitors)

I would have just bought a manual on eBay, but I can't really afford it right now. (spent the money on too many HPs, hehehehe)

Thanks a lot for your efforts.

-Jeremy

Re: I picked up my 32SII today! Joy.

*Message #11 Posted by **lokhin** on 29 Mar 2003, 10:31 a.m.,*

in response to message #9 by John Cadick

may i have a copy too? i have contacted you through email.

thanks

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-41CX Issues!
*Message #1 Posted by **Jeff** on 28 Mar 2003, 7:25 p.m.*

I have recently been getting a problem where the calc starts displaying NULL or a program line while not being in program mode. Everything can be fine but if you tap on the calc it goes into this behavior. It seems to be in some program that it cannot get out of. Any thoughts as to why this might be happening? Please let me know, Jeff

Re: HP-41CX Issues!
*Message #2 Posted by **Richard Garner** on 28 Mar 2003, 10:18 p.m.,*
in response to message #1 by Jeff

Your question does not give enough detail for me to understand exactly what is going on, but all 41 calculators will display NULL if a key is held down for more than a couple of seconds no matter what mode you have it in. If you are not holding the key down to long, it could be that the keys are getting weak or sticking.

Re: HP-41CX Issues!
*Message #3 Posted by **JD** on 29 Mar 2003, 8:41 a.m.,*
in response to message #2 by Richard Garner

I took the rubber feet off the bottom and one of the screws was loose by about a quarter turn. This seems to have resolved the issues. Now when I tap the sides of the calc, it does not go berserk. It is hard to believe that the calc is so sensitive to being tight like this. The calc is a Fullnut by the way.

Re: HP-41CX Issues!

*Message #4 Posted by **David Smith** on 29 Mar 2003, 5:02 p.m.,*

in response to message #3 by JD

The machine depends upon the four screws being properly tightened to hold all the pressure conatcts between the CPU and battery contacts to the keyboard. 95+ percent off all HP41 failures are related to contact problems (either dirt, corrosion, or broken screw posts/seats).

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Ebay price of this HP-35
*Message #1 Posted by **George** on 28 Mar 2003, 6:58 p.m.*

If I knew how, I would provide a link. Since I don't I'll just list the address. Take a look at the price this hp-35 is selling for. This one's out of my price range!

http://cgi.ebay.com/ebaymotors/ws/eBayISAPI.dll?ViewItem&item=2408079414&category=26432

Nice. (NM)
*Message #2 Posted by **Jeremy** on 28 Mar 2003, 8:50 p.m.,*
in response to message #1 by George

-

Re: Ebay price of this HP-35
*Message #3 Posted by **Patrick** on 29 Mar 2003, 12:19 a.m.,*
in response to message #1 by George

Observations 1. I don't think it is a version 1 HP-35. 2. The reserve isn't met yet.

Re: Ebay price of this HP-35
*Message #4 Posted by **Vassilis Prevelakis** on 29 Mar 2003, 4:00 a.m.,*
in response to message #1 by George

Its simple, you just type

```
[url:
```

before the URL and

```
]
```

at the end of the URL. E.g.

`[url:http://www.hpmuseum.org/]`

Here is your link

http://cgi.ebay.com/ebaymotors/ws/eBayISAPI.dll?ViewItem&item=2408079414&category=26432

**vp

Thanks!
*Message #5 Posted by **George** on 29 Mar 2003, 9:53 a.m.,*
in response to message #4 by Vassilis Prevelakis

I'll give it a try next time.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-82240B Infrared Printer
*Message #1 Posted by **Jeff** on 28 Mar 2003, 6:05 p.m.*

I recently picked up a used Infrared Printer and the switch is all the way on dark but the unit still prints light. Is there anything that can be done to restore the print color to the way it was originally? I realize that there is Blue and Black paper but the color seems very light. I also have new paper rolls. Any suggestions would be appreciated.

Re: HP-82240B Infrared Printer
*Message #2 Posted by **David Smith** on 29 Mar 2003, 5:04 p.m.,*
in response to message #1 by Jeff

Make sure your batteries are good and the battery contacts are clean. Also try the NCR thermal paper available at any major office supply store.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Nut Processor Clock Speed?
*Message #1 Posted by **Steve** on 28 Mar 2003, 4:36 p.m.*

I've looked all over but I can't seem to find the clock speed of the Nut CPU used in the 41C/CV/CX. I wrote a program for the 41 and then entered it into the 42S to try it there. I was amazed at how much faster it ran on the 42s (Lewis @ 1MHz), I'm guessing at least 2X faster. Thanks,

Steve

Re: Nut Processor Clock Speed?
*Message #2 Posted by **HrastProgrammer** on 29 Mar 2003, 1:30 a.m.,*
in response to message #1 by Steve

Approx. 360-380kHz

Re: Nut Processor Clock Speed?
*Message #3 Posted by **Jonathan Busby** on 30 Mar 2003, 5:53 a.m.,*
in response to message #2 by HrastProgrammer

While the frequencies cited by HrastProgrammer are correct (of course), they really don't reflect the true speed of the processor. The Nut CPU is bit serial, i.e. it operates on one bit of data at a time. The time required to operate on one such bit is called a "bit time" (surprise ;) and corresponds to a clock cycle. The key piece of information though is that each instruction takes 56 bit times to complete - a so called "word time" . If we divide the maximum clock frequency by the cycles per word time we get :

378000 / 56 = 6750

That's 6750 instructions per second. In comparison, the 1 MHz Saturn core in the Lewis IC can execute a maximum of 333333 instruction per second. That's almost *50 times faster* . So, now you see the real reason for the dramatic speedup of your code. :)

The information about the 41 here is derived from that contained in the 41 service manual.

Hopefully it's accurate.

Jonathan Busby - jdb@SNMAPOhouston.rr.com

Remove the random permutation of "NOSPAM" before replying.

Re: Nut Processor Clock Speed?
*Message #4 Posted by **Kim** on 30 Mar 2003, 8:55 a.m.,*
in response to message #3 by Jonathan Busby

Is that really true.

It's easy to get agreement that your math on the 41 is good.

How about this (suggestion - maybe this dialogue would help answer)

42S is a Saturn based CPU with 64bit ACC registers

The bus is 4 bit wide (as opposed to 41 serial).

Wouldn't it take the CPU at least 16 cycles to load the accumulator and therefore make the suggested 333333 wrong. Even assuming that the clockspeed and the CPU processing speed is the same might prove to be inaccurate.

Kim

Re: Nut Processor Clock Speed?
*Message #5 Posted by **Jonathan Busby** on 30 Mar 2003, 11:09 a.m.,*
in response to message #4 by Kim

You said :

"42S is a Saturn based CPU with 64bit ACC registers"

Well, the Saturn doesn't have "accumulator" registers per se, but it has 4 64-bit general purpose registers : A, B, C, and D. These can be used interchangeably with most instructions but there are exceptions with respect to eg. memory access and loading of immediate data. Also, the D register is the most restrictive when it comes

to its use: It will only interoperate with the C register.

"The bus is 4 bit wide (as opposed to 41 serial)."

While this is true for all Saturn processors, there is one notable exception from a performance perspective: In Yorke based Saturns (used in the 48G series and its siblings) the ALU operates at twice the speed of the external CPU clock from what I've seen. This gives the processor an effective 8-bit internal data bus.

"Wouldn't it take the CPU at least 16 cycles to load the accumulator and therefore make the suggested 333333 wrong."

You're thinking in terms of the 41's single cycle architecture, where "cycle" here is the 41 word time. The single cycle architecture is one of the simplest CPU designs and as you probably guessed (or knew), this is an architecture in which most or all instructions take one clock cycle to execute. In contrast, the Saturn has a multi-cycle design where the instruction execution times vary depending on what each instruction does. In general, the time it takes a Saturn instruction to execute is roughly proportional to how many nibbles of data it has to process. Now, admittedly the speedup factor I gave was a bit contrived as I was basing this on one of the Saturn's fastest instructions, namely P=P+1 (which takes 3 cycles). In real world code that actually accomplishes something useful you'll have a mix of instructions with varying execution times. A good guess for the average execution time of an instruction is 16 cycles, which gives you a speedup factor of around 10. But, this is in no way scientific since it really depends on what the currently executing routine is trying to accomplish.

"Even assuming that the clock speed and the CPU processing speed is the same might prove to be inaccurate."

The clock speed of the Lewis, like other Saturn based ICs, only varies to a very minor degree depending on temperature. It's usually around 1 MHz, although it can be increased to 2 MHz at the expense of battery life. I don't know what you mean by "CPU processing speed". How is that suppose to change? As far as I know the architecture isn't self modifying. ;) (a self modifying Saturn on an FPGA, now that's a thought ;)

Jonathan Busby - jdb@SNMAPOhouston.rr.com

Remove the random permutation of "NOSPAM" before replying.

Re: Nut Processor Clock Speed?

*Message #6 Posted by **Christoph Giesselink** on 31 Mar 2003, 12:30 p.m.,*
in response to message #5 by Jonathan Busby

"While this is true for all Saturn processors, there is one notable exception from a performance perspective: In Yorke based Saturns (used in the 48G series and its siblings) the ALU operates at twice the speed of the external CPU clock from what I've seen. This gives the processor an effective 8-bit internal data bus."

I don't know what your're really talking about, but the internal multiplexed address/data bus is always 4 bit wide. The chips with external memory controllers using an 8 bit data bus to connect with standard memory chips (ROM's, RAM's) like Lewis, Clarke and Yorke have also different timing. The timing of each opcode differs first if the memory storage device is connected to the internal 4 bit bus or 2nd connected over the 8 bit data interface. When accessing devices over the external bus the internal strobe signal is sometimes "streched", causing some extra CPU cycles. Finally on external devices we have different timing on access to even or odd addresses. That's easy to explain:

1) Even

```
D0=(5)   #00000
A=DAT0   B
```

will activate the external data bus once to read the content of one 8 bit cell of the external device. The internal CPU logic will transcode it into the internal 4 bit address/data bus.

2) Odd

```
D0=(5)   #00001
A=DAT0   B
```

will activate the external data bus twice to read the content of two 8 bit cells of the external device, because every wanted nibble is in different memory cells. Especially you see this when you're writing on odd addresses. You have read cycles between the write cycles. That's clear, when I only want to change 4 bit of a for example 8 bit RAM cell, I have to read the complete 8 bit, exchange or replace the wanted 4 bit and write the 8 bit back. But the internal chip logic is so clever that when writing 8 bit to an even address, that there's no read cycle necessary. You can check this behavior on a HP48GX without opening the case.

You only have to play around with the bank switcher FF with a write protected card in slot 2.

So back to the problem above. In many times we can't tell about the true speed of code execution, because we don't know if the code is located on an odd or even address, especially when running in RAM.

Now also back to the HP42S with it's Lewis chip. The Lewis chip has a mask programmable 64KB ROM inside connected with the internal 4 bit data bus, so we haven't the problems above in general. We have always the shortest timing. The problems only occur when you access the RAM or language ROM of the HP17B/17BII or running the Lewis CPU in EPROM (development) mode (using an external memory controller).

BTW, Emu48 use the timings of the original Saturn CPU using the internal data bus. Because of this, the timing isn't very accurate, the additional strobe "stretch" and the different timing accessing on even/odd addresses are ignored.

Christoph Giesselink

Re: Nut Processor Clock Speed?
*Message #7 Posted by **Jonathan Busby** on 31 Mar 2003, 5:20 p.m.,*
in response to message #6 by Christoph Giesselink

You said:

"I don't know what your're really talking about, but the internal multiplexed address/data bus is always 4 bit wide."

Notice that I was talking about the data bus internal to the *Saturn CPU core itself* not the Saturn data bus internal to the Yorke IC but external to the processor core.

Also, notice that I used "effective" in connection with "8-bit". I wasn't saying that the data bus was actually 8-bit, just that it appears to be as the ALU can process 8 bits in one clock cycle. This can be seen if we take the instruction A=A+C W as an example. Not taking into account memory access time, this instruction takes 19 cycles on the Clarke but 11 cycles on the Yorke. If we factor out the fetch/decode time, then we get 16 and 8 cycles respectively. So, the Yorke execution time is twice as fast. This holds for most instructions. Now, I'm not sure if the ALU is really 8 bits wide or if it just runs at twice the speed of the external CPU clock, but the latter would seem

the logical choice since it's easier to implement and has a lower cost in terms of logic resources.

The information presented above is not the only evidence backing the claim put forward here. Dave Arnett (for those not in the know, he was the chief hardware engineer for the 48G/GX) said himself that instruction execution times had been improved in the Yorke.

"When accessing devices over the external bus the internal strobe signal is sometimes "streched", causing some extra CPU cycles"

I haven't read this anywhere, but it's implied because if the memory controller can't accept/deliver a nibble of data in one clock cycle (due to reasons you cited) then it will drive the WAIT line high causing the CPU to hold the NSTR (strobe) line low for longer than one clock cycle. But, this still doesn't explain why you have quarter cycles in the timing of some instructions.

Jonathan Busby - jdb@SNMAPOhouston.rr.com

Remove the random permutation of "NOSPAM" before replying.

Re: Nut Processor Clock Speed?

*Message #8 Posted by **Christoph Giesselink** on 31 Mar 2003, 6:11 p.m., in response to message #7 by Jonathan Busby*

You said:

"The information presented above is not the only evidence backing the claim put forward here. Dave Arnett (for those not in the know, he was the chief hardware engineer for the 48G/GX) said himself that instruction execution times had been improved in the Yorke."

But all opcodes with timing information I saw, comparing CPU cycles (Saturn, Clarke and Yorke) in tone and beeper routines of the HP48G(X), the Yorke implemtation always need more CPU cycles (~30%) for each opcode then the others. And I don't think that this timinig information is wrong, because all constants in the beeper formulars base on these opcode timings and are used by the real calculator. BTW these timing information differs also from Dan and Mika's GX cycle table. This

corresponds also with the speed difference between 48SX and 48GX, with nearly double clock rate (2Mhz -> 3.7Mhz) we get about 60% more speed.

But I know at least 7 opcodes where the cycle time changed from the 1LK7 core to the actual core (in 1LU7, 1LR2, 1LR3, 1LT8).

"I haven't read this anywhere, but it's implied because if the memory controller can't accept/deliver a nibble of data in one clock cycle (due to reasons you cited) then it will drive the WAIT line high causing the CPU to hold the NSTR (strobe) line low for longer than one clock cycle. But, this still doesn't explain why you have quarter cycles in the timing of some instructions."

Why not, we have to differ about "CPU frequency" and "strobe rate". The 1Mhz we are talking about at the HP42S is the "strobe rate", the "CPU frequency" is (RATE+1)*524288Hz = (7+1)*524288Hz = 4,2Mhz -> with "CPU frequency" / 4 = "strobe rate" = (7+1)*524288Hz / 4 = 1.05Mhz at default setting.

So quarter of cycles are possible when the time stretching is generated by the internal "CPU frequency". But this is speculation.

Regards

Christoph

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Benchmarks?
*Message #1 Posted by **Patrick** on 28 Mar 2003, 4:01 p.m.*

In a recent post about the Solver differences amongst various models, it was mentioned that certain models were faster than others. That made me notice that there are no actual benchmarks available on this site.

I realize that benchmarking is a difficult science, but perhaps as a group we could come up with something reasonable and practical. Maybe Dave would consider adding the results to his features lists.

Some comments:

- The comparison would only really be useful for long running operations, either programs or solver / integrate like functions. I personally don't think the speed of keyboard operations is all that critical, although the speed with which the 48G responds to x! is breathtaking after using the 15C for a while. Actually, I take that back... it takes WAY longer to find AND execute x! on the 48G than it does on the 15C!

- Solver speed seems to be a very reasonable benchmark since it uses a bunch of the machine's capabilities, if it weren't for the fact that it does not appear on that many models.

- For programming, I'm not sure how we'd address the RPN vs RPL issue. In many ways this is apples to oranges.

Re: Benchmarks?
*Message #2 Posted by **Jim L** on 28 Mar 2003, 5:11 p.m.,*
in response to message #1 by Patrick

There are these.

Re: Benchmarks?
*Message #3 Posted by **Patrick** on 29 Mar 2003, 12:22 a.m.,*
in response to message #2 by Jim L

Oops.

Didn't see these... my bad.

However, do I believe that the HP-11C is at 6% of the 9100A? Yikes. Then again, the 41C is only at 13% so maybe...

There are a few missing machines in the list. I suppose the 15C is pretty much the same as the 11C -- no change in the processor between these two?

Re: Benchmarks?
*Message #4 Posted by **Chan Tran** on 28 Mar 2003, 10:10 p.m.,*
in response to message #1 by Patrick

While I found that the 48GX is very fast compared to older calculator. The problem with the 48 is that it can be very slow with the stack.

[Long] "Stack speed" 48 series & 49G
*Message #5 Posted by **James M. Prange** on 30 Mar 2003, 4:59 a.m.,*
in response to message #4 by Chan Tran

The problem with the 48 is that it can be very slow with the stack

Well, the RPL stack can be very deep. I don't think that I'd call it slow if I restricted myself to using only 4 levels. On a 48GX, 4 ROLL or 4 ROLLD takes only about 21 ticks (0.0026 seconds). Can we blink that fast?

I have noticed that ROLL or ROLLD over a lot of levels can be relatively slow, about 186 ticks (0.023 second) on a 48GX if I have the numbers 1 through 1000 on the stack and execute 1000 ROLL or 1000 ROLLD. How long does that take on a non-RPL calculator?

For reference, here's my general purpose timing program, which I used for the above and for the total times in the programs below. Note that the "correction value" varies by model. In these particular calculators today, I used these values for correction, but the best value varies among units and even over time (Temperature? Battery condition? Phase of the moon?). To find the value, I put the number 1 on the otherwise empty stack, temporarily disable the last stack, arguments, and commands saves, run the timer program, and adjust the value until it *usually* returns "Ticks: 0" and "0_s". Well, on a 48 series that is; on a 49G I have to settle for *usually* +/- 10 ticks (0.0012 seconds). This program isn't 100% repeatable, but I expect that it's about the best that can be done in UserRPL, and plenty good enough for my purposes. If I care to get picky about routines that are very nearly the same (or very fast), then I run them in loops. Note that this program times the evaluation of the object on the stack; if that's a name, the time will include whatever's needed for name resolution.

```
48SX Checksum (using 104 below): # C2F4h
48GX Checksum (using 72 below): # 5F0h
49G Checksum (using 252. below): # CF3Eh
Bytes: 136
%%HP: T(3)A(R)F(.);     @ Header for ASCII download.
\<<
  MEM \-> t             @ Force GC, use MEM result for dummy 't'.
  \<<
    TICKS 't' STO       @ Get start time, store it in 't'.
    EVAL                @ Evaluate the object.
    TICKS               @ Get stop time.
    RCWS                @ Get current wordsize.
    64. STWS            @ Set wordsize to 64.
    SWAP t -            @ Elapsed time.
    B\->R               @ Convert binary to real.
                        @ Correction for time to do TICKS 't' STO.
    @104                  48SX value
    72                  @ 48GX value
    @252.                 49G value
    -
```

```
    "Ticks" \->TAG      @ Tag result.
    DUP 8192. / '1_s' * @ Also show in seconds.
    ROT STWS            @ Restore original wordsize.
  \>>
\>>
```

"Garbage collection" (but I still say that it should be called "memory packing") gets slower as the stack gets deeper, and often slows down drastically if the stack (which is really a stack of pointers) has many pointers into a large composite that's in temporary memory (that is, the composite isn't stored in a global or port variable). An example of such a pointer into a composite would be to build a list on the stack and use GET to extract an element from it. It "looks like" the element is on the stack, but really the pointer is into the list, which is still in temporary memory. The original list is still referenced and kept in temporary memory for the sake of the pointer until the element is dropped, stored in a global or port variable, combined into another list or a vector, or has the NEWOB command executed on it. (This also affects how much free memory there is.) The garbage collection routine automatically runs when the unused memory gets too low. If the garbage collection routine runs and finds a pointer into a composite, then it has to check all of the following objects in the composite one at a time to find the end of the composite and its size field so that it knows exactly which block of memory to move.

Usually, when speed is the most important criterion, I recommend using the stack instead of variables, and if that gets unmanageable, then local variables in preference to global variables. But it can be a huge advantage to store a large list in a global variable (to get it out of temporary memory) before taking it apart if there's an expectation that a garbage collection may occur with the "list elements" on the "stack". For example, compare the execution times for the following programs. Note that MEM forces a garbage collection (to make it easy to determine how much memory is available), and it's the easiest way to get an idea of how long garbage collection takes. In the following programs I've included internal timing routines for the MEM command itself. All of the timings are with the stack empty and with last stack, arguments, and commands saving enabled. Wordsize is 64. The 49G is in "approximate" mode. Note that the "correction value" varies by model; they were found experimentally and may not be "best" for all calculators. Also note that the times would vary with repeated trials.

This first one is just to time MEM on a nearly empty stack.

```
48SX Checksum (using 32 below): # 6255h
48GX Checksum (using 16 below): # 85AFh
49G Checksum (using 189. below): # F96Dh
Bytes: 84.5
%%HP: T(3)A(R)F(.);     @ Header for ASCII download.
\<<
  TICKS                 @ Get the start time.
  MEM                   @ Force a garbage collection.
  TICKS                 @ Get the finish time.
  ROT -                 @ Elapsed time.
  B\->R                 @ Convert binary to real number.
                        @ Correction for time to execute TICKS.
  @32                     48SX value
  16                    @ 48GX value
  @189.                   49G value
  -
  "Ticks" \->TAG        @ Tag result.
  DUP 8192. / '1_s' *   @ Also show in seconds.
\>>
48SX: 378 ticks (0.046 second) for MEM,
      1510 ticks (0.18 second) total.
```

```
48GX: 254 ticks (0.031 second) for MEM,
      1031 ticks (0.13 second) total.
49G:  594 ticks (0.072 second) for MEM,
      1738 ticks (0.21 second) total.
```

Now with the reals 1 through 1000 on the stack:

```
48SX Checksum (using 32 below): # C99Fh
48GX Checksum (using 16 below): # 2E65h
49G Checksum (using 189. below): # 62B9h
Bytes: 111.5
%%HP: T(3)A(R)F(.);     @ Header for ASCII download.
\<<
  1. 1000.              @ Place the reals 1 through 1000 on the stack.
  FOR n
    n
  NEXT
  TICKS                 @ Get the start time.
  MEM                   @ Force a garbage collection.
  TICKS                 @ Get the finish time.
  ROT -                 @ Elapsed time.
  B\->R                 @ Convert binary to real number.
                        @ Correction for time to execute TICKS.
  @32                     48SX value
  16                    @ 48GX value
  @189.                   49G value
  -
  "Ticks" \->TAG        @ Tag result.
  DUP 8192. / '1_s' *   @ Also show in seconds.
\>>
48SX: 12751 ticks (1.56 seconds) for MEM,
      56681 ticks (6.92 seconds) total.
48GX: 8866 ticks (1.08 seconds) for MEM,
      39169 ticks (4.78 seconds) total.
49G:  9052 ticks (1.10 seconds) for MEM,
      39057 ticks (4.77 seconds) total.
```

No list involved.

Now we'll build a list and explode it onto the stack:

```
48SX Checksum (using 32 below): # 428Dh
48GX Checksum (using 16 below): # A577h
49G Checksum (using 189. below): # CBB8h
Bytes: 121.5
%%HP: T(3)A(R)F(.);     @ Header for ASCII download.
\<<
  1. 1000.              @ Place the reals 1 through 1000 on the stack.
  FOR n
    n
  NEXT
  DUP \->LIST           @ Put the numbers into a list.
```

```
  LIST\->                @ Explode the list onto the stack.
  DROP                   @ Discard the count.
  TICKS                  @ Get the start time.
  MEM                    @ Force a garbage collection.
  TICKS                  @ Get the finish time.
  ROT -                  @ Elapsed time.
  B\->R                  @ Convert binary to real number.
                         @ Correction for time to execute TICKS.
  @32                      48SX value
  16                     @ 48GX value
  @189.                    49G value
  -
  "Ticks" \->TAG         @ Tag result.
  DUP 8192. / '1_s' *    @ Also show in seconds.
\>>
48SX: 1818259 ticks (221.96 seconds) for MEM,
      1870881 ticks (228.38 seconds) total.
48GX: 1255937 ticks (153.31 seconds) for MEM,
      1292199 ticks (157.74 seconds) total.
49G:  1180957 ticks (144.15 seconds) for MEM,
      1216584 ticks (148.51 seconds) total.
```

"Looks like" the same thing on the stack for MEM, but because of the list, it's much slower. Oh well, that gives us time to start a fresh pot of coffee.

But if the list is stored in a global variable before we explode it:

```
48SX Checksum (using 32 below): # C0E2h
48GX Checksum (using 16 below): # 5AB7h
49G Checksum (using 189. below): # 4C07h
Bytes: 156.5
%%HP: T(3)A(R)F(.);     @ Header for ASCII download.
@ Note well! This will purge a global variable named 'TEMP'. If you
@ already have something named 'TEMP', then choose a different name!
\<<
  'TEMP'                 @ Place the name on the stack.
  1. 1000.               @ Place the reals 1 through 1000 on the stack.
  FOR n
    n
  NEXT
  DUP \->LIST            @ Put the numbers into a list.
  OVER STO               @ Store the list in a global variable.
  RCL                    @ Put the list back on the stack.
  LIST\->                @ Explode the list onto the stack.
  DROP                   @ Discard the count.
  TICKS                  @ Get the start time.
  MEM                    @ Force a garbage collection.
  TICKS                  @ Get the finish time.
  ROT -                  @ Elapsed time.
  B\->R                  @ Convert binary to real number.
                         @ Correction for time to execute TICKS.
  @32                      48SX value
```

```
  16                    @ 48GX value
  @189.                   49G value
  -
  "Ticks" \->TAG        @ Tag result.
  DUP 8192. / '1_s' *   @ Also show in seconds.
  'TEMP' PURGE          @ Purge the variable.
\>>
48SX: 6556 ticks (0.80 second) for MEM,
      68400 ticks (8.35 seconds) total.
48GX: 4508 ticks (0.55 second) for MEM,
      67779 ticks (8.27 seconds) total.
49G:  4996 ticks (0.61 second) for MEM,
      51629 ticks (6.30 seconds) total.
```

Much better, even with the extra overhead of handling the global variable. I'm willing to trade the extra size for speed.

And no, using a local variable doesn't have this effect; local variables are still in temporary memory. Try:

```
48SX Checksum (using 32 below): # C035h
48GX Checksum (using 16 below): # 5590h
49G Checksum (using 189. below): # 4178h
Bytes: 144
%%HP: T(3)A(R)F(.);     @ Header for ASCII download.
\<<
  1. 1000.              @ Place the numbers 1 through 1000 on the stack.
  FOR n
    n
  NEXT
  DUP \->LIST           @ Put the numbers into a list.
  \-> TEMP              @ Store the list in a local variable.
  \<<
    TEMP                @ Put the list back on the stack.
    LIST\->             @ Explode the list onto the stack.
    DROP                @ Discard the count.
    TICKS               @ Get the start time.
    MEM                 @ Force a garbage collection.
    TICKS               @ Get the finish time.
    ROT -               @ Elapsed time.
    B\->R               @ Convert binary to real number.
                        @ Correction for time to execute TICKS.
    @32                   48SX value
    16                  @ 48GX value
    @189.                 49G value
    -
    "Ticks" \->TAG      @ Tag result.
    DUP 8192. / '1_s' * @ Also show in seconds.
  \>>
\>>
48SX: 1820005 ticks (222.63 seconds) for MEM,
      1872915 ticks (228.63 seconds) total.
48GX: 1257259 ticks (153.47 seconds) for MEM,
```

```
      1293734 ticks (157.93 seconds) total.
49G:  1181800 ticks (144.26 seconds) for MEM,
      1217617 ticks (148.63 seconds) total.
```

The local variable didn't help a bit.

These timings were done were on a 48SX Version D, a 48GX Version R, and a 49G Revision #1.19-6.

Another technique is to force a garbage collection with MEM DROP just before these conditions occur, in the hope that garbage collections won't be needed at particularly bad times.

By the way, there's supposed to be a new 49G Revision 1.19-7 flash ROM already written, just waiting for HP to allow it to be released. The plan is (was?) that this will have an improved garbage collection routine, particularly when it comes to handling this issue with composite objects.

I hope that someone (maybe just RPL users?) will find this helpful or interesting. I enjoyed playing around with the calculators, and some things that I already "sort of knew" have soaked into my brain a bit deeper. The biggest surprise for me was how well the 49G did.

Regards,
James

Re: [Long] "Stack speed" 48 series & 49G
*Message #6 Posted by **Karl Schneider** on 1 Apr 2003, 1:24 a.m.,*
in response to message #5 by James M. Prange

James --

Good Lord, what an effort!

I suggest that the post be preserved in the Articles section.

Re: [Long] "Stack speed" 48 series & 49G
*Message #7 Posted by **James M. Prange** on 2 Apr 2003, 5:53 a.m.,*
in response to message #6 by Karl Schneider

Thank you.

It really wasn't that much of an effort; as I wrote, it was playing around. All very simple, straightforward RPL programming. Probably the biggest effort was adding comments for the benefit of those not familiar with RPL whilst avoiding adding typos to the programs. Just in case I did make typos, or someone manually keying in a program in made a typo, I included the outputs from the BYTES command. As you may have noticed, the programs share a good deal of code, so the various programs were a matter of editing a previous program, not of writing an entirely new program. And of course, I didn't actually key in the programs on each calculator; I transferred them via their serial ports.

After posting, I wished that I had included the 28 series calculators. But of course, that would entail keying them in; no serial port available. And the 28 series doesn't have a built-in TICKS command, I'd have to use SYSEVAL, and with a different address for each ROM version. The 28 series also lacks the BYTES or any other built-in checksum type of command, though I do have one copied from a book that I use for

verifying that a program is keyed in correctly. And of course, on the 28C, with its very limited memory, I'm pretty sure that I wouldn't be able to put so many numbers on the stack, even with the last stack, arguments, and commands saves disabled. Still, I may decide to add something to the Articles section, and if so, I'll include the 28 series, but using a shallower stack.

I wrote:

The original list is still referenced and kept in temporary memory for the sake of the pointer until the element is dropped, stored in a global or port variable, combined into another list or a vector, or has the NEWOB command executed on it. (This also affects how much free memory there is.)

I should've mentioned that there are exceptions to this. If the element is an integer value from -9 through 9, the composite isn't kept in temporary memory for the sake of the element. These numbers (and many other objects) each have their own address in ROM; I guess that what's on the stack when one of these numbers (and perhaps other objects with ROM addresses?) are on the stack as elements, is a pointer to the ROM address, rather than a pointer into the composite in temporary memory.

For example, if you replace:

```
1. 1000.              @ Place the reals 1 through 1000 on the stack.
FOR n
  n
NEXT
DUP \->LIST           @ Put the numbers into a list.
LIST\->               @ Explode the list onto the stack.
```

in one of the slow programs with:

```
1. 1000.              @ Place the real number zero onto the stack 1000
FOR n                 @ times.
  0.
NEXT
1000. \->LIST         @ Combine the zeros into a list.
LIST\->               @ Explode the list onto the stack.
```

then you'll find that it runs much faster.

Regards,
James

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-97 printer problem
*Message #1 Posted by **George Merriman** on 28 Mar 2003, 1:47 p.m.*

I just picked up an HP-97. It works pretty good, except for the printer. It prints, but the results are very hard to read. The top and bottom rows of dots are OK, but the middle of the glyphs are dim. The effect varies from time to time--sometimes I can just make out what is being printed, sometimes it is so dim that I can't. I measured the resistances in the print head, and none seem to be open--they all measure about 11+ ohms.

Can anyone give me some advice? Do I need a new print head? A new printer? a new calculator? Anyone know of a source of parts for this thing?

Re: HP-97 printer problem
*Message #2 Posted by **David Smith** on 28 Mar 2003, 5:59 p.m.,*
in response to message #1 by George Merriman

Make sure your paper is good. Any original HP paper is well past its prime. Go down to your local office supply store and buy a pack of NCR thermal paper rolls.

Another problem may be grunge on the printhead. It can be cleaned off with 91% isopropyl alcohol. Be gentle as you can damage the tiny print resistors very easily. Also it is easy to crack the print head ceramic carrier when reinstalling the printhead. Make sure it is properly positioned and gently tighten the screws alternating between them so you do not create any unbalanced stresses across the printhead.

Another problem may be the printhead is out of alignment or loose. Or the spring loaded platen that backs up the print line is not properly seated, etc.

The only source of the printheads is another machine.

HP Forum Archive 11

[Return to Index | Top of Index]

Amazon
*Message #1 Posted by **Bob Noble** on 28 Mar 2003, 12:57 p.m.*

A few months ago, I found out that HP was closing the calculator division. At that time, I went looking for a spare HP48GX because I use it daily (I'm an engineer).

Amazon was advertising the lowest price: $129. Their website said "availability 1-2 days". I placed the order.

Then nothing.

I contacted customer service. They said, sorry, and shipped the calculator.

What arrived was a box with a 48 in the blister- card packaging banging around inside. The blister-card was cracked and scratched. Not a good way to start knowing that the item has been banged around BEFORE you use it.

I contacted customer service. They said to send it back, they'd send another.

Then nothing.

I contacted them again. They said sorry, it will ship immediately.

Then nothing.

I contacted customer service again. This time, I got an automated response that said the item was not available; order cancelled. I checked amazon.com. Sure enough, there it was, and still "availability 1-2 business days".

I gave up, called J&R Music World, and ordered one. J&R says it shipped yesterday.

Wish me luck.

Worst of all, amazon.com wasted my time. There aren't too many 48s still out there. By the time I called J&R, they were down to a few dozen.

My $0.02: Avoid amazon.com like the plague!

Bob

I agree.
*Message #2 Posted by **Jeremy** on 29 Mar 2003, 7:15 a.m.,*
in response to message #1 by Bob Noble

Sometime, I can't help it, as Amazon is the first site to pop into my mind that has just about everything. But lately, I've been training myself to check Amazon's price, then looking at various online specialty stores to compare.

When I first started shopping amazon a few years ago, it used to be that every time you compared prices, Amazon was the cheapest. They also seemed to ship quickly. I got into the (bad) habit of buying from Amazon without even checking around any more. Then one time when I was shopping for CDs online, their prices seemed a bit high to me. Sure enough, I shopped around, and they were the most expensive!

That was reinforced when I was shopping for a 32SII a couple weeks ago. They were asking $240, and made no mention that it was discontinued or anything like that. Just a high price, hoping people would buy without question. Only after finding MoHPC did I find out the real story. To me, it is not honorable for a retailer to quadruple their prices when an item is discontinued. Leave that to eBay.

I haven't bought anything from Amazon for months now, and I probably won't ever again. What they're doing is not good.

-Jeremy

Re: I agree.
*Message #3 Posted by **Dave F** on 29 Mar 2003, 7:58 a.m.,*
in response to message #2 by Jeremy

Usually, the discontinued items from Amazon are available via the affiliated sellers. I don't think Amazon influences their prices; it just provides a mechanism for connecting buyers and sellers (much like ebay), with some infrastructure for payments, ratings, etc.

Perhaps these are the guys responsible for the gouging you witnessed?

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Two little RPN challenges (11C, 15C ...)
*Message #1 Posted by **Ex-PPC member** on 28 Mar 2003, 6:07 a.m.*

Here's something to try and solve this weekend (though given the level of RPN expertise among this forum's regular visitors, I don't think it'll take long before someone posts the solutions):

Take your beloved 11C/15C (perhaps some other models can be used too: 32S/SII, 42S, ...) out of the safe, and assuming no particular modes or stack/registers contents

1) try and get the value of Sqrt(Pi)/2 [= 0.8862+] in the X-register.

Of course, the simplest solutions in FOUR steps are:

Pi, Sqrt, 2, /

or, using trigonometrics:

rad, 1, tan-1, sqrt

The challenge is to do it in THREE steps or less, without using complex numbers, functions that do give complex results, or even entering complex mode at all. You can use trigonometric functions, including Polar<->Rectangular conversions, as long as you set the angular mode you need.

2) Under the same assumptions (i.e: no particular trig mode, no particular register or stack contents, and not using complex numbers at all), **try to get the the value of Pi [=3.1416+] on the X register**, but WITHOUT using the Pi function itself or any trigonometric functions at all (sin, cos, tan, and their inverses), and that includes Rectangular<->Polar conversions as well.

If you succeed, try to do it in 5 steps or less.

That's all, have a nice weekend !

Re: Two little RPN challenges (11C, 15C ...)
*Message #2 Posted by **hugh** on 28 Mar 2003, 11:29 a.m.,*
in response to message #1 by Ex-PPC member

(1) . 5 !

(2) . 5 CHS ! x^2

Re: Two little RPN challenges (11C, 15C ...)
*Message #3 Posted by **Michael F. Coyle** on 28 Mar 2003, 6:25 p.m.,*
in response to message #1 by Ex-PPC member

1) try and get the value of Sqrt(Pi)/2 [= 0.8862+] in the X-register. (<= 3 steps)

[.][5][x!]

2) ...try to get the the value of Pi [=3.1416+] on the X register. (<= 5 steps)

[1][8][0][->RAD]

(You didn't say we couldn't use conversions.)

I also have an 11-step solution for this but the margin is too small to hold it.

Have a good weekend.

- Michael

Re: Two little RPN challenges (11C, 15C ...)
*Message #4 Posted by **J. Osugi (Northern Italy)** on 29 Mar 2003, 8:45 p.m.,*
in response to message #1 by Ex-PPC member

[/pre] > 1) try and get the value of Sqrt(Pi)/2 [= 0.8862+] in the X-register. [/pre] [/pre] Sqrt (pi)/2 can be rewritten as Sqrt(pi/4)[/pre] and pi/4 radians is equal to 45 degrees, so that[/pre] one possible solution is:[/pre] [/pre] HP32SII: 45 ->RAD Sqrt[/pre] [/pre]Well, I realize this is too simple. :-) [/pre] [/pre]-- [/pre]

Re: Two little RPN challenges (11C, 15C ...)
*Message #5 Posted by **Michael F. Coyle** on 29 Mar 2003, 8:56 p.m.,*
in response to message #4 by J. Osugi (Northern Italy)

That's clever and so obvious once you see it. I'm kind of annoyed that I didn't think of it myself!

- Michael

Re: Two little RPN challenges (11C, 15C ...)
*Message #6 Posted by **Patrick** on 3 Apr 2003, 2:39 p.m.,*
in response to message #4 by J. Osugi (Northern Italy)

Well, it seems that the parameters of this challenge are a bit ill defined. If entering the number "45" is considered one step, then I have a one step solution:

0.8862269255

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

I bought Hp 42S for $100
*Message #1 Posted by **mapet** on 28 Mar 2003, 3:29 a.m.*

I just want to share with you how I acquired the calc. I live in Poland and HP 42S was put on the Polish online auction system (similar to ebay). Only 3 bidders were interested in the purchase. It was NR auction and the opportunity to buy cheap was great as very few people here in Poland are hp calc collectors. Anyway, I was overbid and lost the auction. Few hours later I received an email from the seller. He told me that he's got 3 calcs and want to sell it to me at the price I offered. I agreed and met him. He told me a story how he acquired the calcs. He bought them 10 years ago in US and brought with him to Poland. After that he put them in the wardrobe and forgot about it. He found calcs recently while cleaning the house. And thanx to this discovery I have HP 42S for 100 bucks! The calc is like new with box, English manual and even some HP advertisments. The funny thing is that only 3 bidders were interested and he had exactly 3 calcs.

Congratulations!
*Message #2 Posted by **Raymond Del Tondo** on 28 Mar 2003, 5:44 a.m.,*
in response to message #1 by mapet

If you happen to want to get rid of the box (w/o calc) please drop me a note via email.

Raymond

Re: I bought Hp 42S for $100
*Message #3 Posted by **Larry Corrado** on 28 Mar 2003, 7:47 a.m.,*
in response to message #1 by mapet

mapet:

Congratulations, a real find.

I'm going to spend about a month in Poland this summer, and have some questions I'd like to ask you about calculators and Poland. Could you contact me directly? My address is lcorrado@uwc.edu.

Thanks.

Larry

Re: I bought Hp 42S for $100
*Message #4 Posted by **R Lion** on 28 Mar 2003, 12:10 p.m.,*
in response to message #1 by mapet

I hope you enjoy this great calc...

Raul

(Recently I got my 42s: http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/archv010.cgi?read=26331)

3 calcs for 3 bidders (or 7 brides for 7 brothers?)
*Message #5 Posted by **Karl Schneider** on 28 Mar 2003, 11:02 p.m.,*
in response to message #1 by mapet

Ebay offers a "Dutch Auction" for selling multiple identical items in a single auction -- something that might have been just the ticket for this situation. All winners pay the price that the *low-bidding* winner paid.

Congrats on your Singapore-made(?) find.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Statistical Bug?
*Message #1 Posted by **Trent Moseley** on 28 Mar 2003, 12:15 a.m.*

As a newcomer to the Forum I would like to thank everyone who participated in the lively discussion about the "Statistical Bug?". Especially to Raul Lion, Gene, and to Les Bell in Sydney.

tm

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-10C War Prices ?
*Message #1 Posted by **Cr Toloss** on 27 Mar 2003, 10:36 p.m.*

Reminds me of the early days of Ebay, I Love It ! ..

HP-10C with book for only $14.99

Re: HP-10C War Prices ?
*Message #2 Posted by **Michael F. Coyle** on 28 Mar 2003, 4:53 p.m.,*
in response to message #1 by Cr Toloss

It took someone only an hour and a half to find that one.

I'm all for low prices, but the seller know what he had on his hands??? A one-minute "completed auctions" search would have pulled out a $244 10C. His other auctions show a wide variety of other items, so maybe he doesn't know calculators.

Better not tell him, though, in case he has some more :)

- Michael

Re: HP-10C War Prices ?
*Message #3 Posted by **Holger Weihe** on 28 Mar 2003, 6:11 p.m.,*
in response to message #2 by Michael F. Coyle

Arrrg! I hope to find such an auction everytime I launch up ebay. No luck till now...

The best offer I found was a 16c for round about 100 Euro as "buy now". Unfortunately I was 5 minutes too late. :-(

Holger

Re: HP-10C War Prices ?
*Message #4 Posted by **Raymond Del Tondo (Germany)** on 29 Mar 2003, 4:03 p.m.,*
in response to message #3 by Holger Weihe

Last year there was a VERY good HP-19C on eBay Germany with a VERY low 'Buy it now' price, I think either 25 or 50 Euros...

Raymond

Re: HP-10C War Prices ?
*Message #5 Posted by **David Smith** on 29 Mar 2003, 5:09 p.m.,*
in response to message #3 by Holger Weihe

Don't waste your time... there are some people out there who run automated programs that continuously scan Ebay listings for any updates, particularly Buy-it-Nows which are your only chance of getting a real bargain on Ebay. Your chances of beating them to the BUY button are slim to none. One buyer in particular seems to be an insomniac, snapping up Buy-it-Now's at all hours of the day or night.

...and I thought my 32SII for $125 was good... (NM)
*Message #6 Posted by **Jeremy** on 30 Mar 2003, 2:25 a.m.,*
in response to message #1 by Cr Toloss

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-32S vs HP-32Sii
*Message #1 Posted by **George** on 27 Mar 2003, 10:09 p.m.*

Except for the obvious extra shift key on the 32sii, is there any real difference between the 32s and the 32sii? Is there any difference in the amount of programming space? Do they both have the same alpha capabilities? If the answers are yes, then why the big price difference that I have noticed on Ebay?

Re: HP-32S vs HP-32Sii
*Message #2 Posted by **Katie Wasserman** on 27 Mar 2003, 10:47 p.m.,*
in response to message #1 by George

The 32Sii adds an algebraic equation solver and the ability to work in fractions. A complete list of the 32Sii functions can be found here:

http://www.finseth.com/~fin/hpdata/hp32sii.html

if youre trying to choose, consider 32S
*Message #3 Posted by **Norm** on 28 Mar 2003, 1:20 a.m.,*
in response to message #2 by Katie Wasserman

Hi,

if you're trying to choose between 32S and 32Sii, they aren't that much different, although the 32S ought to be a little cheaper, generally.

I'd consider the 'everyday driveability' of the 32S to be better for everyday calculations, due to it having a simpler appearance with only one shift key. You might make a good decision to decide that "32S is enough".

If you like lots of tack-on-tinsel and complexity, the 32Sii has a more complicated

appearance additional features, at the higher pricetag on the used market.

Re: HP-32S vs HP-32Sii
*Message #4 Posted by **Paul Brogger** on 28 Mar 2003, 10:09 a.m.,*
in response to message #1 by George

The 32sII has slightly larger digits/characters in its display than those of the 32s (which themselves are already quite large, clear and easily read) .

All examples of the 32s, I believe, were made with double-shot keys, with large, clear, slightly off-white keytop legends (characters) that look absolutely beatiful (at least to some of us sensitive to such things). The 32sII started out with double-shot keys, but with white, generally smaller keytop legends. Later 32sII's have printed keytops that are markedly inferior, with off-center legends and even smaller characters represented.

Internally, the 32s has the older, double-sided gold-plated printed circuit board -- the 32sII has a newer, copper, single-sided circuit board. I believe the newer design is more susceptible to corrosion. One of my two 32sII units is dead (with evidence of moisture damage or battery leakage), while my 32s (which receives vastly greater use) is soldiering on just fine.

I think the above statements of fact are, indeed, accurate -- if not, someone will certainly correct me! Don't get me wrong -- I wish the 32sII were still readily available -- I'd make a point of buying a couple more. But I've long preferred the 32s over the sII.

Re: HP-32S vs HP-32Sii, key ruboff?
*Message #5 Posted by **Norm** on 28 Mar 2003, 2:03 p.m.,*
in response to message #4 by Paul Brogger

(t was said: "All examples of the 32s were made with double-shot keys, with large, clear, slightly off-white keytop legends (characters) that look absolutely beatiful (at least to some of us sensitive to such things).

Counterpoint: If you want a calculator design that is absolutely beautiful, with absolutely beautiful keys, better get an HP-34C !

Yes I am suspicious of the recent-production 32Sii keys, they appear to be painted. I asked on this forum if the 32Sii keys rub off, everybody was adament that they will not, but they sure look like they will.

A couple other things
*Message #6 Posted by **Jeremy** on 28 Mar 2003, 12:46 p.m.,*
in response to message #1 by George

I've read (on this site, I think) that the 32S has a single shift key at the expense of more menus to wade through. If you use the more souped-up functions, the 32SII might be quicker, because you won't need to go into menus as often to get what you're looking for. The rest of the time, it will look more cluttered.

I bid on a 32S on eBay for about $105 and lost. I couldn't decide if it was worth that much dough. Then, I noticed the 32SIIs are going for double that price. Luckily, I found one (a 32SII) for $125. You guys who say you prefer the 32S are breaking my heart. I haven't even picked up the SII from the Post Office yet and I'm having second thoughts. Hehehe

My daily users are a 48G and a 45. I like the 48G, and I'm just starting to get used to the fact that you can't really learn it all unless you devote a LOT of time to it. So I will just learn what I need and try not to let it bug me that the other stuff is a mystery. If you don't have one yet, you might think about picking one of those up on eBay as they're going for pretty cheap now...

-Jeremy

Re: HP-32S vs HP-32Sii
*Message #7 Posted by **George** on 28 Mar 2003, 5:59 p.m.,*
in response to message #1 by George

Thanks for all the input. Due to the price difference,I think I'll go with the 32S. I like the looks of the less cluttered keyboard and the functions that I'll use the most (HMS conversion and POL->RECT) are easily accessible on the keyboard.

Re: HP-32S vs HP-32Sii
*Message #8 Posted by **Paul Brogger** on 28 Mar 2003, 6:41 p.m.,*
in response to message #7 by George

Not to throw a monkey wrench into things, but the H<->HMS and POL<->RECT function *menus* are accessible on the 32s keyboard. Each of those keypresses (shift-8 and shift-7, respectively) brings up an on-screen menu, from which the final function is chosen by pushing a corresponding top-row key.

I don't have my 32sII with me, but I'll bet the individual functions are directly accessible from its keyboard.

But while we're on the subject, if you're going to do any programming, the Single Step (down-arrow) is an unshifted function on the 32s, while it's a *shifted* function on the 32sII. In my opinion, that is the single biggest functional drawback of the sII -- you have to do two keystrokes for every step down while reviewing program text. (And that usually involves looking from the display to the keyboard and back.) On the 32s, you put the ol' index finger on the down arrow, and start walkin'. (This also brings up one of the great advantages of the 42s over either 32s model: it has separate, unshifted SST keys for down *and* up.)

On a related note, and also tying in with another recent post about benchmarks, it just occurred to me that the 32sII is probably faster, but I don't remember seeing a head-to-head comparison. I'm going to run a few benchmarks of my own this weekend. (Not that it will matter -- just take a look at 'em side by side: for me, the 32s wins in the overall beauty department, hands down!)

---

you can't see the operand
*Message #9 Posted by **Norm** on 28 Mar 2003, 8:28 p.m.,*
in response to message #8 by Paul Brogger

Personally, I think the guy made the right choice (choosing 32S) and suggest not pushing him towards 32Sii.

Since we are dealing with a limited pool of discontinued calculators (and the factory is not making what we want) then one must COMPROMISE.

I too am watching closely what makes the progressively newer calculators so UNSPECIAL and the older classics so SPECIAL.

It is true that at the moment he wants to convert Rectangular to Polar (or vice versa) that he has got an extra keystroke on 32S. WORSE, you lose sight of the operand at the moment that the menu pops up. Its asking you R or P (rectangular or polar) but the stinkin' operand is gone (i.e. 65 degrees) and you forget what you were even dealing with. Its a real loose rail for the train of thought.

NEVERTHELESS, in making a compromise, I'd put up with the add'l keystrokes and the soft-menu baloney.

The less cluttered keyboard of 32S is nice, the pricing is better on 32S, and none of these calculator designs is perfect (except HP-34C)

:o)

:o)

Re: HP-32S vs HP-32Sii
*Message #10 Posted by **Paul Brogger** on 30 Mar 2003, 12:08 p.m.,*
in response to message #8 by Paul Brogger

I wasn't pushing George to the 32sII -- I agree the 32s is far preferable. But if the conversions he cited are indeed what he's most likely to use, I thought it best that he understood they're available on the 32s via menus, not directly from the keyboard. (And, indeed, they *are* directly available on the 32sII.)

And further good-ish news: I cleared my two examples (one each, 32s and 32sII) and entered the same program into each -- a simple count-to-10,000 and stop. The 32s version took 6 fewer bytes (??) and ran almost twice as fast(!!??) over the 32sII. I've only run that one simple benchmark so far, but it certainly ran counter to what I would have expected (and better than I might have hoped).

So, don't get me wrong -- I prefer the 32s.

Re: HP-32S vs HP-32Sii
*Message #11 Posted by **Norm** on 30 Mar 2003, 4:13 p.m.,*
in response to message #10 by Paul Brogger

Paul Brogger wrote:

"The 32s version took 6 fewer bytes (??) and ran almost twice as fast(!!??) over the 32sII. "

WOW! Guess that is in keeping with the rule of thumb: with each successive release of the "next generation" the product gets another notch worse.

Re: HP-32S vs HP-32Sii -- more benchmarks

*Message #12 Posted by **Paul Brogger** on 31 Mar 2003, 9:49 a.m.,*

in response to message #10 by Paul Brogger

I ran some simple loops with various types of operations repeated. For logarithms, factorials, and simple addition, the 32sII seems to run at about 75% of the 32s' speed. For trig functions, its performance increases to about 85% of the 32s. (I forgot to check on the relative storage efficiencies for the other programs . . .)

I will grant that, for example, having the LBL function directly accessible from the 32sII keyboard is a real convenience, but I don't think that offsets its shifted SST.

The two models are more the same than they are different, and yet there seems to be no end to the differences one can find if one looks closely enough.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Silver trim paint. Forum search
*Message #1 Posted by **Michel Beaulieu** on 27 Mar 2003, 10:00 p.m.*

Hi, i read here that we can restore silver trim with some paint but i can't remember nor find the post : what paint to use?

Can someone tell me how to search with the "search personalize option" of the forum : i tried but the result are only for recent post, not for more than the active 500 messages.

Re: Forum search
*Message #2 Posted by **Ellis Easley** on 27 Mar 2003, 10:33 p.m.,*
in response to message #1 by Michel Beaulieu

Go to the top of the Forum page and click on "Archives". You can go straight to the Archives from the home page too. The Archives are divided into time ranges. There is no way to search across the different Archives, you have to do one at a time. If the individual Archives were much larger it would take an unpleasantly long time to load the index with a dialup connection. Leave the time range for an individual Archive search set to "Several Eons" unless you want to limit the search to a certain subset of the range of the Archive.

Re: Silver trim paint. Forum search
*Message #3 Posted by **Michael Meyer** on 27 Mar 2003, 11:19 p.m.,*
in response to message #1 by Michel Beaulieu

Hi.

I've found a pair of paint markers at the OfficeMax and Office Depot stores.

They come as a pair of silver and gold. It's SOOOO much easier to use these markers than to use a paint brush. You can even carefully "tap" the tip on the TI logos to restore the gold lettering to those calculators, as well as the gold trim around the display.

Michael

Re: Silver trim paint. Forum search
*Message #4 Posted by **Randy Sloyer** on 27 Mar 2003, 11:27 p.m.,*
in response to message #3 by Michael Meyer

FWIW, I have found the "Model Masters" brand of Chrome Silver enamel paint to be very easy use. It brushes well and has a consistent color and shine.

Re: Silver trim paint. Forum search
*Message #5 Posted by **Michel Beaulieu** on 28 Mar 2003, 12:10 p.m.,*
in response to message #3 by Michael Meyer

Can you tell me more about these marker ; i can't find these on their site (office depot or max).

Is it water base?

Thanks again! Michel

Re: Silver trim paint. Forum search
*Message #6 Posted by **David Smith** on 28 Mar 2003, 6:06 p.m.,*
in response to message #1 by Michel Beaulieu

Many hobby shops will have the "Testors" brand of silver paint marker. It works very well for the classic line of calculators. Also white gas will remove it without removing the original paint.

On the HP65 and HP67 the silver trim is plated on. No paint will match it, but is not too bad for touching up very small dots in the trim.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP Distributor: New Calcs Are Coming
*Message #1 Posted by **J.C. Randerson** on 27 Mar 2003, 9:31 p.m.*

During a conversation with Paul Nelson of Calcpro, www.calcpro.com, he said that HP informed him the HP12c, HP48, and HP49 will be reissued with upgrades within a year. There is a management team from HP overseeing the project, but the actual production has been outsourced.

These new machines are coming from a set of developers who had to ask Dave Hicks, who runs this site for copies of old manuals! How these new calcs will function with just what upgrades...?

J.C. Randerson, Laramie, Wyoming

new features on the new HP calcs
*Message #2 Posted by **Norm** on 27 Mar 2003, 9:43 p.m.,*
in response to message #1 by J.C. Randerson

New features on the New HP Calculators:

* Cell phone

* roaming internet access

* MP3 music player

* built in DVD player

* 3D videogames such as "lord of the rings"

* a 4-function calculator with a 4-button memory and an 'equals' button.

* digital point 'n shoot camera

* 30 seconds of camcorder capability (compressed B&W)

The top-of-the-line model sports a double-width 'ENTER' button, however its purpose is to bring up the soft-menu for the DVD player.

Asked about the feature-set not containing any trigonometric nor calculus solving capabilities, an HP executive on condition of anonymity said "MATH, you want to do MATH, ha, what's your problem chump ? Don't you know this is the internet era ? We determined that the marketplace requires this feature set, just to maintain our quarterly profit projections thru next quarter. SAY, you're not one of them engineer types who never went to business school are you, HA, I bet you were part of that fabricated moon shot hoax back in '69. "

Re: new features on the new HP calcs
*Message #3 Posted by **hugh** on 28 Mar 2003, 8:50 a.m.,*
in response to message #2 by Norm

if you have a browser, the math can be on a webpage. simply implement all the old calcs as java applets and everyone's happy :-)

Re: HP Distributor: New Calcs Are Coming
*Message #4 Posted by **Scott Pritchard** on 28 Mar 2003, 8:17 a.m.,*
in response to message #1 by J.C. Randerson

Lots of scar tissue there Norm!!!

classic calculator Applet simulator
*Message #5 Posted by **Norm** on 28 Mar 2003, 2:06 p.m.,*
in response to message #4 by Scott Pritchard

This idea of simulating the old calculators on a laptop is intriguing. Does it come with a simulated furry carrying case so that I can put it into a simulated briefcase ?

Re: classic calculator Applet simulator
*Message #6 Posted by **Michael F. Coyle** on 28 Mar 2003, 4:44 p.m.,*
in response to message #5 by Norm

Norm writes:

This idea of simulating the old calculators on a laptop is intriguing. Does it come with a simulated furry carrying case so that I can put it into a simulated briefcase?

Even better. Its simulated case comes with a belt loop so you hang the whole thing on your simulated pants.

- Michael

pocket protector
*Message #7 Posted by **Norm** on 28 Mar 2003, 8:32 p.m.,*
in response to message #6 by Michael F. Coyle

Well, in that case, for this simulated calculator thing,

I also want a simulated pocket protector, and a simulated necktie of bad taste, and some simulated engineer-eyeglasses.

:o)

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Another instance of ebay madness?
*Message #1 Posted by **Gene** on 27 Mar 2003, 9:20 p.m.*

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3014825471&category=11712

I have to admit I don't understand this one at all. $112?

$117 and climbing,
*Message #2 Posted by **Norm** on 27 Mar 2003, 9:33 p.m.,*
in response to message #1 by Gene

they don't seem to know their pricing. I admit to buying a 48G+ (for curiosity's sake) for $115 from an internet retailer (not eBay) . But that was fully new-in-box. Later I visit the college bookstore and they've got the same calculator for $95 . So you gotta know your prices.

And a $32 10B too!
*Message #3 Posted by **More eBay follies** on 27 Mar 2003, 11:36 p.m.,*
in response to message #2 by Norm

The buyer's desire for things Hp extend to business calculators as well. Check their history as see they paid $32 for a used 10B, no manual and a name engraved on the back.

P.T. Barnum once said...

Re: $117 and climbing,

*Message #4 Posted by **Patrick** on 28 Mar 2003, 3:36 p.m.,*

in response to message #2 by Norm

You might notice the small feedback numbers (0) and (3) of the two main bidders -- eBay newbies.

To think that a month ago I picked up a Buy-It-Now 48G for $45 and a week ago got a 48GX for $75. Maybe I should offer my 48G to the loser for his second place bid?

Bid low and bid often, that's the ticket.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP 34C
*Message #1 Posted by **Gordon Dyer** on 27 Mar 2003, 8:23 p.m.*

My search for an HP 34C on ebay found this new model...
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2820151404&category=11520
Where is the enter key??

Re: HP 34C
*Message #2 Posted by **Michel Beaulieu** on 27 Mar 2003, 8:55 p.m.,*
in response to message #1 by Gordon Dyer

I don't think it's RPN capable... ;-)

It's a shame the 'battery compartment' is empty... ;) (NM)
*Message #3 Posted by **Jeremy** on 27 Mar 2003, 9:00 p.m.,*
in response to message #1 by Gordon Dyer

-

You guys are confused
*Message #4 Posted by **Norm** on 27 Mar 2003, 9:24 p.m.,*
in response to message #3 by Jeremy

You guys are confused ! Let me explain.

You see, that's just the cover. You can't do the calculations until AFTER the cover has been taken off.

:o) vaa voom ! Nice red color too.

HEY, that's the only model I like BETTER THAN the original HP-34C .

Re: You guys are confused
*Message #5 Posted by **Speck** on 27 Mar 2003, 11:09 p.m.,*
in response to message #4 by Norm

Unless it's the model with the "Do Not ENTER" key. Those suck.

Re: You guys are confused
*Message #6 Posted by **Michael Meyer** on 27 Mar 2003, 11:26 p.m.,*
in response to message #5 by Speck

You have to be careful with this model: It tends to cause a stiff drain on the battery (high capacity, of course) and possible electrolyte discharge.

Using a rubber shield can provide some prophylactic protection, but it's not 100% reliable.

Michael

38C would be better
*Message #7 Posted by **Spice_Man** on 28 Mar 2003, 1:47 a.m.,*
in response to message #1 by Gordon Dyer

Don't you agree?

Re: HP 34C
*Message #8 Posted by **Fred** on 28 Mar 2003, 6:26 a.m.,*
in response to message #1 by Gordon Dyer

Just have a look on other auctions !!!! You will see other unknown HP number : 36A, 38D ....

Re: HP 34C
*Message #9 Posted by **John Cadick** on 28 Mar 2003, 9:53 a.m.,*
in response to message #1 by Gordon Dyer

Although it has been a long time since I was involved with this particular model and type - if memory serves - I believe the enter key is a set of two or more snaps located on the back of the unit.

Re: HP 34C
*Message #10 Posted by **Gordon Dyer** on 28 Mar 2003, 3:55 p.m.,*
in response to message #9 by John Cadick

I prefer the ENTER key on the front![nl} P.S. sorry for lowering the tone of this fine forum.

Re: HP 34C
*Message #11 Posted by **David Smith** on 28 Mar 2003, 6:12 p.m.,*
in response to message #9 by John Cadick

Yes, the ENTER key is on the back. Only true professionals can use it single handed though. Then once you have it it RUN mode, watch out for the dreaded "NO means NOPeration".

Re: HP 34C
*Message #12 Posted by **Paul Brogger** on 28 Mar 2003, 10:22 a.m.,*
in response to message #1 by Gordon Dyer

Fully (con)figured, with redundancy in its implementation, parallelism in its operation, and lots of support!

Re: HP 34C
*Message #13 Posted by **Michael F. Coyle** on 28 Mar 2003, 4:36 p.m.,*
in response to message #1 by Gordon Dyer

Is this one of those "Spice" models I keep hearing about?

(I was going to say something in here about tactile feedback, but I guess I won't.)

- Michael

Re: HP 34C
*Message #14 Posted by **David Smith** on 28 Mar 2003, 6:12 p.m.,*
in response to message #1 by Gordon Dyer

Is it one of Carly's new machines?

Re: HP 34C
*Message #15 Posted by **Wayne Brown** on 29 Mar 2003, 7:07 a.m.,*
in response to message #14 by David Smith

>Is it one of Carly's new machines?

If so, I'll bet she has no use for it herself. :-)

34C Development
*Message #16 Posted by **Spice_Man** on 29 Mar 2003, 5:21 p.m.,*
in response to message #15 by Wayne Brown

I agree. Its entirely too well-developed for it to be Carly's products. <G>

Spicey

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

New calculators
*Message #1 Posted by **Vázquez** on 27 Mar 2003, 7:53 p.m.*

http://www.hp.com/hpinfo/newsroom/press/2003/030324a.html

Re: New calculators
*Message #2 Posted by **Frank** on 28 Mar 2003, 7:44 a.m.,*
in response to message #1 by Vázquez

Key words from the article "Throughout 2003, HP has plans to introduce six additional new calculators for students as well as for doctors and professionals in the banking, financial and engineering fields." Students and Professionals in Engineering fields, last as usual on the priority list but at least present, well, maybe that is our long awaited RPN!

Re: New calculators
*Message #3 Posted by **Jack Neely** on 28 Mar 2003, 10:01 a.m.,*
in response to message #2 by Frank

We may get RPN but I doubt that we will get the quality or service with the new HP calculators.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Help me decode this serial number...
*Message #1 Posted by **joe** on 27 Mar 2003, 2:40 p.m.*

Hi,

Here we go. Second HP in the collection. Its a HP16C, and I was trying to make sence of the serial number. Would somebody please tell me what this means (when it was made, etc)?

The serial is: USA 2228A11076

Thanks, joe

Re: Help me decode this serial number...
*Message #2 Posted by **Scuba Diver** on 27 Mar 2003, 2:57 p.m.,*
in response to message #1 by joe

Sure!

The serial is: USA 2228A11076

Take the first two digits and at it to 1960 = 1982 (year). The next two digits represent the week in the year = 28. The letter indicates where it was made. A = America, B=Brazil, S=Singapore, etc. The remaining digits tell you that it was the 11,076th 16C manufactured during that week in America.

Hope that helps! B.

Re: Help me decode this serial number...
*Message #3 Posted by **David Smith** on 27 Mar 2003, 6:08 p.m.,*
in response to message #2 by Scuba Diver

The "week" number may not actually be the real week it was made. It is more like a production run number. Some of these "weeks" actually lasted many months. This was almost always the case for the earlier models like the '35, '80, '65, etc. Also the serial number for each "week" may or may not have started at 00001. Some seem to start at 10000, etc.

A lot of Singapore production starts with 80000 or 90000. And serial numbers seemed to be assigned sequentially across all models produced at a facility. They were not reset with each "week" or duplicated with another products number.

Re: Help me decode this serial number...
*Message #4 Posted by **James M. Prange** on 27 Mar 2003, 6:24 p.m.,*
in response to message #3 by David Smith

Thanks, David

After posting, I see that you seem to have answered my questions.

Regards,
James

Re: Help me decode this serial number...
*Message #5 Posted by **Frank Wales** on 27 Mar 2003, 6:35 p.m.,*
in response to message #3 by David Smith

As I understand it, HP serial numbers are unique not only to a product line or facility, but across **all** HP products made anywhere in the world.

Although I haven't done it for a while, I regularly called HP during the 1980s and early 1990s for hardware support. The first question they asked was *"What's the serial number of the equipment?"* They didn't have to ask a second question; giving them *just* the serial number was enough to let them know exactly what the piece of equipment was: disk drive, printer, server, PC, calculator, protocol analyser, whatever. And it was not necessary to give them these serial numbers in advance as part of the support contract, so they weren't looking at our contract details in order to figure out what the equipment was.

So I've never assumed that the five digits after the letter indicated the number of calculators produced in a week. Still, I'd be interested if someone who actually worked in the allocation of these numbers at HP could clarify this.

Re: Help me decode this serial number...
*Message #6 Posted by **Ellis Easley** on 27 Mar 2003, 7:31 p.m.,*
in response to message #5 by Frank Wales

I never worked for HP but I have seen a lot of their test equipment service manuals. In the service manuals the serial number is always used as a key to the revision level of the equipment. In some of the oldest manuals I have seen, the digits on the right side are used to define ranges of units that are at different revision levels even though the digits on the left are the same. But HP seems to have settled on changing the digits on the left whenever a significant change is made in production. As long as the digits on the left are the same, all the schematics, parts lists, and other drawings and procedures in the service manuals are applicable. This wouldn't prevent HP from internally keeping track of complete serial numbers vs. minor revisions, such as changing a vendor on a generic part.

As HP reprinted service manuals, they would update the main body of the manual for the then-current revision level and then add back-dating pages (at the back of the manual) listing all the changes made at each revision level. With this information you can always use a newer manual with older equipment.

I agree with David that the digits on the left don't necessarily reflect the actual year and week that a given unit was built. I imagine that they might reflect the actual year and week that a new revision level went into production.

Re: Help me decode this serial number...
*Message #7 Posted by **Andreas** on 28 Mar 2003, 4:41 a.m.,*
in response to message #5 by Frank Wales

I don't know how it works with the old style serial numbers, but the newer ones are definately not unique - in many cases, when you enter a serial number into the lookup tool it comes up with several different products with the same serial number. However, it is usually quite obvious which is the correct one - for instance, if a customer calls about a server and one of the product numbers starts with a D and the other starts with an F it is the one that starts with a D that is the correct one.

In case you're wondering how I know this, I used to work for HP until I had enough of the creeping Carlyfication...

Re: Help me decode this serial number...
*Message #8 Posted by **James M. Prange** on 27 Mar 2003, 6:21 p.m.,*
in response to message #2 by Scuba Diver

Agreed, but wow! 11076 strikes me as a lot of calculators for one week's production. Particularly considering that the 16C is somewhat of a special purpose calculator.

I wonder whether some production lines were set up to run one model for a time, and then switched to producing a similar model as demand dictated? If so, would they have started the unit digits over at 00001 when they changed models or just continued with the next number?

For that matter, I'd probably have started each week's (or start of changed model) production with unit 00000; no sense in wasting a perfectly good number!

Or perhaps this is an example of when they neglected to change the week digits for a while?

Regards,
James

Re: Help me decode this serial number...
*Message #9 Posted by **Christoph Giesselink** on 27 Mar 2003, 2:57 p.m.,*
in response to message #1 by joe

Refering to http://www.hpmuseum.org/collect.htm#numbers this calculator was produced 1982 in week 28 in the USA with part no. 11076 in the week.

Christoph

This info is available on the MoHPC site...
*Message #10 Posted by **Jeremy** on 27 Mar 2003, 9:03 p.m.,*
in response to message #1 by joe

... if you poke around a bit.

-Jeremy

PS - I'm not trying to be rude, but I just thought that you would like to know that a lot of your questions seem to be answered on the site. I'm sure it is no bother for people to answer though...

-Jeremy

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP49G ROM-Error
*Message #1 Posted by **Hendrik P.** on 27 Mar 2003, 1:57 p.m.*

Hello, if i do the FullROM check of my HP 49G Calculator i get this Message:

Form Fail / Object with bad CRC / Bank 1

Is the Calculator defect or is this Error "normal"?

Revision 1.16

Thanks HP

Re: HP49G ROM-Error
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 27 Mar 2003, 2:47 p.m.,*
in response to message #1 by Hendrik P.

Hi;

have you tried to download it again? Maybe another copy?

I would try downloading it again.

Success.

Luiz C. Vieira - Brazil

Re: HP49G ROM-Error

*Message #3 Posted by **James M. Prange** on 28 Mar 2003, 1:29 a.m.,*
in response to message #1 by Hendrik P.

I'm pretty sure that Bank 1 is part of the flash ROM used for the operating system. I'd reflash it; see http://www.epita.fr/~avenar_j/hp/49.html for the lastest and best. If you'd rather stick with a "supported" ROM, revision 1.18 should be available at HP's site.

Regards,
James

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Re: Statistical Bug?
*Message #1 Posted by **R Lion** on 27 Mar 2003, 10:35 a.m.*

No, Dave: the 42s will give you the answer for two data. Try it.

Raul

Re: Statistical Bug?
*Message #2 Posted by **hugh** on 27 Mar 2003, 6:29 p.m.,*
in response to message #1 by R Lion

you have a to be very careful when computing variances on calculators because they all use unstable methods, even hp.

<rant> itsn't it about time we had a calculator that actually worked and did the right thing. the problem comes from use of a formula that magnifies error. for example, do this: clear sigma. 1e6 sigma+ 1e6-1 sigma+ 1e6+1 sigma+ and what do you get. s = 0 what rubbish! </rant>

the correct way is to make use of a two-pass formula (as described in numerical recipes in C page 613). however, that method involves storing all the data points so as to make a second pass.

a cheap "calculator" fix avoiding extra storage would be to simply subtract the first number entered from all the numbers entered. this would approximately renormalize the data by the mean.

Re: Statistical Bug?
*Message #3 Posted by **James M. Prange** on 27 Mar 2003, 7:17 p.m.,*
in response to message #2 by hugh

...for example, do this: clear sigma. 1e6 sigma+ 1e6-1 sigma+ 1e6+1 sigma+ and what do you get. s = 0 what rubbish!

Not *all* HP calculators! The RPL models return 1 for that. They do indeed store all of the data points.

a cheap "calculator" fix avoiding extra storage would be to simply subtract the first number entered from all the numbers entered. this would approximately renormalize the data by the mean

Yes, that should work. For the "cheap" calculators that we actually have, the user can use the method that I mentioned in this post.

Re: Statistical Bug?
*Message #4 Posted by **hugh** on 28 Mar 2003, 6:32 a.m.,*
in response to message #3 by James M. Prange

excellent!

i'd simply assumed the RPL ones had the same algorithms copied over. this nice to know, at last.

i like your "encoded" form, its better than my; subtract the number you firsr thought of hack. its a pity that units than dont store the data don't do something like this.

Re: Statistical Bug?
*Message #5 Posted by **James M. Prange** on 2 Apr 2003, 3:01 a.m.,*
in response to message #4 by hugh

Thank you.

My method has the advantage that when using it, one typically doesn't need to enter so many digits. This can be especially important when entering hundreds of data points.

On the other hand, your idea has the advantage that the user wouldn't even need to

be aware that the data was being adjusted. If I recall correctly, many calculators keep track of only n, sum(x), and sum(x^2) for statistical functions. To implement your suggestion, the additional requirements would be to keep track of x_1, adjust the data on every sum+ input, and adjust the output for things like sum(x), sum(x^2), mean, and total. Seems to me that it should be feasible on many calculators, and the extra calculations would be scarcely noticeable to the user.

Have you applied for a patent yet?

Regards,
James

Re: Statistical Bug?
*Message #6 Posted by **hugh** on 7 Apr 2003, 5:30 p.m.,*
in response to message #5 by James M. Prange

oops, sorry james, was this in response to my stats correction idea? i didnt see this post earlier.

if so then, yes and no :-)

yes, thats what i meant and no, there's no patent. :)

basically, was thinking along the lines of what people do by hand. a friend works in a lab calibrating instruments. as you can imagine the results are heavily clustered around a central figure. what they do (manually) is subtract the figure that they expect from each number and enter those numbers in excel(for example). in fact if you dont excel gets it wrong. yes wrong! just like a cheap calculator that doesnt store the numbers. you'd think that after all these years of hypertext email and featureitis it would work in the worlds leading spreadsheet. heck, they should be doing the proper two-pass forumla properly... ooops ranting again!

this and many more reasons is why we still need quality algorithms in calculators.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Actually, I dont' think that's correct
*Message #1 Posted by **Gene** on 27 Mar 2003, 10:04 a.m.*

The formula for standard deviation of a sample has n-1 on the denominator, so it should work for 2 data points.

Suppose the data are 10 and 5

Standard deviation is

SQRT (((10 - 7.5) ^2 + (5 - 7.5) ^2) divided by (2 - 1))

Which works out to be 2.5

Granted, that's not exactly helpful with only 2 data points, but it does work.

Population standard deviation only has n on the denominator, so you can compute it when you only have 1 data point...the value of the standard deviation in that instance would be 0.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Commodore M55 Manual - Gene please read
*Message #1 Posted by **Clive Marner** on 27 Mar 2003, 8:18 a.m.*

A while ago Gene mentioned he had a manual for an M55 but not the calculator. I have an M55 but the manual I have is in German. If you have an English manual I'd be very interested in borrowing it! Not as much of a problem (loads of web help available!) - I also have a Casio FX-602P with no manual so if anyone reading this can help it'd be appreciated. Thanks, Clive.

I found an English one and it is being scanned into PDF...
*Message #2 Posted by **Gene** on 27 Mar 2003, 10:01 a.m.,*
in response to message #1 by Clive Marner

I appreciate the offer Clive, but I have since found an M55 manual AND an S61 manual.

These are being scanned and will be put online soon...will post a note when they are up and indicate where they will be too.

Thanks all!

Now if I could just FIND an M55... :-)

Re: I found an English one and it is being scanned into PDF...
*Message #3 Posted by **Gordon Dyer** on 27 Mar 2003, 8:04 p.m.,*
in response to message #2 by Gene

I would be interested in a copy of the Commodore manuals...
Thanks

When they are ready, I'll post the link!

*Message #4 Posted by **gene** on 27 Mar 2003, 8:52 p.m.,*

in response to message #3 by Gordon Dyer

Hopefully, there will be a lot of good stuff ready soon.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

new HP-16C emulator online preview
*Message #1 Posted by **Alexander Supalov** on 27 Mar 2003, 2:55 a.m.*

Hi everybody!

I'd like to draw your attention to a new HP-16C emulator written in Java by me and my pupils.

It's available for online preview at http://home.foni.net/~supalov/hp16c . It's implemented using Swing, so that you may need to add Sun's Java plugin (http://java.sun.com/plugin) to get it up and running.

This is an ongoing effort, and there's a number of limitations to this emulator that we are well aware of, but there may be some that we've missed. Please bear with us: all constructive feedback will be highly appreciated.

Best regards.

Alexander

P.S. I'm well aware of the friendly competition referenced from within these pages. We'll do it better, you just wait.

Re: new HP-16C emulator online preview
*Message #2 Posted by **Grant Goodes** on 27 Mar 2003, 10:25 a.m.,*
in response to message #1 by Alexander Supalov

Looks _very_ good. One criticism:

As with many calc-emulators for PCs, this one only permits numeric entry by mouse-clicks. I really think it is a must to allow numeric entry from the keyboard, and ENTER from the return key.

grant..

Re: new HP-16C emulator online preview
*Message #3 Posted by **Alexander Supalov** on 31 Mar 2003, 2:16 a.m.,*
in response to message #2 by Grant Goodes

Hi!

Thanks for posting. Keyboard input is certainly on our development list. There's a conceptual problem, though: would the users prefer a tactile layout (without connection to the symbols on the keyboard keys), or semantic layout that would tie known symbols (like +, -, ENTER, etc.) to the respective buttons on the calculator? Or a certain mix of both? Or the freedom to choose their own layout?

Best regards.

Alexander

Re: new HP-16C emulator online preview
*Message #4 Posted by **Alexander Supalov** on 7 Apr 2003, 4:03 a.m.,*
in response to message #3 by Alexander Supalov

Hi!

I've added preliminary keyboard input (see the http://home.foni.net/~supalov/hp16c for details). Thanks for the suggestion.

Best regards.

Alexander

Re: new HP-16C emulator online preview
*Message #5 Posted by **Paul Brogger** on 27 Mar 2003, 5:07 p.m.,*
in response to message #1 by Alexander Supalov

Looks great! I especially like the size -- my 50-ish eyes don't do so well with some of the tiny emulator images.

The only thing I'd like to add to your "limitations" list is Ctrl-C & Ctrl-V functionality. (To my thinking, Ctrl-C should copy the display contents to the cut & paste buffer, and Ctrl-V should take the hex/numeric portion of the cut & paste buffer & enter it as if via keystrokes.)

Kudos to you and your students for choosing such a worthy and interesting subject for emulation!

Re: new HP-16C emulator online preview
*Message #6 Posted by **Alexander Supalov** on 31 Mar 2003, 2:24 a.m.,*
in response to message #5 by Paul Brogger

Hi!

Copy and paste are a good idea, thanks. I'm putting them onto the wish list. Interacting with the system clipboard may be tricky: I'll have to investigate the matter first.

By the way, I've fixed some other bits over the weekend: now nested subroutines should work as expected.

Best regards.

Alexander

Re: new HP-16C emulator online preview
*Message #7 Posted by **Alexander Supalov** on 8 Apr 2003, 2:55 a.m.,*
in response to message #6 by Alexander Supalov

Hi!

Cut and paste can indeed be done, but only when the program runs as a stand alone application. The Java security manager seems to utterly dislike the very idea of an applet getting access to the system clipboard, and I can understand its point.

So, if I won't be able to convince it that my applet is indeed mostly harmless, the cut and paste will be available only in the stand alone application mode, in which it already works just fine. Thanks for the good suggestion.

Best regards.

Alexander

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP28S: Computing summary statistics?
*Message #1 Posted by **Gary E. RAFE, Ph.D.** on 26 Mar 2003, 7:04 p.m.*

I have a student in my Engineering Statistics course who has an HP28S. We're at the point where we're doing Linear Regression from two lists. We see that his 28S will compute the regression estimates, but we're trying to figure out a not-too-difficult way to get the various summary statistics (sum x, sum y, sum x^2, sum y^2, and sum x*y). The user manual doesn't even hint at how these might be obtained.

Pointers as to how this can be done (easily?) on the 28S are appreciated !

Re: HP28S: Computing summary statistics?
*Message #2 Posted by **James M. Prange** on 27 Mar 2003, 1:25 a.m.,*
in response to message #1 by Gary E. RAFE, Ph.D.

All of this assumes that you're using the calculator's statistics matrix of course.

Try the Owner's Manual, Chapter 28 "Programming Examples", "Summary Statistics" pages 262-269. The programs listed there should get you the sum of squares and sum of products values.

For the sum of a column, just use the TOT command to get a vector containing the sum of each column, and the GET command to extract the value for whichever column you're interested in. It should be rather trivial to write a program that uses SumPAR (where Sum represents upper case Greek sigma) to determine which column is x and which one y.

Also see "Median of Statistics Data" pages 270-275.

Check out anything in the Owner's Manual or Reference Manual that has anything to do with either statistics or arrays.

Of course, using summary statistics methods, there's a greater likelihood that information will be lost due to rounding off, especially in the sum of squares and sum of products. Back in the

days when we did this on paper or with calculators that used summary statistics methods, we used what we referred to as "encoded data". Instead of using the actual data, we used the difference from some set value (typically, but not always, the most significant digits that were the same for all of the data), multiplied by whatever power of 10 gave us whole numbers to work with.

For example, if the input data were 12.3453, 12.3404, and 12.3429, then the algorithm for obtaining the encoded value could be to subtract 12.34 and then multiply that result by 10000, giving us 53, 4, and 29 to work with. After computing our statistical results, we would decode them back; in the above example, we might find the mean of the encoded data to be (approximately) 29 which we divided by 10000 and then added to 12.34 to obtain the result of 12.3429.

Even for calculators that keep all of the data in a matrix, I often find it easier to enter the data in "encoded" form (it's easy enough to do the encoding in my head), and then multiply a column by a power of 10 and add a constant to the column. This saves a lot of repetitive keystrokes.

Regards,
James

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-21 battery terminals
*Message #1 Posted by **Natalie Wilkie** on 26 Mar 2003, 4:13 p.m.*

Hi,

I was given an HP-21 and the previous owner had replaced the batteries with standard 1.5 volt batteries. Does anyone know if this may have damaged it and can you tell me which pin is +ve and -ve.

Thanks Natalie

Re: HP-21 battery terminals
*Message #2 Posted by **db(martinez,california)** on 26 Mar 2003, 9:32 p.m.,*
in response to message #1 by Natalie Wilkie

according to the archives that does no harm (if you have any doubt then use used batteries) . the pin on the same side as the enter key is pos.

Re: HP-21 battery terminals
*Message #3 Posted by **Natalie** on 27 Mar 2003, 3:45 p.m.,*
in response to message #2 by db(martinez,california)

Thank you

Re: HP-21 battery terminals
*Message #4 Posted by **David Smith** on 27 Mar 2003, 6:09 p.m.,*
in response to message #1 by Natalie Wilkie

If you have a battery holder that has been opened up, the battery polarity is molded inside the holder.

HP Forum Archive 11

[Return to Index | Top of Index]

Statistical Bug?
*Message #1 Posted by **Trent Moseley** on 26 Mar 2003, 4:02 p.m.*

Is there a bug in the standard deviation statistical function of some HP machines but not in others? Of the HPs I have with the stat function the 12C,15C, and the 42S seem to have the bug. The 25C, 67, and the 32SII do not. Here is the problem:

With the summation key enter in several data and find the standard deviation. Next subtract a datum. Finding the SD now gives an error message.

c

cC

Re: Statistical Bug?
*Message #2 Posted by **R Lion** on 26 Mar 2003, 5:06 p.m.,*
in response to message #1 by Trent Moseley

I don't know if I understand you. I usually get mean, then sigma+ and get SD. Then mean again, sigma-. If I get SD now, I don't get any error message.

Could you give any example?

Raul

Re: Statistical Bug?
*Message #3 Posted by **Trent Moseley** on 26 Mar 2003, 6:14 p.m.,*
in response to message #2 by R Lion

For example:

clear sigma+

9 sigma+ see 1

15 sigma+ see 2

11 sigma+ see 3

take std dev see 3.06

11 sigma- see 2

take std dev see Error 2 on the 12C, 15C Stat Math Error on the 42S

You do not get an error message on the 25C, 67, or 32SII but see the answer: 4.24

Re: Statistical Bug?
*Message #4 Posted by **R Lion** on 26 Mar 2003, 6:31 p.m.,*
in response to message #3 by Trent Moseley

You can avoid the problem introducing 0 as y data:

0 enter 9 sigma+ see 1

0 enter 15 sigma+ see 2

0 enter 11 sigma+ see 3

etc... and you'll get the expected answer

Raul

Better solution
*Message #5 Posted by **R Lion** on 26 Mar 2003, 6:35 p.m.,*
in response to message #4 by R Lion

When you get one of those strange errors, STOre a 0 in regs 5, 6 and 7 (sumy, sumy^2 and sumxy). Then, s will work

Raul

Re: Better solution
*Message #6 Posted by **Trent Moseley** on 26 Mar 2003, 6:55 p.m.,*
in response to message #5 by R Lion

Raul Lion,

I don't bother. I use one of the machines that don't have the problem.

tm

Re: Better solution
*Message #7 Posted by **R Lion** on 26 Mar 2003, 7:03 p.m.,*
in response to message #6 by Trent Moseley

Oh well... then send me your 15c and I'll send you a new 32sII ;-)

Raul

Re: Better solution
*Message #8 Posted by **Trent Moseley** on 26 Mar 2003, 11:28 p.m.,*
in response to message #7 by R Lion

Raul,

I love 'em all! The 16C didn't even get into the discussion! Now if only I could get my hands on a 34C!

Trent

Re: Statistical Bug?
*Message #9 Posted by **Les Bell [Sydney]** on 26 Mar 2003, 6:40 p.m.,*
in response to message #3 by Trent Moseley

It happens as you describe on the 41CX, as well, but the reason is simple - it's the data in the Y register. When you get the SDEV result in X, then simply key in 11 and press sigma-, it will have 3.06 in the Y register, which it subtracts from the cumulative stat registers (which will have zero for both sigma Y and sigma(Y^2), from memory).

If you key in a zero before the 11 to be sigma-minussed, or clear the stack, it will work just fine.

Best,

--- Les [http://www.lesbell.com.au]

Re: Statistical Bug? - not on my machine
*Message #10 Posted by **Gene** on 26 Mar 2003, 5:07 p.m.,*
in response to message #1 by Trent Moseley

Think you'll need to give more specifics.

Which mode is the 42s in? LinSUM or ALLSUM?

Did you do a CLEARSUM before entering data?

Which data points did you enter?

Which did you remove?

Maybe these will help us help you.

Re: Statistical Bug? - not on my machine
*Message #11 Posted by **Trent Moseley** on 26 Mar 2003, 6:23 p.m.,*
in response to message #10 by Gene

Gene,

See my reply to R. Lion

tm

No bug -- Les got it right
*Message #12 Posted by **Karl Schneider** on 27 Mar 2003, 1:28 a.m.,*
in response to message #1 by Trent Moseley

Trent --

There is no bug. Les Bell's reply below hit the nail on the head -- not clearing the previous SDEV calculation caused it to be entered as a y-datum deleted from summation for two-variable analysis upon doing the Sigma-minus. SDEV of the y-data was undefined (sqrt of negative number).

The 32Sii did not yield an error because it has separate keystrokes for x-SDEV and y-SDEV, population or sample. The 12C, 15C, and 42S will calculate both sample SDEV's with the same keystroke. The older 25C and 67 might not have two-variable stat analysis built in (I have neither unit).

-- Karl

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Can you tell a Halfnut by it's SN?
*Message #1 Posted by **Steve** on 26 Mar 2003, 2:43 p.m.*

What were the production runs for the Fullnut and Halfnut? If I have a serial number that begins with a 2526S (1985, week 26) can I tell what type of "nut" it is without actually seeing the 41cx?

Steve

Re: Can you tell a Halfnut by it's SN?
*Message #2 Posted by **randy** on 26 Mar 2003, 3:44 p.m.,*
in response to message #1 by Steve

Much easier to just look at the LCD. See http://www.hpmuseum.org/collect.htm#variations and scroll down to HP-41C for the picture.

Re: Can you tell a Halfnut by it's SN?
*Message #3 Posted by **David Smith** on 26 Mar 2003, 5:50 p.m.,*
in response to message #1 by Steve

No, there is no clear demarcation between fullnut and halfnut serial numbers.

Re: Can you tell a Halfnut by it's SN?
*Message #4 Posted by **Johnny Billquist** on 27 Mar 2003, 8:24 a.m.,*
in response to message #1 by Steve

No. And you can't tell if it's a half or fullnut given that it's a CX either.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-97
*Message #1 Posted by **Gary Hahn** on 26 Mar 2003, 1:39 p.m.*

I have an old HP-97 that I have used for many years.

It has recently started to do something that I am not able to address. When it has been turned off overnight and then switched on in the morning when I begin work, the display reverts to the scientific notation or engineering display from the normal display mode. Also, during normal operations, it will automatically revert to the scientific notation or engineering display without my doing anything.

Does anyone have a remedy for this condition? I use the normal display mode 100% of the time.

Re: HP-97
*Message #2 Posted by **David Smith** on 26 Mar 2003, 5:52 p.m.,*
in response to message #1 by Gary Hahn

Your battery may need to be rebuilt or there may be some other problem causing noise in the internal power supply. Another problem may be some (usually invisible) contamination on the internal keyboard contacts that is causing bogus SCI keypresses.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Capacitors
*Message #1 Posted by **Howard** on 26 Mar 2003, 8:52 a.m.*

Does anybody know what the replacement capacitors are for the HP67 card reader circuit? The old ones say - 4v 22k and the other says 4v 15k? Thank you.

Re: Capacitors
*Message #2 Posted by **David Smith** on 26 Mar 2003, 12:16 p.m.,*
in response to message #1 by Howard

If they are the silver tubular ones, I think they are 22uF and 15uF. The dipped tantalum versions are 22uF (yellow ones) and 3.3-6.8uF (small blue one that goes bad). Voltage ratings should be 10V or larger.

Re: Capacitors
*Message #3 Posted by **David Smith** on 26 Mar 2003, 6:03 p.m.,*
in response to message #2 by David Smith

I should also mention that these are tantalum capacitors. Most of them sold today are of a "dipped" construction that do not look like the cylindircal ones. The capacitors are also polarized (it matters which way they are installed... most HP products have a square pad around the "+" hole). The two 22uF caps are part of the read head circuitry. The 15uF one is the power filter.

Re: Capacitors

*Message #4 Posted by **Malcolm Brooks** on 26 Mar 2003, 8:19 p.m.,*
in response to message #2 by David Smith

To David,

Can I have a bit of clarification on which is the capacitor that goes bad for card reading operations for the 67.

In an old message by Tony Duell 12 June 2001 he clearly states the problem cap is a 47uF.

Recent discussion says its a small blue 6.8uF cap.

Is it two different capacitors? Where exactly are they located?

Would these be the same on the 97 - I have both 67 and 97.

Then there is the 22uF cap - does this not go bad?

Are all tantalum caps the same for our purposes?

Are all tantalum caps polarised?

Any help much appreciated

Thanks Malcolm

Re: Capacitors

*Message #5 Posted by **David Smith** on 27 Mar 2003, 6:16 p.m.,*
in response to message #4 by Malcolm Brooks

I think Tony's old post dropped the decimal point. The cap is technically a 4.7uF, but it's value is not particularly critical. I have used 3.3uF to 10uF. What can be critical is the size. If it is too big, the case won't close. I usually use 6.8uF because the local surplus store had a pile of them for cheap. The 22uF caps are basically in series with the heads. I have never seen one go bad.

Almost every tantalum cap that you find is a polarized electrolytic. If they are installed backwards and powered up with a nice beefy power source they can explode like a small

firecracker and throw pieces with uncanny accuracy straight for any uprotected eyeballs.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

OOPS
*Message #1 Posted by **Tom Cox** on 25 Mar 2003, 8:58 p.m.*

Model number for printer should be 82143A, not what I had listed. Also the Error Message is "PRINT ERROR" not "PRINTER ERROR."

Sorry for the "Senior Moment."

But I do remember how easy the HP41 was, and still is, to program. I can still read a listing and understand what program is doing. Maybe that simplicity should be part of HP's new calculators.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP 84123 Printer
*Message #1 Posted by **Tom Cox** on 25 Mar 2003, 8:48 p.m.*

I am trying to resurrect my HP 41 system. So far have the calculator, card reader, and wand working. The printer has had a new battery installed but prints only a few very light random characters and printhead never moves all the way to left, always from center to right. After a few seconds of feeble attempts I am always greeted with the message "PRINTER ERROR" which the manual insists means if repeatable the printer should be returned to HP for repair: obviously not a viable option. The 41 shows the Printer Rom functions to exist. Printer will advance paper with the Advance button on printer. Have tried with both a 41CV and 41CX, same results each time. Any thoughts on how best to proceed, or is it trash can time for printer? The batteries are good -- but of what use without the printer? The printer was purchased around 1981/82. The battery charges properly so low voltage is not the problem.

Thanks.

Re: HP 84123 Printer
*Message #2 Posted by **John K. (US)** on 26 Mar 2003, 3:34 a.m.,*
in response to message #1 by Tom Cox

About a week ago, in response to a question I posted about the 82240B printer, David Smith suggested opening the printer, cleaning any paper chaff, and lubricating the carriage drive gears. I don't know if that'll work in this case, but it might be worth a try.

Re: HP 84123 Printer
*Message #3 Posted by **Vieira, Luiz C. (Brazil)** on 26 Mar 2003, 7:28 a.m.,*
in response to message #2 by John K. (US)

Hi;

I have an 82143A that's one of the first type and they are very sensitive to the absense of batteries when the AC adapter is connected. There is an IC (probably working in the regulator) that burns when you do it: use an AC adapter without the batteries. Or a battery with bad contact.

Mine became erratic like this.

When mine was repaired I think HP replaced the old IC with a new one, and I did not observe the former behavior so far. But now I take a lot of care when charging batteries or using it.

Not so much of help, I know, but maybe you now have a few more information.

Success.

Luiz C. Vieira - Brazil

Re: HP 84123 Printer
*Message #4 Posted by **David Smith** on 26 Mar 2003, 12:18 p.m.,*
in response to message #1 by Tom Cox

Besides cleaning and lubricating the printer mechanism, you may have a slipping drive belt. I use a SCX-2.4 from Projector Recorder Belt Co (www.russellind.com)

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP41 Magnetic Cards

*Message #1 Posted by **Tom Cox** on 25 Mar 2003, 7:30 p.m.*

After letting my HP 41 sit on shelf for a number of years, I have recently had reason to attempt to rescue and use some programs I wrote back about 1981. Fortunately the card reader still works (it was repaired once some years ago by HP for the gummy drive roller problem) and seems to work OK. Unfortunately I have found that from 10 to 50% of cards for a program are unreadable. So far as I know it is only possible to read cards into memory in sequence and when one gets to an unreadable side, that is all you are going to load. I have some hardcopy listings, but entering multi-hundred keystroke programs with no errors is a challenging task. What kind of life should I reasonably expect from these cards? Is there any way to load cards past the MALFUNCTION code shown when a bad card side is attempted to be read so that one can enter only the missing program steps? Any thoughts, comments would be appreciated. Thanks.

Re: HP41 Magnetic Cards

*Message #2 Posted by **hugh** on 25 Mar 2003, 8:32 p.m.,*
in response to message #1 by Tom Cox

i know this sounds like a joke, but does spitting on them ever work, or is that only the ti59 or was that a joke as well?

Re: HP41 Magnetic Cards

*Message #3 Posted by **Johnny Billquist** on 26 Mar 2003, 5:22 a.m.,*
in response to message #1 by Tom Cox

I cannot really answer, but I can tell that megnetic cards that I wrote around 1985 still work just fine to read on my machine.

Perhaps you have some alignment problem, cleaning problem or other issue?

Cards can be read out of order, but I don't know what happens if one in the middle is bad. I guess you can't get at the data after that, even if it's been read into memory.

Re: HP41 Magnetic Cards
*Message #4 Posted by **Bill Smith** on 26 Mar 2003, 11:37 a.m.,*
in response to message #1 by Tom Cox

Quite a while ago, further back than reliable memory, I had a nearly 1000 line program that req'd some 14 cards to record. one of the cards went bad, but it seems i was able to load the rest of the program. perhaps because it contained many global labels? i remember editing in the middle of the program enough to get it working again, but i think it required re-entering entire subprograms. better than rekeying the entire thing. then i bought a wand, and have added HP-IL and an 82973A ;^]

anyway, methinks this can be done, but may require some tricks like inserting temporary labels. if time permits, i will experiment around with my bad cards and see if i can rememeber exactly what i did.

best luck, bs

Re: HP41 Magnetic Cards
*Message #5 Posted by **David Smith** on 26 Mar 2003, 12:22 p.m.,*
in response to message #1 by Tom Cox

Time should not be affecting your cards. Storage conditions might. You might want to try cleaning the cards with windex and a clean cloth (in real stubborn cases you might can try alcohol, but this can remove the lubrication from the card and/or the white paint on the back side... if so, re-record the program on a good card).

Also, have you cleaned the card reader head? Also, your replaced rubber roller is almost certainly decompsing as we speak. It may seem good, but it is not.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-41 card reader "memory lost"
*Message #1 Posted by **Michel Beaulieu** on 25 Mar 2003, 7:28 p.m.*

No don't be discourage, i don't need to repair my 41 card reader ;-). Just a question.

Is is normal that if i put a brand new card in my reader and try to read this blank card that i get MEMORY LOST everytime i mistake a card for a empty one?

Merci

Re: HP-41 card reader "memory lost"
*Message #2 Posted by **Johnny Billquist** on 26 Mar 2003, 5:20 a.m.,*
in response to message #1 by Michel Beaulieu

No. You should never get MEMORY LOST errors spontaneously.

Re: HP-41 card reader "memory lost"
*Message #3 Posted by **Hans Brueggeman [GER]** on 27 Mar 2003, 4:25 p.m.,*
in response to message #1 by Michel Beaulieu

michel, possible cause are worn or dirty battery contacts. try this: open the battery compartment, remove the batteries and clean the battery contacts in the calculator with a cotton swab dipped in pure alcohol (isopropanol for example. DO NOT use anythind else than alcohol). take another swab to dry them. also, clean the contacts of the batteries themselves.

cheers, hans

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

'Halfnut' vs 'Fullnut'
*Message #1 Posted by **joe** on 25 Mar 2003, 5:54 p.m.*

Ok, sorry to be dense here, and forgive me for being ignorant, but what exactly is a 'halfnut' vs. 'fullnut' when talking about 41's?

I tried a search here and found a picture showing the display being different - one was more 'round' than the other.

Is this the only difference?

joe

Re: 'Halfnut' vs 'Fullnut'
*Message #2 Posted by **Tony Duell (UK)** on 25 Mar 2003, 6:23 p.m.,*
in response to message #1 by joe

The _real_ difference is in how the electronics are constructed. Fullnut machines have a separate PCB (separate from the keyboard PCB) with pin-through-hole chips on it -- a CPU chip, a power supply chip, several ROM and RAM chips, maybe a timer chip (if it's a CX). The halfnuts have most of the logic built into the display driver hybrid (it contains the PSU, and all the standard memory). The only other chip is the CPU, which is surface-mounted on the back of the keybaord. There is no separate logic board. CX halfnuts have another circuit board soldered on pins across the back of the main board -- this board contains chip-on-board timer and memory ICs to give the extra functions of the CX (but note the ROM in the display driver hybrid is different too, so you can't upgrade a CV itno a CX just by adding this extra board :-(). Personally, I prefer fullnuts -- they're a lot easier to repair!

Re: 'Halfnut' vs 'Fullnut'
*Message #3 Posted by **Michel Beaulieu** on 25 Mar 2003, 7:25 p.m.,*
in response to message #2 by Tony Duell (UK)

I don't know if it me but i prefer the "font" on the LCD of the Fullnut. I think the "pixels" are thicker on the fullnut no? Perhaps it's not different and i imagine it.

Re: 'Halfnut' vs 'Fullnut'
*Message #4 Posted by **John Smith** on 26 Mar 2003, 6:42 a.m.,*
in response to message #3 by Michel Beaulieu

You're correct, the LCD segments are more closely spaced in the FullNut version, so the characters seem thicker and more contrasty. This is specially noticeable in the center two segments, just compare a FullNut 'H' vs. the HalfNut 'H'.

I for once rather prefer the FullNut LCD characters instead of the supposedly improved HalfNut ones. True, the HalfNut display has variable contrast and lowercase characters, but you can't benefit from them unless you use machine code programming, which extremely few people do or care, while having to look all the time at thinner, less easily readable characters (specially under some kind of illumination where they cast shadows thicker than themselves !) isn't worth the 'benefits'. Also, I don't like the rounded frame instead of the clean, rectangular look of the FullNut display.

So... how do you tell them apart
*Message #5 Posted by **joe** on 25 Mar 2003, 8:32 p.m.,*
in response to message #2 by Tony Duell (UK)

Is the only difference the display? I mean, one has the 'rounded' edges, the other has the more square edges...

Also, why are some 41's with a dark background on the keyboard and others are light?

I saw one on ebay that had a light colored keyboard bezel...

joe

Re: So... how do you tell them apart
*Message #6 Posted by **Johnny Billquist** on 26 Mar 2003, 5:25 a.m.,*
in response to message #5 by joe

Actually, if you're into machine code programming, the halfnut display have much more characters defined. It can also adjust the contrast in software.

Re: So... how do you tell them apart
*Message #7 Posted by **kim** on 26 Mar 2003, 6:54 a.m.,*
in response to message #6 by Johnny Billquist

BUT the Halfnut can be turbo'ed to run 3x the normal speed the halfnut gets dodgy around 80-90%.

This might be know by all but I'll share it anyway (hope I get it right) the 41 had the codename Coconut and the FullNut did not get it's name until the Halfnut was introduced (well it still has the official name Coconut as it had it in the labs, people like us changed it...).

Kim

Light keyboard benzel
*Message #8 Posted by **Chan Tran** on 26 Mar 2003, 8:46 a.m.,*
in response to message #5 by joe

There is no light keyboard benzel. What you saw there is an HP41 with the plastic keyboard template.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-41 Dungeon of Doom / Frank Wales game help sought
*Message #1 Posted by **Gene Wright** on 25 Mar 2003, 5:22 p.m.*

Hi all. This game, one of the best for the HP-41/HP-42 IMO, is found in V8N7 of the HPCC Datafile publication, which is now available on CD ROM by the way.

Anyhow, I'm trying to get the game typed up in my HP-42 from the listing and have some questions.

I've verified the listing twice now, but it uses some synthetics to set flags at the start of the game which I obviously can't do on my 42S.

Which flags are set and which are cleared at the start of the game?

My game runs except that it does not give me direction clues about the "keys" in the game and also seems to have invisible creatures fight me when I try a direction when the door is locked.

I plan to go through the listing yet again to make sure I don't have any more typos, but any ideas would be welcome.

Does Frank have an email address somewhere?

Re: HP-41 Dungeon of Doom / Frank Wales game help sought
*Message #2 Posted by **Frank Wales** on 26 Mar 2003, 3:51 a.m.,*
in response to message #1 by Gene Wright

I have several.

Fixed it re: HP-41 Dungeon of Doom / details inside

*Message #3 Posted by **Gene** on 26 Mar 2003, 1:38 p.m.,*

in response to message #2 by Frank Wales

As the game intitializes, it generates the location of the first "key" and stores its location in R09. The program then stores 10 in R10, assigns the SUMREGs to 01 and does a CLSUM.

Foolishly, I had left the 42S in its default ALLSUM state rather than the 41 equivalent LINSUM state.

When it did the CLSUM command, it cleared out R09, which wiped out where the key was, thus bypassing the display of where the key was.

Oh well. At least now it works! Gene

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

chance to help someone in Uganda w/HP-19BII?
*Message #1 Posted by **gene** on 25 Mar 2003, 4:44 p.m.*

I got the email below from ssennyonjovincent@hotmail.com and do not have this part he seeks. I have no idea if this is a scam or real request, but since it is only for a small calculator part, I thought someone here might could help. Either way, I am not involved beyond posting this here. --Gene
---

During my studies for the MSc in international securities, investment and banking at Reading University (ISMA Center),UK in 1997 Iwas introdeced to the HP Calculator as part of our instructional tools. Before returning home to Uganda I ordered the above HP 19BII -BUSINESS CONSULTANT II ID 71200813 from US because I could not get it from UK. It arrived in mid September when I had already left for home.My friend forwarded it to my address in Uganda. On receiving it I noticed that the "battery holder cover" could not close properly because one of the plastic looping pins was broken. I had no alternative but to use it as it was. However, recently, I lost the cover. There is no dealer in such equipment in Uganda my search for the cover in Kenya where there is some represenative was fruitless.Shipment to US or to Indonesia for repairs would be too expensive.Purchasing a new one would be equally costly,and I fear pirated versions. I do need the calculator desperately for instructions to my students and also for my research work. Please do advise me what I can do. Below is my full address: Thank you. Vincent M M SSENNYONJO PO Box 21041 Kampala Uganda

Re: chance to help someone in Uganda w/HP-19BII?
*Message #2 Posted by **jon** on 26 Mar 2003, 2:31 a.m.,*
in response to message #1 by gene

it's a scam. his motive seems to be obtaining personal information. if john doe sends him the part, he'll have john doe's name and address. he may encourage future contact to obtain more information. also, he emphasizes that he "desparately" needs the calculator to teach and to research. i dont see how a missing battery cover will prevent him from doing either. he could just apply tape over the batteries to prevent them from falling out. also, take note of his mailing address. it's a p.o. box in a foreign country...meaning, it's pretty much impossible to track him.

Re: chance to help someone in Uganda w/HP-19BII?
*Message #3 Posted by **randy** on 26 Mar 2003, 3:41 p.m.,*
in response to message #2 by jon

I'd be willing to bet it's a scam. The "19Bii battery door needed" is taken from an classified ad that ran some time ago, he got your email from a posting?

If he really needed one, why not post in the classifieds? Why the direct email?

Re: chance to help someone in Uganda w/HP-19BII?
*Message #4 Posted by **Vieira, Luiz C. (Brazil)** on 26 Mar 2003, 7:28 p.m.,*
in response to message #1 by gene

Hi;

if he sends his broken calculator to be repaired, he will pay costs and receive a new model. No need for that sort of battery holder because the new HP19BII has a different battery port.

If he is a scam, let it goes. If he is interested, he should read answers in here. Whay didn't he post here, instead he sent a private message?

My thoughts.

Luiz C. Vieira - Brasil

Re: chance to help someone in Uganda w/HP-19BII?
*Message #5 Posted by **Chris Randle (UK)** on 26 Mar 2003, 8:32 p.m.,*
in response to message #1 by gene

I'm pretty certain that I saw an almost identical message on a mailing list many months ago. It wasn't about the 19BII, IIRC, but it was pretty much the same sort of wording. The other list concluded that it was a scam for harvesting personal details.

One thing that makes me very suspicious of this one is that the 19BII was readily available in the UK.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

misleading wording on ebay 34C
*Message #1 Posted by **Malcolm Brooks** on 25 Mar 2003, 4:30 p.m.*

Just a note of caution on this ad.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=11713&item=3014358855&rd=1

Its not immediately obvious that this is a non functional unit - until you scroll right down the botton and read the added comments.

Thanks Malcolm

Re: misleading wording on ebay 34C
*Message #2 Posted by **R Lion** on 25 Mar 2003, 5:13 p.m.,*
in response to message #1 by Malcolm Brooks

Incredible!!!!

Raul

Re: misleading wording on ebay 34C
*Message #3 Posted by **George** on 25 Mar 2003, 5:40 p.m.,*
in response to message #1 by Malcolm Brooks

I wonder if the high bidder that placed a bid of $158.05 knew he was bidding on a non-functioning calculator???????

Seller does not respond timely
*Message #4 Posted by **Norm** on 26 Mar 2003, 2:12 a.m.,*
in response to message #3 by George

Feel like I dodged a bullet. I'm not the highest bidder but am the 2nd highest bidder, who is basically therefore responsible for the current bid price in a proxy bid system.

What's feeding the auction is the manuals and the box, and the presumption the calculator is A-O-K.

HOWEVER, the seller has seriously mis-stated the condition of his goods.

I submitted a bunch of questions to the guy (what is lead inside, what is lead, is it pencil lead, is it a sheet of lead)

He has not replied quickly. Perhaps he will reply someday.

YES, DEFINITELY the shifty-eyed, un-truthful, out-to-cheat-somebody type of seller.

Re: Seller does not respond timely
*Message #5 Posted by **Larry Corrado, USA (WI)** on 26 Mar 2003, 7:51 a.m.,*
in response to message #4 by Norm

He did try to explain the "lead" reference in one of his many addenda by saying he meant "leak."

Re: misleading wording on ebay 34C
*Message #6 Posted by **joe** on 25 Mar 2003, 5:56 p.m.,*
in response to message #1 by Malcolm Brooks

I bet somebody is going to be a little upset on this one...

Re: misleading wording on ebay 34C
*Message #7 Posted by **Howard** on 25 Mar 2003, 10:20 p.m.,*
in response to message #1 by Malcolm Brooks

Guess who is the sucker who put an ambit bid for this item? That extra information was placed after I bid on the item. I have sent an e-mail to the seller asking that s/he withdraw the item from sale. I have also said that I will not be paying for it. Does anybody have any thoughts on whether I will be forced to pay in these circumstances. BTW Thank you to those who e-mailed me to make me aware of this situation.

Re: misleading wording on ebay 34C
*Message #8 Posted by **Mike Rivera** on 25 Mar 2003, 10:40 p.m.,*
in response to message #7 by Howard

I believe you can cancel your bid since he later stated it is non-functional.

Just go to bid retraction.

- Mike

Re: misleading wording on ebay 34C
*Message #9 Posted by **R Lion** on 26 Mar 2003, 2:05 a.m.,*
in response to message #7 by Howard

Once, I canceled a bid, because the seller didn't answer my mails during several days... This is worst: calcel your bid with no fear (IMHO)

Raul

Re: misleading wording on ebay 34C
*Message #10 Posted by **Karl Schneider** on 26 Mar 2003, 1:52 a.m.,*
in response to message #1 by Malcolm Brooks

It's *possible* that the unit actually does work, but the seller doesn't know it, and doesn't know how to test it, or even what kind of batteries to buy for it. It was mentioned that the battery leaks, and the old NiCd is doubtless shot.

The seller seems to be an eBay professional, and is not knowledgeable about these. He gave very little technical information. Still, I wouldn't bid that much without assurance of quality.

Re: misleading wording on ebay 34C
*Message #11 Posted by **Howard** on 26 Mar 2003, 10:16 a.m.,*
in response to message #10 by Karl Schneider

You all will be pleased to know that after I wrote to the seller s/he released me fro my bid. After that I see now that s/he has cancelled the auction.

I think it's pretty clear
*Message #12 Posted by **Mike** on 26 Mar 2003, 2:22 p.m.,*
in response to message #1 by Malcolm Brooks

The seller obviously wasn't trying to get away with anything. He made corrections to the auction, based on questions probably asked of him.

NEVER assume a calculator works, unless it is stated as working. ASK questions.

Re: I don't think it's pretty clear
*Message #13 Posted by **Tom (UK)** on 27 Mar 2003, 7:18 a.m.,*
in response to message #12 by Mike

I think the seller did the right thing in this case but I disagree that the auction page was OK...

If something is described only as a 'calculator' I would expect it to work like a calculator - not a collection of plastic and metal. An auction listing is part of a legal contract between the buyer and seller.

However I realise due to greed / stupidity / laziness / ignorance that people put up auctions without describing the item as it should be.

I think ebay should put some check boxes that MUST be completed when submitting an auction, the auction page would then have a section with the following info:

1) Picture is of the actual item for sale.

2) Seller has full knowledge of the item (i.e. seller can't hide behind the excuse of 'I was selling it for a friend / relative so did not realise it wasn't working...')

3) "The following works..." (followed by a text list of the things that do operate) or "The item is untested".

This does NOT stop someone lying BUT it would lead to less misleading sales and give the buyer a stronger legal position as the seller could be shown to have lied.

However it seems Ebay is similar to many other listed companies only looks after it's short term future. Sellers pay Ebay and the higher prices misleading items sometimes fetch add to Ebay's profits - so why should they care?

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP 9810
*Message #1 Posted by **olivier croissant** on 25 Mar 2003, 4:24 p.m.*

Hi,

I am thinking about buying a HP 9810 with the basic memory configuration. I have two questions: Does someone know a way to add memory using market devices to reach its full potential?

Are such machine rare ? How much should i expect to pay for such a machine?

Thanks

Re: HP 9810
*Message #2 Posted by **andy** on 25 Mar 2003, 4:38 p.m.,*
in response to message #1 by olivier croissant

There's one on ebay right now:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=11713&item=3014516072

I've seen 1 or two on ebay in the last year.

Re: HP 9810

*Message #3 Posted by **Tony Duell (UK)** on 25 Mar 2003, 6:39 p.m.,*
in response to message #1 by olivier croissant

The memory in the 9810 is consists of Intel 1103 DRAM chips. These are 1K bit devices, and 3 of them are used for each block of program memory. Hardware in the memory cage does 2 physical accesses to the memory for each CPU memory access, and fiddles with the bits so that the 1K*3 physical memory appears as 512 6-bit 'program steps' to the CPU and to the user (the 9810 stores the program as 6 bit keycodes). The 1103s are early PMOS memory chips and have strange supply rails (+16V and +19V) and logic levels. In the 9810, the TTL signals used by the rest of the machine are converted to/from these strange levels by circuitry on the memory timing/address/data PCBs -- the RAM PCBs are just the 1103 chips, and the signals at the RAM PCB edge connector are at these strange levels. It is therefore non-trivial to use anything other than 1103s in the 9810. And I have no idea where you'd get those from these days.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

hp 25 simulator
*Message #1 Posted by **R Lion** on 25 Mar 2003, 2:32 p.m.*

In this MoHPC there is a 25 simulator

http://www.hpmuseum.org/simulate/simulate.htm

the applet code is public domain, but I don't know what to do.

Can anyone send me the working applet?

Thanks in advance. Raul

Re: hp 25 simulator
*Message #2 Posted by **Jürgen (CH)** on 25 Mar 2003, 5:37 p.m.,*
in response to message #1 by R Lion

Hi Raul,

just click on the "HP-25 R/S" button on the simulate.htm page. If the button does not appear, Java may be disabled in your browser.

To see how the applet is started, look at the HTML source code of simulate.htm (View/Source command in IE):

```
<APPLET archive="hp25.jar" code="hp25b.class" width=64 height=64 align=left
hspace=10>
<B>Java capable browser required</B>
<PARAM name="butn" value="graphics/hp25butn.jpg">
<PARAM name="data" value="graphics/hp25data.txt">
<PARAM name="face" value="graphics/hp25face.jpg">
<PARAM name="leds" value="graphics/hp25leds.gif">
<PARAM name="slid" value="graphics/hp25slid.jpg">
<PARAM name="keys" value="graphics/hp25keys.jpg">
</APPLET>
```

Hope this helps. Regards, Jürgen

Re: hp 25 simulator
*Message #3 Posted by **Paul Brogger** on 25 Mar 2003, 5:41 p.m.,*
in response to message #1 by R Lion

When the page loads, the applet should load with it, though it can take a little time.

Just below the line stating "The applet code is public domain" you should eventually see a graphic of an H-P calculator "R/S" button appear. When the button shows, just "click" the button. I just did it, and it worked fine. (And it IS a cool-looking emulation!)

Good luck -- and post again if that doesn't work. (Though, I'm no HTML/Java debugger, so someone else will have to jump in!)

Re: hp 25 simulator
*Message #4 Posted by **R Lion** on 26 Mar 2003, 2:39 a.m.,*
in response to message #3 by Paul Brogger

Thanks to Jürgen and Paul... and sorry for my bad expression.

What I need/want is to get the java code in my PC for using the emulator without Internet conection...

Thanks. Raul

Re: hp 25 simulator
*Message #5 Posted by **Jürgen (CH)** on 26 Mar 2003, 8:12 a.m.,*
in response to message #4 by R Lion

Send me an e-mail and I'll give you further assistance.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP and TI
*Message #1 Posted by **Joerg Woerner** on 25 Mar 2003, 1:19 p.m.*

HP and TI - always good for a joke...

Few weeks ago I received this email:

"Hello, I have the Radio Shack EC-4025. Do you know where I can get the Booklet for it, had this calculator for so long that I don't remember where I put it. I'm in very need of the Booklet so I can learn how to use my calculator..."

Well, the EC-4025 is nothing else than a rebadged Texas Instruments SC-10. My collection of TI-manuals covers this calculator, I scanned the manual for her and sent it back.

AFTER I sent out the manual I noticed her email address:

*****.*****@hp.com

Greetings, Joerg

Re: HP and TI
*Message #2 Posted by **Tom (UK)** on 26 Mar 2003, 1:07 p.m.,*
in response to message #1 by Joerg Woerner

Was it Carly?

Re: HP and TI

*Message #3 Posted by **Scuba Diver** on 26 Mar 2003, 9:14 p.m.,*

in response to message #2 by Tom (UK)

I wouldn't be surprised if it was!

Even she realises that the new 9-series is crud and she wouldn't be caught dead using it!

B.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Card Reader HP65 - Need help
*Message #1 Posted by **Bengt Walerud** on 25 Mar 2003, 8:09 a.m.*

Trying to get my HP65 in perfect condition. The calculator's been in storage for quite som time but is in excellent condition although the battery needs replacement. I have one problem however: Something has been loose on the inside of the card reader. I took the calculator apart and found two loose screws that attach the motor to the chassi. After fixing these, the card reader doesn't work. I know the motor used to work. What would be the first action to undertake in order to fix this? The motor doesn't run at all - no sound - when I put a card into the reader. Any suggestions?

Re: Card Reader HP65 - Need help
*Message #2 Posted by **David Smith** on 25 Mar 2003, 5:52 p.m.,*
in response to message #1 by Bengt Walerud

Have you replaced the rubber roller. They ALL turn to sticky goo that can totally jam up the reader. Instructions are available on this site and many others on the web. The other thing to check is to make sure that the red and black wires to the motor have not come unplugged from the reader circuit board.

Re: Card Reader HP65 - Need help
*Message #3 Posted by **Tony Duell (UK)** on 25 Mar 2003, 6:43 p.m.,*
in response to message #2 by David Smith

Also check the leaf contact switch and the pads it makes contact with on the keyboard. In the HP65, one of the contacts is used to start the motor when a card is inserted. If that's not closing correctly, the motor won't start. Carefully clean the ends of the leaf contact and the pads on the keyboard PCB with propan-2-ol (isopropyl alcohol). I suppose it could be a problem with the sense amplifier chip on the card reader PCB (this chip also cotains the motor control circuitry) but that's a lot less likely.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Uncredited HPmuseum pic ?
*Message #1 Posted by **mapet** on 25 Mar 2003, 6:23 a.m.*

http://ster.sklephp.pl/index.php?kat=106&PHPSESSID=85c30aa95428fae49874a41960affa43&PHPSESSID=85c30aa95428fae49874a41960affa43

Re: Uncredited HPmuseum pic ?
*Message #2 Posted by **Michel Beaulieu** on 25 Mar 2003, 9:12 p.m.,*
in response to message #1 by mapet

What is this site about? I can't read the language. It's really the picture we can se on the museum home page...

Me too
*Message #3 Posted by **Dave Hicks** on 26 Mar 2003, 12:55 a.m.,*
in response to message #2 by Michel Beaulieu

Can anyone tell me what this is about?

It looks like a Polish HP-products retailer
*Message #4 Posted by **Karl Schneider** on 26 Mar 2003, 2:01 a.m.,*
in response to message #3 by Dave Hicks

The Website and language is Polish (note the *.pl web domain), and seems to be in Warsaw (one of the rotating gif's says "Warszawy", and lists phone #'s. I can interpret only a few words from context.

It looks like a Polish HP-products retailer that found/stole/borrowed a fitting image.

Re: Me too
*Message #5 Posted by **mapet** on 26 Mar 2003, 3:31 a.m.,*
in response to message #3 by Dave Hicks

It's Polish retailer. It sells HP calcs and other HP products. They have HP 32SII listed for about $100.

Thanks
*Message #6 Posted by **Dave Hicks** on 26 Mar 2003, 12:57 p.m.,*
in response to message #5 by mapet

I sent them an email requesting that they credit it or remove it. Now we'll see if their English is better than my Polish. (It couldn't be worse ;-))

I can translate it for you if you wish.
*Message #7 Posted by **mapet** on 27 Mar 2003, 4:26 a.m.,*
in response to message #6 by Dave Hicks

I can translate it for you if you wish.

They obviously do quite well with English
*Message #8 Posted by **Dave Hicks** on 27 Mar 2003, 9:27 p.m.,*
in response to message #7 by mapet

And respond quickly too. That wasn't quite the way I imagined crediting the image but I think it's fine.

Thank you for pointing it out.

Re: They obviously do quite well with English
*Message #9 Posted by **Massimo Gnerucci (Italy)** on 28 Mar 2003, 1:48 a.m.,*
in response to message #8 by Dave Hicks

After all... how could we have RPN without Poland? :-)

Regards,
Massimo

Re: They obviously do quite well with English
*Message #10 Posted by **Spice_Man** on 28 Mar 2003, 2:19 a.m.,*
in response to message #8 by Dave Hicks

If you ever want to translate Polish to English or vice-versa, try this site:

www.poltran.com

You can copy and paste into this site to translate complete paragraphs.

Spicey

'muzeum kalkulatorow HP'...
*Message #11 Posted by **Raymond Del Tondo** on 27 Mar 2003, 9:43 a.m.,*
in response to message #6 by Dave Hicks

Hi Dave,

I lokked today, and now it's credited 'somehow': The tooltip shows 'muzeum kalkulatorow HP'...

Regards,

Raymond

Re: 'muzeum kalkulatorow HP'...
*Message #12 Posted by **Chris Randle (UK)** on 27 Mar 2003, 6:07 p.m.,*
in response to message #11 by Raymond Del Tondo

Also, the graphic is a hotlink to www.hpmuseum.org

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Flakey 28S
*Message #1 Posted by **James M. Prange** on 25 Mar 2003, 5:19 a.m.*

I have a 28S that sometimes pauses either while running or taking keystrokes. Sometimes it's barely noticeable, sometimes a few seconds, sometimes seemingly "indefinitely".

The ON key and ON key combinations always seem to get it going again. Of course ON by itself is ATTN or the equivalent of 0 DOERR, but "ON and +" or "ON and -" adjust the LCD darkness, so they work to get it going.

With the "ON and CursorLeft" repeating self-test, it sometimes pauses, but when I get it going, it always gets to "OK-28S"; never a failure.

With the "ON and NEXT" keyboard test, sometimes the keys stop beeping (not repeatably on any particular key or on either half of the keyboard), and if I keep pressing a few more keys (putting keystrokes into the key buffer) and then do "ON and +" or "ON and -", then it responds with a long (somewhat warbly) beep and I can continue the test and end up with "OK-28S".

No apparent external damage and all of the keys feel ok, none mushy or anything. I've put in tested new batteries and of course cleared the memory, but haven't attempted any disassembly.

This has a Version 2BB ROM (as far as I know, the only version used in the 28S).

Has anyone experienced anything like this or have any ideas on what might be causing this or how to repair it?

Regards,
James

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Re: HP-67 card reader reading
*Message #1 Posted by **Michel Beaulieu** on 24 Mar 2003, 9:39 p.m.*

My motor runs faster and i get no error message on every tries when WRITING BUT i get error at every tries when READING. I have a HP-41 card reader and tried to read the cards my 67 write : i get a "card err" at the moment i enter the card... So i think my 67 reader don't really write ok. Is it possible to write somtehing on my 41 that my 67 can read to see if my hypothesis is ok?

Thanks to the poster who suggest me to retract the motor from is seat : it works great on my speed.

Any other suggestions?

Thanks again!

Re: HP-67 card reader reading
*Message #2 Posted by **Malcolm Brooks** on 25 Mar 2003, 12:13 a.m.,*
in response to message #1 by Michel Beaulieu

These are the symptoms of the dreaded tantalum capacitor failure.

Someone who has actually replaced one should be able to help you identify it and suggest a suitable replacement.

Thanks Malcolm

Re: HP-67 card reader reading
*Message #3 Posted by **David Smith** on 25 Mar 2003, 5:57 p.m.,*
in response to message #2 by Malcolm Brooks

The HP41 cannot make cards that the 67/97 can read. The capcitor failure mentioned above only affects reading of cards.

Check that the three card reader leaf switches are opening and closing properly. Trace the pads on the back of the keyboard where the gold switch fingers on the reader connect down to the pins on the end of the keyboard. There are three of them (motor, head, and write protect). Measure the resistance of the pins to ground. As you insert and remove a card, the switches should close and open in sequence. If the switch fingers are not adjusted properly they may hang open or closed or be intermittent. Adjusting one finger may affect another one, so it can be rather tedious to get them all set correctly.

Re: HP-67 card reader reading
*Message #4 Posted by **Malcolm Brooks** on 25 Mar 2003, 6:41 p.m.,*
in response to message #3 by David Smith

To David,

He is saying he has a problem reading not writing.

Isn't this the symtom of the capacitor failure?

I think he needs a little help in identifying which capacitor and what to replace it with.

I would help but I haven't done it.

Thanks Malcolm

I LOVE YOU ALL :-)

*Message #5 Posted by **Michel Beaulieu** on 25 Mar 2003, 7:21 p.m.,*
in response to message #3 by David Smith

I found these problems by your tips on my card reader :

1- I glue my clutch as you said 2- I change a capacitor for reading 3- I change my orings for fuel tubing 4- I rotate the ajuster/screwdriver pin for tension 4- I ajust the contact with my ohmeter and 2 of the leaf were seeadily in contact, i lower them.

I GET IT WORK - I LOVE YOU ALL - I'm so sorry that i can't help you the same way you did; i'm too much a beginner with HP repairing/using!

It's very difficult to get all these adjustements work in combinations, i think you need a little luck.

Now if someone can tell me how to do the same job on a mint SR-52 with gummy wheel... ;-) I have a lot of card for it...

The little problem that still subsist on my 67 is that i need to pass a NEW card 3 times before really writing on it because the pulling is not regular. Th first time a card is pass, i can see some "tire" mark on the side of the card like morse code. After 4 passes, all the side is mark and the card pass regulary and reading/writing is 100% ok. What to to to correct this problem?

Thanks again!

Re: I LOVE YOU ALL :-)

*Message #6 Posted by **David Smith** on 26 Mar 2003, 12:30 p.m.,*
in response to message #5 by Michel Beaulieu

You may have residue from the old roller spread through the reader mechanism. You should also clean the head.

Uneven pulling of the card can be due to the fuel line not being perfectly round and/ or the hole not being centered. Or the work gear may not be aligned perfectly with the motor shaft (common when gluing a decomposing cluth). These problems causes the reader to make a pulsing URR URR URR URR sound as the card is read.

HP Forum Archive 11

[Return to Index | Top of Index]

HP98x0 machine code info?
*Message #1 Posted by **Tony Duell (UK)** on 24 Mar 2003, 7:54 p.m.*

Doe anyone have any information on the machine code of the processor used in the HP9810/HP9820/ HP9830 machines? I've read the HP Journal articles here, and I've read the appropriate section of Gordon Bell's book. I also have a good idea as to what the processor hardware does. Wht I am ideally looking for is an opcode table/map of this processor (i.e. what the various 16 bit instructions do). Does anyone have such information?

Re: HP98x0 machine code info?
*Message #2 Posted by **Rick Bensene** on 24 Mar 2003, 11:33 p.m.,*
in response to message #1 by Tony Duell (UK)

One of the patents for the 9820 has a complete listing of the microcode for the machine. The architecture of the processor is very similar to the early HP 211x CPU's. From reading through the listings, it's possible to figure out the instruction set. The listings contain both the assembly code, as well as the machine code.

I haven't studied it deeply enough to generate an instruction set listing, but I'm sure that there's enough information there to figured it all out.

The patent number is 3839630. You can get to it at espacenet.com, all you need is a PDF viewer.

Hope that this helps!

Rick Bensene The Old Calculator Web Museum http://oldcalculatormuseum.com

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Repairing HP98x0 keyboard bezels
*Message #1 Posted by **Tony Duell (UK)** on 24 Mar 2003, 7:50 p.m.*

I'm currently restoring an HP9830. My aim is to have a working machine to use, not a museum piece, but equally I don't make unnecessary changes, and when I do fit 'foreign' parts, I don't modify other parts of the machine. An example of this is that there was a missing keycap. In my (overstocked) junk box I founf a keycap for the same type of Cherry keyswitch, but it's a bit shorter. I've fitted that for the moment, if I ever get the right one I can fit it with no problems as I didn't have to modify the switch in the calculator. Anyway, one of the problems was that the plastic keyboard bezel was shattered in one corner -- this seems to be a common problem with the 98x0 machines as the plastic uses goes very brittle with age. I've found a way to repair this so that it's strong enough to use and doesn't look too bad. You use dichloromethane (sold in good model shops over here under the brand name 'Plastic Weld') to disolve the plastic and stick the bits together. Use a brush to run a little along the edge of each piece, then fit them together. Then run a little more solvent into the crack. After sticking all the parts together, take a piece of thin cloth -- I am not sure what I used -- it was an offcut, and cut it to fit over the back of the broken area. Brush more slovent onto the back of that, and then force it into the plastic so that the fibres get embedded in the softened plastic. Let it all dry. Then clean up the outside of the bezel with fine wet-n-dry 'sandpaper'. The result is not very pretty, but it sure beats a large hole in the keyboard.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

hp-22S open cant put back together
*Message #1 Posted by **David** on 24 Mar 2003, 5:49 p.m.*

I have an hp-22S that was opened and I cannot for the life of me get it back together. there are four posts at the top that look like they should slip in the four holes on the back cover, but they don't. Please, anyone with any advice?

Re: hp-22S open cant put back together
*Message #2 Posted by **Paul Brogger** on 24 Mar 2003, 6:15 p.m.,*
in response to message #1 by David

Take it slow, and don't force anything.

How did you get it apart?

Usually (for me) it's the four posts at the bottom (beneath the keys) that are somewhat troublesome. I usually have to shave around the edges of the mushroomed post ends to make them fit back into the holes in the front.

Perhaps the same thing is happening up top? There should be four posts (two on either side of the battery compartment) on the front case, which feed into four holes on the back (underneath the clear red battery cover). If the ends of those are still mushroomed a bit, you may wish to shave them narrower. (I wouldn't *shorten* them so much as make 'em skinnier -- the idea is to leave them just wide enough that they fit into the holes, but still maintain a frictional bond to keep the calculator held together.)

There are also several small guide pins (the number varied with various slightly different versions of the Pioneer case) about the edges of the front which fit into "tubes" in the back case. If any of those are bent, that can prevent close alignment of the case halves.

Take a breath, work slowly, and try to see what the hold-up is. Good luck, and post again if you continue to have trouble.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

A sad story
*Message #1 Posted by **Juan_J** on 24 Mar 2003, 4:52 p.m.*

after a month spent in the hospital and seeing doctors, i found it should be good to write here.

on march 1st, i was robbed and shot four times, three on my right leg and one on my left wrist. i lost my laptop, an hp-42s and an hp-71b (complete with 128k ram, a math rom, a 41 translator and an owner´s manual.) from then on i´ve been recovering (and mourning the loss of both calculators, i must confess.)

now i am feeling better, still ten days away from being able to use my left hand; my leg will take longer since the nerves have to "rewire" (and in the meantime i am re-learning to walk.) i just have my right hand to type and found that typing á la dennis is good when only one hand is available; i might say it´s comfortable even :-)

during my recovery i´ve spent quite a good time with the hp-67 math and stat pac and ported some programs to my 41s. in the process i have remembered the good old days of programming when your code had to be efficient, not fancy, and when you stated the problem, worked the solution and then refined the user interface, not the other way around as it is common these days. among others, i ported the polynomial approximation and the factorial, permutation and combination programs. i will be happy to share these.

as a forum frequent reader, and being the museum one of my favorite sites, i wanted to share these terrible moments, which i am trying to leave behind.

Dave: you can delete this post if you think it is not appropriate here. to all the rest: take care.

Re: A sad story
*Message #2 Posted by **John Cadick** on 24 Mar 2003, 6:56 p.m.,*
in response to message #1 by Juan_J

Juan:

So sorry to hear about your misfortune and I hope you are healing well. You didn't say, but I hope that your attackers were caught and will be punished.

John

> **Re: A sad story**
> *Message #3 Posted by **Spice_Man** on 24 Mar 2003, 7:26 p.m.,*
> *in response to message #2 by John Cadick*
>
> I say we let our troops use the attackers for target practice.
>
> Spicey

Re: A sad story
*Message #4 Posted by **Renato** on 24 Mar 2003, 8:27 p.m.,*
in response to message #1 by Juan_J

Juan,

I am sorry for what happened to you. Many times, the world proves that reality is much more than we can grasp. My belief is that vengeance and anger do not help, and I fell better by not seing these in your words.

Be well. Recover soon.

Renato

A toast to Juan's speedy recovery!
*Message #5 Posted by **Jeremy** on 24 Mar 2003, 10:21 p.m.,*
in response to message #1 by Juan_J

Juan,

I'm sorry to hear what happened to you. Why did they shoot you 4x? I bet you chased after them yelling: "Gimme back my calculators you dirty !@#$^&!" and it took four rounds to get you down, right?

As strange as it sounds, I'm glad you were shot in the leg and wrist instead of in the chest, stomach, neck, head, etc. No matter how grim, there is always a bright side. I know, it is easy for me to say, since I'm not the one in the hospital, but I live my life that way. The calculators and computer are replacable, you will walk again, and you will use your hand again. Those are all good things.

I hope someone gets those thugs. I hope the next guy they mug has a .45 waiting for them... It is nice to say that vengeance and anger don't help, but that is not my style, I'm afraid. If someone shot me, I would love to have a chance to shoot them back. I think it WOULD do some good, as they wouldn't be around robbing and shooting innocents any more. Are (law abiding) civilians allowed to carry weapons where you live?

-Jeremy

A sad story begets a modest proposal
*Message #6 Posted by **db(martinez,california)** on 24 Mar 2003, 11:36 p.m.,*
in response to message #1 by Juan_J

first: juan, i wish you a speedy recovery and new tools.

second: everyone, i suggest that we all send an email to ourselves with a list of serial numbers for our hp calculators so that even if our house is emptied we will still have a record at our isp. that's a short note for me so i'll include my omron and national semi's. they are treasures too.

third: i volunteer to keep a list for our community of stolen calculators by serial number, engraved name, ssn or whatever. i can take info from emails and send it out to whoever asks. if it gets big maybe my sweetie can teach me to use some kind of spreadsheet. i don't know how often it would be used but i am sure that all of us would like to help find the scum that would steal the tools someone earns his living with, no matter if he shoots him in the process or not. you know; an honest seller of a hot calc might know where he got.

suggestions?

Re: A sad story begets a modest proposal
*Message #7 Posted by **Vieira, Luiz C. (Brazil)** on 25 Mar 2003, 8:19 a.m.,*
in response to message #6 by db(martinez,california)

Hello, D.B. and folks;

I'd go a bit beyond. I sometimes saw people posting messages and mentioning partial serial numbers and I used to reason about the reasons they did not put the complete serail number.

I got to my own conclusion but I think I should not post it here. I'd rather read others.

Anyway, each of us should keep our own records with these data, allow data to be shared in a common data bank (as you mention to be in your personal system) AND, as a personal care, scan (better if it is a photography) calculator's back side and keep the image as a proof it was in your hands and matches the so claimed serial number. This would increase safety and confirm calculator's existence.

Images should be at the owner's storage midia because of size.

Just an idea.

Best regards.

Luiz C. Vieira - Brazil

Re: A sad story begets a modest proposal
*Message #8 Posted by **David Smith** on 25 Mar 2003, 6:06 p.m.,*
in response to message #7 by Vieira, Luiz C. (Brazil)

At one time it was a fairly common scam for people to see an item shown with a serial number, fake up some paperwork, and then claim that it was stolen from them. This happened to a friend of mine... luckily he had solid documentation that he had purchased the unit new and several years of factory maintenance records. The scumbag who was trying to pull the con also made the same claim (but his paperwork was obviously bogus).

That's exactly what I had in mind!
*Message #9 Posted by **Vieira, Luiz C. (Brazil)** on 25 Mar 2003, 10:10 p.m.,*
in response to message #8 by David Smith

Hello, David;

Believe me, when I wrote *I got to my own conclusion but I think I should not post it here. I'd rather read others.* I had another text written. This is it:

As we know about many scum that read these posts and do not even dare posting anything back, who could not simply forge a "froof of purchase", a receipt, and claim that calculator with that serial number was his own? If we all have our receipts of our own calculators (I have a few of them)

I thought I would be flamed, and I seethat I was not so far from the truth. I was affraid calling the attention of the other scumbags. And I cannot find other solution for this very problem than electronically register these serial numbers. Any ideas?

Best regards and thank you.

Luiz C. Vieira - Brazil

Re: A sad story begets a modest proposal
*Message #10 Posted by **Michael F. Coyle** on 25 Mar 2003, 8:56 p.m.,*
in response to message #7 by Vieira, Luiz C. (Brazil)

And make a hard copy! What if they steal your computer too?

Re: A sad story begets a modest proposal
*Message #11 Posted by **db(martinez,california)** on 25 Mar 2003, 11:54 p.m.,*
in response to message #10 by Michael F. Coyle

i guess that it is more complicated than my backwoods fix would solve, unless all buyers and sellers are honest. shows what i know. as my calculator tool box grows i will do what luiz suggests and i guess i'll burn up some storage space to store pictures - not just numbers. half of my treasures are not hp but are rpn and that works for me.

and again; best of luck in everything to juan j.

Storing safe information; Dave, I have questions, too.

*Message #12 Posted by **Vieira, Luiz C. (Brazil)** on 26 Mar 2003, 12:49 a.m., in response to message #11 by db(martinez,california)*

Hello, D.B.;

I'd use rewritable CD's. As you sale and buy and manage your "collection" (or tools, in my case) you simply update it. No need to burn up storage space at you hard disk. I usually store this sort of information in two rewritable CD's, as for a backup.

Just another suggestion. I'll run scanning mine.

In time: I had an HP28S stolen last year. I am sure I have the serial # written somewhere, also the receipt. It was bought in Brazil.

Dave, is this all O.K. for you? I am not sure about the others, but I do not feel comfortable posting serial numbers of stolen equipment in your site. I think the best way to point this sort of information out would be adding a link to the claimed information that is posted somewhere else. Is it legal posting only the links as mentioned above? Also, is it against any of the Terms of Use? I read them and it seems there are no explicitly concerns for this sort of contents, but yours will be the last word, as all of us will respectfully accept without complain.

I feel so comfortable and "at home" in your site that I sometimes forget about it.

Thank you.

Luiz C. Vieira - Brazil

Re: Storing safe information; Dave, I have questions, too.
*Message #13 Posted by **James M. Prange** on 26 Mar 2003, 2:47 a.m.,*
in response to message #12 by Vieira, Luiz C. (Brazil)

I've often wondered how many of the items offered for sale on eBay are actually stolen goods. I suppose that eBay is probably one of the safest ways for a thief to make a profit from items that he's stolen. For most of the items being sold, it would be unreasonable to demand that the seller be able to find any sort of original proof of purchase, and a cash register receipt usually doesn't prove much of anything anyway. And of course many of the items will have been sold and resold many times. Oh well, I just hope that most of the eBay sellers really are honest people. It's no doubt best to keep records and some sort of proof of ownership of your most valuable possessions.

Sorry I'm confused
*Message #14 Posted by **Dave Hicks** on 27 Mar 2003, 12:25 a.m.,*
in response to message #12 by Vieira, Luiz C. (Brazil)

I'm sorry Luiz but I don't understand what you're asking me. I've been busy packing and shipping boxes to scanning volunteers and have only had a chance to skim the forum and "this all" in reference to this thread is not obvious to me. Maybe I've been sniffing too much packing tape adhesive :-)

One idea that popped into my head while reading this was a web script where someone could type in a serial number and it would tell them whether or not it was in the database of alleged stolen calculators. The idea would be that you could check any calculator you were buying but the list would not be visible. If the system were gated to a request every second or so the list would probably be sparse enough that a scammer couldn't easily brute-force serial numbers out of it. But this is just a thought and I'm not sure where you were going.

It is not so complicated, but...
*Message #15 Posted by **Vieira, Luiz C. (Brazil)** on 27 Mar 2003, 8:48 a.m.,*
in response to message #14 by Dave Hicks

Hello, Dave;

You're right being confused. The subject itself may become threatening if not dealt with care. My question was if one contributor would have the chance to announce here (maybe at the classified adds or somewhere else) that one of his calculators has been stolen. I thought about this possibility based on this thread's subject, but I came to the conclusion that your site is not the place for this sort of matter. I think it is the place to discuss and even annouce where to get information about serial # and stolen calculators (this is something that, in a general approach, would be a frofitable service at the internet...), but not to announce the fact itself. That's when I thought about simply posting links to pages where the stealing/robbery and the stolen objects are described. Even so, I still don't know if this is the place for posting links like these. Maybe we would read posts with threatening answers from guys (thieves) that do not have anything to loose and would become a nightmare here. We sometimes read messages from spam's, and finding this forum in your site requires entering and reading.

Just let it go, no good idea at all.

Now it's my turn to say I'm sorry...

Luiz C. Vieira - Brazil

Re: It is not so complicated, but...
*Message #16 Posted by **Dave Hicks** on 27 Mar 2003, 4:21 p.m.,*
in response to message #15 by Vieira, Luiz C. (Brazil)

Hi Luiz,

At this point I'm inclined to not worry to much about what could go wrong here. My guess would be that the number of stolen calculators that might be mentioned would be small and I assume that they would tend to be stolen by "general" thieves who wouldn't hang around here.

I think for now I would leave it to the individual as to whether he/she wants to post here and possibly take the additional risk that access to their serial number might be used for unfortunate purposes.

In general I find that laziness is a pretty good forum management style because people here are well behaved and thoughtful. If we're overwhelmed or if such threads turn into flame-fests, then I'll have to rethink that.

ACK!
*Message #17 Posted by **Vieira, Luiz C. (Brazil)** on 27 Mar 2003, 5:10 p.m.,*
in response to message #16 by Dave Hicks

Hi, Dave;

Thank you for your (as always) thoughtful words.

The main reason I decided to mention these concerns was to know what you think about them, as I asked for. And as we see how do people respect this place, your managment style is far from being wrong.

Best regards.

Luiz C. Vieira - Brazil

Re: A sad story
*Message #18 Posted by **Bill** on 25 Mar 2003, 1:11 a.m.,*
in response to message #1 by Juan_J

Juan...

Here's wishing you a speedy and full recovery, and recovery of your prized HP devices. Savages, I am afraid.

To all... Given prices of orig HP calcs, etc. a small box of them can be worth quite a bit. I keep my HPs (ones I don't use) locked in my fireproof gun safe.

Bill San Jose, CA

Re: A sad story
*Message #19 Posted by **R Lion** on 25 Mar 2003, 1:49 a.m.,*
in response to message #1 by Juan_J

Un afectuoso abrazo, Juan y mis mejores deseod para tu recuperación.

Raul

Re: A sad story
*Message #20 Posted by **James M. Prange** on 25 Mar 2003, 6:03 a.m.,*
in response to message #1 by Juan_J

I wish you a speedy recovery. And the recovery of your calculators too.

I hope that whoever did it is off of the streets permanently. Not necessarily executed; I'm not that thirsty for revenge. But life in prison with no possibility of early release or any chance of parole seems about right to me. I don't think that we should ever take the risk of allowing someone who did something like that his freedom and another chance. Of course if he were killed while resisting arrest, that would save society the trouble of caring for him.

Regards,
James

For future reference...
*Message #21 Posted by **Jeremy** on 25 Mar 2003, 8:37 a.m.,*
in response to message #1 by Juan_J

I think that recording the serial numbers and taking a quick and dirty digital pic (if possible) is a great idea. I bet that most of those calculators are sold on eBay, so if we kept a sharp eye on the auctions, and ask the seller for the serial number after one was stolen... It could lead to nothing but good things. If the seller told you the serial number, you would know if it was yours or not. If he wouldn't tell you, you could get eBay and the police involved. The location of the item in the auction also might give a clue. For instance, you wouldn't need to bother with items from Canada that have been for sale for three days if you were robbed in South America...

-Jeremy

Re: For future reference...

*Message #22 Posted by **Juan_J** on 26 Mar 2003, 4:12 p.m.,*

in response to message #21 by Jeremy

thank you so much for your kind words, e-mails and proposals. you are great, guys!

i am feeling better but still in (sometimes intense) pain. the doctor said it will be as long as nerves will heal up, which occurs very slowly (doctor michael?) will need a lot of physical therapy, too.

the proposal sounds good to me. for the time being, my little machines do not leave the house and i will confirm the serial numbers.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

82002A charger diagnostic help

*Message #1 Posted by **Malcolm Brooks** on 24 Mar 2003, 4:45 p.m.*

I have a recently acquired 82002A charger that fails to output any DC voltage. Its the one for the 67 series.

I live in Oz 240V (No I didn't plug it into 240V) and this is a 110V US charger. It seems you just can't get any 240V versions anywhere. Anyhow not knowing that this didn't work I got a 110V converter. The converter works fine. The charger doesn't.

Any Ideas?

I measured some AC (yuk) about 3V on one of the pins. I really don't want to send it back to the US to one of the places that rebuild them as this will probably cost more in shipping than a replacement from ebay.

If its just a matter of replacing a few diodes then great. Can anyone give me any hints what to look for or replacement diode numbers?

Thanks Malcolm

Re: 82002A charger diagnostic help

*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 24 Mar 2003, 9:31 p.m.,*
in response to message #1 by Malcolm Brooks

Hi;

I have an 82002A and it has a 86 to 127 - 172 to 254 AC input select switch. I thought all 82002A were the same!

Mine came with the HP55 and I posted this message with the output voltages measured.

I hope this helps.

Success!

Luiz C. Vieira - Brazil

Re: 82002A charger diagnostic help
*Message #3 Posted by **Malcolm Brooks** on 25 Mar 2003, 12:10 a.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

Ok, it probably really isn't an 82002A. The bottom plate is recessed but solid where the switch is on a real 82002A and it has a large sticker over almost the entire bottom plate covering this up. This sticker has the REAL number worn off. Its basically a 82002A with a 115V Transformer in it Non switchable.

Anyway somethings horribly wrong with it as I get NO DC Voltage reading but a small AC Voltage reading.

Thanks Malcolm

Re: 82002A charger diagnostic help
*Message #4 Posted by **David Smith** on 25 Mar 2003, 6:10 p.m.,*
in response to message #3 by Malcolm Brooks

The first thing to check on these units is the big orange electrolytic cap. They are famous for going bad. You usually do see some DC, until you load the unit down. The parts inside are all common diodes and transistors. Tracing down the problem is usually quite easy.

And yes, HP did make some fixed voltage chargers. Basically they just bypassed the select switch and covered the hole with the stick on label.

Re: 82002A charger diagnostic help

*Message #5 Posted by **Malcolm Brooks** on 25 Mar 2003, 7:01 p.m.,*

in response to message #4 by David Smith

Tony Duell emailed me and explained you will see some AC volts when the middle wire is broken if using a high impedance voltmeter.

Well he was spot on.

I couldn't easily check this as it the case had those torx heads with an anti tamper pin in the middle. I had to dremel the anti tamper pin to use a standard torx to open it.

Now I just have to slice the plug open and resolder the wires.

Thanks to all who replied esp Tony

Malcolm

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP Advantage Pak problem
*Message #1 Posted by **John Flinn** on 24 Mar 2003, 3:23 p.m.*

I have noticed that my HP 41CX won't turn on if I have my Advantage Pak inserted in the calculator. Can the Advantage Pak Rom be reset or is it worthless? Do these modules ever get fixed by fiddling with the contacts?

Thanks,

John

Re: HP Advantage Pak problem
*Message #2 Posted by **David Smith** on 24 Mar 2003, 3:50 p.m.,*
in response to message #1 by John Flinn

Try the pack in different slots. Also try cleaning the contacts with alcohol, mayby a swipe or two of 1000+ grit sandpaper, and slightly bend the contacts inwards.

Re: HP Advantage Pak problem
*Message #3 Posted by **Vieira, Luiz C. (Brazil)** on 24 Mar 2003, 3:51 p.m.,*
in response to message #1 by John Flinn

Hi;

silly questions, but...

1) have you tried in all four ports?
2) have you tried the pack in another calculator?

Sometimes you can fix this sort of misfunction by fiddling with the contacts, but you may also have a problem with the I/O ports themselves instead of the module.

The Advantage Pack is a big source of extra fuctionality. I hope you get yours fixed.

Best regards and success.

Luiz C. Vieira - Brazil

Re: HP Advantage Pak problem
*Message #4 Posted by **John Flinn** on 25 Mar 2003, 1:32 p.m.,*
in response to message #3 by Vieira, Luiz C. (Brazil)

Thank you for your kind support. Alas, I tried all these things and it still comes up dead when the Advantage Pak module is installed in either of my two calculators. This happens in all the different ports and even after the contacts are cleaned and pushed out a little. Heavy sigh, I think this eprom is fried. I will just have to bury it next to my cat's grave in the flower garden... Best Regards,

John Flinn

Re: HP Advantage Pak problem
*Message #5 Posted by **Vieira, Luiz C. (Brazil)** on 25 Mar 2003, 2:40 p.m.,*
in response to message #4 by John Flinn

Hi;

PLease, try it in another calculator. Also, (minimum) chances are you have a bad connection (cold soldering) inside the module, if it stoped working suddenly. I'd ask you to send it for me instead of bury it in the flower garden, but you'll spend nothing to send it to your flowers and Brazil is a bit far (and expensive) from your garden...

You may open it if you want, and opening a module needs some crefull maneuvers. It can be done, anyway. And you'll be a lot mad if this module get back to life by simply applying some solder in its intenal terminals.

Wanna try? Please, don't give it up. It worth spending some extra time to try to repair it.

Luiz C. Vieira - Brazil

Re: HP Advantage Pak problem
*Message #6 Posted by **Diego Diaz** on 25 Mar 2003, 3:28 p.m.,*
in response to message #4 by John Flinn

Just to agree with Luiz, don't give up John, you've got nothing to lose, so go ahead: look for another calc, open the pack, check the solders... whatever... but please, please, please... do not bury (or throw trash, or burn...) the module.

Even in the worst case (if the ROM chip is "REALLY" burnt) the shell and connector are still valuable, sure you can make somebody near you very happy with them, so place an ad.

Best wishes from the Canary Islands.

Re: HP Advantage Pak problem
*Message #7 Posted by **John Flinn (Oregon)** on 26 Mar 2003, 12:52 a.m.,*
in response to message #6 by Diego Diaz

Hmmm, Don't worry I wasn't going to bury it. I'll tape it on the back of a Brazilian Cerdo during the next Batucada performance in Eugene. That should get rid of any corrosion. Maybe one of those pyramids for sharpening razors would work. Is it hard to take the plastic case of the Application Pak? Best- JF

Re: HP Advantage Pak problem
*Message #8 Posted by **Vieira, Luiz C. (Brazil)** on 26 Mar 2003, 1:05 a.m.,*
in response to message #7 by John Flinn (Oregon)

Hello, John;

be caucious: depending on the rythm and energy, Batucada may get rid of corrosion, but may also shake information a bit inside the chip... if the module is back from the death and show strange behaviour, it's your sole responsability. ;-)

Back to actual life (thanks for the Brazilian reference; I mean it as a healthy call), one of our contributors in here has pictures showing how to do it by using a small knife. I cannot remember who has it, but I am almost sure it's not a North-American contributor. If I am wrong, please, forgive me.

If he reads these posts he will surely mention where are the pictures.

Best regards and good luck!

Luiz C. Vieira - Brazil

(I was confident you were kidding about throwing the module away; I was just trying to extend the joke a bit more... We take jokes quite seriously!)

Re: HP Advantage Pak problem
*Message #9 Posted by **Dave F** on 26 Mar 2003, 9:24 a.m.,*
in response to message #1 by John Flinn

Out of curiosity, how hard would it be to rebuild an Advantage Pak by burning new EPROMS? I.E., is the ROM easily replaceable with a readily available EPROM or FLASH part? Similarly, has anyone converted another module, such as a games module, to an Advantage or HPCC module by replacing the PROM? Of course, this presumes legal ownership of a non-functioning module containing the code to be burned

Dave

Re: HP Advantage Pak problem
*Message #10 Posted by **David Smith** on 26 Mar 2003, 5:58 p.m.,*
in response to message #9 by Dave F

The HP memory chips were custom serial memories. Back in the before times, there were a couple of places that built a custom interface chip from the HP41 logic to standard parallel eproms and built them into programmable memory modules. Fat chance of finding one though. There is enough info floating around about the HP41 interface to duplicate the device using modern programmable logic, etc. but it is not an easy excercise.

Re: HP Advantage Pak problem
*Message #11 Posted by **Dave F** on 26 Mar 2003, 8:48 p.m.,*
in response to message #10 by David Smith

After reading your response, I did a little search, and found this very interesting work-in-progress, which appears to implement a superset of the logic you mention. I imagine the FLASH ROM / SRAM emulator could be pared down to a simple ROM interface, perhaps with clock, etc., and fit in a small, inexpensive CPLD or FPGA; perhaps the data could be placed there as well, for low chip counts.

Re: HP Advantage Pak problem

*Message #12 Posted by **Dave F** on 26 Mar 2003, 10:24 p.m.,*
in response to message #11 by Dave F

Oops. Here's the link:

http://www.kuipers.to/hp41.htm

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Hp advertising brochure

*Message #1 Posted by **Randy Sloyer** on 24 Mar 2003, 2:33 p.m.*

I just had a friend that knows of my affliction hand me a great advertising brochure on the entire Hp line from 1976. It's about 9" x 25" and is a 7 panel fold-out in pristine condition with the exception of a rubber stamped name of a retailer on the back. I was wondering who, if anyone was scanning these or similar items for the Museum. I think I once read were Chris in Florida was maintaining a log of advertising?

The item is Pub. No. 5952-6081D 10/76

Suggestions for a good use (other than wallpaper) welcome.

Re: Hp advertising brochure

*Message #2 Posted by **Gordon Dyer** on 24 Mar 2003, 2:55 p.m.,*
in response to message #1 by Randy Sloyer

Get it scanned and let us all have a look!

Thanks in advance...

Re: Hp advertising brochure

*Message #3 Posted by **Vieira, Luiz C. (Brazil)** on 24 Mar 2003, 3:45 p.m.,*
in response to message #1 by Randy Sloyer

Hi;

if you can, scan it send me. I'll find a way to put it in a page where it can be downloaded from. Also, it would be better for me if each e-mail does not go beyond 600KBytes. I think the best resolution will allow two to three pages for each e-mail.

Let me know.

Best regards.

Luiz C. Vieira - Brazil

Re: Hp advertising brochure
*Message #4 Posted by **Randy Sloyer** on 24 Mar 2003, 9:05 p.m.,*
in response to message #3 by Vieira, Luiz C. (Brazil)

Thanks guys.

I'll get it scanned. Luiz, maybe I'll post on my site so you can download instead. I'll send you a link when I'm done. It will be about 11 images when finished.

After you scan it...
*Message #5 Posted by **Jeremy** on 24 Mar 2003, 10:23 p.m.,*
in response to message #1 by Randy Sloyer

...hang it up in your office/cubicle/whatever. That would really get peoples' attention, and you might wrangle a couple more members out of the general public...

-Jeremy

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Good prize, isn't it?
*Message #1 Posted by **R Lion** on 24 Mar 2003, 1:28 p.m.*

Look at this 48GX + original hp RAM card auction:

http://cgi.es.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3014391941&category=3728

...and no, I dont know the seller.

Raul

Re: Good prize, isn't it?
*Message #2 Posted by **Scuba Diver** on 24 Mar 2003, 9:41 p.m.,*
in response to message #1 by R Lion

Yes, it is a good price, however I noticed that the box isn't original to the calculator; the box is for a 48G, however the auction is for a 48GX.

B.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP and Scholastic Launch 2003 Create-A-Calculator Contest
*Message #1 Posted by **J.Manrique López** on 24 Mar 2003, 12:55 p.m.*

Hp uses young children to design new calcs:

http://www.hp.com/hpinfo/newsroom/press/2003/030324a.html

Nice, users are important :-)

Have fun,

J.Manrique

#1077 HPCC Member

Re: HP and Scholastic Launch 2003 Create-A-Calculator Contest
*Message #2 Posted by **Michael F. Coyle** on 24 Mar 2003, 2:00 p.m.,*
in response to message #1 by J.Manrique López

HP says...

Throughout 2003, HP has plans to introduce six additional new calculators for students as well as for doctors and professionals in the banking, financial and engineering fields.

I'm not sure why doctors were singled out here. At least they're coming out with something for engineers.

Cross your fingers and hope for the best.

- Michael

...and a new HP Calculator Web Site
*Message #3 Posted by **Michael F. Coyle** on 24 Mar 2003, 2:26 p.m.,*
in response to message #1 by J.Manrique López

So far, it's just promotion for the contest but they promise more soon, including information on new products. We shall see. You can also get on their mailing list.

http://www.hp-calculators.com/

Re: HP and Scholastic Launch 2003 Create-A-Calculator Contest
*Message #4 Posted by **Ben Salinas** on 24 Mar 2003, 6:31 p.m.,*
in response to message #1 by J.Manrique López

Well, I am a K-12 student. I think I will enter. Looks like a chance to have an impact on what HP thinks the calculator world is going to. Of course I will include RPN (possibly including a switch from algebraic and RPN, but that might cost too much... what do you think? Have any other calculators used both) I need to decide whether to use Graphing, or scientific. Personally, I have always been a fan of scientific calculators, for the increased speed. The only HP calculator that I regularly use is the 32sii (I only got one from my school last year), although I have seen a 49g, and briefly used a 39g.

Well, what do you think we need in one? (and yes, i will go read the other 5000 posts about a "new HP calculator") -Ben Salinas McAllen, Texas

Re: HP and Scholastic Launch 2003 Create-A-Calculator Contest
*Message #5 Posted by **Chris Randle (UK)** on 24 Mar 2003, 6:45 p.m.,*
in response to message #4 by Ben Salinas

<<Have any other calculators used both>>

The 19-BII has a (software) switchable RPN/Algebraic. There may have been others.

IMHO it was a very good idea. My wife refuses to use an RPN calc because it's so alien to her calculator upbringing. She happily uses the 19-BII and I live in hope that one day she may switch over as an experiment and experience the epiphany that we've all enjoyed.

Re: HP and Scholastic Launch 2003 Create-A-Calculator Contest
*Message #6 Posted by **Chan Tran** on 24 Mar 2003, 7:02 p.m.,*
in response to message #5 by Chris Randle (UK)

I say RPN (or RPL) only, no algebraic. Scientific (no graphic) even though you could have multi line display. Graphing not neccessary as a PC would do that much better.

Re: HP and Scholastic Launch 2003 Create-A-Calculator Contest
*Message #7 Posted by **Ben Salinas** on 24 Mar 2003, 10:46 p.m.,*
in response to message #6 by Chan Tran

<<I say RPN (or RPL) only, no algebraic. Scientific (no graphic) even though you could have multi line display. Graphing not neccessary as a PC would do that much better.>> The reason I was suggesting non RPN, and graphing was to appeal more to high school students. I know I am on of the only people at my school of 600 who does not use a graphing calculator (and my school is a math and science magnet school). I personally CAN use nothing but RPN also, but most people I know are scared out of their minds of RPN (even though, IMHO RPN is much easier). HP is much more likely to build a new calculator if they can take a larger market share.

Personally, I would like a small, RPN, scientific calculator, but that's just what I think. I bet most engineers and the likes agree with me.

I was also thinking of a graphing calculator, built like a scientific. In other words, no massive menus, and clumsy keyboards. (I guess it would be more of a scientific calculator with basic graphing abilities) Of course then you have to have the huge screen, so scratch that -Ben

Re: HP and Scholastic Launch 2003 Create-A-Calculator Contest
*Message #8 Posted by **Michael F. Coyle** on 25 Mar 2003, 8:48 p.m.,*
in response to message #7 by Ben Salinas

Hi Ben!

I would also prefer a scientific to a graphing. (I have both and enjoy them both.) There are already enough graphing calcs around but we really need a shirt-pocket RPN scientific.

I suspect you're right -- HP might be more inclined to make a machine they could sell lots of. So maybe it does need to be dual mode -- algebraic/RPN. But here's a suggestion: select the mode by keystroke, like DEG/RAD/GRD is now,

but
1. Have it "wake up" in RPN mode, and
2. Don't remember the mode when it is shut off.

This way, algebraic users would be accomodated but they would have to press an extra button each time they turn it on. (And of course make RPN/ALG a shifted function so they'll have to hit a shift key too.) Maybe some users would get tired of hitting the extra keys and be more inclined to see what RPN is all about. (The 48GX is like this -- primarily RPN but algebraic available at a small price: single quotes + EVAL.)

Good luck with your entry!

- Michael

Re: HP and Scholastic Launch 2003 Create-A-Calculator Contest
*Message #9 Posted by **bill platt** on 24 Mar 2003, 8:30 p.m.,*
in response to message #5 by Chris Randle (UK)

Yes, and palm-top computers can also graph---with the appropriate hp-48 emulator, or other software--- the graphing calculator is dead, but the compact scientific will live on---32sii sized or smaller.

Re: HP and Scholastic Launch 2003 Create-A-Calculator Contest
*Message #10 Posted by **Masao Kinoshita** on 25 Mar 2003, 10:09 a.m.,*
in response to message #5 by Chris Randle (UK)

My wife is the same way. She'll use my HP 17Bii (in algebraic entry mode), HP 27S or her HP 30S; but not my HP 32Sii or HP 48GX. (I also gave her an HP 6S Solar, but it got broken when we moved.)

BTW, where she worked before, they bought a bunch of HP 30S's for everyone after she brought hers in. Is there a connection? :-)

Re: HP and Scholastic Launch 2003 Create-A-Calculator Contest
*Message #11 Posted by **John K. (US)** on 25 Mar 2003, 3:31 a.m.,*
in response to message #4 by Ben Salinas

Well, what do you think we need in one?

Well, since you asked... :^)

I would really like to see a HP 42S replacement with a large memory capacity (64 - 128 KB) and some way of feeding it info. Bluetooth would be nice, but probably too expensive. USB would be a reasonable alternative. **Bi-directional** IR would also be acceptable. I'd really like to be able to print to my 82240B with it as well.

Good luck with your entry!

Re: HP and Scholastic Launch 2003 Create-A-Calculator Contest
*Message #12 Posted by **Fred Lusk (CA)** on 24 Mar 2003, 9:09 p.m.,*
in response to message #1 by J.Manrique López

So why doesn't HP also have some Create-A-Calculator contests that non-students could enter? For instance, why not a contest open to engineers?

Fred

Re: HP and Scholastic Launch 2003 Create-A-Calculator Contest
*Message #13 Posted by **Paul Brogger** on 24 Mar 2003, 10:40 p.m.,*
in response to message #12 by Fred Lusk (CA)

Well, the HP du jour is making a play to start building interest in the engineers of the future. Let's hope they follow through and stick with it for a couple of decades . . .

So, find a semi-interested child, grandchild, niece, nephew or ??? and offer some encouragement, help with RPN, experience with various calculator features, and . . .

Re: HP and Scholastic Launch 2003 Create-A-Calculator Contest
*Message #14 Posted by **Masao Kinoshita** on 25 Mar 2003, 9:55 a.m.,*
in response to message #12 by Fred Lusk (CA)

IIRC, the last time HP held a calculator contest for grups,* HPCC entered a triangular calculator. (Philadelphia won.)

*grups = "grown ups" in a Star Trek TOS episode

Re: HP and Scholastic Launch 2003 Create-A-Calculator Contest
*Message #15 Posted by **Jordi Hidalgo** on 31 Mar 2003, 12:12 p.m.,*
in response to message #14 by Masao Kinoshita

Masao Kinoshita wrote:

> HPCC entered a triangular calculator. (Philadelphia won.)

Yes, the PAHHC entry won. But HPCC's entry was not the triangular calculator described by Wlodek in Datafile V17N2, pages 19-21 ("Let's Innovate!") but the HP68, described in V17N6, pages 24-30 ("HP68 Calculator Design Datasheet"), which was "nearly the same size and shape as the HP48, but slightly smaller so it fits better in the pockets". It's interesting to note that many features of the HP68 were later included in the HP49G (better display contrast, display protected from breaking, RPL, CAT command, filer, fonts, math libraries, electronic version of the AUG, ...)

Jordi Hidalgo
HPCC #1046

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

hp 22s - '7' key problem
*Message #1 Posted by **Neil** on 24 Mar 2003, 12:49 p.m.*

I recently managed to get a hold of an hp 22s after trying for the last few months. The '7' key seems to have a problem. It works when I press on the right side of the key, but not on the left side. When pressing on the centre,more or less every alternating keystroke registers a '7' on the display. I discovered this problem when I tried to do SHIFT + LIBRARY because the EQUATION LIBRARY didn't seem to come up. I have tried blowing compressed air as suggested somewhere in the HP Forum archives, but this doesn't help. I mean it isn't really a problem since I am now aware of it, but what I would like to know does this mean this key is about to give up the ghost?

Re: hp 22s - '7' key problem
*Message #2 Posted by **Paul Brogger** on 25 Mar 2003, 5:25 p.m.,*
in response to message #1 by Neil

The 22s is a "Pioneer" style calculator. There seem to be three approaches to problems like this:

It has been suggested elsewhere (by Randy Sloyer) that three twenty-minute baths in distilled water in an ultrasonic cleaner, separated by long drying-out periods (perhaps near a heater, or on top of a refrigerator) should clean out a Pioneer keyboard with foreign goo inside.

Sometimes the keyboard-to-circuit-board contacts aren't tight, but if that were the problem, I'd expect several other keys to behave similarly. To double-check this, pinch the calculator front-to-back (firmly, but gently, as the hackneyed phrase goes) just above the top row of keys, and below the display. Deep inside there is where the keyboard contacts the printed circuit board. If the contacts are loose, the pinching should (temporarily) improve that and therefore improve the behavior. If this diagnostic trick indicates bad contacts, you'll want to take the calculator apart, take out the circuit board, clean both sides of the keyboard-to-circuit connections, and bolster the rubber/latex/whatever pressure pad that maintains contact. (One theory is that the rubber gradually shrinks with age.)

Finally, I have fixed keyboards in prized units by taking apart the several layers and replacing them with less-worn equivalents from a less-valued calculator. But this requires an extra "parts"

calculator that hasn't yet been worked to death. The procedure is invasive, tedious, and fraught with potential for complications, so only undertake such a repair as a LAST resort. (I.e., live with an imperfect key, if that's an option.)

Good luck -- and post again if you need more help.

-- paul b.

Re: hp 22s - '7' key problem
*Message #3 Posted by **Randy Sloyer** on 25 Mar 2003, 11:35 p.m.,*
in response to message #2 by Paul Brogger

If the key rocks from side to side, one or both of the small internal hinges that stabilize the key could be broken.

Try pressing on the left side of the key, then the right. If both sides move when one side is pressed, the hinge is okay. If not, one or both sides are broken.

It takes a direct, centered downward force to make proper contact between the upper flex dome and the lower cross point contact. There is a small, flat ended actuator pin centered on the upper part of the key (it's right under the top horizontal line segment of the 7) that deforms the dome when pressed. If the key's hinge is broken, the flat end of the pin no longer hits squarely, resulting in missed key presses since the contact area is significantly reduced.

Eventually, after lots of key presses where the sharp edge of the pin is pressed at an angle on the flex dome, it will cut through the mylar dome sheet. The result is a dead keyboard. Replacement is an ugly thing at best, as it takes an organ donor and lots and lots of time and patience.

A photo of the hinge on the enter key of a 42S, you can see the actuation pins.

(picture unavailable)

Re: hp 22s - '7' key problem
*Message #4 Posted by **Neil** on 27 Mar 2003, 1:24 p.m.,*
in response to message #3 by Randy Sloyer

Gents, Thanks for your replies. I checked as you suggested Randy, but the hinge seems to be OK ie. the key presses down level when I push either on the left side or right side. So perhaps it is some goo that has gone down the left side of the key.

I was really only concerned if this symptom was a sign that the key was about to break fairly soon. If it is just some goo stuck under the left side of the key then I'll live with it since that is the only key affected on the calculator, and at least it is still functional.

By the way Paul, when you talk about keeping a cheaper pioneer or two for parts in case a more prized one breaks, does this apply with keeping say a 10b in order to fix a 27s or 42s, or does it need to be something like a 17bII?

Re: hp 22s - '7' key problem
*Message #5 Posted by **Randy Sloyer** on 27 Mar 2003, 7:41 p.m.,*
in response to message #4 by Neil

The keyboard is common to all Pioneer series machines. One size fits all, but there are non-electrical differences with at least three different versions. If you swap all the pieces out as a group, they can be considered interchangeable. The metal keyboard backing plate that also holds the LCD is part of that group.

```
The LCD matrix is:


10B = 20S
17B = 17Bii = 27S = 42S
14B = 22S = 32S
The 32Sii is unique
```

Re: Interchangeable Parts for Pioneers
*Message #6 Posted by **Paul Brogger** on 28 Mar 2003, 2:29 p.m.,*
in response to message #4 by Neil

Randy's response is more complete than the one I might have offered, and is absolutely correct in all particulars of which I am aware. Randy, you're a great resource for the folks utilizing this site. Thanks!

The first Pioneers that I experimented with were several service-replacement 14B close-outs bought from EduCalc for $20 each. Those days are gone. But don't be afraid to buy "broken" units, when available. (Example: the last 42s I bought was listed as a "Parts Calculator Only", but simply has a sticky keyboard and some minor cosmetic damage from a clumsy take-apart job -- I've already upgraded its memory and moved the PCB to a working case, pending a keyboard fix . . .)

Re: Interchangeable Parts for Pioneers
*Message #7 Posted by **Ron Ross** on 28 Mar 2003, 3:41 p.m.,*
in response to message #6 by Paul Brogger

Have you considered just exchanging the ROM from a 42s onto a 17b. Wouldn't that be a lot less trouble than messing with a keyboard? I do realize you would not have a 42s keyboard layout, but you would get brand new keys and newer everything as new 17b's are fairly easy and cheap to find.

Just curious as to the feasability? 8'/

Re: Interchangeable Parts for Pioneers
*Message #8 Posted by **Paul Brogger** on 28 Mar 2003, 6:57 p.m.,*
in response to message #7 by Ron Ross

I've changed circuit boards. In fact, because I'm always wringing maximum $ out of every genuine 42s I can get working, my "personal" hot rod is a shiny new HP-17BII with a 32K HP-42S circuit board. I've painted the keys and keyboard black, except for those which are neutral or agree (STO, RCL, UP, DOWN, SHIFT, the numerals, the arithmetic operators, etc.)

I used to think I could memorize the layout, but I don't actually use it often enough for that. So, I've got a ~full-scale color print of the original MoHPC - 42s keyboard image -- cropped, laminated, and attached to the back by a clear tape "hinge". I fold it out to use anything beyond the basics, and fold it back when storing the calculator in its case.

Despite my contrary report in an early repairs article (I should update that!), the ROM is actually part of the processor chip. There is a second chip, but it's RAM. (That's why we can upgrade the -42s from 8K to 32K.)

If I remember correctly, Tony Duell somehow discovered that by tying an "off-board ROM enable" line low (or whatever), he could cause the CPU to consult an external ROM (I think located in the extra set of pads on the PCB). So, if one had the right PROM programmer, intimate knowledge of 42s internals and Saturn Assembly Language, one might be able to hack the 42s operating code! (Potentially VERY cool, and about as esoterically geeky as one might get!) On a simpler note, one might convert -17BII PCBs to -42S functionality if one could produce the right PROM (without angering any copyright holders . . .)

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Misc. Repairs -- SHARP
*Message #1 Posted by **Paul Brogger** on 24 Mar 2003, 11:30 a.m.*

I just found a SHARP EL-5020 scientific "programmable" (though how, I've no idea) at the Goodwill for $0.99 . Upon cursory check-out, most everything worked but the "8" and "9" keys. (?!?!) (Curiously, but even though they didn't register, the LCD display dimmed slightly as I pressed them.) Also, the memories weren't "continuous", like I expected them to be.

I took the case apart, and found the keyboard assembly is held together by heat stakes. While accepting that I probably had to take *that* apart, I noticed the pad for the tiny "Reset" button that's hidden on the back case. I put it together, pressed "Reset", and voila! Full functionality restored!

Repair Lesson 1a: **Try the Reset button, first.**

Also, the vinyl hinge holding the calculator to its little vinyl "wallet" is cracking -- I suppose I might try vinyl cement (as is provided with swimming pool repair kits), but I'll accept other recommendations, should some of you have any . . .

Re: Misc. Repairs -- SHARP
*Message #2 Posted by **Ex-PPC member** on 24 Mar 2003, 12:07 p.m.,*
in response to message #1 by Paul Brogger

Have a look at regular contributor Viktor Toth's page on this Sharp model, which includes a lot of info, some comments, and a small program:

http://www.rskey.org/el5020.htm

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP 100LX problem
*Message #1 Posted by **mapet** on 24 Mar 2003, 5:57 a.m.*

I am trying to install a CF card into my HP 100LX. For that I need a driver, but I can not transfer it to the calc as I have no serial cable. I can not put the driver on the card because without the driver the card will be not initialized. My solution to this problem was to send the driver to my HP 48GX and then transfer it via Irda to 100LX. I succeeded but the driver is not running properly. I discovered that during the transfer the file got additional 60 bytes. HP 48 adds some bytes at the beginning of the file and in the end as well. I tried to remove the additional bytes but without success. Any solution to my problem?

Thanx

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Molded Keys on 48G/GX
*Message #1 Posted by **Scuba Diver** on 23 Mar 2003, 11:24 p.m.*

Hello everyone!

I took a look at a 12C with painted keys and it was easy to tell the difference between these keys and those that are double-molded. I was wondering; have 48s ever been manufactured with painted keys or were they all double-molded?

I just purchased a Singapore unit from early 1997 (3702) and it "looks" like they're double-molded...I haven't seen one of the newer models, but I'd be interested to know if the keys are painted.

Luiz, I know you have a newer 48! :)

Thanks! B.

Re: Molded Keys on 48G/GX
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 24 Mar 2003, 6:23 a.m.,*
in response to message #1 by Scuba Diver

Hello, Scube and folks;

the black-dot LCD I have (in hands at this very moment) seems to have the same molded surface inscriptions. I passed my fingernail over the [ENTER] letters and I can feel their contour, say, it is definitely not painted.

This one's serial # is ID13900XXX.

Hope this helps.

Best regards.

Luiz C. Vieira - Brazil

(If you want to take a look at the moded colors, I have an opened HP48 without the faceplate and I have already scanned the front side. Do you think it's a good idea? Have a look at the front view in this picture so you can see what I'm gonna use)

Re: Molded Keys on 48G/GX
*Message #3 Posted by **Randy Sloyer** on 24 Mar 2003, 10:26 a.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

FWIW, every Indonesian and Chinese 48 I have ever seen have printed keytops.

Only the Singapore's have double shot keys. It is very easy to tell as the double molded legends are flush, the printed are raised.

Re: Molded Keys on 48G/GX
*Message #4 Posted by **R Lion** on 24 Mar 2003, 10:34 a.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

I can feel their contour, say, it is definitely not painted

Sure, Luiz? Please, use a magnifying glass...

Raul

My apologies...
*Message #5 Posted by **Vieira, Luiz C. (Brazil)** on 24 Mar 2003, 11:38 a.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

Hi, guys;

forgive-me not taking as much care as I should when posting in here. I'm glad many of you corrected me "not such in time"... I could not wait for others! My mistake

I took my measures: I drilled a small hole in the [F] key and I could see that there is a "thick" painting (I mean its's thick for a painting; seems like plastic) and I tested both key surfaces from Indonesia and Singapore calculators and they seemed the same for me. Now that's the proof they are not.

HP48 painted key

I'll be more carefull next time...

Best regards and sorry...

Luiz C. Vieira - Brazil

Re: Molded Keys on 48G/GX
*Message #6 Posted by **Gray Wilson** on 24 Mar 2003, 10:15 a.m.,*
in response to message #1 by Scuba Diver

I have a G+ with black LCD, s/n ID24301226. It's keys are definitely painted, not double moulded.

Re: Molded Keys on 48G/GX
*Message #7 Posted by **Vieira, Luiz C. (Brazil)** on 24 Mar 2003, 10:18 a.m.,*
in response to message #6 by Gray Wilson

Hi;

Yours seems to be newer than mine. Maybe we could identify the serial # where painted keys started.

Anyone else with information about his?

Luiz C. Vieira - Brazil

Re: Molded Keys on 48G/GX
*Message #8 Posted by **Stephan (Germany)** on 24 Mar 2003, 12:38 p.m.,*
in response to message #7 by Vieira, Luiz C. (Brazil)

48G S/N ID83707205 keys definetely painted (symbols sometimes not even centered, matt)

48G S/N 3509S00638 keys look much better (glossy, symbols centered and more readable, probably molded)

Re: Molded Keys on 48G/GX
*Message #9 Posted by **Scuba Diver** on 24 Mar 2003, 9:37 p.m.,*
in response to message #8 by Stephan (Germany)

Thanks for all the posts!

Mine's 3702S12160 and they look molded; they're gloosy and every symbol is centred.

Does anyone think that they used painted keys in Singapore, or did that start in Indonesia / China ?

B.

Re: Molded Keys on 48G/GX
*Message #10 Posted by **R Lion** on 25 Mar 2003, 1:52 a.m.,*
in response to message #9 by Scuba Diver

I've ever read Indonesia with both screens (blue and the new, black)...

Raul

Re: Molded Keys on 48G/GX
*Message #11 Posted by **James M. Prange** on 25 Mar 2003, 4:12 a.m.,*
in response to message #7 by Vieira, Luiz C. (Brazil)

Thanks for the pictures, Luiz. I hope that that was an already dead calculator.

Does it seem as if the paint (or plastic or whatever) goes below the surface of the keytop as if filling in molded-in depressed characters? Or does it seem as if it was simply applied over the top of a smooth keytop?

I have two 48GXes from Singapore, serials 3545S... and 3623S..., and one from Indonesia, serial ID952....

I know, I don't *need* three 48GXes, but I'm just a bit paranoid that they might not be so easily available in the future, and that a suitable replacement may never be marketed.

For what it's worth, with the fingernail test over the ENTER key on each of these calculators, I can feel some slight stepping, but I can't tell whether the letters are raised

or depressed. In general, on the Indonesian model, the lettering is placed lower on the keys, the numerals on the number keys are obviously smaller, and the lettering on most other keys seems slightly smaller but the stokes are wider. Looking at them under a 10X magnifier I can't tell that any of the legends are raised or depressed, but the edges are definitely more irregular on the Indonesian. Perhaps the most obvious difference under magnification is that the Indonesian has all corners on the lettering simply rounded, but the Singaporean characters have a rounded "undercut" at each corner.

If I didn't have the Singaporean models to compare it with, I probably would never've noticed that there's any problem with the Indosesian model, so I suppose that it's acceptable, except that I worry that painted-on legends may eventually wear off.

By the way, all three have the same type of display as far as I can tell.

Just when did they change the serial number scheme? I know, sometime between week 23 of 1996 and week 52 of 1999. But has it been nailed down any closer than that?

Regards,
James

Re: Molded Keys on 48G/GX

*Message #12 Posted by **Vieira, Luiz C. (Brazil)** on 25 Mar 2003, 5:16 a.m.,*
in response to message #11 by James M. Prange

Hi, James;

The picture you see is from a brand new, fully working HP48G+, and now it has a small hole in the [F] key. I don't care, in fact I'll "write my name" on it soon. Besides, who would by a calculator with a small hole in the [F] key? Almost everyone that reads these posts know that this sort of mark is in my HP48G+.

And the inscriptions are like stamps, a surface mark. They are probably a little recessed, I didn check for it, maybe the contour is thinner than the rest of it.

You wrote: <*For what it's worth, with the fingernail test over the ENTER key on each of these calculators, I can feel some slight stepping, but I can't tell whether the letters are raised or depressed.*

That's the same feeling I had and made me think the inscriptions were molded instead of painted.

Well, now there's no doubt about it. I'll scan the molded key from an actual dead HP48G (Singapore) with the same hole and you'll see the difference.

Best regards.

Luiz C. Vieira - Brazil

Re: Molded Keys on 48G/GX

*Message #13 Posted by **Scuba Diver** on 25 Mar 2003, 3:40 p.m.,*
in response to message #12 by Vieira, Luiz C. (Brazil)

Thanks Luiz...I look forward to the scanned images!

With respect to the serial numbers, I always thought that they changed in 1996, however my 48GX is 3702.

I have a 1998 Indonesian 17BII and it uses the new serial number sequence (ID817xxxx)

So, if I had to guess, I'd say somewhere between early 1997 and early 1998, although it's possible that each manufacturing site changed at different times...I can't imagine that everyone changed worldwide on one day...

B.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Disintigrating 41C soft case
*Message #1 Posted by **Dave F** on 23 Mar 2003, 11:01 p.m.*

Hello,

A while back I acquired a 41C+card reader, with a soft vinyl case. I recently pulled it out, and was surprised to find that the reference cards (and to a lesser extent, the calc) were covered by a fine, sticky black dust. This is apparently from disintigrating foam in the case lining, and it's hard to wash off. Has anybody else had a similar experience? How hard is it to find replacement cases?

Thanks,

Dave

Re: Disintigrating 41C soft case
*Message #2 Posted by **Stefan Hauschild** on 24 Mar 2003, 3:02 a.m.,*
in response to message #1 by Dave F

I experienced the same with my HP71´s softcase. I have washed it and now all seems to be ok. But I think within the next few months the inner nylon will have disappeared completely...

Best regards

Stefan

Re: Disintigrating 41C soft case

*Message #3 Posted by **John Smith** on 24 Mar 2003, 7:46 a.m.,*

in response to message #1 by Dave F

I've experienced the exact same problem with two HP-71B soft cases: lots of fine, black dust, that was very difficult to remove from the LCD display, keys, ports, etc.

It seems to me that after 15-20 years they disintegrate spontaneously, as the cases are brand new on the outside. I've tried to remove all the dust but to no avail. The "solution" is to keep the 71B themselves inside a thin, sealed plastic bag, then that plastic bag into the case. This means everytime I use them I must use a new plastic bag, but at least it keeps the potentially dangerous black powder at bay, while protecting the machines inside their proper cases.

As for finding replacement cases, it isn't hard, only expensive, and probably pointless since the replacements, if original, are likely to disintegrate as well.

Re: Disintigrating 41C soft case

*Message #4 Posted by **Frank V** on 24 Mar 2003, 10:06 a.m.,*

in response to message #3 by John Smith

I've also experience the same problem with a case for a 41C. It' s peculiar that it happens to some cases and not others the same age. It might have something to do with where you store the case and the surrounding environment. If the storage climate surrounding the case is humid and damp, this problem is more likely to occur. It's advisable to maintain your collection in a dry and moderate temperature environment. These cases are very hard to find, so it's best to try to fix the problem.

To correct this problem, I cut out the nylon lining completely around the edge. This lining protects the spongy glue based material. Once I cut the nylon lining around the entire perimeter of the case, I use a vacuum cleaner's main hose to SCRAPPE out the spongy glue based material completely. It's best to turn the case inside out to accomplish this task. Once you have removed all of the gook, take a hair dryer, HOT, and solidify the remaining material by drying it for at least 15 minutes.

Hope this helps

Re: Disintigrating 41C soft case
*Message #5 Posted by **Richard Garner** on 24 Mar 2003, 9:48 a.m.,*
in response to message #1 by Dave F

I have found that the 41 with card reader and the 48 are the same size. So any case that fits the 48 will fit the 41 with cardreader. You might check procalc for a 48 replacement case.

Re: Disintigrating 41C soft case
*Message #6 Posted by **David Smith** on 24 Mar 2003, 3:54 p.m.,*
in response to message #1 by Dave F

Just take the case and toss it in the wasing machine. Let air dry with something proping open the mouth. Might have to repeat. It seems the sub-lining is what decomposes.

Re: Disintigrating 41C soft case
*Message #7 Posted by **David Smith** on 24 Mar 2003, 4:02 p.m.,*
in response to message #6 by David Smith

I forgot to mention, I have washed MANY HP41 cases and spice cases over the years. The grunge has never reappeared in any of them. Some REALLY grungy spice cases in particular come out of the washing machine looking like new. It seems only cases from one source seem to get the grunge. I guess about 1 in 10 HP41 cases and 1 in 5 spice cases have the problem.

Disintegrating 41C soft case
*Message #8 Posted by **Dave F** on 25 Mar 2003, 12:34 a.m.,*
in response to message #7 by David Smith

Washing worked well--thanks for the suggestion. The foam residue is gone, and it seems safe for holding the calculator. The cosmetic result is great. I suppose, however, that the case offers less protection against trauma than it did before all the foam disintegrated. Essentially, there's no padding. Ah, well.

Re: Disintegrating 41C soft case

*Message #9 Posted by **David Smith** on 25 Mar 2003, 6:12 p.m.,*

in response to message #8 by Dave F

Most of the cases did not have any foam padding anyway. I think what decomposed was some kind of backing material.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Who wants a 41CV for $120?
*Message #1 Posted by **Jeremy** on 23 Mar 2003, 10:21 p.m.*

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3014972757&category=11713

I think that is a pretty good price, no?

-Jeremy

Re: Who wants a 41CV for $120?
*Message #2 Posted by **Karl Schneider** on 24 Mar 2003, 2:55 a.m.,*
in response to message #1 by Jeremy

Not a *bad* price, but this CV is an older Fullnut version with no manuals or case, and the only extra is the Math module, which can be had on eBay with the necessary manuals for around $10.

CV's don't command the price of CX's, which have the built-in functionality of the Extended Functions and Time modules, plus a few other features, like better directory listings.

No great bargain...

Re: Who wants a 41CV for $120?
*Message #3 Posted by **John K. (US)** on 24 Mar 2003, 5:28 a.m.,*
in response to message #1 by Jeremy

If you **really** want **this** one, then $120 isn't bad. Of course, you could go ahead and bid normally and take your chances. I've gotten a few good deals that way.

Have you seen this?
*Message #4 Posted by **Vieira, Luiz C. (Brazil)** on 24 Mar 2003, 6:58 a.m.,*
in response to message #1 by Jeremy

Hello, Jeremy;

I looked at the pictures and this one called my attention:

For what I see, someone tried to open it without any concerns about screws and the like.

I'd take care with it.

My thoughts and concerns.

Luiz C. Vieira - Brazil

Re: Who wants a 41CV for $120?
*Message #5 Posted by **Diego Diaz** on 24 Mar 2003, 4:44 p.m.,*
in response to message #1 by Jeremy

Well... at least there is somebody out there that thinks it's not an unreasonable price: It's been sold in 15 hours!!

Anyway it seems really overprized to me... :-0

Cheers!!

Re: Who wants a 41CV for $120?
*Message #6 Posted by **Paul Brogger** on 24 Mar 2003, 6:19 p.m.,*
in response to message #5 by Diego Diaz

I probably should have bid rather than jumped -- but I've been wanting one. Besides, the seller has offered a money-back guarantee. But I assume I'll keep it. (If it's truly overpriced, then I'll be a little red-faced for a while . . .)

Re: Who wants a 41CV for $120?
*Message #7 Posted by **Randy Sloyer** on 24 Mar 2003, 9:17 p.m.,*
in response to message #6 by Paul Brogger

Paul,

First, forgive me if this has been mentioned before.

I saw the side of the case looked like somebody tried to pry it open with a screwdriver. In the past when confronted with this injury, I've just trimmed the damage with an x-acto knife, leaving a scar, but I recently stumbled upon a better way.

I found that I could rub or burnish the plastic back into place with a wooden "popsicle" stick. It works well on the textured Pioneer cases. I think it might be a bit more obvious on the smoother 41 case, but it might be worth a try.

Re: Fixing the calculator's case edge
*Message #8 Posted by **Paul Brogger** on 24 Mar 2003, 10:53 p.m.,*
in response to message #7 by Randy Sloyer

Why, thanks for the suggestion. I'd already guessed that cutting would smooth it, and that burnishing might be possible. The popsicle stick will definitely work better than whatever (probably metal) instrument I might have tried.

And, I've got a 42s (due to be keyboard-repaired, memory-upgraded, and sold) with some similar marks on it -- I'll try it on that one too.

I've got a better one:
Message #9 Posted by on 25 Mar 2003, 2:21 p.m.,
in response to message #1 by Jeremy

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3015260351&category=3294

The contrary is that one:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3010907901&category=11713

Re: I've got a better one:
*Message #10 Posted by **Paul Brogger** on 25 Mar 2003, 5:32 p.m.,*
in response to message #9 by

Yes, it appears that you do . . .

I guess I could have done worse, and could have done better. I'll take a bit more time, next time.

Re: I thought I did -- now, can it be fixed?
*Message #11 Posted by **Paul Brogger** on 30 Mar 2003, 12:46 p.m.,*
in response to message #1 by Jeremy

I offer my naiive experience in the interest of educating the greater community. (And, I'm asking for advice . . .)

I just received the HP-41CV. I suppose it is essentially as advertised. Upon disassembly, there is some battery leakage/corrosion noted, and the case is indeed scarred from a brutally amateurish disassembly attempt. The real problem is that in the process of prying the thing apart, the curious person with the screwdriver broke out the back-case seats of the two screws under the upper rubber pads (and almost did the same for the lower two screws). So, the case was rattling about and was generally not well held-together. (The broken plastic seats were dangling on the screw heads like horribly misshapen washers . . .)

I've temporarily got flat metal washers under the screw heads to hold things tight -- I'm now going to buy the "N" cells to test the unit's operation. If I'm to keep this thing, I want to either find some kind of flat-head screw which will allow me to put on the rubber feet, or to epoxy back the plastic seats for the original screws. Looking at the pieces, however, it appears that the seats will simply be pulled away from the back case again, even if epoxied, when things are tightened down. That, and the requirement that the epoxy job will have to fit the limited space in the power/expansion connection block (or whatever it's called) that is held in place by those two screws, has got me doubting whether the repair can be done.

So, does anyone have any experience with this kind of repair? (I'll start looking through the "Repairs" articles and searching the Archives soon, but don't have time right now . . .)

Thanks.

Re: I thought I did -- now, can it be fixed?
*Message #12 Posted by **David Smith** on 30 Mar 2003, 4:04 p.m.,*
in response to message #11 by Paul Brogger

Don't use epoxy... use a plastic welding solvent sold at most hobby shops. The stuff I use is called Tenax... it is just methylene chloride (or dicholoromethane). It melts the plastic and lest you weld it back together. I brush it on both sides (rather liberally) and clamp the joint for at least 24 hours. Work fast... it evaporates very quickly. Also be careful not to squash the softened plastic with the clamps.

Re: Yes, this glue fixes some plastics VERY well!
*Message #13 Posted by **Paul Brogger** on 8 Apr 2003, 9:27 a.m.,*
in response to message #12 by David Smith

For those who may be shopping, I found a brand of methylene choride (or, I guess, dichloromethane) glue at the local hobby shop -- the brand is "Ambroid PROWELD".

It did wonders on both my HP-41C back case (screw seats) and a Topcat battery door (broken in half in the mail).

And I second all the usage advice offered in the post above! The stuff *does* evaporate almost instantly. For the battery door, I arranged the pieces so that they were held in approximation with rubber bands (and held the rubber bands off the surface of the joint with toothpicks), cracked open the break *just a little bit*, filled it in with ProWeld, and then let it settle back into alignment. It seems to have worked perfectly.

Thanks for the info!

Re: Yes, this glue fixes some plastics VERY well!
*Message #14 Posted by **Tony Duell (UK)** on 8 Apr 2003, 6:35 p.m.,*
in response to message #13 by Paul Brogger

In the UK, dichloromethane is available from _good_ model shops under the brand name 'Plastic Weld'. It comes in a little brown glass bottle. You're right. This stuff is excellent for plastic repairs. As I mentioned in a previous message, if you have space on the back of the repair (say you've got a case part that's snapped in half, or a shattered keyboard bezel from a 98x0), stick it together as usual, then cut out a piece of thin cloth to fit over the back, put it in place, and brush it with the solvent. Then force it into the softened plastic. It won't look pretty (but it's on the back, right), but it will make the repair even stronger.

Re: Yes, this glue fixes some plastics VERY well!
*Message #15 Posted by **Speck** on 8 Apr 2003, 11:41 p.m.,*
in response to message #14 by Tony Duell (UK)

Heh-heh-heh! It's Composites class all over again!

What about this solvent cement?
*Message #16 Posted by **Ellis Easley** on 9 Apr 2003, 4:57 a.m.,*
in response to message #15 by Speck

Paul, does the Ambroid Proweld list the ingredients? Is it 100% methylene chloride? I found their website (http://www.ambroid.com/Ambroid.html) but it doesn't have Material Safety Data Sheets available - the MSDS will list the ingredients if they aren't proprietary. The Ambroid website does give this description of Proweld:

"Its unique "low surface tension" formula assures speedy absorption into the joint ..."

I found a brand called "Weld-On #4" by IPS Corporation (http://www.ipscorp.com/ind_html/acrylics.html), for joining acrylic, which contains (from the MSDS) 50% methylene chloride, 50% trichloroethylene and "<1%" methyl methacrylate monomer. I'm wondering if the ingredients other than methylene chloride will affect the performance with a calculator case. I bought it at a plastic distributor where I went to get a sheet of plastic to repair a window. The IPS Corporation also makes "Weld-On #3" and "#5". #3 is the same three chemicals in the proportions 90% - 9% - "<1%". #5 is 65% methylene chloride, 25% methyl methacrylate monomer and 5-10% glacial acetic acid. The product bulletin for #4 says:

"WELD-ON 4 is formulated as a blush-resistant cement for bonding acrylic plastic to itself. It will also form strong bonds with other plastics such as styrene, butyrate and polycarbonate to themselves. It will not bond to certain cross-linked acrylic."

Further on it says:

"Some plastic fabricators prefer WELD-ON 4 to WELD-ON 3 because it is less likely to leave white marks (commonly called blushing). However, if you need faster cement than this one, we suggest you try Weld-On 3 or for slower set, try Weld-On 5."

Apparently the higher proportion of trichloroethylene in #4 slows the drying (and prevents white spots) and the acetic acid in #5 slows it even more (that or the ??? monomer).

Re: Ambroid PROWELD Label
*Message #17 Posted by **Paul Brogger** on 9 Apr 2003, 9:44 a.m.,*
in response to message #16 by Ellis Easley

For ingredients, it says only "Contains methylene chloride." and "... contains a chemical known to the State of California to cause cancer."

On the front it says "Professional Plastic Welder for Styrene, Butyrate, ABS & Acrylic (Lucite or Plexiglas)"

That's it for ingredients & applications -- the rest is hype, cautions, and directions.

We're about to buy our digital camera -- If this is still an issue, I'll take a picture or two, for what that may be worth . . .

Re: Ambroid PROWELD Label
*Message #18 Posted by **Ellis Easley** on 9 Apr 2003, 6:01 p.m.,*
in response to message #17 by Paul Brogger

No, that's enough information. The product bulletin for the stuff I have says:

"Methylene Chloride and Trichloroethylene are listed as cancer causing materials."

I think trichloroethylene is the same as carbon tetrachloride which used to be a very common spot remover (Carbona) and which was removed from common use many years ago. I think it was even used in fire extinguishers! They were built like giant syringes.

I think what I have will just dry more slowly than a higher concentration of methylene chloride. Interesting that the feature listed first is the non-blushing aspect, this might be a plus for the sake of cosmetics. I'm going to try the solvent on some less important repairs

that I have saved up before I use it on my HP67. It's been through enough!

Re: I thought I did -- now, can it be fixed?
*Message #19 Posted by **Ellis Easley** on 30 Mar 2003, 4:35 p.m.,*
in response to message #11 by Paul Brogger

Look in the Archives for David Smith's advice on using a solvent (methylene chloride AKA dichloromethane) to glue broken posts back together. Also how to replace them if they can't be fixed. I haven't used this solvent yet but I have it on my shopping list. Also, I use what I call a "burnishing tool" to smooth gouged plastic. I have a complete description below, but first ...

I had a similar Ebay experience with an HP67 with damage the seller hadn't mentioned (new seller, was courteous and refunded part of my money.) The unit appeared to be unused - no leakage, no wear on the springs that guide the card, the wheel was gummy but clear and stuck to the nylon (delrin?) roller at just one point. I actually removed the old wheel from the hub in one piece! That was the good news. The bad news was somebody tried to pry it open with a screwdriver from the front edge. They had found and removed the screws under the front rubber feet but couldn't find the others (I blame HP in part for hiding them. I suppose they used the label to cover a couple of screws so they could tell definitively whether a unit under warantee had been opened, but I think that kind of behavior is sort of like leasing, rather than selling, equipment to your customers.) Luckily the electrical damage was limited to slight bending of a couple of the gold hairpin-like contacts that join the PCB's. Most of the damage was displaced plastic around the gap that joins the top and bottom. Then I guess out of frustration from failing to open the unit, the "perp" stuck a narrow screwdriver in one of the screw holes and twisted, breaking the post and deforming the hole.

I don't mean any insensitivity to anyone, but this unit was raped.

I repaired most of the outside plastic damage with the burnishing tool I mentioned before and will now describe:

Regarding smoothing gouged plastic with a popsicle stick, I use a tool I inherited from my father which I call a burnishing tool (although I don't remember what he called it). It is like a short (1.65" long) stout (0.36" X 0.24" maximum cross section) dagger with blunt knife edges and point (though I think you could penetrate a skull with it!) and curved sides, with a wooden handle. The finish is very smooth but not a mirror finish. With it I can often push the extruded plastic back into the void by using many small strokes and trying to do just a little each stroke. It can leave a pretty smooth finish depending on the type of plastic (though I don't know different types of plastic apart - that is something I would like to learn

more about.) When I want to get a smoother finish, I use a tiny bit of toothpaste and rub with my finger, adding a bit of water when it dries out. It seems possible to generate a considerable amount of friction this way, judging by how hot it gets - you can actually go too far (causing worse scoring than when you started) with just toothpaste and finger! I found a similar tool in the Small Parts catalog, they call it a burnisher and it is like mine except curved. It is in their catalog 22, which appears to be the same one available for download today (www.smallparts.com). I guess you have to download the entire 35MB file! but I think it is worth it, it's a real wishbook of tools and materials. The tool I found is on page 393 and the catalog number is HM-296. It is near deburring tools and files. There was no entry for "burnish..." in the index.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

9114B battery
*Message #1 Posted by **Diego Diaz** on 23 Mar 2003, 8:57 p.m.*

I've seen (and read) previous threads in this forum regarding this issue, but haven't read about the recovery of a "no too dead" battery.

********** FOR YOUR SAFETY **********

First of all, some of the activities depicted in here involves the handling of corrosive sulphuric acid (O4H2S) so EXTREME care sould be taken to avoid eyes/skin/clothes... or whatever contact with acid.

This procedure is for your knowledge only, and any attempt to reproduce what I explain in here shall be done at your own risk, and taking whatever precaution is needed.
****

What I did:

A few days ago I received my 9114B, as the battery pack was dead I removed it and plugged a bench power supply (6,8v and up to 4A) to the inside connector: the drive worked fine... so far so good, then I turned to the battery pack just to realize that it is a 88014A instead of the 88014B.

Despite of that I opened it, took the Panasonic LCR-226 battery and pry the top cover away (a good cutter and a lot patient needed), under the cover there is a transparent plastic piece with a pair of ultrasonic welded posts that holds three rubber caps each of wich was "sealing" a Lead-Acid cell.

Once the plastic and the caps were removed, I can put some acid solution (1cc or so on each cell) I took it from my car's battery using a syringe.

The cellulose inside the cell still looks fairly dry so I decided to drop some (another 2cc + or -) distilled water in it.

Put the caps back and the plastic piece on its place, some cyano-acrilate (superglue) here and there

and 24 hours 100mA deep, deep charge and the battery is back to (a fairly healthy) live.

I've done some dozens of write/read operations for the last two days and the three led charge gauge has always been on...

...Nevertheless I'm in need of some help.

1.- Does somebody have the schematics for the 88014B? (I've read elsewhere it has a more elaborated charging circuit, and I'd like to reproduce it)

2.- Did someone try to fit an 88014B circuit in a 88014A housing? Does it use the same SLA 6v 2'4Ah battery?

3.- Will a regulated (e.g. LM723) supply do the job without the need of a battery? (I'm not going to use it outdoor)

4.- Am I the only mad guy trying to "manufacture" his own Power/Batery Packs? (Ok... you don't have to answer this last question :-)

Thanks in advance, and kind regards from the Canary Islands.

Re: 9114B battery

*Message #2 Posted by **Andreas Müller(GER)** on 24 Mar 2003, 8:08 a.m.,*
in response to message #1 by Diego Diaz

Hi Diego,

1.- I have reverse engineered the schematics of both charging circuits. Do you want both or only version B?

2.- Version B fits in version A and vice versa. And its the same battery type in both versions.

Regards, Andreas

9114 battery schematic
*Message #3 Posted by **Dave Mabry** on 24 Mar 2003, 8:33 a.m.,*
in response to message #2 by Andreas Müller(GER)

Andreas,

I would like the schematics that you mention, both versions if that is possible. If you can, use my e-mail address in this post.

Thank you.

Re: 9114B battery
*Message #4 Posted by **Diego Diaz** on 24 Mar 2003, 9:11 a.m.,*
in response to message #2 by Andreas Müller(GER)

Hello Andreas and thanks a lot for your fast answer. I've already made my own schematic for the 88014A version (the one I have) as the circuit is really simple.

So I'd only need the "B" versión to compare and (as you say it fits in the "A" enclosure) to make and populate the PCB.

You can use my mail address in the header of any of my messages to contact me.

Best regards from the Canary Islands.

Re: 9114B battery
*Message #5 Posted by **Vieira, Luiz C. (Brazil)** on 24 Mar 2003, 9:43 a.m.,*
in response to message #2 by Andreas Müller(GER)

Hello, Andreas;

I was just waiting for the chance to ask you again for the schematics. As I mentioned before, I lost almost everyhting in my e-mail box, and many attached information were not saved. Concluding: I no longer have the schematics, too.

My battery pack is the 88014B type, but I would like knowing the differences between both. As I also mentioned before, I deal with analog and digital electronics (also digital logic) and I think that the more information you have, the better.

Thank you very much.

Best regards

luiz C. Vieira - Brazil

Re: 9114B battery
*Message #6 Posted by **Andreas Müller(GER)** on 24 Mar 2003, 1:15 p.m.,*
in response to message #5 by Vieira, Luiz C. (Brazil)

Hi Luiz,

it's on the way. Regards, Andreas

Re: 9114B battery
*Message #7 Posted by **Diego Diaz** on 24 Mar 2003, 12:57 p.m.,*
in response to message #1 by Diego Diaz

Well Andreas, it seems that you've got to make a lot of people happy with your info. I'm glad to be one of them, and to serve as a "usable" link for others to contact you :-)

By the way, the drawings look superb, nice job!!

Cheers from the Canaries.

Re: 9114B battery
*Message #8 Posted by **Andreas Müller(GER)** on 24 Mar 2003, 1:17 p.m.,*
in response to message #7 by Diego Diaz

No problem. If I can help. You're welcome. Regards, Andreas

Re: 9114B battery
*Message #9 Posted by **David Smith** on 24 Mar 2003, 4:09 p.m.,*
in response to message #1 by Diego Diaz

Unless you are VERY desparate and stranded on a desert island, I would definitely NOT recommend trying to revive the old battery. Once they go dead, they have a very limitied capacity and life when revived. Also you risk leaking battery acid into the machine... not good. Replacement batteries for the 9114B pack cost are very readily available and usually cost around $12-$15.

Re: 9114B battery
*Message #10 Posted by **Diego Diaz** on 24 Mar 2003, 5:07 p.m.,*
in response to message #9 by David Smith

Well David you're "almost" rigth... about the desert island I mean... :-)

I live in the Canary Islands and I must say it's a really nice place for living: the best of the weathers, sunny beaches all around the year... but you only have two suppliers of electronic components, and none of them had "the" battery nor something similar enough to fit in its place.

Nevertheless, I've got to order a pair of new batteries through one of the shops. They will take about 6 weeks to be here and will blow me 20€ off each... :-(

The battery I "repaired" was a little bit shaken during its travel from US so part of the electrolite was spilled inside the batery cover, (I cleaned this *really* carefully) so I decided to make a try and refill the cells, as the cellulose inside the cells was inmaculate white: (this tends to turn light-brown due to PbO2 degradation). After that the CyanoAcrylate hermetically sealed the top cover again, so no acid is going to find a path to the drive innards nor even the mere pack.

But I have to repeat: you were right... I was REALLY desperate!! :-)))

Thanks all of you for the posts and keep this HP spirit running!!

Re: 9114B battery
*Message #11 Posted by **Daniel Sancho** on 26 Mar 2003, 12:43 p.m.,*
in response to message #1 by Diego Diaz

If you like... In Spain you can buy similar batteries... I buyed recently 3 batteries in Málaga (1 for the 9114B and 2 for both HP-110+)

There are not exactly the same but have exactly the same size

DiaMec DM6-2.8

Greetings, Saludos

Daniel

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-33C HP-33E HP-34C HP-38C HP-38E Business vs. Engineering
*Message #1 Posted by **Norm** on 23 Mar 2003, 7:29 p.m.*

HP-33C HP-33E HP-34C HP-38C HP-38E

Those are the calculators of the 'spice' series?

Well I'm getting a little smarter, thanks to you guys, if I want a furry-carry-case or a battery lid or other bits & pieces, then even if my focus point is HP-34C I can buy any of the other 4 models, for cheaper than a HP-34C if I want some spare parts.

I quickly notice on eBay that the financial/business models are all 'like new in the carton' and appear never used, with every last manual and pamphlet present .

COMPARE THAT to the ENGINEEERING calculator, the HP-34C with the vast majority of ENGINEERING specimens having been worked to pieces 'til the power switch is worn out and the whole thing covered in 1/8" of grungy house dust slime, the books used 'til the pages fell out and scattered to the 4 winds.

If the business calculators are all 'like new unused' with all the books unread, compared to the HP-34C specimens all pounded to dust, then what does that say about the business majors vs. the engineering majors ?????

:o)

Re: HP-33C HP-33E HP-34C HP-38C HP-38E Business vs. Engineering
*Message #2 Posted by **Michael F. Coyle** on 23 Mar 2003, 8:04 p.m.,*
in response to message #1 by Norm

Norm writes:

I quickly notice on eBay that the financial/business models are all 'like new in the carton' and appear never used, with every last manual and pamphlet present. ...ENGINEERING specimens having been worked to pieces 'til the power switch is worn out and the whole thing covered in 1/8" of grungy house dust slime, the books used 'til the pages fell out and scattered to the 4 winds.

If the business calculators are all 'like new unused' with all the books unread, compared to the HP-34C specimens all pounded to dust, then what does that say about the business majors vs. the engineering majors ?????

Engineers don't clean their calculators? :)

- Michael

Spice_Man's Series
*Message #3 Posted by **Spice_Man** on 23 Mar 2003, 8:26 p.m.,*
in response to message #1 by Norm

Also add to that list the 31E, 32E, and 37E.

Spicey

It says that...
*Message #4 Posted by **Jeremy** on 23 Mar 2003, 9:28 p.m.,*
in response to message #1 by Norm

Business majors discovered only too late that they don't like or don't want to learn RPN.

They bought them, and without really getting into them too much, they said, that's right: "Where's the = key?"

Rather than take a few seconds to figure it out (like a mistaken engineer might) the business major returns it and gets a TI. (or algebraic hp)

I know, I know. Quite a shame.

-Jeremy

Re: It says that...
*Message #5 Posted by **Andrés C. Rodríguez (Argentina)** on 24 Mar 2003, 6:19 a.m.,*
in response to message #4 by Jeremy

While I am an engineering guy, I must point that your theory about business and RPN seems to be contradicted by the long life of the 12C (Oh, if 11C and 15C have lived so long...)

Except that we conclude that business people just buy them, and not use them at all, so not to learn RPN... (?)

Re: It says that...
*Message #6 Posted by **R Lion** on 24 Mar 2003, 9:24 a.m.,*
in response to message #5 by Andrés C. Rodríguez (Argentina)

Oh, if 11C and 15C have lived so long...

I wish !!

Raul

And also... (was: It says that...)
*Message #7 Posted by **Vieira, Luiz C. (Brazil)** on 24 Mar 2003, 9:34 a.m.,*
in response to message #5 by Andrés C. Rodríguez (Argentina)

Hola, Andrés; como estás?

let's also point out one important fact: both HP17BII HP19BII offer RPN and Algebraic modes, user selectible. Except for the HP49G that explicitly does that, all other scientific are RPN, RPL or Algebraic. Even if dealling with algebraic expressions (the only way I believe a calculalor should do) the HP28 and HP48 series are RPL only.

So, business people have RPN as a choice in both HP19BII and HP17BII. And I have the original HP17B manual that comes with the HP17BII: the fornt cover shows a calculator without [x<>y], [Rv] and [ENTER] inscriptions. Also, an extra RPN guide comes with it, and this extra manual has the HP17BII image in its front cover. I understand that the HP17B did not have RPN; seems that businees communitiy

complained about it. Is it correct?

Luiz C. Vieira - Brazil

Re: And also... (was: It says that...)
*Message #8 Posted by **Chan Tran** on 24 Mar 2003, 10:09 a.m.,*
in response to message #7 by Vieira, Luiz C. (Brazil)

I witnessed many finacial professional using the 12C. Yes they do use it.

Re: And also... (was: It says that...)
*Message #9 Posted by **Scuba Diver** on 26 Mar 2003, 9:19 p.m.,*
in response to message #7 by Vieira, Luiz C. (Brazil)

Luiz, did I read your post correctly?

Did early 17BIIs come with a 17B manual?

I've heard this before, but didn't believe it (I chalked it up to a very disorganised friend that had both calcs and just mixed the manuals up).

B.

Re: And also... (was: It says that...)
*Message #10 Posted by **Vieira, Luiz C. (Brazil)** on 27 Mar 2003, 6:39 a.m.,*
in response to message #9 by Scuba Diver

Hello, Scuba;

That's right. I have an HP17BII with a Spanish HP17B Owner's Manual (Manual del Proprietário, 1st. Ed., November 1987, printed in Germany) and an additional HP17BII "How to use RPN" (Cómo Usar la NPI, January 1990, 1st eddition). The calculator's serial # is ID042XXXX. When I bought the calcualtor last year, all was fresh new, sealled in a blister, manuals shrik-wrapped and with a strong smell of ink solvent (some pages even firmly closed to each other, fresh new, never before touched).

I cannot tell you anything about English versions.

Something that bothers me is that all HP financial calculators use (surely, of course) english inscriptions for financial terms, wherever they are sold. The

menu-based multilingual ones (HP17B/BII, HP19B/BII) have their manuals for local languages written with translated terms. I sometimes feel confused when reading the HP19BII Portuguese version Owner's Manual because I got used to identify financial entities by their English "shorten" terms and they were all translated to Portuguese. When I get the HP17BII Spanish version things ar a bit worse, because Spanish is almost completely readable if you are a native Portuguese speaker, but some specific terms are not easily understood and may even give you a false idea.

Well, this is not the subject but illustrates one fact. Hope this clears your doubts, Scuba.

Best regards.

Luiz C. Vieira - Brazil

Re: HP-33C HP-33E HP-34C HP-38C HP-38E Business vs. Engineering
*Message #11 Posted by **David Smith** on 24 Mar 2003, 4:14 p.m.,*
in response to message #1 by Norm

Be VERY careful buying ANY spice series machines... even for parts. They are by far the most problematic of any HP calculator. Broken battery contacts, broken battery ribbons, broken battery door latches, cracked screw posts, cracked cases, bad LED segments, bad internal contacts, corrosion, corroision, corrosion, and more corrosion.

could a person solder the chips
*Message #12 Posted by **Norm** on 24 Mar 2003, 4:22 p.m.,*
in response to message #11 by David Smith

then I got Lucky ... I have got the earliest version of the HP-34C where they did not even solder the chips to the board and it works great!

Even if they aren't considered reliable, they sure had pretty cosmetics.

Since there is no longer any factory to swap out the old board for a new one, well, dould a person take an unsoldered version all the way apart, SOLDER the chips down in the early version, and then put it all back together again?

Seems like a good way to get a malfunctioning one going again ?

Re: HP-33C HP-33E HP-34C HP-38C HP-38E Business vs. Engineering
*Message #13 Posted by **John K. (US)** on 25 Mar 2003, 2:32 a.m.,*
in response to message #1 by Norm

> If the business calculators are all 'like new unused' with all the books unread, compared to the HP-34C specimens all pounded to dust, then what does that say about the business majors vs. the engineering majors ?????

I think that it says more about **where/how** they are used, rather than how much they are used. Judging by my own usage patterns as well as those related by others who post here, I'd say that a scientific/engineering model is **far** more likely to be used in the field or on the factory floor, or carried by a student (i.e. places where they're likely to get banged around or dropped) than a business model. The latter tend to live in offices, briefcase pockets, and meeting rooms.

Just my US$0.02 worth. :^)

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

A Really Obscure (unknown?) Bug

*Message #1 Posted by **Katie Wasserman** on 23 Mar 2003, 7:21 p.m.*

For no good reason I thought that I'd try to see what a 17BII does when you enter a lot, a real lot, of digits. I was expecting an overflow error when I got past integers with 500 digits. But this was not the case.

The calculator accepts a seemingly infinite number of digits and when you get past 500 and hit ENTER it goes nuts and flips the sign of the exponent. So entering a string of 501 1's for example, will give you 1.11111111111E-500. (502 1's would give you 1.11111111111E-499, etc.) Aside from the obvious entry bug, this number should be an underflow condition according to the manual, but it's not and it works like it's a real number. You can take LOG or LN or SQR of it, multiply it by 10 etc.. As far as I know it's impossible to enter a number this small through normal means.

In checking the 17B, 19BII, 27S I found that they all have the same bug. Probably the 19B has the same bug and maybe some others. Of course this bug would never appear in real life, which is why HP probably never bothered to check there entry routines for this problem.

Re: A Really Obscure (unknown?) Bug

*Message #2 Posted by **Chris Randle (UK)** on 23 Mar 2003, 7:47 p.m.,*
in response to message #1 by Katie Wasserman

Oh yes! The 28S doesn't exhibit this behaviour. 501+ digits give a "syntax error".

Re: A Really Obscure (unknown?) Bug

*Message #3 Posted by **Glen Kilpatrick** on 23 Mar 2003, 9:11 p.m.,*
in response to message #2 by Chris Randle (UK)

I think I'd lose track long before I got to 500 pushes of the "1" key. I wonder if that means I've got a really obscure bug too....

Re: A Really Obscure (unknown?) Bug

*Message #4 Posted by **Chris Randle (UK)** on 24 Mar 2003, 6:30 p.m.,*

in response to message #3 by Glen Kilpatrick

It's not easy being a nerd. You've got work at it.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

NOT WORKING HP-41C

*Message #1 Posted by **Jon** on 23 Mar 2003, 5:07 p.m.*

I have an HP-41C (made in 1980) which was working perfect and suddenly it turned off by itself. Now I can´t turn it on. Somebody said me it could be static charge. I put the 4 batteries out and waited 24 hr, but it doesn´t work.

Does anybody know what to do???

Thanks in advance

Jon

Re: NOT WORKING HP-41C

*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 23 Mar 2003, 6:45 p.m.,*
in response to message #1 by Jon

Hello, Jon;

based on a few experience dealling with HP41 (I have four working models with me) I'd tell you first: don't panic!

Now let's see. Chances are you have a simple problem of bad connection (bad contact) between the BAT/IO assy (batteries and the I/O port connections and assembled in one single piece) and the keyboard. This is normally due to oxidation from battery leakage.

You can check it by removing the batteries again and looking carefully at the batteries contacts. Can you see any green power that would smear in your fingers? This is the sort of oxidation that may form under the batteries' contacts. Sometimes you can see it, sometimes its hidden under the black plastic in the bottom of the batteries compartment that surrounds the BAT/IO assy contacts.

Do you have the skills to open it and try to clean it? It seems to me yours is a fullnut. Please,

check for it based on the image below.

(picture unavailable)

Let us know if you are willing to open it or not.

Success.

Luiz C. Vieira - Brazil

Re: NOT WORKING HP-41C
*Message #3 Posted by **Jon** on 24 Mar 2003, 1:49 a.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

Thank you for your fast answer:

It is a "fullnut". I have opened it (removing the four screws under the feet)and I can´t see any oxidation. It looks very clean. I have used a voltimeter and I read 6.2 V in the plastic connector. So it seems the battery contacts are ok. I can´t see any broken plastic in the screw holes (I don´t know the word in english) so I think it closes ok and the contact should be right.I haven´t dissasembled any more. After assembling again it doesn´t work.

What else can I do??

Thanks again

Re: NOT WORKING HP-41C
*Message #4 Posted by **Vieira, Luiz C. (Brazil)** on 24 Mar 2003, 5:35 a.m.,*
in response to message #3 by Jon

Hi;

please, downlaod this PDF file and check for the two first pictures showing the HP41 opened. There is a zebra connctor that allows the electrical connection between the "mainboard" and the keyboard. You should check this zebra connector carefully, because there is one type of them that has very thin golden-plated cooper trails. Also you should try to use plastic washers (thin ones) between the mainboard and the back cover to ensure there is preassure enough over the contacts.

These are the most common problems and correcting procedures. I hope you have success. If not, post again.

Best regards.

Luiz C. Vieira - Brazil

Re: NOT WORKING HP-41C
*Message #5 Posted by **John Flinn** on 24 Mar 2003, 3:18 p.m.,*
in response to message #4 by Vieira, Luiz C. (Brazil)

Hi, Here is one more thing to check if your calculator doesn't turn on. If the coil springs in your battery pak are tired, sometimes there is not a good contact. Try stretching them a bit so that they give better pressure on the batteries. Another thing, if you take out the batteries for a couple of days, sometimes the calculator resets itself. I have a 41CX and I got it to work after removing a dead Advantage Pak module, stretching the coil springs and snugging up the tiny screws under the rubber foot pads.

Hope this helps!

John

Re: NOT WORKING HP-41C
*Message #6 Posted by **Jon** on 24 Mar 2003, 3:51 p.m.,*
in response to message #4 by Vieira, Luiz C. (Brazil)

I have dissasembled the main board and the zebra connector is clean. I have checked all the contacts and they are ok. In fact all the calculator´s inside is perfect (clean, without any corrosion). And after assembling everything again I have found out the problem: battery contacts don´t work properly. The previous owner painted them with silver paint (conductive). It has very good aspect but it seems to lose conductivity due to batteries friction. I have a photo but I don´t know how to attach it

If I place silver paper in each battery contact the calculator works again Now I know the problem but not the best solution. Does anybody have experience solving this failure.

Thanks in advance

Jon

Re: NOT WORKING HP-41C

*Message #7 Posted by **Vieira, Luiz C. (Brazil)** on 24 Mar 2003, 3:59 p.m.,*
in response to message #6 by Jon

Hi;

there are self-adhesive cooper foil from Chomerics (it seems to me the e-address is www.chomerics.com) and I think they're the best solution. It is not golden plated, but it has conductive glue and you can cut it and apply directly over the battery contacts.If you look carefully, there is some part of the contactcs in the calculator's BATT/IO assy that are exposed, so you can even solder the foil (low-temperature soldering iron).

At the Chomerics site you may request a sampla, that will be enough for your needs.

Best ergards and success.

Luiz C. Vieira - Brazil

Re: NOT WORKING HP-41C

*Message #8 Posted by **David Smith** on 24 Mar 2003, 4:21 p.m.,*
in response to message #6 by Jon

You can try more silver paint. I don't know if you can still solder to the contacts, but if so I use small pieces or brass "U" channel strip available at most hobby shops. Cut a small piece of the brass strip a little shorter than the battery contact. Clean and sand lightly inside the brass piece. I run a small bead of solder on the battery contact, a small bead inside the brass channel, place the brass over the battery contact, heat from the top to melt the two solder beads together. Voila, a very heavy duty battery contact.

Re: NOT WORKING HP-41C

*Message #9 Posted by **Jon** on 25 Mar 2003, 10:14 a.m.,*

in response to message #8 by David Smith

Thank you to everybody:

I will try first the self adhesive copper foil. But it is interesting to know that I can even solder it.

Thanks again

Jon

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

This one's for you, Norm.
*Message #1 Posted by **Jeremy** on 23 Mar 2003, 11:16 a.m.*

... and anyone else who's interested.

I don't have any of the HPs up yet, I apologize... I think I've captured the soulless look of LCDs compared to LEDs that Norm raves about.

-Jeremy

PS - You can see a couple other of my interests on that page too...

LED displays at the bottom

Re: This one's for you, Norm.
*Message #2 Posted by **Spice_Man** on 23 Mar 2003, 8:30 p.m.,*
in response to message #1 by Jeremy

What the heck is the white King doing on the f2 square!?!? THE HORROR!!!!!!!!!!

Spicey

He had to make way for the rook to attack the Omega ;) (NM)
*Message #3 Posted by **Jeremy** on 23 Mar 2003, 9:09 p.m.,*
in response to message #2 by Spice_Man

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[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

The story of my collection. (super long, hopefully worth it...)
*Message #1 Posted by **Jeremy** on 23 Mar 2003, 11:00 a.m.*

The post below about LEDs has inspired me to share the story of my collection.

I have always preferred LED displays to LCDs. They are easier to read and just have a certain charm to them that is very hard to explain. That they actually 'emit' light rather than just displaying something is just awesome to me.

It all started a couple of months ago. I spotted an old TI-1200 calculator on a shelf in my grandpa's bedroom: Jeremy: "Pop, do you still use that?" Pop: "Nope." Jeremy: "Can I have it?" Pop: "Sure. Knock yourself out. I remember paying $150 for a TI in the 70s... it was the first one with square root" (He was referring to the TI SR-10) {I don't know if that is true or not, I think the HP 35 may have predated the SR-10 but maybe it was so expensive he didn't consider it}

So I took it, put a fresh battery in it and kept it next to my computer keyboard. I used it for things like balancing the checkbook and such. Every time I turned the thing on and saw that sharp little red LED display, I smiled. I had to have more.

Off I went to eBay, where I bought the Sanyo 'Mini Calculator' which is AC-only powered and the size and shape of an old transistor radio. I've seen the inside of one of these, and the display I think is what you guys call "Pixie Tubes"? They look like little neon bulbs. This one seems to work more like an adding machine than an typical alegebraic calculator. (for example if you want to subtract 3 from 6, you would key: 3 += 6 -) Multiplication and division work normally, but if you want to subtract, you have to hit the subtract button AFTER you add it. This one has a beautiful amber display. $8 + $8 shipping.

Next, I found the coolest little Casio Personal Mini with a green LED display and the sideways format. I bid on that and won it for $12. The guy shipped me the wrong calculator, a Unisonic 888. I decided I would be open-minded and try it. Two of the keys didn't work and there was corrosion all over the terminals. So I emailed the guy and let him know. He said "Keep it and I'll refund the money. It's not worth all the shipping charges. If I find the Casio, I'll send it to you." Nice. So I took the thing apart, cleaned off the terminals and fixed the keypad. It was not the HP type of keypad. It was the mushy kind where each key had a spring, a contact, and a couple other pieces. It was an

absolute nightmare getting it back together properly. It turns out that someone before me had it apart and couldn't get it back together right, and so two of the keys didn't work. So that one was free, and had a nice green tube display. (which looks like LEDs) $0)

Next, I got to thinking that although I like these LED calculators, they won't do me much good in the Advanced Communications class I'm taking. So I went back to the Datamath site and did some research. What I wanted was a classic TI scientific with enough scientific functions to be useful to me in school. I also wanted it to be not too collectible as I wanted to buy it and use it. So I got a nice first generation TI-30. (Red LED display again) I think I paid $22 for that one. It came with a vinyl case which was made to look like denim. (Did people actually wear these on their BELTS??!!) My fellow DeVry students were having a good laugh at me. My one good buddy in particular is in this phase where he's dressing as if it's 1971 outside. So I let him know that he could laugh at my calculator, but it's newer than his pants!

Then, I remembered the nice keypad my 48GX had before I sold it out of discouragement that it was so unintuitive to use. So I figured older HPs might be simpler and have the coveted LED display. I surfed over to eBay and was floored by how much they were going for. $300 for a 30 year old calculator? They must be good, or collectible, or both. I didn't buy that HP 35, way out of my budget right now. Still, I wanted an HP scientific with an LED display. The first thing I saw that fit the description that I could afford was a heavily used hp 45, which I won in the auction for.... $45. No battery, a dirty and sticky keypad with 'keys that had to be pressed hard to work', dirty keypad outside, cracked battery door. No problem, I could fix or deal with all of those things. I took 'er apart, cleaned out the keypad, built and hardwired a AAA battery holder and away I went. It wasn't quite that easy, it took an entire evening to do it. The first time, they shift key didn't work. So I took it apart, hardwired the battery holders and gently cleaned underneath the shift key with a toothbrush and some 91% alcohol. When I got it back together, the shift key worked, but the 1/X key didn't. So I took it apart again and cleaned THAT one. It worked, but now some other key didn't. So I took it apart again (thankfully this is very easy to do) and cleaned all of the keys. I replaced the plastic sheet that separated the keys from the rest of the environment. (using a wrapper from a package of Radio Shack AAA battery holders I happened to have on hand; it looked like about the same kind of plastic) Anyway, now it is very clean inside and out, and works like new. It still looks very worn; you know how they get shiny from years of use. It feels a little odd though; using something that has that worn, shiny feeling that I have only had for a few weeks.

For some reason, (cough cough, have I caught something?) that wasn't enough. I had to have more of that elusive HP quality. I discovered MoHPC and read for hours for about four nights. As nice as that hp 45 is, it doesn't do complex numbers and matrices. True, my trusty TI-85 does all that, but it is not quite the same. At this point, I was starting to really get used to RPN and develop a distaste for algebraic. (although it is very well implemented in the TI-85) I decided I should get a 15c. What?!! They're discontinued and selling for over $200 on eBay?!! Bogus. Next, I decided that a 32SII would be good. Seemingly, Amazon still had some, they they were selling for $240. :(How COULD they? A quick trip over to eBay explained it. They have been discontinued and are fetching crazy money. About $220 at that time. Then, I got to thinking, if those are selling for so much on eBay because

they're collectible, does that mean that some of the newer high-powered ones are out of favor? Yes, it did. I picked up a 48G with manuals and a couple minor dents to the faceplate on eBay for $40. Even if I didn't use all the fancier functions, it was worth $40, right? That huge easy-to-read display shows four levels of the stack and probably is better on batteries than the LED display of my hp 45.

Last night is the final chapter. (hopefully) I was surfing around on eBay and out of curiosity, I wanted to see what the 32SIIs were going for. $250 apparently! Blimey. I changed the priority and had it display the newly listed items first, and someone was selling a nice condition 32SII with case for $125 with 'Buy it Now' So I jumped on that without a second thought. The interesting thing is that I can't really afford it right now, but I know that if I feel any remorse, I can get back my money and then some. For a while now, I'm going to have to stay the hell off of eBay or I will find myself in trouble. ;) I'm just going to read this forum and be a good boy. Maybe actually learn how to program the 48G and 32SII.

Side comment on my TI-85. I bought this in about 1991 in high school. It has gotten me through all of high school, and the first three years of Electronics Engineering Technology. It has had my name carved into it, the battery door, and the slide case with my Swiss Army knife. It has been dropped once or twice, but not too badly. It is shiny and worn, and has earned its retirement.

OK, you can wake up now... ;)

-Jeremy

Re: The story of my collection. (super long, hopefully worth it...)
*Message #2 Posted by **Michael F. Coyle** on 23 Mar 2003, 7:13 p.m.,*
in response to message #1 by Jeremy

Great story! It really belongs in the HP Memories Forum, where it will stick around forever, rather than here, where it will drop of the end of the world in two weeks. (I know, it will wind up in the forum archive, but it's just not the same.

I'm thinking of writing up my own history for the Memories Forum.

- Michael

Calculator Display Types

*Message #3 Posted by **Michael F. Coyle** on 23 Mar 2003, 7:52 p.m.,*
in response to message #1 by Jeremy

I just saw the pictures you put up on your web page. I can tell you what kind of displays you have there.

The TI-1200 has an LED display, as you surmised.

The Unisonic machine has a vacuum flourescent display (VFD). You still see these all over the place. These have the digits divided into segments (usually seven), and are bluish white or greenish white in color. The greenish ones are somtimes mistakenly called "green LEDs" by the unknowledgable.

The display on the Casio might be an LED but is probably a Burroughs Panaplex display. It's a gas discharge type using neon (I think) gas. The digits are formed into segments like LEDs and are orange in color. This display comes in a single-piece glass enclosure. (VFD's are packaged this way too.)

Photos of LED, Panaplex, VFD, and LCD displays can be found on the TI Museum, http://www.datamath.org/

Nixie Tubes are an older Burroughs display technology. Each digit is packaged separately in its own enclosure, which looks very similar to a minature vacuum tube. Each digit is fully formed, not segmented, from its own wire inside the tube. These wires are stacked from back to front and give a cool-looking 3-dimensional look to the display, which I've never seen captured in any photograph I've ever seen. The color is reddish-orange, like the Panaplex displays.

Nixie tubes can be seen at the Nixie Clock and Wristwatch Site, http://www.amug.org/~jthomas/clockpage.html

And of course your LCD is an LCD.

Hope this helps.

(Minor question: on the Sanyo, is the handle just a handle or can it be used as a tilt stand, too?)

- Michael

Tilt stand too. (NM)
*Message #4 Posted by **Jeremy** on 23 Mar 2003, 9:11 p.m.,*
in response to message #3 by Michael F. Coyle

-

Re: The story of your collection. (pretty long, it WAS worth it...)
*Message #5 Posted by **Paul Brogger** on 24 Mar 2003, 7:11 p.m.,*
in response to message #1 by Jeremy

Copy it into the MoHPC "Memories Forum"

And if you think "last night" was "the final chapter" . . . Well, I shouldn't give you cause for more worry just now -- you've been through enough lately!

;^)

Re: The story of your collection. (pretty long, it WAS worth it...)
*Message #6 Posted by **Ren** on 25 Mar 2003, 1:06 p.m.,*
in response to message #5 by Paul Brogger

Jeremy, Thanks for sharing with us. As far as old calcs go, *bay is an expensive place. Check garage sales, school auctions, GoodWill, Salvation Army, Thrify Nickel flyers. Check out the toy areas in SA, Goodwill, and garage sales too, as "old junky calculators" often get sent to the toy box. And if your school has a newspaper, place a classified ad, "Wanted to Buy: HP calculator" and if anyone responds, don't tell them you are a collector, but need one for school. Who knows what will turn up. And since you already have "other brands" of older calcs, don't stop collecting those, even if you don't want to collect those, you can use them as "trading cards" with other collectors. *bay will have it, IF you JUST GOTTA HAVE IT, and the other places I've mentioned aren't treasure troves either, but because they are off the beaten path you might find something just minutes away from the dumpster. Ren

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[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-67 card reader Clutch BAD JOB

*Message #1 Posted by **Michel Beaulieu** on 23 Mar 2003, 10:23 a.m.*

My card reader works great for some weeks after all your tips but i did a stupid thing : i oil the gearing for better pulling and less noise. It works greater for 2 days but after that, the clutch began to "slip". I open it thinking just cleaning the clutch but i saw the horror : The inner material of the clutch disentagrate with oil and the motor pin entering the clutch is now slack and no more traction is possible :-(I clean everything, the clutch is now empty of material and oil : what can i do replacing the material?

Hangry and desperately, Michel :-(

Re: HP-67 card reader Clutch BAD JOB

*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 23 Mar 2003, 12:53 p.m.,*
in response to message #1 by Michel Beaulieu

Hi;

If I am in this same situation, I'd try to fill the clutch with some sort of material (I'd try some Epoxy-based, but people in here will give you other possibilities, for sure) tha I could drill latter, when dried. The problem is centering the hole and finding a driller with the specified diameter. This is what I woud do... What sort of material is the cluthc made of? Metal? If so, it's gonna be harmless. Anyway, try this "filling" material with another piece, let it dry, drill it and test if it fits fine in the motor axis then you can try the same procedure in the clutch.

Hope you have success.

Best regards.

Luiz C. Vieira - Brazil

Re: HP-67 card reader Clutch BAD JOB

*Message #3 Posted by **David Smith** on 23 Mar 2003, 4:12 p.m.,*

in response to message #1 by Michel Beaulieu

The "clutch" is apparently made of nylon. If it is completely gone, then your best bet is to find some nylon rod of the right size (try Small Parts, Inc). Cram it in the drive gear, cut it to length, chuck it up in a GOOD micro lathe or mill, and drill a new hole for the motor shaft. I had a friend who used to do this for me, but he sold his tools and moved.

If the clutch is somewhat intact you can try gluing it to the motor shaft. Clean the motor shaft well with alcohol to remove any oil. I then dip a resistor lead in a rubbery superglue called IC1000 (or is it IC2000) Tire Cement (Hobbytown has it). Wiggle the stuff around in the clutch hole, and stick it on the motor shaft. You don't want too much glue in the hole because it may prevent the gear from being inserted all the way onto the shaft. Also make sure you don't get glue into the motor bearings.

Re: HP-67 card reader Clutch BAD JOB

*Message #4 Posted by **Malcolm Brooks** on 23 Mar 2003, 5:26 p.m.,*

in response to message #1 by Michel Beaulieu

To Michel,

I disintegrated a clutch on the weekend :)

But I read on this site somewhere that you can use the insulation from wires of around the right size.

You will need to get wire with around 1mm id - and an oversize OD. You need an oversize OD since:-

A) it probably won't be centred and you can scrape it to make it centred.

B) the id will probably be a touch bigger than 1mm and making the OD oversize and stuffing it in helps shrink the id.

It helps to have lots of wire to choose from.

Mine works with just a touch of vibration. Maybe I'll have another go sometime.

Thanks Malcolm

Re: HP-67 card reader New job
*Message #5 Posted by **Michel Beaulieu** on 23 Mar 2003, 9:52 p.m.,*
in response to message #1 by Michel Beaulieu

I glued the clutch with the original material that was there. Now cards pass thru the reader too slow and i get "Error" message every attempt. Any ideas?

Thanks again! Michel

Re: HP-67 card reader New job
*Message #6 Posted by **Malcolm Brooks** on 23 Mar 2003, 11:18 p.m.,*
in response to message #5 by Michel Beaulieu

To Michel,

If it did read ok a few days ago and you have not changed the wheel, and it reads slow now. Then it must be that when you replaced the clutch you glued it so the shaft is too long and it is jamming and running slow. Or when you screwed the motor back the clutch is jamming on the side and running slow.

I've had both.

When you screw the motor back make sure you can rotate the shaft easily, or test run the motor (disconnected from the circuit board)

If it is jamming on the side - slide a VERY thin piece of card between the clutch and the wall and then tighten the motor screws up.

If it is too long then I hope its not glued that well. It could be tears! Or you could try placing a thin bit of packing material between motor and frame to set the motor and shaft back a wee bit to give it clearance.

Thanks Malcolm

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

like a man in the desert, red LED hp-34c
*Message #1 Posted by **Norm** on 23 Mar 2003, 4:41 a.m.*

shouldn't clutter the chat board, BUT, after 10 years straight of using an LCD HP-32S, I just finally re-acquired an HP-34C with RED LED DISPLAY. I got it off the internet from a seller.

I get some AA batteries in that puppy, I turn it on.... OOOOHHHHHHHH

AHHHHHHHHHHHHHH

REEEDDDDDDD LLLLLLEEEEEEEEEEDDDDDDDDDDDDDDDDDDD's
OOOOOOOOOOOOOOOOOOHHHH YEEEAAHHHHHH

COME TO PAPAAAAAAAAA!!!!!!!!

I FEEL LIKE A MAN WHO JUST SPENT 2 DAYS IN THE DESERT SUN WITH NO WATER BOTTLE.

GULP GULP GULP GULP NOW I GOT WATER

ULP ULP ULP ULP MMMMMFFFFFFF BURRRP!!!

OOH YEAH. RED LED'S..... THEY ARE GORGEOUS. Carly isn't.....

Yep, LEDs are pretty cool...
*Message #2 Posted by **Jeremy** on 23 Mar 2003, 9:49 a.m.,*
in response to message #1 by Norm

I started my collection with them. What? You want to hear the story? OK then, I'll allow my arm to be twisted. ;)

I saw an old TI-1200 sitting in my grandpa's shelf...

You know, now that I think of it, this might be of more universal interest, so I will do it up in a separate post. Keep your eyes peeled.

-Jeremy

Re: Yep, LEDs are pretty cool...
*Message #3 Posted by **David Smith** on 23 Mar 2003, 4:14 p.m.,*
in response to message #2 by Jeremy

The Spice series LED's are particularly nice becuase of their size and sharp appearance. Also has them cool comma's.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HELLP! HP-34C HELLP! Plastic case problem

*Message #1 Posted by **Norm Hill** on 23 Mar 2003, 4:24 a.m.*

I NEED HELP !! HP-34C !!

How do you get the &&^%$&%^# plastic case opened up?

I have got a specimen in my hands. Wonderful thing, which I have much familiarity from its original heydey around 1978 - 1984 .

I got a specimen thru an internet purchase. It's in great shape, BUT, it has the same problem I experienced with my own unit back in 1984.

Some ^%$@#%^$#%$ HP designer back in 1977 did NOT do his job. An act of pure maliciousness, you CAN'T get this case apart without damaging it. BUT, I need to get the case apart WITHOUT DAMAGING IT !!!

Sure, take out the 2 screws, try to lift the back off, but no way. It's stuck together almost like glue down by the "Hewlett Packard HP-34C" logo at the lower edge.

Instead of giving it 2 pleasant pins that could be removed, that turkey whose name I already mentioned (^%$@#%^$#%$) made the thing incomprehensible and easily damaged.

I can already see some minor damage on this unit's plastic due to somebody trying to get it open (for justified or unjustified reasons, it seems to work fine).

I AM SURE THAT there must be some valid trick to get it open. Surely HP service did not destroy each plastic case that came back to them?

Its amazing how a design engineer who does a fine job disappears into the woodwork and nobody ever knows who he is or what he did. But some turkey who is nothing more than a vandal on a timeclock, you can remember his name 30 years after he worked in the plastics department. His name is ^%$@#%^$#%$

Thanks in advance for somebody explaining the magic 'flick of the wrist that will get this thing opened up so I can repair the plastic that somebody already had messed with.

What's hilarious is I felt a need to open mine up back around '84 and had identical pry-marks and identical types of damage, and now I get some completely unrelated unit from somebody else many states away, and see the same thing. Can see the 'Dilbert' design manager now..... Excellent work Mr. ^%$@#%^$#%$ I am really impressed with your plastic case design, I'm going to promote you to MANAGEMENT.

Re: HELLP! HP-34C HELLP! Plastic case problem

Message #2 Posted by ***Vieira, Luiz C. (Brazil)*** *on 23 Mar 2003, 6:26 a.m.,*

in response to message #1 by Norm Hill

Hi;

there is an interlock assembly that is easy to be removed if you "dp the trick".

If you look at the back "glued" (not glued, in fact) bottom side, you'll see there is a small plastic "slice" in the keyboard half rounding around the back half of the calculator case. You shoud be able to slide the back half "over" this plastic slice, by gently twisting and smoothly spinning the back half, and then moving it out of the upper (keyboard) half. I once read that using dental floss is safe and helpfull... no, not exactly in your tooth, around between both halves. I remember this technique was described some time ago, but I did not try it. Please, have a look at the image below and you'll have an idea: it's a "free-mouse", not scaled, far-from-actual-object drawing represent a cut-view. Shaded half is the "bottom" half, as if it is upside-down.

(picture unavailable)

You may notice the "small slice" at the righ side of the drawing.

Hope this helps you to find the best way to "separate" them.

Best regards.

Luiz C. Vieira - Brazil

CANCEL RED ALERT

*Message #3 Posted by **Norm** on 23 Mar 2003, 6:35 a.m.,*

in response to message #2 by Vieira, Luiz C. (Brazil)

OK, AWESOME DIAGRAM. IT's APART, and I JUST PUT IT TOGETHER, and it's all happy camper again.

Here's my ten cents worth of wisdom:

I used a little cleaner-degreaser on the slide switches, which of course leaves them 'dry'. Before reassembling, I added just a touch of "tri-flow" which is similar to a WD-40 product with white-powder teflon particles added. After the oils dissipate, the teflon remains in the metal pores. So that's what I did.

BACK TO THAT VERY UNPLEASANT PLASTIC DESIGN:

I trimmed a little plastic away (5 thousandths, ten thousandths) so that maybe it would come apart easier in future. Visualize as follows: You get the back off finally (and could well be only with damaging something, but I did OK). Now, set the calculator aside but hang onto that back. Get your X-acto knife. I can't hardly say it with words, but remove a little plastic (and/or 45 degree it) at the very edge of the protruding 'clip' and also, trim a little at the very bottom edge of the case.

Two places to trim, just along the bottom edge, just 5 or 10 thousandths. I'm sure it will help in future.

THANKS AGAIN! Awesome diagram!

OOHHH YEAHHHHH HP-34C BETTER THAN S*X

*Message #4 Posted by **Norm** on 23 Mar 2003, 6:50 a.m.,*

in response to message #3 by Norm

OK this baby is up and running. THIS IS MY FIRST TIME TO GET A CLASSIC BACK INTO MY HANDS AFTER 12 STINKIN' MISERABLE ROTTEN YEARS OF HAVING DUMPED MY 34C for a 32S.

Early version with unsoldered chips inside is unreliable? I dunno, thats what it is, and its working OK. I like the extra 1.5 ounces of weight.

LED's, RED LED's YEAHHHH. And a SWITCH. YEAH, a REAL LIVE POWER SWITCH. *CLICK*. Not like a 32S where they were too stinkin' cheap to give you a

power switch.

What is wrong with that Carly creature, parading around about "cost reduction". I can see her now in the boardroom, with a 50 foot long Mahogany table and a $3000 "power suit" that she's wearing, leather chairs all around, parading about her "cost reduction" and the need to boost profits? That we don't even deserve a 5 cent power switch?

The 32S was already cost-reduced to the point of a cereal-box-toy, but they discontinue it like they can't make any money. Yeah right, right on Carly.

NO STINKIN SOFT-MENU'S. You want to F, ENG, 4 ? JUST DO IT. YOu don't have to hit 2nd, DISP and then continue with a soft menu, like 32S.

I put this baby into Engineering Display mode, does it say something bleccchy like

"14.142E0" ????

NO! AN HP-34C SAYS

14.142 00

YEAHHHHHHHHHH. In nice clear crisp RED LED digits.

OHHH ITS GETS BETTER AND BETTER. I MAKE A LITTLE PROGRAM. IT WORKS, IT WORKS !!

I got some nice "LABEL" buttons right up top, label a program "A" or "B" and run it easily just by pushing "A" or "B".

Think you could do that with a 32S ?????? HA HA HA HA HA HA no way charlie.

I GOT A REAL LIVE SWITCH TO GO BETWEEN "PRGM" AND "RUN" bet that Carly is doing a speech right now with her stinkin' powerpoint and excel spreadsheet, to prove that slide switches are evil.

AND YOU RUN THE PROGRAM AND ALL THEM LED'S START A BLINKIN' KeR blIPPTY blippITY BLIP BLIP.

KeR blIPPTY blippITY BLIP BLIP.

KeR blIPPTY blippITY BLIP BLIP.

KeR blIPPTY blippITY BLIP BLIP.

U gotta love that one kilohertz CPU speed. OOOO LAAA LAAAA. (OK I admit, if they speed that up with a new CMOS chip, I'll accept that. But no other "improvements" from those who no longer bring good things to life.

THIS THING IS GEORGEOUS. Couldn't a done it w/o the HP Museum. In fact the seller contacted me because I tried posting a classified ad here. They bumped into it off a google internet search. Not everybody wants to setup to sell on eBay. Sometimes they want to dump it quickly w/o creating an auction page.

Thanks dgh.

Every key push is like total ecstacy. Little keys with little tiny hinges on them, where HP-32S has just got a whole bunch stuck in there all blow-molded at once. You get that flim-flammy feel on all those uninspired brown-plastic cereal box calculators because the keys aren't even free floating.

THIS THING IS AWESOME. A month ago, I said HP should start making these HP-34C 's again.....

Now that I have had the good luck to acquire a nice sample.....

I WAS RIGHT !!!!

HUBBA HUBBA OOOO WEEEE BAAABEEEEEEEEE. HP-34C .

If I saw a kid trying to learn trigonometry and calculus, I'd get him one of these. AWESOME.

And thanks to more modern high-power batteries, the RED LED display is not something to fear..... it's something to be ENJOYED .....

Re: OOHHH YEAHHHHH HP-34C BETTER THAN S*X
*Message #5 Posted by **R Lion** on 23 Mar 2003, 7:02 a.m.,*
in response to message #4 by Norm

Hi my friend: You are really happy, aren't you? Enjoy! Thanks for sharing

Raul

I'm happy for you, but...
*Message #6 Posted by **Vieira, Luiz C. (Brazil)** on 23 Mar 2003, 7:39 a.m.,*
in response to message #4 by Norm

Hey, Norm, from the Analog Lands! (are you the one?)

Do not give up s*x for your new "digital" tool/toy.

I wouldn't.

Be aware not going beyond the analog/digital limits... It may be a call without a return, you you understand me.

Anyway, I'm sincerely happy for you. I felt almost like this (my tunes were Brazilian ones) when I brought my HP41C back to life after 8 years inside a shoes box.

Best regards.

Luiz C. Vieira - Brazil

(As Raul Lion, I like reading about and sharing happy experiences with these folks in here; this forum must be THE place for this, too)

HAPPY, happy, I am very h a p p y happier than a hippy
*Message #7 Posted by **Norm** on 23 Mar 2003, 6:44 p.m.,*
in response to message #6 by Vieira, Luiz C. (Brazil)

THIS THING IS GREAT!!!!!!! While I re-read the HP-34C owner's manual to rediscover what made it such a cool machine, I am busily COMPARING IT to the HP-32S.

If you just type in a scientific notation number, like 25.251 E 08 I immediately noticed how much more nicely it was formatted. The decimal number is pressed to the far left, the exponent is pressed to the far right. Crisp, clear and you don't even need an "E" in the display.

The 32S crams it all together with no spaces and an "E" to separate them.

OK, we can always find some sort of advantage to the 32S. It has got 12 digits, the 34C has only got 10. But so what, the 34C is more fun. "happier than a hippy". This is what the Microsoft and Carly types can't understand its not how

much resources you have, its what you do with those resources. It's not whether the hard drive is 10 gigabytes or 100 gigabytes, its what you do with that resource.

One designer can build a beautiful machine with an economically constrained 10 digit display, the other builds something boring and dull with a 12 digit(or even more sophisticated) display.

VERY VERY HAPPY,and this HP-34C is stomping the 32S all to pieces with one hand tied behind its back.

I got a little lucky, other than the classic pry-mark damage at the bottom of the HP-34C, this unit is like showroom new after I did a minor cleanup.

Wouldn't go so well if the unit were pounded to bits and had dried dog barf on it. That's why there is supposed to be a thing called "factory" where they make new ones for us, and then we give the factory our money to go and get a new one. But Carly did away with that concept.

- Norm

The "dental floss trick" for Spice units (e.g., HP-34C)
*Message #8 Posted by **Karl Schneider** on 23 Mar 2003, 4:55 p.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

Norm --

For future reference, here is the link for my "dental floss trick" for opening the case halves of Spice calc's, mentioned by Luiz Vieira and David Smith in this thread:

Using dental floss to open HP Spice-series calculators

I have digtal pictures of this, and would like to turn it into a tech article including Luiz' illustration.

I'd be honored
*Message #9 Posted by **Vieira, Luiz C. (Brazil)** on 23 Mar 2003, 6:28 p.m.,*
in response to message #8 by Karl Schneider

Hello, Karl;

I'd be honored!

Use it as well. If you believe this one is also usefull, feel free using it too. I think with previous one you have a better view. Check it:

(picture unavailable)

(picture unavailable)

Best regards.

Luiz C. Vieira - Brazil

Re: HELLP! HP-34C HELLP! Plastic case problem
*Message #10 Posted by **David Smith** on 23 Mar 2003, 4:23 p.m.,*
in response to message #1 by Norm Hill

The best way to open a spice machine that I have found is to to remove the two screws at the top of the battery compartment. Next lift up on the back of the case so that it clears the battery contacts (you will probably have to press down on them to clear the cutout in the case). While holding the case back up away from the battery contacts you then want to squeeze the base back downward towards the label. I place my thumbs in the battery compartment and fingers on the front label. The latch that Luis drew so well, should pop loose.

I have seen a couple of machines that just would not pop loose though. You can try the dental floss trick or in a dire emergency just keep pulling the case back up. You will eventually hear the CRAAAACK of doom as the latch unlatches. I have never broken the latch, but it is a possibility.

ALL GOOD IDEAS, Thanks,

*Message #11 Posted by **Norm** on 23 Mar 2003, 6:54 p.m.,*

in response to message #10 by David Smith

These were all good ideas and very nice diagrams about the SPICE series calculator case problem such as HP-34C.

I like the dental-floss and might try it some time.

Did anybody NOTICE I mentioned the possibility of trimming the plastic back a little with an X-Acto knife?

I think its a fairly good suggestion. Use a super razor sharp X-acto.

You can't overdo such a trim, obviously. Just like 5 thousandths of an inch. Just a little goes a long way. You can trim it right angle or even 45 it, as you prefer.

Its hard to describe which surfaces to trim, but there are two points of 'hangup' that make the case so horrible to dismantle. The edge of "the latch" and the very lower edge of the bottom half.

Both edges to trim are on the bottom half plastic piece.

I did this bit of trimming so it would be easier to take it apart in future.

There are other situations where you shouldn't feel "stuck" with whatever gaffe the plastics manufacturer gives you. One such thing I have trimmed before, is a DVD box where its hanging on so tight it wants to bust the DVD in half rather than let go of it. Use that trusty X-acto knife, but SPARINGLY.

What is MoHPC ?

*Message #12 Posted by **Norm** on 23 Mar 2003, 6:56 p.m.,*

in response to message #11 by Norm

What does MoHPC stand for?

Oh, does that dental floss have to be MINT flavor or regular ?

Re: What is MoHPC ?
*Message #13 Posted by **Todd G** on 23 Mar 2003, 7:01 p.m.,*
in response to message #12 by Norm

You're kidding, right?

Just in case you aren't, MoHPC stands for Museum of HP Calculators!

Now. Who is buried in Grant's tomb?

nobody!
*Message #14 Posted by **Norm** on 23 Mar 2003, 7:32 p.m.,*
in response to message #13 by Todd G

nobody is buried in Grant's tomb

the whole thing is a hoax.

:o)

Who is buried in Grant's Tomb?
*Message #15 Posted by **Karl Schneider** on 24 Mar 2003, 2:39 a.m.,*
in response to message #13 by Todd G

The correct answer to the age-old question, which is an example of one whose answer is not as obvious as it seems:

Ulysses S. Grant... *and* his wife.

Regarding the question Norm posed in "What is MoHPC": I used mint floss, but I have not compared waxed to unwaxed.

On lubing the slide switches: I am familiar with Norm's choice of Tri-Flow (having used it on bicycles). It used to be called Tri-Flon, but I guess Du Pont objected. I had earlier asked the question in this Forum of what to use for these switches, and got a number of suggestions. One of those was Radio Shack Lube Gel, which I had already bought for the purpose.

Re: I'll take that disgusting HP-32s off your hands . . .
*Message #16 Posted by **Paul Brogger** on 24 Mar 2003, 11:10 a.m.,*
in response to message #13 by Todd G

Norm -- I'm worried for you. You're going to pop an artery!

(I wouldn't mind adding a 34C to my meagre holdings someday, myself.)

And if you like LED's so much, I've got a working TI-30 (*very* good condition) that I'll trade for that horrible LCD HP-32s (in just about *whatever* condition} . . . I might even throw in the TI-55, as well . . .

I suppose there's no use in my encouraging your enjoyment of your new acquisition -- it appears that you're doing quite well on your own!

Hello Paul; the 32S is the thrasher
*Message #17 Posted by **Norm** on 24 Mar 2003, 4:13 p.m.,*
in response to message #16 by Paul Brogger

Hello Paul;

The 32S is the thrasher calculator around the house. I've got 4 of them actually. Some upstairs some downstairs. The chinsy LCD and the long battery life has its advantages. I can just grab one and calculate when the need arises. In between they get scratched up and dented and I don't even care. The cats walk across them with yard mud on their paws and thats OK too.

You wouldn't want to buy my 32S calculators because they are all thrashed. I don't want to sell because I still use them as thrashers. The 34C must necessarily be used on the nicer occasions (because it is a discontinued work of art and must be treated carefully).

****

Yes, really enjoying this thing. Last night I was comparing INTEGRATE and SOLVE between an HP-34C and the HP-32S. The 34C the procedure is VERY SMOOTH to get started (slower to complete the operation of course). The 32S has got a bunch of incomprehensible "definitions" that have to be done in advance of starting. Wasteful extra key-strokes, that furthermore add confusion.

You have to define which program is to be integrated. With the HP-34C, you just do that at the moment of beginning, you say (f) SOLVE "A". The "A" is the program label. With the 32S you have to define it by use of soft-menu's.

The HP-34C the variable is passed to the program as the primary X-stack register, the obvious place.

But with the 32S, you have to define which register the argument to the function is coming from. Again, wasteful extra steps.

The 34C handles like a nice little Red Ferrari. The 32S handles like a klunky brown & grey garbage truck.

That's what 15 years of "progress" gets you.

Enjoyed chatting, yes, having lots of fun 'rediscovering'. Will continue to do comparisons of why the 34C ran so nicely.

NOTICED that the alphanumeric display really does NOT add much to the 32S. It adds clutter. The 34C is very crisp because they made best possible usage of those 8's. I'd say its clearer and crisper, all in all, than the alphanumeric display.

I mean, all keys are labelled by their "row column" in the 34C and that's clear & crisp. With the 32S you get all sorts of silly little extras. The INTEGRATE program gives you "(integral symbol) =" and then the symbols disappear as soon as you move on. Why add all this eye-candy.

Do they think they are in Hollywood? Eye-candy is their phrase for overcomplicating a scene and over-polishing all the chrome. Even in Hollywood eye-candy is bad. It's cinematic junk food. I like 70's movies where they shot more genuinely on a budget. The 32S has too much eye candy, but its all dull-grey-bland LCD eye candy.

About the 34C/15C solver
*Message #18 Posted by **R Lion** on 24 Mar 2003, 5:02 p.m.,*
in response to message #17 by Norm

Hi Norm: I'm as lover of the 15c as you of the 34c... and they have the same solver. A solver for solving *one variable* equations. The 32s/42s solver is better: it can solve any variable in multiple variable equations.

Well, if you read this post:

http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/archv010.cgi?read=29015

then you will get another good new about your loved 34c.

I hope you enjoy your new solver as much as I do in my 15c

Raul

Some thoughts: 34C vs. 32S and 15C
*Message #19 Posted by **Karl Schneider** on 25 Mar 2003, 1:25 a.m.,*
in response to message #17 by Norm

Paul --

I agree with you about the ease of use of Solve/Integrate with the 34C, 15C, and 41C Advantage Pac. Raul's post referenced one of mine, describing how to utilize Solve/Integrate on these calcs for a chosen variable in a multi-variable function without editing the function-definition user program.

I am writing one or two articles about these topics, but haven't fully decided their breadth and scope.

One interesting thing about Solve/Integrate on these calcs vs. the 32Sii: The user may perform Integrate within a program passed to Solve, or vice-versa -- computationally-intensive, but practical tasks. The 32Sii does not allow that. This was progress? A shame, because the 32Sii is about four times as fast as the 34C or 15C, and twice as fast as the 41C.

The 32's limited alphanumerics allows the user to see symbols for

program steps instead of having to decipher keycode sequences, and to use more-descriptive letters for variables and program labels. This is good for small programs in "permanent residence", not so important otherwise.

I have a 32Sii and 12C for daily use at work; A PC with Matlab and Excel is on my desk for heavy computations or graphing. However, the one I'd take first to any exam is the 15C I've had since 1983. It's everything the 34C is and more, and ya don't have sit next to a wall socket. ;-)

more 34C's for me

*Message #20 Posted by **Norm** on 26 Mar 2003, 2:55 p.m.,*
in response to message #19 by Karl Schneider

Well, if you guys really like the LCD versions better, its good, because that means less buyers for HP-34C, and more HP-34c for me with less competition.

When I compare them directly, the 32S is an OBVIOUS descendent of the 34C. All the clever ideas were done in the 34C, the designers of 32S were just copycats building it to the price of a cereal-box toy.

I'd rather have the genuine Mona Lisa than a knock-off copy.

Just the reasoning behind the enthusiasm that's all, don't mean to state it too strongly because I understand you prefer the greater computational horsepower of the newer unit. But I am preferring the superior cosmetics of the 34C.

I notice some objections i had to 32S , are actually fixed in 32Sii . Say you wish to convert 60 degrees to radians. You type in 60 on a 34C. Then you hit the "g" and "->R" . Quick, expedient, no surprises, works great.

On the inferior 32S, you lose sight of the X-register, thereby interrupting your train of thought, and it asks you by soft-menu whether you want ->D or ->R (into degrees or into radians). It is asking you this while you cannot even see what you started with (the 60 degrees), and it is furthermore requiring an extra keystroke.

Nevertheless, this has been fixed on the 32Sii . The 32Sii has that arranged more like the 34C .

Re: more 34C's for me

*Message #21 Posted by **Ellis Easley** on 27 Mar 2003, 10:24 p.m., in response to message #20 by Norm*

I love the 34C, too - it's the only Spice model I have so I don't really know anything about the others. But as I have learned here, the Spice series appears to be HP's first attempt at calculator cost reduction that came with a loss of quality. The case and the keys are fine and the display is better that previous models, but the recharger connection with it's tin plated contacts is kind of flimsy. Tin plated contacts aren't meant to be used for a large number of mating cycles. The battery contacts break easily. The solderless IC assembly version looks like it would be unreliable but I don't know if it was, mine isn't that version.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

hp Replacement batteries
*Message #1 Posted by **David E** on 23 Mar 2003, 1:25 a.m.*

I need a battery for my hp-45 and hp-25. I was wondering if someone could give a part number from nicad lady (is this the best place to go?). I don't understand voltage etc, so I am lost.

Re: hp Replacement batteries
*Message #2 Posted by **David Smith** on 23 Mar 2003, 4:25 p.m.,*
in response to message #1 by David E

If you have the old packs, just take them to your local Batteries Plus or Batteries Etc store. They will know what to do. I always have mine rebuilt with 1800 maH nickel metal hydride AA cells. They will run the machine for three times as long as the original 600 maH NiCad cells (if you charge them for three times as long).

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Poll - Is it time to add the 32SII and 20S to the fully fledged part of the Museum?
*Message #1 Posted by **Jeremy** on 23 Mar 2003, 1:20 a.m.*

I have finally broken down and bought an SII on eBay. (ouch)

After surfing around HPs site for an hour or so and discovering that I could only find a copy of the manual in Spanish or Portuguese, it dawned on me: Since these models are no longer made, they should be on the 'proper' part of the museum, right?

Although the 20s doesn't get much respect around here on account of it being algebraic, I think the 32SII is pretty well respected.

If you don't feel like commenting, that's fine, but please at least post your vote as a 'Yes' or 'No' in your Subject line. Maybe our champion Mr. Hicks will make it happen... ;)

-Jeremy

Yes
*Message #2 Posted by **Gray Wilson** on 23 Mar 2003, 5:00 a.m.,*
in response to message #1 by Jeremy

Yes, a section '1988 - 2002 "Pioneers"' would be cool and useful.

Re: Poll - Is it time to add the 32SII and 20S to the fully fledged part of the Museum?
*Message #3 Posted by **Bill Hemphill** on 23 Mar 2003, 4:56 p.m.,*
in response to message #1 by Jeremy

I have just recently obtained a new 32Sii and 20S manuals from Randy Sloyer. Thanks Randy. I will be scanning these for Dave to use for the HPMuseum site (assuming that he has permission to use them).

I'll let Dave know when I have them scanned in.

Yes!
*Message #4 Posted by **Holger Weihe** on 23 Mar 2003, 4:58 p.m.,*
in response to message #1 by Jeremy

... and not only the HP-32SII and HP-20S. I believe that all HP calculators which are no longer produced belong to the "main exhibition". So I would like to see there the HP-49G, too.

Holger

Yes! (unfortunately)
*Message #5 Posted by **Karl Schneider** on 23 Mar 2003, 5:10 p.m.,*
in response to message #1 by Jeremy

It's probably time to add the recently-discontinued Pioneer models to the museum as a complete section.

I bought one of the last 32Sii's on the shelves last year at Fry's for $60, and recently won a new 20S on eBay for $28 (it will be my programmable "traveling" calc).

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

I've missed HPs heyday... (long)
*Message #1 Posted by **Jeremy** on 23 Mar 2003, 12:13 a.m.*

I have just finished reading all of the posts in the 'Memories' forum. All the stories were good, but I especially liked the ones with references like: "It was 1972 and I was a freshman in Electrical Engineering..." or things like that.

Since I was born in 1976, I didn't start using calculators until years later. The first HP I saw was a 20s that a friend of mine got during high school. I remember being very impressed with the keyboard and construction, but very disappointed in the functions:cost ratio. (I had just bought a TI-85)

It seems that my whole generation has completely missed out, unless they are introduced to HPs and RPN/RPL by some freak accident.

I discovered this site after spending several hours on the Datamath site. I started to search eBay for vintage TIs. (I bought a TI-30 which is as old as I am..) I remembered the HP name, and searched for LED HPs on eBay. I could not BELIEVE how much these were going for! Out of curiosity, I found this site and read most of it. (admittedly, I didn't read much on the desktop machines...) Now, three weeks or so later, I have two HPs: A 48G and a 45, which I have probably talked way too much about lately, hehehe.

I bought another calculator today, a $6 Casio for the glovebox in my car. The main selling point was that Casio makes good calcs, (for the money!) and that it is dual powered. This way, it can sit in my car's glovebox for eons and still work when I need to balance my checkbook figure gas mileage, or bring it into the grocery store to decipher 'sale' prices. I digress...

Back to my original point though. Although I can really appreciate RPN/RPL and HP construction now, I don't think I can ever quite have the appreciation that many of you have who are 20 years my senior. It is an experience I will never have, as I was either unborn or playing in sandboxes when you all were in electronics labs and whatnot.

Still, when I was using my hp 45 earlier today in electronics lab, I just had to saw "Wow.' to myself as I pushed those nice keys...

-Jeremy

Re: I've missed HPs heyday... (long)
*Message #2 Posted by **Les Bell [Sydney]** on 23 Mar 2003, 12:49 a.m.,*
in response to message #1 by Jeremy

Yup. The seventies was a special era, for sure - primarily due to the fact that most of us were raised on slide rules, and a computer was a roomful of equipment attended by a lab-coated high priesthood, worthy of only the most complex problems.

I got my first HP (a -45) in early 1974, after a frustrating few months with a Sinclair Scientific I had built from a kit. The 45 had a high "gee-whiz" factor - I remember sitting in the bar of our Hall of Residence, using the "Day of Week" "program" from the Math Applications Pac to work out what day of the week people had been born on.

More to the point, the 45 made it possible for me to crunch problems such as Routh-Horwitz comparatively quickly without needing computer time.

Interestingly, I made the money to pay for my HP-45 by building Sinclair calculators from kit form, then selling them during the evening at the bar where I worked during holidays. I'd use the little calc to add up a long order, and the customer would inevitably ask "What's *that*?". After I'd explained how it worked and demonstrated it, the next question was inevitably, "Where can I get one?". It took me about an hour to build one, and the kit cost me GBP14.95, so by selling them at GBP25 I was soon able to afford the HP-45!

Best,

--- Les [http://www.lesbell.com.au]

Re: I've missed HPs heyday... (long)
*Message #3 Posted by **David Smith** on 23 Mar 2003, 4:38 p.m.,*
in response to message #2 by Les Bell [Sydney]

I made the money to buy my HP45 by shooting rabbits with an assault rifle! One year there was a terrible "bunny bloom". There were so many rabbits that a rancher was losing lots of cattle to broken legs in bunny holes. He told a friend of mine he would pay us $2.00 each for every rabbit we brought in. One afternoon with an AR15 converted for .22LR yielded 200 rabbits, $400 dollars, one really gross pickup truck bed, and one rather amazed rancher. He kept his end of the deal. We didn't have the heart to tell him that for every rabbit that we shot, there were easily 20 more.

The next day I went down to the local office supply store. I was going to buy a TI SR-10. When I got there, the salseman mentiioned off hand that they had this weird machine in the back that nobody knew how to use... it had no "=" key. It was an HP45. It had been ordered that spring by a local small school district. Their science teacher had quit over the summer, and they placed it on consignment... only $250 bucks.

Re: I've missed HPs heyday... (long)
*Message #4 Posted by **Patrick** on 23 Mar 2003, 5:26 p.m.,*
in response to message #1 by Jeremy

Hey Jeremy it is great fun to read your messages. No need to apologize for length, ASAIC.

In the early 70's in high school I bought a fairly cheap plastic "Sterling Slide Rule". That was followed by a lovely metal precision version from Pickett, Model N902-ES - Simplex Trig. I have both slide rules still today. I even have a little warranty certificate from Pickett which starts with

"Congratulations on your selection of a Pickett All-Metal Slide Rule. It is yours for a lifetime; a constantly accurate and dependable aid to your progress."

I may end up having it for my lifetime, but I'm not sure the constant accuracy is going to mean much to me.

I finally convinced my Dad to buy me an electronic caculator. My better-off friends had just gotten SR-50's at about $250 (Canadian - which was pretty close to par with the US dollar back then, I believe). I couldn't believe that you could just push a button and get the value of tangent of an angle! All those heavy and cumbersome math tables could now be chucked! Well, not quite. Unfortunately, I still had to live with tables of the transcendental functions for a bit longer. The SR-50 was too much money for my family so I got an SR-10 for $99.95, serial number 1218454. All it had was the basic four functions, a memory, and square root, but I absolutely loved it and read everything I could about it. The manual was great. It even told you how to compute rough values for logarithms by a process involving (I think) 11 repeated square roots!

I was a calculator (and general gadget) fanatic and I looked for every new development and tried to get every calculator brochure I could get my hands on. I liked the HP machines very much. When I think back to those days, though, it wasn't so much the quality of the machines or the RPN that hooked me, it was the advanced functions. HP was definitely technologically way ahead in those early days. I was soon brainwashed with the RPN spiel, though, and I was telling all my friends how wonderful it was, not having ever used it. It was like being in a clique of people who knew The One True Way. It was great stuff for an up-and-coming geek.

As an undergrad I finally saved enough money and bought myself an HP-25. There was no 25C in those days. I think I spent $249.95 Canadian on it, plus tax. I absolutely devoured this little machine that I dubbed "Hewey". I wrote oodles of programs, many of them games, and honed my skills at tricks and techniques to write amazingly efficient code to fit within its very limited program memory.

In grad school, I was living in an apartment with four other guys, all undergrads, one of whom was from a fairly wealthy background. He bought a HP-41C and, as soon as I saw it, I was hooked. These were the heady days of synthetic programming investigation. I actually discovered a byte-grabber of sorts two weeks before I received the edition of PPC Journal which had the same technique described. Talk about proud. What a geek.

My academic heritage is pure math and I now work in software development (large custom systems). It comes as a surprise to folks when I tell them I have very little use for a calculator, but it is true. Of course, this has never stopped me from buying them.

My mid-life crisis must have kicked in recently as I suddenly felt the irresistable need to acquire great quantities of HP calculators, despite what my friends and my banker were telling me. I'm approaching 20 machines now. This doesn't include the programs on my Palm m515 and Tungsten|T.

Yikes. What a geek.

Hey, Jeremy... Look around. Right now there is something happening which, 20 years from now, will be looked back upon and declared to be the heyday of its kind. The trick is to recognize it.

Computing logs using square roots
*Message #5 Posted by **Ex-PPC member** on 24 Mar 2003, 9:17 a.m.,*
in response to message #4 by Patrick

Patrick wrote: "It even told you how to compute rough values for logarithms by a process involving (I think) 11 repeated square roots!"

This is based on this identity:

limit for (N -> Infinity) of N*(X^(1/N)-1) => Ln(X)

If you take 10 square roots in succession, N=2^10 which is 1024, so you can calculate an approximation to the natural log of a number X by simply taking 10 consecutive square roots, subtracting one, then multiplying by 1024. For instance, for X=2, my calculator produces 0.6934+, which is an approximation to Ln(2) = 0.6931+

The more square roots you take, the more exact the result will be, up to a point, because as the partial result tends to 1, you begin to lose a lot of significant digits when you then subtract one from it. Using 11 square roots you should use 2048 instead of 1024 above.

Slide Rules

*Message #6 Posted by **bill platt** on 24 Mar 2003, 9:00 p.m.,*
in response to message #4 by Patrick

Mentioning the "sterling" slide rule reminds me of my own Geekdom. In 11th grade, my 11-c fell off of the desk in "health" class, and the LCD cracked. So I sent it back to HP, which actually took quite some time...

So, in physics class, my teacher had a huge Pickett slide rule hanging above the chalk-board, which he really didn't use much, but it did occasionally create conversation in the beginning of the school year.

Having broken my calculator, one day we had a quiz or test and of course I was unprepared (yes, they allowed calculators, I am not THAT old) and so I called out to Mr. Kelly, "yo, do you have a slide rule I can borrow?" Of course, I already had a reputation for being a bit of a wise-cracker so he made some sort of disparaging return, but I insisted, and he lent me one.

Sure enough, I flew through that test, using that slide rule, aced it, and way ahead of the class. Boy-oh-boy did THAT get the teacher's attention!

I still have that Sterling that Mr. Kelly gave me, and it lives in an honored place in my drafting box.

-Bill

PS I continued to use my slide rule--even after the calculator was fixed. You see, the slide rule is faster for straight multiplication and division, and it has a built-in memory! It's also good for your brain!

The year this happened? 1984!

I din't miss, but could not afford...

*Message #7 Posted by **Vieira, Luiz C. (Brazil)** on 24 Mar 2003, 10:10 a.m.,*
in response to message #1 by Jeremy

Hi;

It's fairly known that Brazil does not have NATIVE (please, "compatriotas", it's a fact...) high tech in many technological fields. Digital electronics and computing devices are both of them. Let's face one thing: if one cannot develop or build machines that make tools for making machines, then this one will always depend on those who build machines to make tools for making machines.

Of course the world is not made by machines, but in many circumstances, machines allow the work to be finish in less time with more efficiency, thus saving time for the operator to perform other, personal tasks.

In Brazil almost all technologies are imported. We have (nowadays) no automobile brand (we have Italian FIAT, American GM and FORD, German VW, and no one Brazilian brand), no electronics brand (TI, HP, IBM, etc.), even medicine synthetic labs (Johnson & Johnson, etc.). There are many native brands, but almost none on high technology. As a consequence, high tech costs much in here. And it was not different in the 70's. I went to the university in 1979 and I could see many things. At that time, Spices were coming and, soon later, there was the HP41. When I finish my Engineering course I could see Voyagers ant the HP28C (I had to stop two times so I delayed my final conclusion). I could barely buy an HP41C with one memory module, an HP15C and after working for nine months as a student worker, my boss brought me an HP16C and an HP41CX with a card reader. Later I could buy a pack with used: HP41CV, another card reader, a Wand (82153) and an HP82143A printer. I have them all with me till today, all working fine.

I can tell you I got the 70's "tail", but for us in here, it was like the mid of it: technology used to come a bit slower than today.

Let me add something before my "compatriotas" (country mates) flame me: I am completely and proudly aware of the fact many Brazilian researches, scientists and developers work hard and efficiently around the world and have significantly contributed to many scientific advances. But just a few of them were in Brazil when they have their chance to do it.

I'm sorry to use the Forum's place for this subject, but adding this information may help others to understand what I mean.

Best regards.

Luiz C. Vieira - Brazil

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

RPN Yoda
*Message #1 Posted by **Gordon Dyer** on 22 Mar 2003, 6:27 p.m.*

For those of you who do not visit Joerg's site, here is a cheeky insult...
http://www.datamath.org/Related/HewlettPackard/JPEG_RPN.htm

Re: RPN Yoda
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 22 Mar 2003, 7:31 p.m.,*
in response to message #1 by Gordon Dyer

Hi, Gordon;

this is part (the first?) of a series with many jokes about the RPN system. Erwin is an entity.

I read a few of them and I did not feel them harmfull at all. I think I still have at least four others, if I am not wrong. I'll dig my HD's a bit and if I find them I'll let you know.

Best regards.

Luiz C. Vieira - Brazil

Re: RPN Yoda
*Message #3 Posted by **Gordon Dyer** on 23 Mar 2003, 8:20 p.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

Thanks Luiz, I would like to see the others they should be good entertainment!

Re: RPN Yoda

*Message #4 Posted by **J.Manrique Lopez de la Fuente** on 23 Mar 2003, 7:24 a.m.,*
in response to message #1 by Gordon Dyer

Hey!

Don't call it insult! This a new probe that the Force is unsually strong in RPN. Other systems could seems faster, stronger and easier.. as the Master said.

Just curiosity.. The hp49, was presented on 21st May 1999. Yoda, the great RPN Master, was shown for first time (officially) in Empire Strikes Back, on 21st May (1980?)... Wasn't supposed the hp49 the one to give balance to the Force? Kill the hp49 the RPN?...

Maybe it's time for A New Hope...

May the Force be with you,

J.Manrique

#1077 HPCC Member

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-85 software
*Message #1 Posted by **rhahm** on 22 Mar 2003, 5:42 p.m.*

Does anyone know of any sites that have archived software for the HP 85?

I just got the Lifutil program running on an older DOS machine and am now able to convert, store, and send lif programs in a DOS file.

My HP-85 is interfaced to a 9121D 3.5” disk drive and I also have a 82901M 5.25” drive.

Of the math, statistics, and standard pacs I own I was only able to salvage 4 programs from the standard pac and none from the other tapes because of eof and read problems.

Does anyone have copies of these or other HP 85 programs they could share? I would be glad to share what I have but for now I only have these programs: Timer, Ski, Amort, and one other.

Thanks

Bob

email: rhahm@nycap.rr.com

Re: HP-85 software
*Message #2 Posted by **Vassilis Prevelakis** on 23 Mar 2003, 2:11 p.m.,*
in response to message #1 by rhahm

A very limited collection of programs exists at http://www.series80.org/Programs.

I have the HP 85 Standard pac *manual*, and I have typed in 1-2 programs from that one (calendar functions and histogram generator). I am waiting for someone to send me the rest so that I can put up a disk image (like the one for the 87).

Its very depressing that the old tapes fall apart, a lot of information is lost despite the fact that the media are still around. Shame!

**vp

Re: HP-85 software
*Message #3 Posted by **Vassilis Prevelakis** on 24 Mar 2003, 12:58 a.m.,*
in response to message #2 by Vassilis Prevelakis

I forgot that I have the Math Pac as well (its not up on the Web site because I have to xfer the programs from 5.25 diskettes and the 87 with the 5.25 diskettes is currently in storage (http://www.series80.org/Pictures).

As soon as I have the programs, I'll scan the manual and put everything on-line.

**vp

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Shipping for HP15C on eBay
*Message #1 Posted by **Vlad H.** on 22 Mar 2003, 10:09 a.m.*

Now here is a different one:

We can't sometimes believe how high the prices go. Well, here is an ingenious idea how to make even more, how about to charge $45 for shipping within US and that doesn't include insurance. I even asked the question if it is a typo and got a blunt answer: "The auction says shipping & handling to any of the 48 U.S. states is $45.00" !!!! I bet someone will get cought into this trap. Here is the link: http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3014526732&category=11713

Re: Shipping for HP15C on eBay
*Message #2 Posted by **joe** on 22 Mar 2003, 6:14 p.m.,*
in response to message #1 by Vlad H.

This is the kind of moron that really makes me mad. I mean, $45 for shipping??? Give me a break..

joe

Re: Shipping for HP15C on eBay
*Message #3 Posted by **Mark** on 22 Mar 2003, 7:57 p.m.,*
in response to message #1 by Vlad H.

This is called "fee avoidance" on eBay and is against eBay's policies. I reported it and ebay indicates it's already been reported and they're looking into it. ebay no likey when you charge shipping fees that they don't make a percentage of... -mark.

That's a dirty trick. I would NEVER buy from him..
*Message #4 Posted by **Jeremy** on 22 Mar 2003, 10:09 p.m.,*
in response to message #1 by Vlad H.

even if the final auction price was $1 on a mint hp35.

-Jeremy

PS - Thanks for reporting that dirtbag, Mark! I figured he was more planning on someone overlooking that little part and getting blackmailed into paying it under penalty of negative feedback.

Re: Shipping for HP15C on eBay
*Message #5 Posted by **Rick** on 23 Mar 2003, 12:05 p.m.,*
in response to message #1 by Vlad H.

I asked him if I could issue a UPS call tag and he replies..

I will not accept a UPS call tag!!! Buckeye Country is the Ohio State Buckeyes Football Team NATOINAL CHAMPIONS !!!!!!

Seller's response on excessive s/h
*Message #6 Posted by **Dave Mabry** on 23 Mar 2003, 3:29 p.m.,*
in response to message #1 by Vlad H.

I sent the seller a quick question asking if the shipping charge of $45 was a typo. He replied that it was not a typo. Then I asked why so much. You can read the entire exchange below. Interesting.

BTW, I asked e-bay a couple of days ago if it was against their rules. Got the form response that they will look into it.

> dmabry@mich.com wrote:

> Just a quick question. Is the $45 shipping charge a typo? If not, > why so much?

justraspberry wrote:

> There is no misprint $45 is the shipping & handling !!

Dave Mabry <dmabry@mich.com> wrote:

Why so much? I'm just curious. I looked at your other auctions and you had much more reasonable shipping charges. Is there something about this calculator that makes it cost you more to ship?

justraspberry wrote:

Shipping & handling is just $45.00...That is all the information necessary.

Re: Seller's response on excessive s/h
*Message #7 Posted by **David Smith** on 23 Mar 2003, 4:40 p.m.,*
in response to message #6 by Dave Mabry

What is strange is that his/hers/its other auctions have a proper shipping charge.

Re: Seller's response on excessive s/h
*Message #8 Posted by **Patrick** on 23 Mar 2003, 7:09 p.m.,*
in response to message #7 by David Smith

Ultimately, to an intelligent buyer this should make no difference at all. When I bid, I take into account the full cost of the transaction, not just the bid amount. For example, I will bid higher on local items where I have agreed with the seller beforehand that I can pick the item up, rather than paying to have it shipped.

If others don't take total cost of ownership into account, then frankly that's their problem, IMO. Since the shipping amount is disclosed up front, I don't see it as putting anyone at a disadvantage, provided it applies to everyone equally.

Re: Seller's response on excessive s/h
*Message #9 Posted by **Rick** on 24 Mar 2003, 12:10 a.m.,*
in response to message #8 by Patrick

Someone should ask him if he would forgo the delivery charge if an arrangement is made to pick it up. I asked him if I could send ups to pick it up and he flat out said NO! He does not strike me as someone who believes in being nice to a prospective customer. Quite the contrary.

Re: Seller's response on excessive s/h
*Message #10 Posted by **Frédéric** on 24 Mar 2003, 4:46 a.m.,*
in response to message #9 by Rick

It's only a new way to make more and more money whithout suffering. It's like psychological prices in shops. We are all enough intelligent not to be disturbed by these prices like $99,99 but the question is "why do sellers continue to mark such prices ???"

Excuse my bad american langage practice .... my company decided to send me for a training

99 is much less than 100, even for large values of 99
*Message #11 Posted by **Frank Wales** on 24 Mar 2003, 9:03 a.m.,*
in response to message #10 by Frédéric

It's like psychological prices in shops. We are all enough intelligent not to be disturbed by these prices like $99,99 but the question is "why do sellers continue to mark such prices ???"

Because they work. People think 99 is noticeably cheaper than 100 because we are all endowed with a fuzzy sense of the relative sizes of numbers beyond about three, and so we give more weight to the most significant digits to help us get a sense of the quantities involved.

So, with 99 versus 100, '9' is clearly less than '10', and that kind of rough estimate is good enough for most things we have to do. The bigger the number gets, the harder we have to work to retain a sense of the true differences with any accuracy, and this makes it quite natural for us to think of 99 as significantly less than 100. It's not about intelligence, but about our apparent evolutionary heritage, since animals appear to have the same problems with precise counting beyond about three that we do.

(A good book on this topic is 'The Number Sense' by Stanislas Dehaene -- it's expensive, but worth the read.)

If you are **genuinely** unaffected by the difference between 99.99 and 100 in your buying behaviour, you are in a minority. Similarly, if your buying behaviour is unaffected by advertising, you are in a minority. Even though most people claim it doesn't affect them, it does anyway. (Try this thought experiment: you have to choose between two products, neither of which you've purchased before. Both appear to be of equal quality, and both are the same price. One is from a well-known company that advertises on TV; the other is from a company you've never heard of. Which one do you pick? Why?)

Re: 99 is much less than 100, even for large values of 99
*Message #12 Posted by **Layne Carruth** on 24 Mar 2003, 9:20 p.m.,*
in response to message #11 by Frank Wales

This is going to show my age, but there's actually another very important reason for having prices like $9.99 instead of $10. Back in the old days, when people had to actually make change rather than have a computer/ register calculate it for them, this was a way to make it harder for someone to siphon money out of the till. The theory was, that keeping track of all those .99's and .95's would make it much harder for someone to keep track of the running total in their head. I'm not sure it worked, but that was the theory.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Anyone looking for 85 HP-38G calculators?
*Message #1 Posted by **Gene** on 22 Mar 2003, 9:45 a.m.*

Wow.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3014297008&category=20335

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Wow. $275 and counting for a 15c
*Message #1 Posted by **Gene** on 22 Mar 2003, 9:28 a.m.*

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3013454777&category=3734

Re: Wow. $275 and counting for a 15c
*Message #2 Posted by **David Smith** on 22 Mar 2003, 5:39 p.m.,*
in response to message #1 by Gene

Well, it's actually not all that bad a price if the machine is in near mint condition. It has the Advanced Functions manual which has been known to sell for over $100 (and usually goes for over $50).

I think it IS a bad price...
*Message #3 Posted by **Jeremy** on 22 Mar 2003, 10:18 p.m.,*
in response to message #1 by Gene

... More importantly, I think it should show someone at hp that there IS a market for these.

Maybe that is why HP is working on a new RPN calc for this year? They saw the highway robbery prices people are getting for them on eBay and decided that there IS money to be made with them...

If only they would get more agressive with their marketing, as TI has done, they would make a killing. HP started out as the king of scientific calculators. When TI really got on the ball, hp dropped the ball. If TI ever had to directly compete with hp in terms of build quality, they would get decimated. However, the competition would be good for both companies.

Nowadays, and starting with my high school class in about 1990, TIs are the absolute ruler in high school and college level math classes. I don't even know if HP can get back into the running no matter what they do...

-Jeremy

TI FOR MATH CLASS; I was at the U. Bookstore; TI-86 .

*Message #4 Posted by **Norm** on 23 Mar 2003, 4:36 a.m.,*

in response to message #3 by Jeremy

Hi, Noted your comment that TI is the preferred calculator for math class.

Well, let me follow up with my own observations. I was at the University Bookstore that serves the U of Washington near Seattle. So they've got a case full of calculators.

Couldn't help but say to the clerk, "I'd like to buy an HP-32S ii" . She said "sorry, that was discontinued 7 months ago".

I asked "was it popular with the college math students and their teachers?" She said "no not really". I ask "what is popular for college math" she says "TI-86".

She said most all the students and the professors buy a TI-86, here in March 2003 for their math class.

I saw the HP-48G+, and I saw the HP-49G. I asked about them, I said 'do the students buy any of those'??

She knew her calculators, and she really implied that they are not popular.

SO, what's the point? Nothing too much, BUT, a person could take a look at the TI-86 just to see if there is anything particularly fine about it.

I surely would not think so in advance. The thing looks incomprehensible and difficult to learn to use.

I have something to say: These graphing calculators are dumb, dumb, dumb, and I'll tell you why. It's a tiny little box with a pixel field of about 60 x 100 pixels. That has less power than a Radio Shack TRS-80 with big 8" floppy disks and a 300 baud modem from about 1982.

A calculator is supposed to do portable computing of numbers. It is not a MATLAB program. If I want extraordinarily complex math processing to do matrices or post-process an ultrasound image, I wont be using their stupid graphing calculator, and I won't be using it for anything else (except landfill) because they've made the front panel incomprehensibly complicated and therefore useless.

NEVERTHELESS, look to TI-86 (maybe buy one and look it over) if you want to see where the focus point is. I have no doubt it is inferior to an OLDER HP CLASSIC. However, it may be superior to the current HP offerings. HP has totally lost their corporate marbles. They remind me of Ford/Firestone.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

The 'HolyGrail' of HP calculators...
*Message #1 Posted by **joe** on 21 Mar 2003, 10:59 a.m.*

Well, I have the 'bug' now! I have a 12C and would love to get my hands on a nice 16C. However, since I was in high school, I've wanted a HP67. I sat down and did a lot of reading here at this site (great info) and found out about the HP41.

Guys, if you were looking and wanted to have a nice machine in your arsenal, where would you invest in? Would you go for one of the HP41 variants or for a 67?

Just wanted to ask for some oppinions. I realize that there will be many different opinions, but what do you guys think?

Regards, joe

Re: The 'HolyGrail' of HP calculators...
*Message #2 Posted by **Grant Goodes** on 21 Mar 2003, 11:11 a.m.,*
in response to message #1 by joe

Depends on what you want to do. As an item to behold and covet, the HP-67 is right up there. For myself, I prefer the utility of the HP-41C and system. I have many HP-IL peripherals, HP-41 modules, and use my HP-41CX every day. I also use my HP-16C at work _a lot_.

Bottom line: Each person has their own "Holy Grail", and you'll have to decide for yourself. If you always wanted an HP-67, sounds like that's what you should look for. Me, I always wanted an HP-19C. No real justification, just lusted after it at the time, and still think it's cool.

grant..

Re: The 'HolyGrail' of HP calculators...
*Message #3 Posted by **Bob L** on 21 Mar 2003, 11:18 a.m.,*
in response to message #1 by joe

You're in trouble now.

I've got many of them, including some newer stuff. My choice for daily use is a 41C.

Re: The 'HolyGrail' of HP calculators...
*Message #4 Posted by **Bill Smith** on 21 Mar 2003, 11:44 a.m.,*
in response to message #1 by joe

most of my friends would warn you this is a very bad sign; seek treatment....

actually, from a collecting perspective i think you just have to go with your instincts. one mans obsolesence is anothers treasure. from a user standpoint, i don't think you can go wrong with interest in the 41. they are plentiful, with numerous options like modules, peripherals, and software. there remain a couple programs in my library unique to the 41, too infrequently used to port to another platform. my most used computational tool at work or home though is the 100lx and 200lx.

my 41 cents, bs

Re: The 'HolyGrail' of HP calculators...
*Message #5 Posted by **David** on 21 Mar 2003, 12:11 p.m.,*
in response to message #4 by Bill Smith

I have both the 41 and 67. I love the versitility of the 41, but I actually use the 67 at work based on the fact that a) it does everything I need a calc to do b) most importantly, the coolness factor. I love the way the 67 feels and operates, and it looks darned cool...

The HP55 is my Holy Grail.
*Message #6 Posted by **Jeremy** on 21 Mar 2003, 12:11 p.m.,*
in response to message #1 by joe

I love the LED display, and the features it has are very useful. Quartz timer, conversions, etc.

The 15C would be a close second.

-Jeremy

Holy Grail?
*Message #7 Posted by **Gene** on 21 Mar 2003, 12:18 p.m.,*
in response to message #6 by Jeremy

Toughest to get was the HP-70. If not for a friend who has found THREE in the past, I wouldn't have that one today.

The 16c shows up on ebay from time to time. I got one for $60 a few weeks ago...still not sure why it didn't get bid up higher.

I managed to get a 41c s/n 1932A... with all the bugs. That was a holy grail for a long time.

The 19C is a personal favorite and I'm pleased mine works still!

The 35 red dot has to be one of the toughest things to find, other than that mythical never released HP-95C, but I rule that is out-of-bounds because it was never really out there! :-)

Re: The 'HolyGrail' of HP calculators...
*Message #8 Posted by **Dave Shaffer** on 21 Mar 2003, 1:14 p.m.,*
in response to message #1 by joe

Joe,

If you want it for daily use - go for the 41 (or an 11/15). These are the ones I reach for first. In terms of what you can get on Ebay for functionality and price/availability, I think the 41 series wins hands-down.

re: "where would you invest in?" If you want to invest (i.e. hope for some return), the 67 (or others mentioned in some of the posts) might be better.

Re: The 'HolyGrail' of HP calculators...

*Message #9 Posted by **Vieira, Luiz C. (Brazil)** on 21 Mar 2003, 1:32 p.m.,*
in response to message #1 by joe

Hi;

I deal with HP calculators since 1982, but I got into contact with them in 1978, when I saw and played with an HP21. I had a few models in the beguining of this century (2000) but I could afford buyin used models and new ones in 2001; now I just dare dreamming of them.

I own many RPN models: 25, 31, 55, 41C/CV/CX, 42S, 11C, 12C, 15C, 16C, and the RPL ones: 28S, 48SX/G/G+, 49G. The financials 17BII and 19BII were bought for learning and teaching and, perhaps, writing a book. Too late: no more available as new ones, no one will print a book about an equipment that cannot be bought as new. Oh, yes, I also have some HP41 stuff and an HP82240B IR printer.

Hard to select a "Holy Grail" in this team. IF, and only IF I have to select a stand-alone for science in general, I'd go for the HP48G+ mostly because I can buy another if it's lost or stollen. Any other will be hard to replace. If the HP15C is a choice, I'd go for it instead the HP41. The HP41 needs enhancements, say, plug-in devices to be a powerfull piece. If you add an Advantage ROM to the HP41 then you'll have all Voyagers at once (does Advantage have financial functions too? I don't know). If you add an HPIL to the HP41 you'll allow it to talk to the world.

If my Holly Grail is based on the HP41, I'd add an Advantage ROM and that's all. But it will be far from one resource: LCD graphics.

And I am almost sure an HP41 with an Advantage ROM is a lot more expensive than a fresh new HP48G+. And let's face it, guys: I don't care walking with an HP48G+ in my pocket, but I'd be dam scared and cautious if I have an HP41CV/CX with an Advantage ROM im my pocket... Wouldn't you?

My US0.15 contribution.

Luiz C. Vieira - Brazil

Re: The 'HolyGrail' of HP calculators...
*Message #10 Posted by **R Lion** on 21 Mar 2003, 3:09 p.m.,*
in response to message #1 by joe

The 48GX (1,25Mb)well customized, is invincible,

The 42S is the non-graphics best. And easy to use.

BUT... the 15C is magic!

Just my opinion

Raul

Re: The 'HolyGrail' of HP calculators...
*Message #11 Posted by **Ron Ross** on 21 Mar 2003, 3:33 p.m.,*
in response to message #10 by R Lion

The 42s is crap and the 15c is even worse!!! If you have one and haven't used it, dump it or better yet, just contact me!!!

These are two of Hp's worst. I would take either off anyones hands so as to releive them of the burdon of owning such Hp CRAP!!

Regards, and such a nice GUY Ron Ross

Re: The 'HolyGrail' of HP calculators...
*Message #12 Posted by **R Lion** on 21 Mar 2003, 4:51 p.m.,*
in response to message #11 by Ron Ross

Yes, I own these two craps... a pity.

And one of them is very impatient waiting for its new case ;-)

Raul (thanks!)

It seems...
*Message #13 Posted by **Vieira, Luiz C. (Brazil)** on 21 Mar 2003, 8:00 p.m.,*
in response to message #11 by Ron Ross

... someone is begging for a new toy.... ;-)

Re: It seems...
*Message #14 Posted by **R Lion** on 22 Mar 2003, 2:02 a.m.,*
in response to message #13 by Vieira, Luiz C. (Brazil)

Not exactly a toy but a synthetic leather case for one of my toys...(Thanks again to Ron)

Raul

Re: The 'HolyGrail' of HP calculators...
*Message #15 Posted by **Mike Rivera** on 21 Mar 2003, 3:47 p.m.,*
in response to message #1 by joe

Hi Joe:

You said, "Well, I have the 'bug' now!".

If this is true (sorry if it is - I know how you feel), then your only viable answer is BOTH OF THEM.

If you think this won't happen - just wait!

- Mike

Re: The 'HolyGrail' of HP calculators...
*Message #16 Posted by **joe** on 21 Mar 2003, 5:14 p.m.,*
in response to message #15 by Mike Rivera

Mike,

Tell me about it!! I want, I want, I want...

Oh hell, its only money right? :)

Thanks to all...

joe

This should be...
*Message #17 Posted by **Vieira, Luiz C. (Brazil)** on 21 Mar 2003, 8:10 p.m.,*
in response to message #16 by joe

... an intensive-care place for addicted people. In fact, this site encourages us to believe we're the cure.

Anyway, you're in the right place to tell your tales about HP calculators, and in the worst place to ask for help getting rid of them.

Welcome... take a seat. There are many around here.

Luiz C. Vieira - Brazil

...not quite
*Message #18 Posted by **Michael F. Coyle** on 21 Mar 2003, 10:38 p.m.,*
in response to message #17 by Vieira, Luiz C. (Brazil)

You almost have it right. This site is a sort of Alcoholics Anomymous for calculator addicts.

<my_interpretation>
AA members believe that alcoholism is a chronic disease, thus no one is ever "cured", no matter how long it has been since their last drink. Therefore AA concentrates on coping techniques and mutual help by others in the same situation.
</my_interpretation>

Does the above paragraph resemble this site and its inhabitants?

Repeat after me: "My name is Michael, and I'm a calcoholic."

- Michael

Calcoholics but anonymous...
*Message #19 Posted by **Vieira, Luiz C. (Brazil)** on 21 Mar 2003, 11:48 p.m.,*
in response to message #18 by Michael F. Coyle

... at least most of them... , say, most of us!

<<8^D

Re: Calcoholics but anonymous...
*Message #20 Posted by **Patrick** on 22 Mar 2003, 2:18 a.m.,*
in response to message #19 by Vieira, Luiz C. (Brazil)

No cure for this disease.

The problem is, nobody here would buy into a program with only 12 steps!

12-Step Programs
*Message #21 Posted by **Michael F. Coyle** on 22 Mar 2003, 7:15 p.m.,*
in response to message #20 by Patrick

Patrick writes:

The problem is, nobody here would buy into a program with only 12 steps!

The program is only 12 steps, but the execution time can be very long!

- Michael

Re: The 'HolyGrail' of HP calculators...
*Message #22 Posted by **David Smith** on 21 Mar 2003, 5:52 p.m.,*
in response to message #1 by joe

Yes, you DO NEED BOTH of them. You cannot live without them. Your life is meaningless without them. Look deep into my eyes. Buy, buy, buy. Also you REALLY should have an HP97 or three...

I have six HP41 machines that I use regularly (one upstairs, one downstairs, one in the workshop, one in the office, and one in each car. They are all cosmetically challenged with rebuilt battery contacts, case engravings, chipped battery holders, etc. They just keep on ticking.

Re: The 'HolyGrail' of HP calculators...
*Message #23 Posted by **Paul Brogger** on 21 Mar 2003, 8:04 p.m.,*
in response to message #1 by joe

. . . just make *sure* to watch out for the bunny rabbit!

;^)

More ideas and ways to rationalize...
*Message #24 Posted by **Jeremy** on 21 Mar 2003, 10:17 p.m.,*
in response to message #1 by joe

First things first. What's your budget? My calculator budget is pretty tight, so here's the route I took:

Bought a well-used HP45 (I love the LEDs) on eBay for $45. Worked on it a bit and now it's very nice.

I studied like hell on this site until I decided I wanted a 32S or a 32SII. Saw the prices on eBay and thought to myself: "Not gonna happen, Cap'n!" They were like $250 for a $71 calculator! Blimey. So I started to think along different lines... People on MoHPC tend not to like the HP48s as much. They're bigger and slower, but they have a ton of capability. So I looked up HP48s on eBay and the 48Gs are selling for around $40. Nice. Even if you only use 1/4 of the features and the rest sit there and rot, it is not such a shame, right?

Take advantage of the fact that they're not collectible and use the hell out of it. They still have that great HP construction, keyboard, etc. Also, it is very nice to see the stack as you work with it.

As I said below, I'd like to have an hp 55 some day. I would also like a 10C, 11C, or 15C. Until I stumble across one in a pawn shop, thrift store, or garage sale, I will be happy with the two I have. My 48G will run circles around the 15C in performance, and the 45 will run circles around the 15C in the 'character' department. The beauty is that I got them BOTH for half the price of a 15C or 32SII on eBay.

-Jeremy

Re: More ideas and ways to rationalize...
*Message #25 Posted by **Chan Tran** on 21 Mar 2003, 11:27 p.m.,*
in response to message #24 by Jeremy

Jeremy, I think you get the right idea. I am thinking of buying a few 48's as they are cheap right now. I have an SX and a GX already but more doesn't hurt. I never did like the 15C or 42S nor that I like the 32 or 32SII much. I have a 32SII bought brand new about 7 years ago for $58. I rarely used it may be I should sell it to buy a replacement card reader for my 41CV and a couple of 41CX Opt. 001. I had the 28C just for curiousity. Didn't like it and gave it to my sister. I bought the 34C in 79. Took it home learned all the functions on it in a week and returned it to buy a better one. I went for the 41C (which later got stolen) but missed the 97 very much. I recently got the a 97 as a gift. My first calculator was the 25 I bought late 75. Used it for a couple of years then the battery went dead. I tried to run the thing with the charger only and the display went flickering. I figured well if I put a capacitor where the battery is I could get the thing to work. I blew the machine that way as I now know the capacitor helped raised the voltage up to around 10VDC... I threw the thing away... Now I wish I have an HP-25....

Re: More ideas and ways to rationalize...
*Message #26 Posted by **Larry Corrado, USA (WI)** on 23 Mar 2003, 1:01 p.m.,*
in response to message #25 by Chan Tran

A capacitor in place of the battery! OUCH!

LC

Re: The 'HolyGrail' of HP calculators...
*Message #27 Posted by **Andy** on 24 Mar 2003, 10:21 a.m.,*
in response to message #1 by joe

The 9100a.

Re: The 'HolyGrail' of HP calculators...

*Message #28 Posted by **Rick Bensene** on 25 Mar 2003, 12:01 a.m.,*

in response to message #1 by joe

I can't believe that y'all have forgotten about the REAL Holy Grail of HP calculators.

The obvious Holy Grail of HP Calculators is the HP 9100A, followed closely by the 9100B.

These machines are the 'big brothers' of all the handheld machines y'all are so excited about. These machines were miracles of their day, using all-transistor construction, magnetic core memory, a totally unique ROM based on bleeding-edge circuit board technology, a CRT-display, and a very unique wire-rope ferrite microcode sequence store. And...even with all of this, these machines are still very capable, and are faster in many cases than the fancy-schmantzy handheld calculators of the '70's and '80's.

'60's technology rules :-)

Rick Bensene The Old Calculator Web Museum http://oldcalculatormuseum.com

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[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP67 Card Reader not writing
*Message #1 Posted by **Gene R. DiResta** on 21 Mar 2003, 9:14 a.m.*

My card reader reads OK but generates an error on writing. Earlier this month, I received input from D. Smith and T. Duel. Thank you all for your suggestions. I finally got around to trying their suggestions, i.e. cleaning contacts and tightening screws - no change. I read recent message from owner with card reader problem; capacitor change was suggested. My reader has the three tubular capacitors on its card. Would replacing them work for me ? If so, what type and values are these caps ?

Re: HP67 Card Reader not writing
*Message #2 Posted by **David Smith** on 21 Mar 2003, 5:20 p.m.,*
in response to message #1 by Gene R. DiResta

I don't think that the caps are your problem. The one that goes bad only affects reading.

My guess is still one of the reader leaf switch contacts. Trace the pads on the back of the keyboard where the gold leaf switches touch to the pins on the end of the keyboard. Use an ohm meter or beeper to measure continuity to ground. As you manually insert and remove a card, the three swicthes should close and open in sequence. My bet is that the write protect switch is not adjusted properly.

Re: HP67 Card Reader not writing
*Message #3 Posted by **Gene R. DiResta** on 27 Mar 2003, 2:03 p.m.,*
in response to message #2 by David Smith

I opened the calculator and identified the leaf switch contact pads you describe. Two of the pads go to pins at the end of the keyboard; one does not. It doesn't seem to connect to any trace. How is this tested?

Re: HP67 Card Reader not writing
*Message #4 Posted by **David Smith** on 27 Mar 2003, 6:18 p.m.,*
in response to message #3 by Gene R. DiResta

I think there are actually four pads, one is not used (or is ground). Three of them definitely go the the pins to the CPU card.

Re: HP67 Card Reader not writing
*Message #5 Posted by **Gene R. DiResta** on 31 Mar 2003, 5:08 p.m.,*
in response to message #4 by David Smith

I repaired the problem by putting a slight upward bend on the leaf switch closest to the display LEDs. While your diagnosis was correct, cleaning and tightening the retaining screws didn't work. Contact was never made when the card was inserted. Imposing a slight upward bend on the contact ensured a solid contact between pad and switch resolving the write problem. Thank you all for your very valuable help.

Re: HP67 Card Reader not writing
*Message #6 Posted by **David Smith** on 31 Mar 2003, 6:10 p.m.,*
in response to message #5 by Gene R. DiResta

The "retaining" screws are actually the switch adjustment screws. They raise and lower those nasty little gold leaf switch. Sometimes the switches cannot be adjusted all the way with the screws and you have to resort to bending the gold fingers (and usually much cursing ensues). The other problem you run into is the adjustments to one switch can affect the others. That is why HP changed the design in the HP41 reader.

Re: HP67 Card Reader not writing
*Message #7 Posted by **Jack** on 6 Apr 2003, 1:04 a.m.,*
in response to message #6 by David Smith

Where can I get the card reader fixed on HP65 and HP67?

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

ebay.de price history updated and at new adress
*Message #1 Posted by **Holger Weihe** on 21 Mar 2003, 6:02 a.m.*

Hello,

It took some time, but now I have updated the list of average prices of HP-calcs at ebay.de. The URL has changed. You can now find the list at http://www.hp-calculators.de. The old URL won't work anymore.

Shall I continue posting update notes in this forum?

Holger

Re: ebay.de price history updated and at new adress
*Message #2 Posted by **Dave Mabry** on 21 Mar 2003, 6:34 a.m.,*
in response to message #1 by Holger Weihe

Hi Holger,

I, for one, enjoy your price page and hope you continue to update it and let us know here.

Thank you for your work.

Re: ebay.de price history updated and at new adress
*Message #3 Posted by **hugh** on 21 Mar 2003, 6:57 a.m.,*
in response to message #1 by Holger Weihe

i like your photos. how do you get them so clear?

Re: ebay.de price history updated and at new adress
*Message #4 Posted by **Holger Weihe** on 21 Mar 2003, 7:22 a.m.,*
in response to message #3 by hugh

Hello hugh,

I shot the photos with a 3 megapixel digital camera on a tripod. The calculator is lying on a table with a sheet of white paper under it. Most of the photos are made with a 500W spotlight, but I now prefer daylight (used on the 20S, the second 28S and the printer). Later I fill the white outside of the foto with pure white and correct the colors if necessary.

Holger

Re: ebay.de price history updated and at new adress
*Message #5 Posted by **David Smith** on 21 Mar 2003, 5:41 p.m.,*
in response to message #4 by Holger Weihe

I know a couple of professional photographers who shoot very high quality photos close up for high-dollar auction catalogs (Sotheby's Christies, etc). They all recommend shooting outside on an overcast day.

Re: ebay.de price history updated and at new adress
*Message #6 Posted by **Andreas Stockburger** on 21 Mar 2003, 7:12 a.m.,*
in response to message #1 by Holger Weihe

Hi,

your page is great! Please continue to inform about updates!

Question: Whats this "HP-48GX Limited Edition" in your collection ? I have never heard about this?

Can you expain/tell me something ?

Best regards

Andreas

Re: ebay.de price history updated and at new adress
*Message #7 Posted by **Holger Weihe** on 21 Mar 2003, 7:28 a.m.,*
in response to message #6 by Andreas Stockburger

Hello Andreas,

The HP-48 with metal casing is cool, isnt't it? I must admit that I made it with 3d-Studio - just for fun and to provoke some curiosity... :-)

Holger

Re: ebay.de price history updated and at new adress
*Message #8 Posted by **Raymond Del Tondo** on 21 Mar 2003, 8:29 a.m.,*
in response to message #7 by Holger Weihe

Hi Holger,

very cool!

Now that you say it I looked at the serial number more closely.

It seems to be a number from Singapore, whereas you stated it'd be an Indonesian unit;-)

Regards,

Raymond

Re: ebay.de price history updated and at new adress
*Message #9 Posted by **Holger Weihe** on 21 Mar 2003, 6:33 p.m.,*
in response to message #8 by Raymond Del Tondo

Hello Raymond,

the number is ID98008902 which is similiar to the number of one of my real 48GX'es. Doesn't "ID..." stand for Indonesia? Otherwise it would be SG...

But another important question: Did HP really produce more than one million HP-48? First I wanted to make a serial number with very many zeros at the end, but I thought that this would be too obvious...

Holger

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Repairing HP41C
*Message #1 Posted by **Luis** on 21 Mar 2003, 3:57 a.m.*

Does somebody tried to replace zebra connector by a plane cable soldered to contacts?

Do you know how can i do more presure in lower posts? I think the problem is in contact between keyboard and main board.

Re: Repairing HP41C
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 21 Mar 2003, 8:56 a.m.,*
in response to message #1 by Luis

Hi;

there is a way to completely replace broken posts, and I used the tecnique in at least three HP41 fullnut, but recovering existing, loose ones is a lo better and safe. Some guys use thin plastic slices and glue to dissolve the slices inside the posts holes. Then they drill it thin enough to allow a new thread to be "made" with the screw itself.

You can also try to solder the mainboard to the keyboard. It has also been done, look here. I just warn you that this is a one-ticket trip. Once done there is no way to get back. Both mainboard and keyboard golden plated contacts will never be able to hold zebra connectors again. I'd use this technique as the last shot ever.

Many guys in here mentioned that one can buy standard, comercialy available flexible zebra connectors and cut them to fit anywhere. I would like having the chance to find and buy these connectors for testing, because they seem to be the only way out in these cases, I think.

If you go for soldering, think you will not be able to use the mainboard in another calculator OR use another mainboard in your unless you solder them again.

Success.

Luiz C. Vieira - Brazil

Fantastic
*Message #3 Posted by **Luis Gomez** on 21 Mar 2003, 11:20 a.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

The calculator is now operational. I don't know how i solved the problem.

I've removed again the display and i've remove the display clips from the edges. After this i mount everithing and now is operational.

There is only a little problem: if i press on the calculator near the display, the character contrast is very low. Occurs the same when i press the keys ON, USER, PRGM and ALPHA. Do you know how can i solve it?

Regards from Spain

Mine is like this...
*Message #4 Posted by **Vieira, Luiz C. (Brazil)** on 21 Mar 2003, 1:07 p.m.,*
in response to message #3 by Luis Gomez

... since the day I bought it. The bottom edges fade a bit when pressing any of the four "toggle" keys, meaning ON, USER, PRGM and ALPHA. I would not care that much: mine is about 20 Y.O. and works pretty fine after being rebuilt about four months ago. It laid down with internals spread inside a shoes box for more than eight years before being rebuilt.

I'm glad you made it, i.e., "it" made it.

Happy calculations.

Luiz C. Vieira - Brazil

(in time: have you disassembled the LCD assy when you first opened the calculator? I remember I mentioned that in a previous post of yours and I don't remember if you answered. I also remember I mentioned this is somewhat risky. Would you describe your experience, please?)

Re: Mine is like this...

*Message #5 Posted by **Luis** on 23 Mar 2003, 6:26 p.m.,*

in response to message #4 by Vieira, Luiz C. (Brazil)

The first time i opened the calculator i didn't disassemble the lcd. Later, because the calculator did not work, i disassemble the lcd and now everithing is ok.

Regards

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-25 program line

*Message #1 Posted by **Michel Beaulieu** on 20 Mar 2003, 10:14 p.m.*

Hi, i'm trying some programs on my newly ressucitate HP-25 and need some help : how can i add some lines to an existing program. I found how to replace a line but not how to insert a new one.

What is the purpose of "suffix" key?

The case and the keys of my calculator is beige-yellow color : on the museum photo, keys are white keys : Is is a variation scheme or due to discoloration :-(

I also read about possible power dammage to this unit and Zener diode but i can't find a post that "resumue" the issue : What diode to use and where to connect it in order to protect the electronic?

Thanks Michel

Re: HP-25 program line

*Message #2 Posted by **Ernie Malaga (Miami)** on 20 Mar 2003, 10:26 p.m.,*
in response to message #1 by Michel Beaulieu

Michel:

>I found how to replace a line but not how to insert a new one.

Unfortunately, the HP-25 has no insert/delete capabilities. The only way to do what you want would be to GTO nn (an unused program lline), then after the lines you want to insert, do GTO nn to go back to the line immediately after the first GTO. It's not efficient, but it does the job.

To "delete" a line, you can replace it to a NOP.

>What is the purpose of "suffix" key?

I think you meant PREFIX. If you mistakenly press any of the prefix keys (f, g, STO, RCL,

GTO, whatever), you can press [f] [PREFIX} to cancel it.

>The case and the keys of my calculator is beige-yellow color : on the museum photo, keys are white keys : Is is a variation scheme or due to discoloration

Most likely the latter.

-Ernie

Re: HP-25 faceplate...
*Message #3 Posted by **Michel Beaulieu** on 21 Mar 2003, 4:32 p.m.,*
in response to message #2 by Ernie Malaga (Miami)

You are probably right : it's prefix... I have no writing at all on my claculator, all is erase except the keys themselves. It's not even written anywhere the model number : The front letters are erase too. It is possible that it'S not a HP-25 - It looks like the photo on the museum but is there other similar model than the HP-25?

How can it be possible that the calculator have not writing AT ALL, not even some small paint is still observable on the faceplate but all the writing on the keys ar like new...

I don't think this calculator is a collectable one but it's very fun to use, i like the size of it : I there some program available for it somewhere?

Thanks again

Re: HP-25 faceplate...
*Message #4 Posted by **David Smith** on 21 Mar 2003, 5:28 p.m.,*
in response to message #3 by Michel Beaulieu

It may be an HP21. See if it matches the HPMUSEUM photos. Some of the HP25 (especially the 25C) have problems with the silkscreened legends on the keyboard washing off. Seems to be related to certain production runs. Mostly affects the top row or right column of keys.

Re: HP-25 faceplate...
*Message #5 Posted by **Vieira, Luiz C. (Brazil)** on 21 Mar 2003, 9:37 p.m.,*
in response to message #3 by Michel Beaulieu

Hello, Michel;

nice reading your posts here.

I have an HP25 and I am a lot curious about yours. Did you get success entering in Program mode?

There are two switches above the display: on is to switch it to ON and OFF and the other should work ans PRGM/RUN switch. In the HP21, the second switch selects RAD and DEG angular modes.

If you entered in Program mode, yours is an HP25 or HP25C: they are exactly the same except for the *Continuous Memory* inscription in the keyboard's faceplate (bottom) and the "C" letter in the calculator's ID.

If it is a collectible? All woodstocks are collectible items, any of them. Some are rarest them others, but all of them are rare as for being Woodstocks.

Good luck! And best regards.

Luiz C. Vieira - Brazil

(I did not forget your request about HPIL)

Re: HP-25 program mode
*Message #6 Posted by **Michel Beaulieu** on 21 Mar 2003, 10:04 p.m.,*
in response to message #5 by Vieira, Luiz C. (Brazil)

I again lost your email due to computer failure... i have more good calculators than good computers - strange choice...

Yes i can enter the program mode but i have a problem : all the last 2 rows of keys don't enter code in my program they just shows me the x display while push in. these keys are working well in RUN mode but strangely in PRGM mode.

So it's not a 21 but perhaps a 25C, i don't know yet...

I really like the "baby" size of the calculator! And with fres batteries i can run for 4 to 5 hours : compare with my TI-58 less than 1 hours it's great. I always love LED calculator but DISLIKE the battery lifetime. With the 25 i think i reconciliate with LED calculators, i'll use it at school insted of my 41.... just for a while... :-)

A dreamy calculator should be a LED one with great conservative powers needs, continuous memory and some of my 41 feature i like most... Does it exist in TI of HP? The 58C is good but battery life is very bad...

Just write me a message so i can restore your email!

Thanks Michel

Right here!
*Message #7 Posted by **Vieira, Luiz C. (Brazil)** on 21 Mar 2003, 10:21 p.m.,*
in response to message #6 by Michel Beaulieu

Be my guest, my friend! ;-)

Re: HP-25 program line
*Message #8 Posted by **David Smith** on 21 Mar 2003, 5:26 p.m.,*
in response to message #2 by Ernie Malaga (Miami)

The case is supposed to be yellowish beige... the woodstock series was named after the small yellow bird in the Peanuts comic strip. The keys are a sort of off white/yellowish-grey. Over time (and often with the help of cancer stick smoke) the cases and keys do darken. I have lightened up some cases and evened out some color changes where the case was protected by a label by putting the case out in a nice Texas sun. I would not recommend this for the darker keyboard.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Poll - How long did it take you to gel with RPN/RPL?
*Message #1 Posted by **Jeremy** on 20 Mar 2003, 6:26 p.m.*

Me? about a week of constant daily use.

When I first came here, I saw all the posts cracking on algebraic and thought: "Wow, these guys are kind of racist." Now that I have been using RPN/RPL for a while, algebraic seems awkward. Now I have to actually THINK for a second to remember how to do algebraic calculations.

Let's hear your 'transfer to the dark side' stories. ;)

-Jeremy

Re: Poll - How long did it take you to gel with RPN/RPL?
*Message #2 Posted by **Chan Tran** on 20 Mar 2003, 7:22 p.m.,*
in response to message #1 by Jeremy

The HP25 was the first calculator I had so that doesn't apply.

Re: Poll - How long did it take you to gel with RPN/RPL?
*Message #3 Posted by **Bill Platt** on 20 Mar 2003, 8:28 p.m.,*
in response to message #1 by Jeremy

Got my 11-C in 10th grade, and was very excited about it---Read the manual (what a cool manual that was!) with my 8th grade brother looking over my shoulder. My first calculator, but had used my fathers TI SR-71? much previously.

The concept of the stack was such an natural and obvious advantage that I remember it being an epiphany of sorts.

Perhaps more telling was that my brother played with the calculator that one day, and then, having never used it again, borrowed it from me one day many months later, and he had no problem. RPN had "stuck" to him like glue.

He bought a 12-C when he got to college and has used it ever since.

(Normally, my calculator had very little "borrowing" demand since classmates would always be saying "where's the *^&$ sign!)

Re: Poll - How long did it take you to gel with RPN/RPL?
*Message #4 Posted by **Karl Schneider** on 20 Mar 2003, 11:18 p.m.,*
in response to message #3 by Bill Platt

"My first calculator, but had used my fathers TI SR-71? much previously."

I remember being enthralled by a TI SR-51-II in the late '70s (similar to TI-59?). Being formerly in the USAF, I can assert with confidence that the SR-71 is a high-performance reconnaissance/spy aircraft that set speed and altitude records which still might stand today.

I don't find it difficult to go back and forth between AOS and RPN, having used AOS calc's from 1978 until getting a HP-15C in late 1983 after experimenting with the HP-41C in 1981.

I've bought the 28C, 48G, and 49G in the past year, and am still only semi-competent with RPL.

Re: Poll - How long did it take you to gel with RPN/RPL?
*Message #5 Posted by **Larry Corrado, USA (WI)** on 20 Mar 2003, 8:34 p.m.,*
in response to message #1 by Jeremy

It was easy for me. In 1966, I went right from a slide rule to a Friden EC-132, a gigantic desktop which used RPN, and in fact had the whole stack visible right on the oscilloscope-sized CRT screen. It was nice: you could see exactly what was going on when you performed an operation.

When I got my HP-21 at work in '76, it was no problem.

Re: Poll - How long did it take you to gel with RPN/RPL?
*Message #6 Posted by **GS Leong** on 20 Mar 2003, 9:03 p.m.,*
in response to message #1 by Jeremy

I was 15 when I got my hp21, it took me about a week I used the excellent examples in the users manual.

Re: Poll - How long did it take you to gel with RPN/RPL?
*Message #7 Posted by **Richard Garner** on 20 Mar 2003, 10:57 p.m.,*
in response to message #1 by Jeremy

My first HP was the 41CX in college 1982, late in the semester close to finals. It took me about a week to get the basics down and during finals I was bouncing between it and a TI-59 that I had picked up on clearance from an Ardans department store that was going out of business. From that point on I very rearly use that other type, and when I do, I have to really think about how to use them. I love RPN and will never give it up.

Re: Poll - How long did it take you to gel with RPN/RPL?
*Message #8 Posted by **Vieira, Luiz C. (Brazil)** on 21 Mar 2003, 12:06 a.m.,*
in response to message #1 by Jeremy

Hi;

I had a TI57 in 1978 as my first calculator and it took me a couple of days to "master" the basics of AOS. I remember I tried an HP21 at that time and I found it awkward to use.

Later I bought an HP41C with a memory module. I had seen many TI machines at that time - TI58, TI59 - but I also saw an LCD-type calculator and felt amazed with that. So HP offers the HP41: alphanumeric and LCD display type.

It took me less than a week to undertand and use RPN efficiently, but it took me longer to program it with the same efficiency. I could repeat and enhance the examples, but I wasn't able to write a program from scratch. I remember that ISG and DSE were the "last barrier", together with the flags' concept. I cannot remember my first efficient program, but I remember it took me so much to "master" RPN programming that I was too tired to celebrate.

I wrote a lot of user-requested programs for the HP's, but I felt myself comfortable with direct access resources. I wrote a few programs for my own, and they remind internal functions: no interactive input, no labeled output. Like when you compute SIN, or LN, or y^x...

Wow! It's been a long time ago... Cheers.

Luiz C. Vieira - Brazil

Re: Poll - How long did it take you to gel with RPN/RPL?
*Message #9 Posted by **James M. Prange** on 21 Mar 2003, 5:42 a.m.,*
in response to message #1 by Jeremy

With RPL, maybe a minute? Although of course I wasn't competent to write a program in that time. But I knew, deep down, as soon I realized how the display model worked, that a 28C was a "must have" calculator. By the time that I had nearly convinced myself that I really "needed" it and might be able to afford it, even though it didn't have nearly as much memory as my Sharp EL-5520 or it's I/O (well the 28C does have output, but no input) and it was pretty expensive for a calculator, and went back to the store for another look, it had been replaced by the 28S. I was writing simple programs (well, at least copying them from the Owner's Manual, understanding how and why they worked, and writing my own slight variations) the first evening that I owned a 28S. So much more straightforward than writing a BASIC program for the Sharp or recording an algebraic entry keystroke program for my little Radio Shack calculator. How could anyone ever go back to those?

After experiencing RPL, I could never go back to algebraic entry (or writing a BASIC program) for anything that I could justify writing a program for, although I do keep batteries in the Sharp and various cheap calculators that I have. The Sharp mostly for old time's sake (and it's easy on batteries when not being used), and the cheap ones because they fit in a shirt pocket, although I have to think about how they work when I use them. Actually, my old Lloyd's from around 1980 and my Radio Shack from the late '80s still work on the original batteries; amazing, even though they're rarely used.

I'd have to say that it was more the case that algebraic entry never really "gelled" with me. It never did seem "natural" to press an operation key like + before entering the next argument; how can you add two numbers when you've only keyed one of them in? I kept pressing the = key after keying in the first number and then keying in the next number which replaced the first number and left me very frustrated, so I considered calculators to be a pain in the neck to use, although they were useful enough to be worth a little pain. RPN (or RPL) entry seems natural for me. I did buy a TI SR-51A when they came out with that (about 1975) with it's heavily advertised algebraic entry, but I found it to be rather a disappointment (although quite useful), and stopped rebuilding the battery pack when I got a cheaper scientific calculator. With RPL, calculators are easy to use and program (and fun to play with).

But of course, I had started out with pencil and paper and slide rule, which pretty much force one to do numerical calculations in an RPN manner.

And at various times I'd used adding machines. One of them in the front office at work even did

multiplication, but I don't remember whether it did division as well. It didn't even need batteries or have to be plugged in, you just cranked the handle to get the answer. I wish I could've seen it with the covers removed. I hope that it didn't get trashed and that someone treasures it; it was a very impressive machine and I'd love to have it for my own.

The first electronic digital calculator that I ever got my fingers on was a Canon which needed to be plugged in and used Nixie tubes for display. Not programmable of course. It just did the basic arithmetic +, -, X, and /; nothing so sophisticated as square root. That was around 1971, and it was certainly a wondrous device. I pretty quickly developed a routine for finding square roots far more accurately than a slide rule could, but as a practical matter, for "real world" problems our input data was approximate (I doubt that it was accurate to three significant digits) and slide rules were much faster and more convenient. But the calculator was fun to play with. I found that it had a problem with dividing by zero. When it did a calculation, the various cathodes in the Nixie tubes flashed on and off while it was working on it. When I tried dividing by zero just to see what it would "think" about that, the cathodes in the tubes near the the right side began flashing, and the flashing moved leftward until all of the cathodes in all of the tubes were rapidly flashing. The only way that I found to get it to quit was to turn it off. I left it going bonkers once for the owner (one of my shipmates, who I guess had spent about a month's pay on it) to see when he wandered into the shop. He looked as if he were about to have a heart attack, but he more or less calmed down after I turned it off and back on, tried it out, and found that it seemed to work perfectly. I never did tell him that I had any idea of what had caused the problem; I wonder whether he ever discovered how to make it do that. He's certainly smart enough to know that it doesn't make any sense to divide by zero, but I'm not so sure that he'd be curious enough to try it on a calculator just to see what would happen or careless enough to do it by accident.

Sure brings back a lot of memories.

Regards,
James

Re: Poll - How long did it take you to gel with RPN/RPL?
*Message #10 Posted by **Johnny Billquist** on 21 Mar 2003, 7:44 a.m.,*
in response to message #1 by Jeremy

Got my first HP-41 in 1983 or so, and it took me a day or two to "get it", but then I was totally hooked, and have been confused by algebraic calculators ever since. I sold that first 41, and got myself another. I finally "upgraded" to a 48 in 1991, but I've started to drift back to my 41 recently. I also have one or two 41 emulators for my Palm, to help me survive.

Re: Poll - How long did it take you to gel with RPN/RPL?
*Message #11 Posted by **Dave Shaffer** on 21 Mar 2003, 1:06 p.m.,*
in response to message #1 by Jeremy

My first intro to RPN was the 9100 series somewhere around 1970. They had one at the radio observatory when I was a grad student. I was doing simple programs in minutes on that. (Of course, I hadn't been polluted yet by any "conventional" calculators.) RPN seemed a perfectly natural way to do things, and I don't remember ever having to stop and think about it. You could pretty much look just at a formula and evaluate it.

I analyzed my thesis data on my mechanical engineer Dad's HP35 one weekend when I was at home. (this might have been Christmas 1972.) With no previous experience, I developed a 10-step or so "program" (i.e. the order in which I had to hit the keys to enter and process several numbers per line of data) in a few minutes. Then I spent two days number crunching. The alternative would have been to punch all the numbers onto IBM cards and write a little fortran program.

Re: Poll - How long did it take you to gel with RPN/RPL?
*Message #12 Posted by **Michael F. Coyle** on 22 Mar 2003, 12:40 a.m.,*
in response to message #1 by Jeremy

My first experience with RPN was in 1974 playing with the HP-35 and HP-45 sold in Macy's. I was already a calculator fan and had read everything published on the subject I could get my hands on (two articles in Popular Science). I had a couple of HP brochures that explained RPN -- one was "ENTER vs =". (If anyone has this one, PLEASE POST!!!)

With brochures in hand, I practiced on the display models. (Macy's had a display with the -35 and -45 locked into security cradles, so I could play to my heart's content without bothering the salesman. Although I did get the manuals from him once.)

I don't ever remember having trouble understanding RPN. It all seemed perfectly natural at the time. So I guess the answer to the question is Gel Time = 0.

Unfortunately I had nowhere near the money to buy either of these gorgeous beasts and used other machines for the rest of the 70's. I returned to the RPN fold in 1979 and never looked back.

(But for three months in 1976, I actually had a Paying Job programming TI calculators. I had a fun time. Maybe I should write this stuff up for the Memories Forum.)

- Michael

Re: Poll - How long did it take you to gel with RPN/RPL?
*Message #13 Posted by **Robert Burnham** on 23 Mar 2003, 10:26 p.m.,*
in response to message #1 by Jeremy

Learning RPN (in the HP-35 "flavor") came easy because I'd worked somewhat with a Series 300 calculator from Wang Laboratories. This was ca. 1969, and the Wang used RPN.

(Great old nixie tube machine -- take a look at the Old Calculator web museum:

http://www.oldcalculatormuseum.com/calcman.html

and scroll down for the Wangs.)

I don't recall ever spending much time agonizing over the learning process with the Wang. It all went pretty quickly, and by the time I got the 35 several years later, I found reviving the knowledge was simple. In addition, it really helped that the 35's manual was (is) a marvel of conciseness.

Also, I was very struck by the way the 35's manual got the newbie owner to actually use RPN before he had officially learned it. That's immensely reassuring. And I recall the 25's manual did a similar trick in getting the novice to write and run a program -- again before you were supposed to know how to do it.

Now when you compare those manuals with what you get these days....!

Argh.

Best regards,

Robert

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-41CV, Decimal point
*Message #1 Posted by **John Rutherford** on 20 Mar 2003, 12:45 p.m.*

My young son played with my calculator and somehow changed the decimal point to display as a comma. Does anyone know how to change it back?

Thanks, John

Re: HP-41CV, Decimal point
*Message #2 Posted by **Jeff** on 20 Mar 2003, 12:55 p.m.,*
in response to message #1 by John Rutherford

set flag 28.

Re: HP-41CV, Decimal point
*Message #3 Posted by **Vieira, Luiz C. (Brazil)** on 20 Mar 2003, 12:57 p.m.,*
in response to message #1 by John Rutherford

Hi;

have a lok at the keyboard and you'll see a SF over the [7] key. Press the shift(golden) key, the [7] key and you seee in the display:

```
[SF_ _          ]
```

Then you press [2] [8]. The decima point is probably back again.

Best regards.

Luiz C. Vieira - Brazil

Jeff was faster...
*Message #4 Posted by **Vieira, Luiz C. (Brazil)** on 20 Mar 2003, 12:59 p.m.,*
in response to message #3 by Vieira, Luiz C. (Brazil)

Hi, Jeff;

I thought about removing my post, but I believe I can let it as is; O.K. ?

Best regards.

Re: HP-41CV, Decimal point
*Message #5 Posted by **John Rutherford** on 20 Mar 2003, 1:14 p.m.,*
in response to message #3 by Vieira, Luiz C. (Brazil)

Thank you all!

John

Re: HP-41CV, Decimal point
*Message #6 Posted by **Dave Shaffer** on 20 Mar 2003, 7:05 p.m.,*
in response to message #1 by John Rutherford

Hey, let him keep playing with it:

1) He might change back to decimal all by himself

2) We'll get another RPN convert! (Teach 'em early!)

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Maximum Calculator

*Message #1 Posted by **Richard Parfitt** on 20 Mar 2003, 11:32 a.m.*

Just as an alternative to "What I would market" or "Minimum system", I would like a HP41 CX type machine in layout. Very fast with a 4-6 line lcd, or even new no-power technology, polymer display, (4mm) chars (Ooooppsss 0.15"), maybe even color (see camera below), should fit within the size of the display area on a 41, with graphics capability, 4 slots for SD type storage card, (storage capacity now 512mb) say 256mb internal, usb interface to outside world, must be RPN system, save files (text) to PC/MAC, same weight as 41CX, Lithium Ion batteries/throwaway Lithium cells, continuous memory battery backup via small coin cell, nice smooth leather case (ala HP35), voice recorder to SD device, tri-band mobile phone, gps, 3M pixel camera, `irda' interface to printers, good battery life, quality 41 type keyboard, emphasis on using proven commodity systems, interfaces, displays, etc. Phheeewwww I think that's all. It's all possible, the hardware exists to do it, we have light weight small phones, my Erricson T28 is nothing when the batteries are out, cameras are now very small so it should be easy to integrate the hardware, gps systems are being planned to fit into SD packaging, (ok you might have a small antenna sticking out maybe 32mm), battery technology exits in consumer items, maybe make it so that the devices plug in if you need them, so more SD slots??. All the the keys can be used on the different functions with a selection system to go from function to function, maybe like (USER PRGM ALHPA CAMERA RECORD) . BUT....., is it marketable and would anyone buy it??...

Re: Maximum Calculator

*Message #2 Posted by **Patrick** on 20 Mar 2003, 3:26 p.m.,*
in response to message #1 by Richard Parfitt

Phew. That's some list.

My Tungsten|T has a bunch of that already.

I would prefer a smaller form factor. I love the Voyagers. Forget expansion slots for memory. Memory is cheap so load the thing with a whack of memory to begin with (256 megabytes!) and then provide a nice I/O mechanism. I think Bluetooth would be great. You don't need any exposed areas on the calculator for I/O ports or tedious lining up of infrared ports. Just bring the

calculator within range of your Bluetooth enabled PC and synchronize.

Think if the Voyagers had that with a nice two line display (a la 42S?) and a battery that lived forever. What a lovely toy.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

LCDs on HP Calculators before the 41C
*Message #1 Posted by **Richard Garner** on 20 Mar 2003, 11:15 a.m.*

Does anyone know if HP used LCDs on any calculators before the 41C? I remember in College Chem class in 1982 that someone had an HP that was not a 41C that had an LCD. I want to say it was like a 32E/C or 33. Can anyone shed some light on this?

Thanks

No LCD calculators prior to the HP-41c
*Message #2 Posted by **Gene** on 20 Mar 2003, 12:23 p.m.,*
in response to message #1 by Richard Garner

The next LCD calculators were the voyagers, the HP-11c and HP-12c were the first two, followed by the 10c and then 15c and 16c.

The HP-31E, 32E, 33E, 33C, 34C, 37E, 38E, and 38C all used red led displays.

The HP-41c was HP's first!

Gene

Re: No LCD calculators prior to the HP-41c
*Message #3 Posted by **Vieira, Luiz C. (Brazil)** on 20 Mar 2003, 12:43 p.m.,*
in response to message #2 by Gene

Hi;

after reading and seen so many things about unreleased models - like the HP95C and the X-Pander - I wonder if Richard did not have the chance to see some stuff like these. If you have a look at Craig Finset's database you'll see some entries related to never-seen or never-released models, something like a rumor.

Even TI had its unreleased famous TI-88, and a few units are available somewhere. Collectors' pieces, indeed.

Pioneers second Voyagers after 1987, and the HP32S is the closest HP41-look model, but it was not available in 1982.

Now I'm curious, too.

Luiz C. Vieira - brazil

Re: No LCD calculators prior to the HP-41c
*Message #4 Posted by **joe** on 20 Mar 2003, 1:11 p.m.,*
in response to message #2 by Gene

Pardon the ignorance, but what do you mean by 'voyagers'?

I noticed another thread that used that term. Thanks for any info?

joe

Re: No LCD calculators prior to the HP-41c
*Message #5 Posted by **Michael F. Coyle** on 20 Mar 2003, 1:30 p.m.,*
in response to message #4 by joe

Hi Joe,

Voyagers are a series of calculators made during the 1980's. They are:
HP-10C, HP-11C and HP-15C scientific
HP-12C financial (22 years old and still manufactured!)
HP-16C programmer's calculator

Details are available elsewhere on this site. The nice things about these machines are that they are very solidly build, fit neatly in a shirt pocket and run almost forever on silver oxide batteries.

Maybe some of us are feeling nostalgic if we feel that HP could solve half of its calculator woes if it brought back some of these very desirable machines (particularly the 11 or 15).

I have an 11C and a 16C and I'm never *ever* giving them up! (I just got a 48GX, though, and that one's pretty cool, too.)

- Michael

Re: No LCD calculators prior to the HP-41c
*Message #6 Posted by **joe** on 21 Mar 2003, 10:56 a.m.,*
in response to message #5 by Michael F. Coyle

Thank you Michael for the reply.

I have been bitten by the 'bug'! I have a 12C right now that I am very happy with.

I am 'searching' for a 16C. I think that would be a nice addition.

In my opinion the holy grail of HP's is the 67. I remember when I was a teenager, some of my dad's fellow engineers had HP67's and I used to drool over those machines! I'm amazed they still fetch the prices they do on Ebay.

Thanks again! joe

I vote that
*Message #7 Posted by **Norm** on 21 Mar 2003, 5:55 a.m.,*
in response to message #1 by Richard Garner

Hi, I vote that the guy in the college class in 1982 probably had an HP-34C . Nice rig. It took 2nd place to the HP-41C most of the time, but either was popular then.

Why celebrate LCD over LED
*Message #8 Posted by **Norm** on 21 Mar 2003, 5:58 a.m.,*
in response to message #7 by Norm

Why celebrate LCD's over LED's.

If you have enough battery oomph to keep it going, the LED's looked WAY COOLER than the LCD .

LCD is dull grey and boring. LED was brilliant, sizzling, crisp, and if the power went off in the building, you could punch in all 8's and use it for a flashlight.

If HP was "into it" anymore they'd give you some display options that sizzle with much more luster than a dull drab LCD.

Re: Why celebrate LCD over LED
*Message #9 Posted by **Chan Tran** on 21 Mar 2003, 7:42 a.m.,*
in response to message #8 by Norm

LCD works better in bright light but calculators are used where the light isn't too bright. So LED looks better. I used the 9825B for a while and it has full dot matrix 32 character LED display. It looks great but after a few nights on the thing I started seeing cyan in the morning.

Re: Why celebrate LCD over LED
*Message #10 Posted by **Masao Kinoshita** on 21 Mar 2003, 9:47 a.m.,*
in response to message #9 by Chan Tran

I'm waiting to see who uses the new organic LEDs (OLED) first in calculators. Kodak licensed the manufacturing to a firm in Taiwan some time ago. IBM likes to show off OLED displays in concept watches and color OLEDs are in the works.

So LEDs are back, though based on some jellyfish chemophore this time (that's where the "organic" comes from).

Re: Why celebrate LCD over LED
*Message #11 Posted by **Vieira, Luiz C. (Brazil)** on 21 Mar 2003, 10:54 a.m.,*
in response to message #10 by Masao Kinoshita

Hello, Masao;

do you know where to find OR do you already know the specs for these organic LED's? The only information I have is that blue-light LED's exist because of this technology. I read about blue, cyan LED's since the 80's, and now they are indeed available. The active pannel in some new laptops use this sort of technology, right?

If you know any links to any e-docs about it, I'd appreciate knowing about them, too.

Thank you.

Luiz C. Vieira - Brazil

Re: Why celebrate LCD over LED
*Message #12 Posted by **Masao Kinoshita** on 21 Mar 2003, 4:49 p.m.,*
in response to message #11 by Vieira, Luiz C. (Brazil)

Hi Luiz,

OLEDs are quite new. I don't think anything from the 1980s would pertain to them. One of the first showcase for OLEDs was the display that you could roll up. I think those are supposed to go on the market soon (if not already?). I remember reading _quite_ a while back that the first drivers for using OLEDs as displays were ready. At that time one set was shipping and the other about to ship.

IIRC, OLEDs use less power and emit their own light, i.e., the energy hungry backlight is no longer necessary.

Try googling around the blue nowhere. There's lots of information out there.

After I made the earlier post, I started wondering how Kinpo would ration out something like this. Judging from their Web site, Citizen seems to be their model partner. And of course, Kinpo makes calculators for Texas Instruments! So how does HP fit into their scheme of things, I wonder, for such new technology?

Mosk as in Tosk (Star Trek Deep Space Nine) Knights of Access (Jeffery Deaver's "The Blue Nowhere")

Re: Why celebrate LCD over LED
*Message #13 Posted by **Masao Kinoshita** on 21 Mar 2003, 5:23 p.m.,*
in response to message #12 by Masao Kinoshita

I meant to say - IIRC, OLEDs use less power ***THAN LCDs*** and emit their own light, i.e., the energy hungry backlight is no longer necessary.

I think these are a couple of reasons why IBM is so interested in showing them in watches, where battery technology has been a big limiting factor. Maybe Citizen will eventually use them in their SPOT watch, since IBM and Citizen are (were?) working together on a WatchPad.

Re: Why celebrate LCD over LED
*Message #14 Posted by **Vieira, Luiz C. (Brazil)** on 21 Mar 2003, 11:11 a.m.,*
in response to message #8 by Norm

Hi, Norm;

here we are dealling with mixed, not EXACTLY analog matters.

Since the first LCD I saw I realized they could be used and read under direct sunlight, something impossible to be done with LED displays. I remember surveyors gladly ran from the HP67 to the HP41C simply because they could use it under sunlight. I remember a classmate told me once: *hat is it using a calculator in the dark good for if you can barely see the keyboard and even take notes or read anything? If there is energy to charge batteries, then turn the lights on!* I like reading and studying under fair light, better if (not directly) under sunlight. It's a lot easier to read, to write. I don't like studying and working with poor light. And in this case, there should be light enough to see LCD's characters and key inscriptions and notebooks and books...

In other hand, I use LED anytime I need to signal anything in a pannel. My first digital multimeter was a home-buitl based on the famous CA3161/3162. I remember I had to change power supply design because measurements were unstable and I used a regulated +5VCC to the IC's supply and a non-regulated +6Vcc to the LED's line... Hey, wrong place to talk about this. Sorry, guys... Anyway, it still works but today I use a portable, LCD reading mulimeter.

Jus my thoughts.

Best regards.

Luiz C. Vieira - Brazil

Re: Why celebrate LCD over LED
*Message #15 Posted by **Masao Kinoshita** on 21 Mar 2003, 5:10 p.m.,*
in response to message #14 by Vieira, Luiz C. (Brazil)

For my HP 67, I had one of those sunshades not unlike the scope Mr. Spock would look into at his science station onboard the United StarShip Enterprise (Star Trek The Original Series). It snapped on and off with ease.

I also used it during exams, since the 67's LEDs were designed to be seen from different angles, i.e., real world tool. The LEDs on my HP 21* and HP 25 were sunk deep into the calculator (for exams?). Don't get me wrong, I really liked my HP 25 (but I really wanted a card reader, since keying in the programs every time was so tedious and I really wanted the HP 65 in the first place). I gave the 25 to my oldest sister when I got my 67.

*It was really my father's HP 21.

Re: Why celebrate LCD over LED
*Message #16 Posted by **James M. Prange** on 21 Mar 2003, 2:02 p.m.,*
in response to message #8 by Norm

Mostly for low power consumption. And for alphanumeric displays, redefinable fonts and graphing, I've never seen an LED display that could match the LCD displays. LEDs are hard to read in bright sunlight, and I remember that red LEDs were hard to make sense of under the red lights on a ship.

Still, under the right conditions and for the right uses, they do look very nice and are easy to read. So if they ever get the power consumption down to something comparable to an LCD display, I'd welcome a new calculator with an LED display.

Regards,
James

Re: Why celebrate LCD over LED
*Message #17 Posted by **Richard Garner** on 21 Mar 2003, 10:31 p.m.,*
in response to message #16 by James M. Prange

Wow, did this thread get off track. All I was looking for was information for any HP calculator that had an LCD before the 41C. What I saw in 1982 was an HP of the old 30 series that had an LCD. The only reasoning I can come up with so far is:

A) it was a prototype that was being tested. The question there would be how did a prototype like that find its way to a student in a 2 year college in northeast Texas.

B) it was an actual 30 series something that was built at the end of the production run and a compatable LCD was put in instead of ordering more LEDs to finish the last few units on the line.

This question has always been in the back of my mind and it comes to the surface from time to time just to taunt me to look some more.

Thanks

LED Calculators could be viable in 2003!
*Message #18 Posted by **Michael F. Coyle** on 21 Mar 2003, 11:28 p.m.,*
in response to message #16 by James M. Prange

James wrote:

Still, under the right conditions and for the right uses, they do look very nice and are easy to read. So if they ever get the power consumption down to something comparable to an LCD display, I'd welcome a new calculator with an LED display.

The three problems with old LED calculators are:
* Batteries
* Power-guzzling LEDs
* Power-guzzling ICs
all of which contribute to short battery life.

But the state of the art has advanced over the last 25 years and makes LED calculators much more attractive now.

Batteries:
Other threads here compare the old Nicads to new Nicads and NiMHs which could give increased operating time. A problem is that the old calcs were not designed with the new batteries in mind. This leads to questions about charging time, waveforms, etc.

But suppose we were to design a new machine with modern batteries and power supply circuitry. All the technology now used in portable computers and cell phones could be applied to calculators. This includes NiMH and Li-Ion batteries, quick-charge circuits and high-efficiency DC-DC converters. This is all off-the-shelf stuff.

An extra benefit is that with modern circuitry we wouldn't have to worry about frying the calculator's little innards if the battery pack were removed.

LEDs:
New LED materials are much more efficient than their 1970's counterparts. I've been looking at some Agilent data sheets and it looks as if seven-segment displays using AlGaAs would require only 1/5 the power of the old so-called "high-efficiency" Red LEDs. We don't have to rely on new, unproven technologies like Organic LEDs.

The old small "stick" LEDs used in calculators are no longer manufactored, so an LED manufacturer would have to design new displays and tool up.

If somewhat higher power consumption could be tolerated, we could even envision other colors. Blue LEDs, anyone?

Circuitry:
The old PMOS ICs used in the early calculators had pretty high power consumption. CMOS circuits operated at a reasonable clock rate would consume essentially zero power. Witness the Voyagers, which have been known to run for over a decade on their original batteries.

So maybe the time is right for a new generation of LED calculators. My vote is for a 26th Anniversary Edition HP-29C. Perhaps the R&D and manufacturing cost could be justified by making the first run a limited-edition deluxe collectable. Ebay prices seem to justify the idea that under the right circumstances, people will buy high-quality calculators for high prices. Heck, even I'd buy one or two! (And maybe lower cost units could follow.)

- Michael

Re: LED Calculators could be viable in 2003!
*Message #19 Posted by **Vieira, Luiz C. (Brazil)** on 21 Mar 2003, 11:55 p.m.,*
in response to message #18 by Michael F. Coyle

Hi;

it's time to think of actual replacements for Woodstocks and Spice's (among others) LED displays. Should industry care for building LED displays as building blocks, like thos found in HP Classic models? I have at least four woodstock LED displays with corroded digits that no longer work. Even if they are orange or blue (not green because of the red protective "shield") I think that digit's size would be greatly welcome.

Any specs about these? Any link to be consulted?

Thanks for any information.

Best regards.

Luiz C. Vieira - Brazil

What about OLED's?
*Message #20 Posted by **Layne Carruth** on 22 Mar 2003, 1:28 p.m.,*
in response to message #19 by Vieira, Luiz C. (Brazil)

What about using an OLED (organic LED) display? I have a Motorola cell phone with this type display. Advantages are VERY bright, vivid color display, low power consumption. I understand they are still having problems creating laptop size displays (production techniques still being developed), but a calculator display is similar in size to the cell phone.

Re: What about OLED's?
*Message #21 Posted by **Vieira, Luiz C. (Brazil)** on 22 Mar 2003, 3:38 p.m.,*
in response to message #20 by Layne Carruth

Hello, Layne;

OLED's are the subject, indeed. I was not aware of them as commercial products since this post written by Masao Kinoshita. And I'm willing to know how are 7-segments being packed, i.e., dimensions, size, specs, colors... If OLED's use less current than LCD's, they have a much higher internal resistence. Would existing, already designed LED drivers deal with OLED's as well? I'm asking about this because scan frequency in multiplexed drivers take into account the final brightness and energy transfered to the LED display. Should pulse width and peak values be changed if OLED's are used

instead of LED's when keeping existing electronics?

If so, I'll have to research before thinking about using new OLED's in vintage HP calculators. Hey, operation time with fully charged batteries would be increased in about 3 times! It worth trying something about it...

Hey, Norm, any ideas? Usggestions? Comments? Anyone else?

Best regards.

luiz C. Vieira - Brazil

Re: What about OLED's?
*Message #22 Posted by **Michael F. Coyle** on 22 Mar 2003, 8:05 p.m.,*
in response to message #20 by Layne Carruth

OLED's do look attractive. But as I look at it I guess I see it more as a replacement for LCD's in graphic calculators rather than as the basis for a retro LED machine.

Worth keeping an eye on, though.

- Michael

No Stick LEDs Anywhere
*Message #23 Posted by **Michael F. Coyle** on 22 Mar 2003, 11:52 p.m.,*
in response to message #19 by Vieira, Luiz C. (Brazil)

Hi Luiz,

I've looked all over the place and it looks like NO ONE is manufacturing the small multidigit LED displays used in calculators. The closest I could find were some multicharacter intelligent alphanumeric LED displays from Agilent. But these are not compatible with calculator displays.

I guess when LCD's came in, nobody was interested in the small LED's anymore. It's too bad.

- Michael

Making LED arrays from avail single digit models
*Message #24 Posted by **glynn** on 23 Mar 2003, 3:27 a.m.,*
in response to message #19 by Vieira, Luiz C. (Brazil)

Luiz;

I proposed this long ago, but maybe time has come to suggest it again:

--- snip ---

"Another project that might be worthwhile in that vein is the matter of the "Classic" displays. They rely on an obsolete and hard-to-find five-digit seven-segment LED. Matched brightness on the three sets of five-digit displays are tough. BUT... A project to make a "drop-in" replacement for the display... a circuit-card with fifteen matched LED digits, is possible, if enough people want to do this. Single LED digits are easy to source, in many sizes. Design could probably proceed NOW."

--- snip ---

(from Archive 3, Aug 24 2000 "A modest proposal", one of many ideas tossed off in a rather long essay)

Basically, there ARE things out there to be done, either as a group, or by some entrepreneur-type who wants to supply to a market that is waiting.

The HP LEDs were actually rather small-charactered, but such was the state of the art back then; they made up for the tiny segments by encasing them behind clear epoxy lenses (one over each seven-segment character; this lent them a nice look head-on, and I believe made viewing them at an angle a bit easier, too-- but experimentation could tell you if an "unlensed" LED, maybe set a bit more forward in the case, would lead to increased readability. Character size itself might be a bit tweakable, too... all of that being behind the red bezel, you'd probably have to have two Classics side by side to tell the display was not an "original".

As Classics become more and more a collectible than a commodity, perhaps being as faithful to the original as possible is necessary. In which case, a molded clear styrene strip of "bubbles" might be worth attaching to small-segment arrays, for that authentic "HP" look. Cost of casting the bubble strips from Lucite would be nearly negligible, a "garage" operation. A rubber mold, a mild vacuum chamber to keep air pockets down, and resin two-part that you can acquire at most hobby chains. Even omit the vacuum if you don't mind a few spoilt strips due to air-resin mixing.

In short, Luiz, a bit of parts research would LIKELY get you closer to building "stick"s for yourself and others out of single character elements, and it seems to me that a run of fifty or so would prolly meet with an audience in Here.

Fifty assemblies would be large enough that you would be able to sort the elements out of those 750 singles sent you by a

place like DigiKey by comparative brightness, so that all 15 in each calc's display would be pretty darn close to each other. If you do less than this, you need to have a supplier willing to sell you pieces sorted by codes from the production run. HP used to have letter codes characterizing brightness, and some LED manufacturers sort them out this way per tray.

(By the way--- regarding OLEDs--- they are a REAL technology now, not the vaporware they were when I was writing about us building our own design calculator two and a half years ago. At this moment, few facilities pump out OLED displays yet, and the concentration has been on dot-matrix arrays for PDAs etc., but that will likely change and some off-the-shelf small alphanumeric stuff is likely to appear in the next two years or so. Uniax (sold to Dupont Displays, look these guys up) was a developer of the "flexible" tech mentioned earlier in this thread, and the key there was that OLED could be PRINTED or silk-screened as part of a mylar sandwich, and thus it was very thin, dissipated its low but "age-producing" heat very well, and could be tooled up into unique designs incredibly cheaply; it was just printing, after all. I am a firm believer in OLED, and feel its color can be fairly well "tuned" to provide good readability even in bright light (not limited to reds, OLEDs make nifty greens and others too). My own preference is an amber-yellow on flat black, accomplished by shining the element through a fine mesh screen of black polyester. The contrast is incredible, and easy on eyes as well. If I ever DO design my own calc....)

Well, best of luck to all!

Re: Making LED arrays from avail single digit models
*Message #25 Posted by **Michael F. Coyle** on 23 Mar 2003, 10:17 p.m.,*
in response to message #24 by glynn

Hi Glynn!

Last night I looked around at LEDs to see what small displays are available. I looked in several distributor catalogs, all of Agilent's LED Web pages, and many other Web sites. What I found is not encouraging.

First, as I mentioned somewhere, the old multidigit LED "stick" displays don't seem to be available as new parts from *anyone*. Apparently customers lost interest when LCDs became widely available. The only way to get stick displays is to salvage them from existing equipment. (Keep in mind that there were many different types, so buying an old cheapie TI to replace HP LEDs isn't going to fly.)

I've looked around for small single-digit LEDs. The smallest I found had digits 0.2" high, a little bigger than calculator displays. One vendor is SunLED: see http://www.sun-led.com/products/spec/XZDMDK05A.pdf for a typical unit. It is 0.394" high X 0.272" wide. Twelve of these in a row would be 3.264" wide total. This is even wider than my 48GX! A display made of these would not fit into any pocket calculator I know of. And this was the smallest single digit part I found.

Agilent does make small multicharacter LED displays; these are small enough to (perhaps) fit into existing calculators. One of the smaller ones is the HPDL-1414 4-character display, see http://www.semiconductor.agilent.com/cgi-bin/morpheus/networkProducts/dataSheetAbstract.jsp?

BV_SessionID=@@@@0680387105.1048474265@@@@&BV_EngineID=hadcgkdhkjkgbemgcgjcfijdio.0&oid=50637. These devices would not be electrically compatible with existing calculators (though they could serve as the basis for a newly-designed calculator).

I suppose it would be possible to go to an LED manufacturer and get custom units done. Would it even be feasible, given the high engineering, tooling, and minimum order requirements? (This question would also apply to OLEDs when the right types appear. The chances of an off-the shelf part being exactly what we need would be small.)

This has been a very interesting discussion. I read the old thread, including your post, and I was impressed. An open-source calculator would be a worthwhile project if enough people got on board. I would be willing to share my thoughts on this if you are willing.

- Michael

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Can you clear out the stack?
*Message #1 Posted by **joe** on 20 Mar 2003, 8:53 a.m.*

I read the page here that goes into showing the basics of RPN. I read about the stack and that is quite fascinating. In the example all the registers on the stack are loaded with numbers. Hitting 'clx' clears the display register, but all the other registers have data in them, right?

How do you 'clear' all the stacks? Is there ever a need to have to worry about that?

Sorry to be such a pain, this stuff is interesting!

joe

Re: Can you clear out the stack?
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 20 Mar 2003, 9:26 a.m.,*
in response to message #1 by joe

Hi;

in some circumstances it's a good idea to clear the stack to avoid using "garbage" if you press a wrong key. If the stack is empty, you can enter any number and accidentaly press [+] that you have no trouble. This is valid only for RPN models. RPL ones (HP28/48/49) demand two existing operators. RPN stack is always there, and its contets when cleared are all zeroes.

HP67/97 do not have an specific stack clearing procedure. The HP55 clears the stack if you clear registers ([f][CLR] or [g][CL.R]). All voyagers, except the HP16C, have the stack contents cleared when you perform statistics registers clearing ([f]CLEAR[Ê], where Ê means sigma greek letter). The HP12C is particularly different because the [f] CLEAR[REGS] clears everything, including the stack. I am not quite sure, but [f]CLEAR[FIN] keeps stack contents.

Both HP41 and HP42 have the CLST, that is the only specific function to LCear STack contents in these models.

RPL models have CLEAR function that clears numbered-levels contents.

Hope this helps. If I forgot something, please forgive-me: almost every information I post here is written by heart, except when I mention page numbers... ;-)

Luiz C. Vieira - Brazil

Re: Can you clear out the stack?
*Message #3 Posted by **Richard Garner** on 20 Mar 2003, 9:40 a.m.,*
in response to message #1 by joe

I am doing this from memory, with only the 48GX in front of me. I'm not sure about the older models, pre 41C, but there is a command called CLST (Clear Stack) that will clear the stack. On the 41C/CV/CX do an XEQ {Alpha] CLST [Alpha], this can be assigned to a key if you plan to use it allot. I think on the 15C, it is a shifted key command left of the ENTER key. On the 42S, 28C/S, & 48S/G Series it is accessable from a menu.

Hope this helps.

Richard Garner

Re: Can you clear out the stack?
*Message #4 Posted by **R Lion** on 20 Mar 2003, 10:04 a.m.,*
in response to message #3 by Richard Garner

In the 15c, CLEAR SIGMA (f GSB) puts a O into statistic registers AND in the four stack levels.

Raul

Re: Can you clear out the stack?
*Message #5 Posted by **Richard Parfitt (UK)** on 20 Mar 2003, 10:43 a.m.,*
in response to message #4 by R Lion

If you have a HP25 there is a clear stack command as I think there is on the HP45. On the 25 it's [f,clx], I think most of the classic machines that had a summation function also had clear stack capability because the summation made use of the stack. Quick way to check is to look at pictures of machines on MoHP site. Regards Richard.

Re: Can you clear out the stack?
*Message #6 Posted by **Karl Schneider** on 20 Mar 2003, 11:54 p.m.,*
in response to message #4 by R Lion

"In the 15c, CLEAR SIGMA (f GSB) puts a O into statistic registers AND in the four stack levels."

Works for the real stack, but does not touch the imaginary stack if in complex mode. CLx, ENTER, ENTER, ENTER also fails to clear the imaginary stack, because CLx works only on the real X-register by design.

0, ENTER, ENTER, ENTER will clear both stacks.

CLEAR SIGMA, CF 8 will clear the real stack and eliminate the imaginary stack.

Clearing out the stack
*Message #7 Posted by **Nenad (Croatia)** on 20 Mar 2003, 10:19 a.m.,*
in response to message #1 by joe

Joe,

IMHO the reason why you need not worry about clearing the stack lies in the nature of the RPN itself. As you always see every intermediate result and the new argument pushes them up, you intuitivly know what will come down again.

Disregarding the RPL calculators (HP28, HP48, ...) only the HP42S shows the Y stack value in display, though, by my experience, this may sometimes be a bit confusing.

CLx is a very important operation, as it operates in a similar way ENTER does: disabling stack lift for the next enter argument. This is a trivial (but important) fact.

Re: Can you clear out the stack?
*Message #8 Posted by **joe** on 20 Mar 2003, 10:57 a.m.,*
in response to message #1 by joe

Thanks guys!

The more I read about all these things, the more I like them. I have allways been a fan of HP calculators and finding this site has been awesome.

Thank you again to all that have posted to my question.

joe

Re: Can you clear out the stack?
*Message #9 Posted by **Patrick** on 20 Mar 2003, 3:19 p.m.,*
in response to message #8 by joe

Then there's people like me who can't remember which clear function on which model does what. However, on just about any model you can clear the stack by pressing CLx, ENTER, ENTER, ENTER.

Quicker than spelling out CLST (or whatever it is called) on the 41's alpha display.

Not good for programming of course, but there you have an incentive to invest the time to do it right.

Re: Can you clear out the stack?
*Message #10 Posted by **Vieira, Luiz C. (Brazil)** on 20 Mar 2003, 4:57 p.m.,*
in response to message #9 by Patrick

Hi;

that's exactly the way one find in the HP67 User's Manual, p. 80, bottom of page. As explained there, [f] [CL REG] does not change stack registers' contents.

And you're right: works in any RPN calculator.

Luiz C. Vieira - Brazil

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Clearing a mistake entry...
*Message #1 Posted by **joe** on 20 Mar 2003, 8:45 a.m.*

OK. Just got my first HP, a 12C. I've used HP's before however, I have never owned one of my own. I've read the page here that gives a primer on RPN. The part about the registers is very interesting.

My question: suppose you want to add two numbers. You do the following: 5 ENTER 3 - oops, that should have been a 2. So how do you do you 'clear' the 3 and enter a 2? I've been hitting 'clx', the response is correct, but is there a better way?

thanks, joe

Re: Clearing a mistake entry...
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 20 Mar 2003, 9:17 a.m.,*
in response to message #1 by joe

Hi;

in the HP12C this is the only way to replace the number in the X-register for a 0.00 and write something else over it. Ohter models have a back-space, or right-arrow, or [<-] key so you can delete last entered digit instead of the complete number. The HP12C and most vintage models do not have it (I think the HP41 was the first HP calculator with the back-space resource...)

Also, you can simply roll the stack contents down, say:

```
INPUT   PRESS    DISPLAY


5      [ENTER]   5.00
3       [Rv]     5.00
2       [+]      7.00
```

In this case, wrong entry is lost when new number in input. And use [x<>y], too. In this case, the wrong entry is not lost, instead it goes to the Y-register.

```
INPUT   PRESS    DISPLAY


5      [ENTER]  5.00
3      [x<>y]   5.00
2       [+]     7.00
```

Hope this helps.

Best regards - Luiz C. Vierb - Brazil

Re: Clearing a mistake entry...
*Message #3 Posted by **joe** on 20 Mar 2003, 9:23 a.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

Thank you Luiz.

joe

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

CHPC founded in Zagreb, Croatia!
*Message #1 Posted by **Croatian HP Club** on 19 Mar 2003, 5:44 p.m.*

An important message from Croatia to the rest of the world:

CHPC (Croatian HPclub) has been founded here in Zagreb on 19th March 2003, at 18:00 (6 PM) C.E. T, at the very dawn of the World War III.

This important event can no doubtfully be compared with the one in 1939 when Mr. Bill and Mr. Dave founded the company of a well-known name, which produced the best products in the world, known for their quality, durability and attention of every detail. The company kept to this policy for a very long time. Unfortunately, they have finally left their commitment to quality and satisfaction of their customers (who adored their products) for unknown reasons...

The goals of the CHPC are as follows:

1. To save the memories to something which is known nowadays as the oldHP,

2. To promote the way of life and way of RPN thinking approach, which was once in the past given as a gift to all of the CHPC members by the oldHP,

3. To preserve the knowledge of old arts, such as keystroke programming and RPL programming, in fact, any programming, for the generations to come,

4. To help the future generations understand and appreciate the passion of their predecessors,

5. To make the world a better place for living in every aspect, as far as it is possible today, though without any new oldHPs in the sight.

Membership fee is set at fixed 414248 EUR for the first 67 years, subject to the special discount price of 100 per cent for the first ten thousand members.

Money donations are accepted only from our Nigerian, Zimbabwean and Congoan friends (who have

recently made such offers) and only in amounts of one million US$ and above, mailed to the club address in cashable cheques. Other persons may donate coconuts, spices and hawkeys, if they wish (though it is not likely to be expected).

Any Croatian citizen who adores RPN and/or RPL and the way they are implemented on oldHPs is invited to become a CHPC member. Anybody from abroad who shares the same feelings and possesses a recommendation of at least two present CHPC Croatian members may become an international CHPC member.

At the present time the CHPC has two Croatian members and one international. Other members are invited to join the CHPC.

Long live the CHPC! Long live the RPN way of life! Long live the ENTER key!

Nenad (CHPC #1)

Hrast (CHPC #2)

At Zagreb, 19th March 2003

I want to be part of it, although I'm not a croatian...
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 19 Mar 2003, 6:23 p.m.,*
in response to message #1 by Croatian HP Club

You guys made it! Congratulations!

What should I do do be a member? Move to Croatia? Tell me if there is a school so I can teach there!

That's serious: what should I do?

If there is something I have created and written about HP calculators that you believe is usefull, I'll be glad to send it to be stored amongst your files.

Just let me know what to do.

Congratulations!

Luiz C. Vieira - Brazil

You are the only Croatian I know...
*Message #3 Posted by **Jeremy** on 19 Mar 2003, 10:09 p.m.,*
in response to message #1 by Croatian HP Club

.. and I don't really know you that well, so I guess I'm out of the loop, eh? That is a shame. :(

Otherwise, I don't suppose I could talk you and your friend to nominate me to yourselves for membership, could I? ;)

See you around. -Jeremy

Re: CHPC founded in Zagreb, Croatia!
*Message #4 Posted by **HrastProgrammer** on 20 Mar 2003, 2:05 a.m.,*
in response to message #1 by Croatian HP Club

> CHPC (Croatian HPclub) has been founded here in Zagreb on 19th March 2003, at 18:00

Actually, it was 18:01 because we were very busy eating and drinking :-)

Re: CHPC founded in Zagreb, Croatia!
*Message #5 Posted by **Dan M (Vermont, USA)** on 20 Mar 2003, 7:18 a.m.,*
in response to message #1 by Croatian HP Club

Hey, you guys are the best! Way to go!

My Grand-Dad was from Zagreb a long time ago (his name was Trgovcic, perhaps Serbian? but no matter). I was given a seat at the stammtisch by the Croatian guys who run the "Yugoslavian Restaurant" in Burghausen, Germany... does that count?

I'd love to be in, go "ENTER"!

Best regards,

Dan M Bellows Falls, Vermont USA

Re: CHPC founded in Zagreb, Croatia!
*Message #6 Posted by **CHPC** on 20 Mar 2003, 10:10 a.m.,*
in response to message #5 by Dan M (Vermont, USA)

Yes, Dan, of course, you are cordially invited. You may even apply for a full (Croatian) membership, but in that case you will have to pay a membership fee of 0,00 kn instead of 0,00 USD.

You may expect an invitation letter from our club secretary.

Best regards,

Nenad (CHPC #1)

Re: CHPC founded in Zagreb, Croatia!
*Message #7 Posted by **Dave Shaffer** on 20 Mar 2003, 10:58 a.m.,*
in response to message #1 by Croatian HP Club

Sign me up.

I stayed in Zagreb for a day or two almost exactly 30 years ago when our college Glee Club made a tour of (then) Yugoslavia.

Since I've been there, and have half a dozen RPN calcs, I hope I qualify. Shall I send you my $0.00 dues by paypal?

Re: CHPC founded in Zagreb, Croatia!
*Message #8 Posted by **Jordi Hidalgo** on 20 Mar 2003, 2:26 p.m.,*
in response to message #1 by Croatian HP Club

Nenad and Hrast wrote:

> An important message from Croatia to the rest of the world

Nazdravlje! Svima im na ovom mjestu izražavam svoju prijateljsku zahvalnost.

> Membership fee is set at fixed 414248 EUR

Izgleda da se potkrala pogreška u cijenama koje ste nam naznacili...
Vrlo nam je žao što Vam moramo saopciti da smo insolventni :-)

Bog!

Jordi Hidalgo
HPCC #1046 (... i CHPC #?? ;-)

Re: CHPC founded in Zagreb, Croatia!
*Message #9 Posted by **Ernie Malaga (Miami)** on 21 Mar 2003, 11:26 p.m.,*
in response to message #8 by Jordi Hidalgo

> Nazdravlje! Svima im na ovom mjestu izra?avam svoju prijateljsku zahvalnost.

> Izgleda da se potkrala pogre?ka u cijenama koje ste nam naznacili... Vrlo nam je ?ao ?to Vam moramo saopciti da smo insolventni :-)

Don't take this the wrong way, please, but I hope the monthly magazines (à la PPCCJ) are published in Esperanto...

...aux gxi estos tre malfacile kompreni! 8^)

-EM

CHPC e-mail
*Message #10 Posted by **CHPC** on 21 Mar 2003, 12:45 p.m.,*
in response to message #1 by Croatian HP Club

This is the e-mail address for application ...

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Problem with my HP-41
*Message #1 Posted by **Luis Gomez** on 19 Mar 2003, 4:30 p.m.*

I have a problem with my HP-41. I've removed the display to clean it. Now i only only see ramdom characters in display. I've check all contact in display using a digital multimeter and everything is ok.

If i check the batery i get 5.4V. I don't know where is the problem.

Regards

Re: Problem with my HP-41
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 19 Mar 2003, 4:47 p.m.,*
in response to message #1 by Luis Gomez

Hola, Luiz.

Check it the mainboard is perfectly aligned and in contact with the keyboard contacts. I had this problem many times, and in some of them I added two plastic washers between the case and the mainboard, fasten it a bit closer to the zebra connectors.

Did you disassembled the LCD assy? I mean, did you remove the "top" and "bottom" frames in order to clean polymer surfaces?

I have an HP15C that I removed the LCD frame and after reassembling the displays were fading and randomly ON and OFF. I disassembled it again, deeply cleaned the polymers and reassembled it again. It is working perfectly fine since then.

I read that the LCD assy is ESD sensitive and is easily dammaged if mishandled. Did you take ESD precautions?

Hope this helps. Luiz C. Vieira - Brazil

Re: Problem with my HP-41
*Message #3 Posted by **David Smith** on 19 Mar 2003, 5:55 p.m.,*
in response to message #1 by Luis Gomez

Go down the line of connections with a probe and gently tug on each one. See if any pop loose from the LCD circuit board or possibly the keyboard. Also make VERY sure all solder flux has been removed. Clean the contacts and the back of the LCD with 91% isopropyl alchohol. Make sure none leaks onto the display window or you will be removing the LCD again to clean the white stains off.

Re: Problem with my HP-41
*Message #4 Posted by **Luis Gomez** on 20 Mar 2003, 7:13 a.m.,*
in response to message #3 by David Smith

The problem stay.

I've reasambled all circuits: unsolder and solder again the display, and main board. I've claned all contact.

I've changed four LR1 batterys.

I can see in screen something like this: \ - - /

just only a digit.

And the following labels: BAT USER GRAD SHIFT O

When i insert the battery pack, the HP41 goes on If i press ON i can see in the screen: MEMORY sound a beep and return to initial state. When i press R/S occurs the same, but not inmediately, first label GRAD goes to RAD and after one second i can see the MEMORY message and ear the beep.

There is not response to others keys.

Regards

Re: Problem with my HP-41
*Message #5 Posted by **Luis Gomez** on 20 Mar 2003, 7:42 a.m.,*
in response to message #4 by Luis Gomez

The problem is not allways the same. If i remove memory modules and i connect the battery i can see label USER and i i press key 1 or 2 i can seen in the display these digits, but i can press keys very strong.

I think maybe a problem with contact between main board and keyboard.

Do you know how can i solve this problem?

Thanks

Re: Problem with my HP-41
*Message #6 Posted by **Vieira, Luiz C. (Brazil)** on 20 Mar 2003, 9:10 a.m.,*
in response to message #5 by Luis Gomez

Hi;

can you tell us what sort of connector you have between them both? I know three different zebra connectors used to do so, ant the best one is the most difficult to deal with: the one with very thiny golden-plated cooper trails.

Best regards.

Luiz C. Vieira - Brazil

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Programming Challenge: Powers and Roots
*Message #1 Posted by **Patrick** on 19 Mar 2003, 3:05 p.m.*

Through the evil of eBay, I recently managed to pick up a pristine copy of the HP-15C Advanced Functions Handbook. I've only had a half hour or so to read it so far, but it appears to be quite excellent.

One of the interesting numerical oddities that they point out surrounds the function obtained by taking the square root of a number 50 times and then taking the square or the result 50 times. While mathematically you should end up with the identity function (f(x) = x, for x >= 0), numerically you end up with something quite different.

The little challenge that I propose is to write the shortest program to compute the function described. You may only use square roots, squares and arithmetic functions. No y^x, no log/ln, no e^x, etc.

In order to make the problem non-trivial, I impose the additional constraint that you may not use any conditional tests, such as [x=0?], [ISG], [DSE], or [F?].

A secondary question is how large the number 50 can be increased to on your selected platform using only these self same functions.

Since I only know RPN, not RPL, I'd be primarily interested in seeing the solution done using the former method. I suggest the HP-11C and HP-15C as the platforms to use since I happen to like them the best, but others would work equally well.

Re: Programming Challenge: Powers and Roots
*Message #2 Posted by **Dave Shaffer** on 19 Mar 2003, 4:29 p.m.,*
in response to message #1 by Patrick

Am I missing something in your challenge?

re: "One of the interesting numerical oddities that they point out surrounds the function obtained by taking the square root of a number 50 times and then taking the square or the result 50 times. While mathematically you should end up with the identity function (f(x) = x, for x >= 0), numerically you end up with something quite different."

Unless you do something fancy to maintain precision (maybe that's the challenge?), if you take the square root 50 times (I assume you mean the equivalent of hitting the square root key 50 times in a row), unless you start with a very big - or very small - number, you wind up with 1.000000000! No matter how many times you square that, you're gonna get 1. (I just tried with my '32SII: 99*10^99 goes to 1.000000000 on the display after about 40 square root pushes.)

Re: Programming Challenge: Powers and Roots
*Message #3 Posted by **Patrick** on 19 Mar 2003, 4:37 p.m.,*
in response to message #2 by Dave Shaffer

Well, my challenge hasn't touched upon the numerical lessons (yet). I've only asked for an algorithm to compute the function in the shortest number of steps. Taking advantage of the numerical oddities wasn't what I had in mind, but your point is certainly valid.

Re: Programming Challenge: Powers and Roots
*Message #4 Posted by **Vieira, Luiz C. (Brazil)** on 19 Mar 2003, 7:13 p.m.,*
in response to message #3 by Patrick

Hi;

the example exactly illustrates something that cannot be computed with the Voyagers available range.

I'd suggest to write an algorithm or program to compute the uncertainty of the result. Something like the value placed in the Y-register after a numerical integration.

The Advanced Functions Handbook deals with accurate, errors and error recovering/ detection in an HP15C when using advanced functions - integration, SOLVE, complex numbers and matirces - as you have already seen. You can perform many of the

examples in the hP42S and check for the difference/correctness obtained when internal 15 digits take place, instead of 12 internal digits available in the HP15C. You may also see that many examples focus unusual situations, say, regular users unusual situations.

Just to add a few more information.

Luiz C. Vieira - Brazil

Here's My Solution Anyway

*Message #5 Posted by **Michael F. Coyle** on 20 Mar 2003, 11:41 p.m.,*
in response to message #3 by Patrick

I observed the same thing...it takes only 38 square roots to get from 9.999999999E99 to 1.0 on the HP-11C, and only 39 square roots to get from 1.0E-99 to 1.0. Still, even though it's therefore useless, I present a solution anyway, in only 32 steps. (Two of which are optional.) To make it more fun, I will present it without comment and (sadistically) leave it as an exercise to the reader to puzzle out.

- Michael

```
f LBL A      (This step's optional!)
GSB 5
GSB 4
sqrt x
sqrt x
f PSE        (This one too!)
g x^2
g x^2
GSB 8
GSB 8
f LBL 8
GSB 7
f LBL 7
GSB 6
f LBL 6
g x^2
g x^2
g x^2
g x^2
g RTN
f LBL 5
GSB 4
```

```
f LBL 4
GSB 3
f LBL 3
GSB 2
f LBL 2
sqrt x
sqrt x
sqrt x
sqrt x
g RTN
```

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

What is the easiest way to build a PC-HP48 cable?
*Message #1 Posted by **Jeremy** on 19 Mar 2003, 1:29 p.m.*

I have found numerous pages in the internet telling about the connections, but have not had any luck finding plugs to wire into.

One particular site, I forget which one, suggested that you use a standard mail serial plug for the PC end, and mold your own for the hp48 with two part epoxy. That doesn't sound too bad. I guess you would wire up the pins, and somehow position them correctly, then surround them with the two part epoxy. Once it has set completely, you could just file/sand it down to fit properly. Has anyone done this?

For those who have built a cable, how did you do it?

I have seen the one included with the HP connectivity kit available through Amazon, but I don't want to pay $45 for a CD full of software I probably won't use most of.

Thanks. -Jeremy

Re: What is the easiest way to build a PC-HP48 cable?
*Message #2 Posted by **James M. Prange** on 19 Mar 2003, 2:37 p.m.,*
in response to message #1 by Jeremy

It seems to me that I read somewhere or other that the connectors used on CD drives have the same pin spacing and fit (or at least could be easily adapted to fit) the 48 series. But don't count on it, I might be wrong about that. Maybe do a little more research at http://www.hpcalc.org/ or on the comp.sys.hp48 newsgroup. Use google search, http://groups.google.com/groups?meta=group%3Dcomp.sys.hp48, to search for information from the newsgroup archives.

Note that you don't need the full connectivity kit. You need a cable (see Joe Horn's Cable Table at http://holyjoe.net/hp/cable.htm to see which HP cables or cable/adapter combinations will work); the software that you need is available for free, at hpcalc.org, HP's website, and, I

suppose, many other websites. The last time that I checked, http://www.calcpro.com/ seemed to be the cheapest place to buy a cable.

Regards,
James

Re: What is the easiest way to build a PC-HP48 cable?
*Message #3 Posted by **hugh** on 19 Mar 2003, 3:01 p.m.,*
in response to message #2 by James M. Prange

you are right. the cd connectors do fit and work. i followed some wiring instructions i found and it worked fine. its the white one with a ridge on the top not the flat black one from a CD-ROM to audio card connector.

it cost me nothing, but the downside is that my wire is somewhat less well built.

Thanks. I'm looking into it. (NM)
*Message #4 Posted by **Jeremy** on 20 Mar 2003, 1:41 p.m.,*
in response to message #2 by James M. Prange

x

Re: What is the easiest way to build a PC-HP48 cable?
*Message #5 Posted by **Woody** on 19 Mar 2003, 2:50 p.m.,*
in response to message #1 by Jeremy

If you look around, you will find the cable alone for about $17 on the web. You can download the software for free from the HP website or others, including some links directly from the pages where you can buy the cable.

You probably won't save much (or any) money making your own unless you already have some spare cable, an older serial mouse, solder, serial plugs, etc.

If you just enjoy doing this sort of thing, that's a different story

Would someone please post the pinout?
*Message #6 Posted by **Andrés C. Rodríguez (Argentina)** on 19 Mar 2003, 6:43 p.m.,*
in response to message #5 by Woody

Just in case...

Re: Would someone please post the pinout?
*Message #7 Posted by **James M. Prange** on 19 Mar 2003, 7:17 p.m.,*
in response to message #6 by Andrés C. Rodríguez (Argentina)

See http://www.hpcalc.org/details.php?id=4741 (text file) or http://www.hpcalc.org/details.php?id=1722 (PDF file).

Regards,
James

Check these two sites
*Message #8 Posted by **Jeremy** on 19 Mar 2003, 10:05 p.m.,*
in response to message #7 by James M. Prange

These two sites have been very good references for me so far with regards to my hp 48G. I could find them and just post the pinouts for you, but I think you will be better off if you find them yourself. You will probably learn all sorts of other things along the way. I would bookmark those two sites if I were you, as I think you will find them a handy reference in the future.

Cheers! Jeremy

http://www.hpcalc.org/

http://www.engr.uvic.ca/~aschoorl/faq/48faq.html#toc2

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

hp-71b RPN capability
*Message #1 Posted by **Terry Ingram** on 19 Mar 2003, 1:16 p.m.*

Does anyone know if there is a LEX file available for the 71b that provides RPN capability? If possible, a hex dump listing for use with the makelex program would be desirable.

I know I've asked a lot of 71b questions recently... I really appreciate eveyone's help.

Thanks, Terry Ingram

Re: hp-71b RPN capability
*Message #2 Posted by **kim** on 19 Mar 2003, 3:30 p.m.,*
in response to message #1 by Terry Ingram

The Forth ROM currently for sale @ebay will do this for you (plus a bunch of other fun things)

BR

Kim

Re: hp-71b RPN capability
*Message #3 Posted by **Andy** on 19 Mar 2003, 4:43 p.m.,*
in response to message #2 by kim

There is a LEX file called RPNLEX. Once you have this 1038 byte lexfile on your 71, you can enter an rpn calculator mode by typing RPN. Its fast, small, and can do trig and log functions.

Also, you won't have to bid on it...you can just type it in.

Andy

Re: hp-71b RPN capability
*Message #4 Posted by **Raymond Del Tondo (Germany)** on 19 Mar 2003, 5:35 p.m.,*
in response to message #3 by Andy

Could you give me a hint where this RPNLEX is located, or even send it to me by mail in 9114 format?

Thanks in advance.

Raymond

Re: hp-71b RPN capability
*Message #5 Posted by **Terry Ingram** on 20 Mar 2003, 2:34 a.m.,*
in response to message #2 by kim

What are some of the fun things available within the Forth Rom?

I've tried the RPNLEX program as suggested by Andy, and want to say it is a great program. It adds RPN capabililty, with only a few sacrifices. I think with a few more additional functions, it would serve my needs very well.

Does anyone know how to make simple modifications in Forth?

Thanks, Terry Ingram

Re: hp-71b RPN capability
*Message #6 Posted by **Kim** on 20 Mar 2003, 7:32 a.m.,*
in response to message #5 by Terry Ingram

Well actually I made a mistake.

It's the HP41 translator. Which is a special version of the Forth ROM.

The ROM effectively makes the 71B into a 41CX with a truckload of registers (I don't remeber how many but it's a lot, over 1000 I think). It takes old 41 programs via IL and runs them on the 71B

So this would definately make the 71B RPN capable.

On top it has a series of need functions you can read more about in this location.

Beware, the Assembler is NOT included in this ROM.

http://www.hpmuseum.org/journals/71forth.htm

The best way to dive into the particulars of the ROM without bying the ROM for sale on the BAY is to get hold of the precious CD set (or now DVD as well) that is made available via this great site.

The Archives of Forum has lot's of conversations about the Forth ROM versus the 41 Translator. The best place to dive is right here.

Looking forward to see what the ROM goes for.....?

Best regards

Kim

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-25
*Message #1 Posted by **Michel Beaulieu** on 19 Mar 2003, 12:23 p.m.*

I know it's a quite weel known problem but can someone tell me the "procedure" to get alive a beautiful but dead HP-25. Where to put my multimeter to point the problem?

Thnk you for answers!

MB

Places to start...
*Message #2 Posted by **Jeremy** on 19 Mar 2003, 1:08 p.m.,*
in response to message #1 by Michel Beaulieu

1. Check to make sure that the battery terminals are free of corrosion. If they have corrosion on them, get the big chunks off by chipping at it with a screwdriver. Once that is done, get the smaller chunks off by any means you can find that won't damage the terminals. You will have to take the calculator apart if the corrosion has reached inside the battery compartment.

2. The next thing I would check is the power switch. On the hp45 of mine that I just worked on, the power switch was amazingly dirty, but it still worked. When you take the chassis of the calculator apart, a little brass spring contact thingy should come loose. Clean that with rubbing alcohol and soft clean cloth until black junk stops coming off.

3. Look closely for any connections that might have been broken.

It is possible that someone tried to power it up with a charger and either no battery or a dead battery and that the damage might be pretty extensive.

Last, but certainly not least, check the page of this site dedicated to fixing classic HP calculators. Rather than just promote laziness and give you a good link, I will just tell you to go the the MoHPC main page, and look to the right. Under the heading 'Collecting and Using...' you will see a link for 'Repairs & Batteries'. Click that and find the option called 'How to Fix

Classic Models' A lot of that information applies to fixing card readers, so it won't apply. But much of the information is pretty good!

Let us know how you make out.

-Jeremy

WOW, but...
*Message #3 Posted by **Michel Beaulieu** on 19 Mar 2003, 5:52 p.m.,*
in response to message #2 by Jeremy

Wow Thanks, it works! The switch is not working so i bypass it and i get it to work!

But now how can i "open" the keyboard to clean the switch? it seems to be "plastic soldering" in place like my HP-41. I never try to open my 41 keyboard but i need to open this 25 : how to do it safely?

I have another problem : Teh key are weel mark but the "faceplate" where the sub functions are written is completely erase : where is the square root, the SIN, LOG etc... Was there a removable faceplate on these calculator or how can all these writing completely erase out - the rest of the calculator seem to be in nice cosmetic condition...

Michel

Ok for the picture :-)
*Message #4 Posted by **Michel Beaulieu** on 19 Mar 2003, 6:04 p.m.,*
in response to message #3 by Michel Beaulieu

I found a picture on the site... So just answer my keyboard dissambley questions :-)

Thanks again!

Re: WOW, but...

*Message #5 Posted by **Jeremy** on 19 Mar 2003, 7:58 p.m.,*

in response to message #3 by Michel Beaulieu

"But now how can i "open" the keyboard to clean the switch? it seems to be "plastic soldering" in place like my HP-41. I never try to open my 41 keyboard but i need to open this 25 : how to do it safely? "

Be warned, this information is completely from memory and is assuming that the HP25 is similar to the HP45 that I have. So work at your own risk ;)

There are 6 or 8 screws that hold the whole circuit board assembly to the front half of the calculator molding. If you take these screws out, it should easily just lift out. When *I* did that, the springy brass contact that completed the power circuit just fell right out. At the time, I didn't know what it was, I had to look around for a bit to figure it out. At that point, you will see that the formerly shiny contact points on the springy brass contact and the contact points on the circuit board are completely dirty instead of nice and shiny and clean. So then, you can just clean it off with rubbing alcohol and a clean, lint-free cloth. (I used an old clean sock) I just put my finger in the sock, dip it in rubbing alcohol and rub it until it's pretty clean. Then, put it all back together and away you go!

While I had mine apart, I also replaced the plastic sheet that keeps the keypad contacts relatively sealed, as it was cashed. I just used a plastic wrapper that was used to package some Radio Shack battery connectors I bought and trimmed it to size.

Using an old toothbrush, (dry) I also cleaned out the inside of the enclosure and the keyboard. It is amazing how much junk accumulates in the corners in 30 years...

It was great fun to work on that. It was designed with technicians in mind and it shows. If the cicuitry was fried, I don't know that I would be able to track it down, but many times it is something much simpler. Those simple things can intimidate lots of people and they shouldn't.

Good luck.

-Jeremy

Re: WOW, but...

*Message #6 Posted by **David Smith** on 20 Mar 2003, 11:32 a.m.,*

in response to message #3 by Michel Beaulieu

The HP25 keyboard cannot be disassembled without causing a lot of damage. It is held down by a zillion heat staked melted plastic posts. If you look near the top of the keyboard while you flip the switch, you can see a couple of holes that are under the switch contacts. You may be able to fix the problem by spraying some contact cleaner there and working the switch a bit. If the cleaner leaks out, it may stain the keyboard (depending upon type). You might also try working a few bristles from a wire brush in the holes.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP 14B Self test
*Message #1 Posted by **Neil** on 19 Mar 2003, 12:17 p.m.*

I have a 50th anniversary version of the hp 14b. When I run the selftest including keyboard test, and the message '14b -OK' comes up, there is also a small '0' just above the '14b -OK' appearing. I'm curious to know if this zero comes up on all hp 14b calcs when the selftest is completed or could it be some kind of flaw with the LCD display or something. I have other hp calc models and I've never seen this before when doing the same type of selftest.

Re: HP 14B Self test
*Message #2 Posted by **Raymond Del Tondo (Germany)** on 19 Mar 2003, 12:20 p.m.,*
in response to message #1 by Neil

Maybe it's something like a revision or version number.

Raymond

Re: HP 14B Self test
*Message #3 Posted by **Massimo Gnerucci (Italy)** on 19 Mar 2003, 1:27 p.m.,*
in response to message #1 by Neil

It comes up on mine too (and it is not an anniversary edition).

Re: HP 14B Self test
*Message #4 Posted by **Neil** on 19 Mar 2003, 3:22 p.m.,*
in response to message #3 by Massimo Gnerucci (Italy)

Thanks for the quick replies. I guess since it comes up on your 14b as well Massimo, it must be normal with the 14b.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Good grief! $56 for this part?
*Message #1 Posted by **Gene** on 19 Mar 2003, 8:34 a.m.*

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3012509840&category=11713

Hard to believe. $56 for an N-cell holder?

I would think you can do better for a non-HP part
*Message #2 Posted by **Jeremy** on 19 Mar 2003, 8:55 a.m.,*
in response to message #1 by Gene

I was at Radio Shack the other day buying AAA cell holders do doctor up my 45, and I noticed that they had N cell holders. It looks like the one you're looking at might be integral to the battery cover though...

It kinds of makes me wonder if guy sell them on eBay without the cell holder, knowing they can get more for the parts separately.

If you can't find something at Radio Shack that works, you might try searching online...

-Jeremy

Re: Good grief! $56 for this part?
*Message #3 Posted by **Bill Smith** on 19 Mar 2003, 11:07 a.m.,*
in response to message #1 by Gene

Yeah, I know. Calculators _with_ the part can sell for less. Unfortunately, I need one myself.

Re: Good grief! $56 for this part?
*Message #4 Posted by **Garry** on 19 Mar 2003, 12:01 p.m.,*
in response to message #3 by Bill Smith

You guys should watch some of the other battery holder/packs for various HP calcs. I've been outbid at least 4 times at $50+ for 29C pacs for rebuild. These guys must have a bottomless wallet. There are just a few bidders that are driving prices twice over what the same items sold for last year. It will probably go higher by the year's end. Happy Bidding!!

Re: Good grief! at least $170 for this part?
*Message #5 Posted by **Amazed with eBay** on 19 Mar 2003, 7:53 p.m.,*
in response to message #1 by Gene

Okay, so it works! The box? The manual?

http://cgi6.ebay.com/aw-cgi/eBayISAPI.dll?ViewBids&item=3012485380

Re: Good grief! at least $170 for this part?
*Message #6 Posted by **David Smith** on 20 Mar 2003, 11:44 a.m.,*
in response to message #5 by Amazed with eBay

There is another reader out there right now selling for even more... I wonder if he wants another dozen or so at the same price?

Re: Good grief! at least $170 for this part?
*Message #7 Posted by **Chan Tran** on 20 Mar 2003, 11:49 a.m.,*
in response to message #5 by Amazed with eBay

I need a card reader to replace my broken one but the way it goes I don't think I can ever afford one. I think I paid around $160 for my card reader new in 1979.

Re: Good grief! at least $170 for this part?
*Message #8 Posted by **David Smith** on 20 Mar 2003, 5:46 p.m.,*
in response to message #7 by Chan Tran

Keep looking on Ebay. Sometimes they go for afforable prices (like $40 or under). You WILL have to take it apart and replace the rubber wheel. Instructions abound on this site and others.

Re: Good grief! $56 for this part?
*Message #9 Posted by **Ellis Easley** on 25 Mar 2003, 8:55 a.m.,*
in response to message #1 by Gene

That is an astonishing price but these have always been hard to get, apparently. In the PPC Journals there are discussions about battery life in the 41 which became a problem after the card reader was introduced. Users remarked that if HP would make the battery holder available as a spare part, things would be easier.

The high current requirement of the card reader motor makes alkaline batteries have a short effective life. After a relatively brief period of use there is plenty of energy to run the calculator but not enough to run the motor AND have sufficiently high output voltage to maintain the calculator memory. (I think the calculator intelligence takes over and refuses to operate the card reader when the battery voltage is below a certain level.) Using "N" NiCads in the regular battery holder was better for the card reader motor because NiCads maintain a fairly constant output voltage at high current drain compared to alkalines. But the NiCads will only run the calculator for a fairly short time because of their low capacity (150 mA-h vs >1000 mA-h for alkaline N cells) and their high self-discharge rate (need to be recharged once a month or so). This is aggravated by the fact that you can't recharge the cells in the calculator (Thank God! imagine how many 41's alive today wouldn't have survived if NiCads could have been recharged inside!) A good solution would be to have a spare battery pack loaded with NiCads so you could quickly change to NiCads when using the card reader. Apparently HP didn't make the spare battery holders available. Their solution was the rechargable pack which has even smaller capacity cells (I think 50 mA-h).

Another thing is that the springs are destroyed by battery leakage, leaving the plastic in fine shape. Somebody who used to advertise in the classified ads here had lots of the plastic holders without springs. I'd like to learn how to make those springs - what kind of wire to start with, etc. - because some of my holders have corroded springs.

Re: Good grief! $56 for this part?
*Message #10 Posted by **David Smith** on 25 Mar 2003, 6:21 p.m.,*
in response to message #9 by Ellis Easley

Yes, I found in an old Key Notes where HP starting selling spare battery holders for the princely sum of $1.00 each!

Re: Good grief! $56 for this part?
*Message #11 Posted by **Ellis Easley** on 26 Mar 2003, 7:02 p.m.,*
in response to message #10 by David Smith

Really! I wonder how many users knew about it? If it was widely known, you would think that people who had paid about $300 for a calculator would have bought a few extra battery holders - then there would be plenty for everybody now!

One battery holder was likely enough for most users. They last forever unless you have a bad leak. I imagine extra battery holders would have easily been "lost in the shuffle" over the years. Maybe they are with the odd socks!

I wince whenever I read the instructions for servicing the card reader on the 9100 - book says to fold a card in two and wet it with solvent - I hate to think of all those cards no longer around for me to use!

Re: Good grief! $56 for this part?
*Message #12 Posted by **David Smith** on 28 Mar 2003, 6:17 p.m.,*
in response to message #11 by Ellis Easley

They mentioned that you could only order them through a non-standard address. Later they made them available through the regular channels.

I don't remember the exact story, but the idea was you kept your partially depleted batteries in one for general use, and then used the good pack only when running the card reader.

Re: Good grief! $56 for this part?
*Message #13 Posted by **Vassilis Prevelakis** on 29 Mar 2003, 7:05 p.m.,*
in response to message #9 by Ellis Easley

```
> I'd like to learn how to make those springs - what kind of wire to start with, etc.
```

easy, just steal the springs from a battery pack that is currently available (e.g. the 3 or 4 AA battery holders that are sold in RadioShack or equiv).

I used to have a backup battery pack (wired so that it would route two cables out through the side door to an external battery pack with 4 AA batteries.

Then I bought the rechargable battery pack.

The sad thing is that even though I have kept everything from my original HP 41C (one of the first), I cannot find either the second battery pack or the recharable battery pack. I must have thrown them away :-(

**vp

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

82240B Repairs
*Message #1 Posted by **John K. (US)** on 19 Mar 2003, 6:18 a.m.*

I've got a 82240B that is acting up. After a few lines of printing, it starts printing garbage characters. It looks a lot like some kind of buffer overflow, but setting the delay to 1.9 (max) on my 42S doesn't seem to make any difference, and the 42S works just fine with an old 82240A.

Has anyone seen this kind of behavior before? Does anyone have any experience fixing these things? TIA!

Re: 82240B Repairs
*Message #2 Posted by **Randy Sloyer** on 19 Mar 2003, 7:36 a.m.,*
in response to message #1 by John K. (US)

If you are running on batteries, it is time to change them. What you describe is a classic low battery situation were the print head speed slows below 1.9 seconds per line and the printer looses sync with the calculator, as there is no handshaking.

It can also be caused by paper chafe build-up in the printer carriage, slowing things down.

You can open the printer by removing the four rubber feet, you'll find a phillips head screw in each tunnel and two more in the battery holder area. A canned air blaster will do the clean-up. Just watch out for the power indicator LED and print head ribbon cable on re-assembly, they don't always go back into place on their own.

Re: 82240B Repairs
*Message #3 Posted by **David Smith** on 19 Mar 2003, 6:02 p.m.,*
in response to message #2 by Randy Sloyer

Also you may need to clean and libricate the head carriage lead screw.

Re: 82240B Repairs
*Message #4 Posted by **John K. (US)** on 20 Mar 2003, 3:53 a.m.,*
in response to message #3 by David Smith

I take it that those parts are nylon or some such? Any recommendations on a lubricant for them? Thanks!

Re: 82240B Repairs
*Message #5 Posted by **David Smith** on 20 Mar 2003, 11:47 a.m.,*
in response to message #4 by John K. (US)

Nope, they are good ole metal. I use a gun lubricant called Break Free CLP. Just a TINY amount is all you need. Otherwise dirt, etc can be trapped. I tent to over lube the cam and wipe the excess off while rotating the drive gear to get everything cleaned.

Re: 82240B Repairs
*Message #6 Posted by **John K. (US)** on 21 Mar 2003, 2:57 a.m.,*
in response to message #5 by David Smith

Ah! I just happen to have a bottle of Break Free. I'll give it a try this weekend. Thanks!

Re: 82240B Repairs
*Message #7 Posted by **John K. (US)** on 20 Mar 2003, 3:51 a.m.,*
in response to message #2 by Randy Sloyer

Since the I'm running the printer with the AC adapter, it's probably not the batteries, but I hadn't thought about the possibility of cruft gumming up the works. I'll give that a try. Thanks!

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Decade Anniversaries
*Message #1 Posted by **Masao Kinoshita** on 18 Mar 2003, 5:05 p.m.*

Does anybody know if HP sold merchandise to celebrate the HP 35's 30th Anniversary?

I just got my IBM ThinkPad 10th Anniversary jacket. (What can I say? NASA took ThinkPads into space, right?)

And next year is the 20th Anniversary for Casio's first Data Bank watch, the CD-401/40. Fossil is scheduled to introduce their Palm OS PDA watch this summer and Microsoft SPOT watches this fall.

Oh yeah, and Pontiac will reintroduce their GTO* on its 40th Anniversary! :-) * not short for "go to" in this case (I'm sorry, couldn't resist. HP used to use Pontiac's GTO in their calculator ads a long time ago.)

Re: Decade Anniversaries
*Message #2 Posted by **Spice_Man** on 18 Mar 2003, 11:17 p.m.,*
in response to message #1 by Masao Kinoshita

I think even HP would be embarrased at the prospect of releasing a 30th Anniversary labeled Kinpo. I think the only thing that would make any sense would be a 30th Anniversary 12C.

Spicey

Re: Decade Anniversaries
*Message #3 Posted by **Patrick** on 19 Mar 2003, 2:40 a.m.,*
in response to message #2 by Spice_Man

I think they should do like the rest of us and stay at 29.

HP Forum Archive 11

[Return to Index | Top of Index]

HP-41CX Manuals for $90?
*Message #1 Posted by **Jürgen (CH)** on 18 Mar 2003, 4:51 p.m.*

Just saw this auction on eBay: CX Manuals for $90

Crazy, isn't it?

Re: HP-41CX Manuals for $90?
*Message #2 Posted by **Ernie Malaga (MIami)** on 18 Mar 2003, 8:41 p.m.,*
in response to message #1 by Jürgen (CH)

Of course it's crazy. Especially since you can get those manuals for a small fraction of that amount from the Museum's CD/DVD set.

And dozens of other menus, too.

-Ernie

Re: HP-41CX Manuals for $90?
*Message #3 Posted by **Holger Veit (DE)** on 19 Mar 2003, 3:25 a.m.,*
in response to message #2 by Ernie Malaga (MIami)

>Of course it's crazy. Especially since you can get those >manuals for a small fraction of that amount from the >Museum's CD/DVD set. > >And dozens of other menus, too.

This is not the point with these auctions (like the crazy prices for HP32-II calcs as well). These manuals are not for reading - in this case a PDF would be sufficient, but for *having*, because everything concerning HP calcs promises to rise in value in the future. A PDF is worthless there.

Be also aware that exactly for the prospect of further rises there are individual who attempt to keep the prices as high as possible already now. There will always be idiots who buy at

such prices.

Holger

Re: HP-41CX Manuals for $90?
*Message #4 Posted by **Massimo Gnerucci (Italy)** on 19 Mar 2003, 4:31 a.m.,*
in response to message #1 by Jürgen (CH)

Well... in three days he/she spent US $633.00 for a Zenrom module and US $106.50 for "HP-41 ADVANCED PROGRAMMING TIPS by K. Jarett"... less than US $90.00 for the manuals isn't too much in this perspective.
Let's not pay too much attention to those crazy people (IMHO).

Massimo

Re: HP-41CX Manuals for $90?
*Message #5 Posted by **David Smith** on 20 Mar 2003, 5:49 p.m.,*
in response to message #4 by Massimo Gnerucci (Italy)

A pair of CX manuals usually brings less than $30 on Ebay. There seems to be a pair on auction at any given time. They seem to be slightly more common than the C/CV manuals. Some people just don't bother doing their homework (check the completed auctions prices) or they just GOTTA have it NOW.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

How about an 'RPN Excercises Page'?
*Message #1 Posted by **Jeremy** on 18 Mar 2003, 1:29 p.m.*

First, let me say that I'm aware of the page our good buddy David has put together on getting started in RPN. I read through it and have a pretty good grasp on it. However, for something so different from the norm (for many people) it can take a bit more than that to learn how to use it as thoroughly as algebraic.

So I was thinking that maybe one/some of the experts out there might volunteer to put together an RPN excercises page to help us RPN novices get into the swing of things. There would be problem after problem, starting from pretty basic stuff and progressing to advanced stuff, and finally to the little tricks, like filling the stack with a number to use it as a constant. It would also include problems on stuff to help teach the RPN-unique keys, like last X, R->, etc. There are probably more of them that I don't even know yet.

I think that probably most of the people who hang out here are experts on the topic, so maybe there isn't as much of a demand as I think there is, but there have got to be people like me around who know just enough to get around, but not quite enough that they can completely replace their TIs comfortably. ;)

What do you all think?

-Jeremy

Re: How about an 'RPN Excercises Page'?
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 18 Mar 2003, 1:50 p.m.,*
in response to message #1 by Jeremy

Hi, Jeremy;

I'm far from being an expert, but I know many vintage and earlier HP manuals have significant amount of examples and exercises. What manuals do you have? What calculators do you own? I think some examples and exercises may be of general scope, but soem others may take advantage of some specific stack manipulation functions that are exclusive to some models OR not available in all of them. For example, not all vintage and even a few earlier models have the R^(roll-up) function, and it is a lotr usefull sometimes.

I have a few of the good Vintage manuals myself (HP67/97, HP25 and HP55) and some earlier ones. What about creating a PDF document with some examples based on these ones? If you think it's a good idea, I can do it. I only have to find the time, and Wednesday is a better day for me.

Hope this is about what you have in mind.

Best regards.

Luiz C. Vieira - Brazil

I don't have ANY manuals yet...
*Message #3 Posted by **Jeremy** on 18 Mar 2003, 5:24 p.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

I should have a 48G with a manual delivered to my door within the next few days. (I had a 48GX before, but got rid of it in disgust...) I think I will buy the manual on CD from MoHP on the HP45 I just fixed the other day too.

I do remember some good examples in the 48GX manual. I'm thinking of something more complex though, something from the minds of the forumers. Something that would maybe help people before they have to ask here how to do something in RPN.

I suppose maybe it is a matter of having spare time to create such a document though...

-Jeremy

Re: I don't have ANY manuals yet...
*Message #4 Posted by **Chan Tran** on 18 Mar 2003, 5:50 p.m.,*
in response to message #3 by Jeremy

The 48 has (may I call it) RPL and the 45 has traditonal RPN which are significantly different. I think you should concentrate on mastering the 45 first then move on to the 48.

I agree...
*Message #5 Posted by **Vieira, Luiz C. (Brazil)** on 18 Mar 2003, 9:38 p.m.,*
in response to message #4 by Chan Tran

Hi;

Chan Tran is right: mastering RPN is the first step to RPL. But I "see" and feel RPL as the evolution, the "RPN's next step". Is that what you mean, Chan Tran?

I know many contributors in here do not agree with this, but RPL was developed based on what RPN users would like to have as enhancements.

I use and program both user-level interfaces, no matter at all. I completely agree with Chan Tran that RPN knowledge allows a better understanding of RPL concepts. And it should be.

Best regards.

Luiz C. Vieira - Brazil

Learn RPN before RPL?
*Message #6 Posted by **Karl Schneider** on 18 Mar 2003, 11:36 p.m.,*
in response to message #5 by Vieira, Luiz C. (Brazil)

Luiz Veira said,

"But I 'see' and feel RPL as the evolution, the 'RPN's next step'".

This may indeed be true, but I believe that it was a step that should not have been taken -- one that led to the precipice of over-complexity.

I have the 28C, 48G, and 49G, and feel that none of them are particularly intuitive or simple to use and navigate. Of course, that's a discussion that's been hashed over many times in this forum, and I'm not looking to start another.

I got two 28C's with manuals on eBay -- a near-mint one for $37 and a real good one for $25. The mint one arrived in its original(?) box with a 1986 price tag of $212. I think someone quickly found the 28C a little more than they could chew, or were unpleasantly surprised to find that it didn't work quite like the older ones.

The HP28C has a storng handicap.
*Message #7 Posted by **Vieira, Luiz C. (Brazil)** on 19 Mar 2003, 12:02 a.m.,*
in response to message #6 by Karl Schneider

Hi, Karl;

the HP28C has a strng handicap: 4KRAM. Add to it the not-so-intuitive first-stage RPL and we have an ugly duck.

I had an HP28C in hands. Low memory condition is easily achieved when you are dealing with complex matrices or extensive algebraic manipulations.

I like all enhancements RPL brought and I learnt the basics (say, user RPL) too fast because I was kinda waiting for something like that.

As you said, *that's a discussion that's been hashed over many times in this forum, and I'm not looking to start another* and I second you.

Best regards, my friend.

Luiz C. Vieira - Brazil

Re: The HP28C has a storng handicap.
*Message #8 Posted by **James M. Prange** on 19 Mar 2003, 9:04 p.m.,*
in response to message #7 by Vieira, Luiz C. (Brazil)

I'll add that the 28S also has a strong handicap. It has 32KB of RAM, and if you lose memory for any reason, the only way to get anything back into it is via the keyboard.

I once had the sad experience of replacing the low batteries in my 28S with "brand-new" fresh off the shelf N cells, only to find that the 28S turned itself off after momentarily turning on the display. When I put the old batteries back in it displayed "Memory Lost" along with the low battery icon. It turned out that the "new" batteries must've been sitting "on the shelf" for an awfully long time; they were almost completely dead. Never again will I put any battery in a calculator without testing it first.

I did have almost all of my programs neatly printed out and attached to 5" by 8" index cards with notes for comments, checksum, size, any required programs, any programs that used the program, and any other information that seemed relevant. But of course I never did key most of them back in. Well, that's one way to purge unneeded objects from memory.

Re: I agree...
*Message #9 Posted by **Chan Tran** on 19 Mar 2003, 9:27 a.m.,*
in response to message #5 by Vieira, Luiz C. (Brazil)

Right Luiz. I think RPL is better because it's more consistent than RPN. You don't have exception when a function takes more than 2 arguments and returns more than 1 result. I understand that sometimes RPL is less convienient than RPN but overall I think it's an improvement.

Re: I don't have ANY manuals yet...
*Message #10 Posted by **James M. Prange** on 19 Mar 2003, 1:19 p.m.,*
in response to message #4 by Chan Tran

I learned RPL long before I learned what little I know of "Classic RPN". For myself, I find classic RPN rather difficult to use, inconsistent in that it has some prefix commands, very limiting, and a bit hard to get accustomed to, but fairly easy to learn; after all, RPL is (except maybe for program structure words) an extended form of RPN. I doubt that it makes much difference which you learn first. Except, perhaps, that if you learn RPL, you might not have very much motivation to take a step backwards to classic RPN.

Of course, there's a slight possibility that others here might disagree with me. ;-)

Regards,
James

I haven't thought this way...
*Message #11 Posted by **Vieira, Luiz C. (Brazil)** on 19 Mar 2003, 3:58 p.m.,*
in response to message #10 by James M. Prange

Hi, James;

you know what? Maybe you're right. I cannot say a word about learning RPL without knowing RPN because I simply cannot do it anymore.

HP mentioned in its own HP48 related brochures that RPL programming structure was a mix FORTH and LISP, not as a program listing, instead program functionality. I do not know FORTH and I read a few and tested something over LISP some (long) time ago, so I am not aware of how does a FORTH or LISP programmer feel when dealing with RPL.

Interesting point the one you mention.

Thank you.

Best regards.

Luiz C. Vieira - Brazil

Re: I haven't thought this way...
*Message #12 Posted by **James M. Prange** on 19 Mar 2003, 8:37 p.m.,*
in response to message #11 by Vieira, Luiz C. (Brazil)

Actually, all that I know of either Forth or Lisp is that I've read that RPL shares many features with each of them, so I imagine each of them to be sort of like RPL. Of course, cats and dogs are sort of like horses; they all come with four legs, want food, and need some cleaning up after.

Seriously, I don't think that either RPN or RPL is hard to learn. Well, at least enough for them to be very useful, if not enough to be considered an expert.

Perhaps the main difficulty is that if you already know one, you may not have as much motivation to learn the other.

Re: I don't have ANY manuals yet...
*Message #13 Posted by **Chris Randle (UK)** on 18 Mar 2003, 8:35 p.m.,*
in response to message #3 by Jeremy

What was it about the 48GX that you disliked that will be different on the 48G?

There were a number of factors...
*Message #14 Posted by **Jeremy** on 19 Mar 2003, 12:30 a.m.,*
in response to message #13 by Chris Randle (UK)

...and none of them particularly good ones.

1. I needed the money, and it was worth over $100 2. Trying to figure out how to do some things on it that were easy on my TI-85 was absolute hell. Once I figured them out, they were so counter-intuitive that I couldn't remember how to get there for the life of me. Those are bad things when you're under pressure and time crunch for tests. For example, I was led to believe that the HP48GX would do symbolic integration. It does, kind of, but try and remember how to do it! I sure couldn't. It is actually easier to do it by hand. 3. I didn't need the expandability. 32k is realistically more than I will probably use. That might change if I build the cable and start downloading programs for it...

Just about 20 minutes ago, I took delivery of a 48G I bought on eBay (with 'Buy it Now') for $40, including manuals. That is the positive side of the discontinuation of the RPN HPs. People are so busy overpaying for models like the 11C and the 32SII, that they are not noticing that a 48G can be snatched up so cheaply. It's got tons of functions, and even if you only use the basic scientific ones, it is a hell of a good deal, right? I kind of like being able to see the next few levels of the stack instead of having to remember what's in there. It's not a big deal, but it is nice when you're trying to work with some particularly nasty equations, right? It does lack the pocket size and the charm of the RPN machines, but it gets the job done HP-style and on a tight budget.

For the charm-factor, I have an hp 45 that I just bought and fixed up, which I'm absolutely delighted with... The hp LED display is absolutely top-shelf. But I'm getting of on an arctan here...

-Jeremy

PS - To sum it up concisely, it was not about choosing between a 48GX and a 48G, but between having BOTH a TI-85 and a 48GX instead of a TI-85 and $120. A couple of years later, I found myself missing the 48GX, but not the expansion. So here I am.

Re: There were a number of factors...
*Message #15 Posted by **John K. (US)** on 19 Mar 2003, 5:45 a.m.,*
in response to message #14 by Jeremy

For US$40, a 48G is a *great* deal. For most things, I prefer the older 4-level stack RPN machines, but the 48/49 devices have some very nifty features. One of my current favorites is the ability to attach units to numbers and plug them into the SOLVE variables. The way that it converts units automagically within the app is just way too cool. And it has saved me more than a couple of times when I fat-fingered an equation. Heck, NASA probably wouldn't have lost the Mars Polar Lander if they'd been working their calculations with units on a 48G. ;^)

There may be other calculators out there that will do the same thing but if so, I don't know which ones.

Re: I don't have ANY manuals yet...
*Message #16 Posted by **James M. Prange** on 19 Mar 2003, 2:04 a.m.,*
in response to message #3 by Jeremy

For your new 48G, I strongly recommend getting the "HP 48G Series Advanced User's Reference Manual".

In my opinion, The 48G Series User's Guide was a disappointment. But the CD-ROM set/DVD-ROM has the 48SX User's Manual and Programmer's Reference Manual; most of the information on the 48S series also applies to the 48G series.

Also note that there's a lot of information about RPL models available at http://www.hpcalc.org/

Regards,
James

Thanks, I'll look into that.
*Message #17 Posted by **Jeremy** on 19 Mar 2003, 8:52 a.m.,*
in response to message #16 by James M. Prange

I had already discovered some good sites dedicated to the 48G. I was prompted to search when I read the part on this site that said something like: "..there are already plenty of websites dedicated to the 48G..."

I guess the first place I will start to look for the Advanced Users Reference will be HP, because their markup won't be so bad... If I'm lucky, they will have it as a free download, but I'm not crossing my fingers there.

-Jeremy

Re: Thanks, I'll look into that.
*Message #18 Posted by **James M. Prange** on 19 Mar 2003, 10:09 a.m.,*
in response to message #17 by Jeremy

I doubt that HP will have a download (they didn't last time I checked).

Try:
http://www.calcpro.com/

Re: How about an 'RPN Excercises Page'?
*Message #19 Posted by **joe** on 18 Mar 2003, 11:03 p.m.,*
in response to message #1 by Jeremy

Would you please tell me more about that page? Where can I find it? I am new at RPN too, and would appreciate any help.

Thanks, joe

Here's the RPN page that is on the site already.
*Message #20 Posted by **Jeremy** on 19 Mar 2003, 12:36 a.m.,*
in response to message #19 by joe

You can find it in the menus on the right side of the main page, but here is a link to it directly from here:

Learn RPN Page

The page is very well done, and I have just printed it out today, so that I can carry it around and practice it when I have a free minute here and there. Once you get used to the new thought process, it really does make sense, and it really does come quickly.

-Jeremy

Re: Here's the RPN page that is on the site already.
*Message #21 Posted by **joe** on 19 Mar 2003, 8:50 a.m.,*
in response to message #20 by Jeremy

Thank you very much...

Re: How about an 'RPN Excercises Page'?
*Message #22 Posted by **Michael F. Coyle** on 18 Mar 2003, 11:51 p.m.,*
in response to message #1 by Jeremy

Sound like a good idea. I'd be glad to volunteer, but I can't do it alone. Maybe if one or two other people get on board we could get something done quickly.

But I just had another thought. Maybe it would be a better idea to just recommend that folks new to RPN buy the CD-ROMs and learn from the original manuals.

Thoughts, anyone?

- Michael

Re: How about an 'RPN Excercises Page'?
*Message #23 Posted by **Vieira, Luiz C. (Brazil)** on 19 Mar 2003, 12:49 a.m.,*
in response to message #22 by Michael F. Coyle

Hi;

I mentioned this possibility in my first post at this very thread, but my only concerns are related to the different resources from one model to the other. I believe a "starting" or "reference" point would be a good choice for those who bought or recover a vintage/earlier RPN model and want to go further. If you have an HP10C and want to follow the examples available in the HP67 manual, chances are you'll miss the R^ (roll-up) function/key. In this case, the best vintage manual would be the HP25 User's Manual, so you can follow almost all examples as is.

The *Learn RPN Page* is already copied (as all MoHPC contents) in the CD's. I think an RPN tutorial in the CD is a very good idea, indeed. The *Learn RPN Page* is dedicated to show how does RPN work, and is not particularly

focussed in key sequences or in a specific model. This is very important.

I'll prepare something and allow others to look and "taste".

Best regards.

Luiz V. Vieira - Brazil

Re: How about an 'RPN Excercises Page'?
*Message #24 Posted by **Michael F. Coyle** on 19 Mar 2003, 8:56 p.m.,*
in response to message #23 by Vieira, Luiz C. (Brazil)

Hi Luiz!

You wrote, concerning using vintage HP manuals: *...my only concerns are related to the different resources from one model to the other. I believe a "starting" or "reference" point would be a good choice for those who bought or recover a vintage/earlier RPN model and want to go further.*

I agree. I think our target audience is people who have no RPN experience who want to become proficient.

If you have an HP10C and want to follow the examples available in the HP67 manual, chances are you'll miss the R^ (roll-up) function/key.

I was suggesting that a new owner of an old calculator get the MoHPC CD set. That way, they could learn from the correct manual and this would not be an issue. (I think the CDs have all the old manuals.)

Even with the CDs, I think there is still room for a detailed RPN tutorial. It could cover many topics in more detail than the original manual, not just explaining *what* the features are, but *why* they work the way they do, and *how* to use them to their best advantage.

The problem here is that if say, half the calculators have R^ and the other half don't, and you want to write a "generic" RPN manual, how do you do it? My ideas are below. (And I agree with you, the RPN tutorial on this site is good, and it's good that it's generic.)

In this case, the best vintage manual would be the HP25 User's Manual, so you can follow almost all examples as is.

The HP-25 manual is terrific but the 25 has no R^!!!

Anyway, let's take a step back. As I see it, there are three main types of RPN in use:
Classic RPN, like on the HP-25 (I'll call this "25-style.")
HP-41 RPN, like 25-style but with many more stack manipulations possible. (Call it "41-style.")
RPL, like on the HP-48, 49. (Call it "RPL" or "48-style.")

I think a tutorial that tried to present optimum examples that work with all three styles of RPN would be too complex and would fail. I think we should concentrate on 25-style RPN and not worry for now if the examples work on the other machine. (Exception: first introductory chapter should not cover any advanced material and should be so generic that it *will* work on any calculator.)

I think the feature set we should have in mind is that of the HP-25, that is, 4 basic functions [+][-][*][/],

[ENTER^], [CHS], [EEX], [CL*x*], [*x*<>*y*], [R dn], and scientific functions as needed. Perhaps also a display mode command so the user's display can match the the tutorial's.

To deal with R^, we might present the answers with and without R^:

Example: compute ...<something>...
Solution: ...<series of keystrokes>...
If your calculator has [R^], you can save two keystrokes:
...<series of keystrokes>...

Since only a small number of examples would benefit from R^, the text would not become too cluttered.

Now it is true that every calculator has its own little quirks. Prehaps the best way to deal with this is to add a chapter at the end with notes for each specific calculator. For example, the notes for the HP-35 would mention the odd CHS behavior and the fact that trig functions erase the value of T.

If you want, I can write up some sample text. And I'd be glad to look at what you come up with.

- Michael

Here's a sample, Luiz
*Message #25 Posted by **Michael F. Coyle** on 19 Mar 2003, 11:21 p.m.,*
in response to message #24 by Michael F. Coyle

Hi Luiz!

As an example of what I have in mind, I've written the section for everybody's favorite function, [%]. It has been lightly formatted and so is presented as preformatted text.

Am I on the right track here, do you think?

Anyone's comments welcome.

- Michael

```
======================================================
(title) % Is A Little Different


The [%] function is similar to the other 2-number functions.  First
key in your base amount, then the desired percent rate, then press [%].
The display now shows the percentage of the base amount.


Example: What is 15% of 45?
Solution: 45 [ENTER^] 15 [%]   (Answer: 6.7500)


Example: A 68 Ohm resistor is available with four different tolerances:
20%, 10%, 5%, and 1%.  How much resistance does each tolerance
```

correspond to?
Solution:
68 [ENTER^] 20 [%]   (Answer: 13.6000 Ohms)
68 [ENTER^] 10 [%]   (Answer: 6.8000 Ohms)
68 [ENTER^] 5 [%]   (Answer: 3.4000 Ohms)
68 [ENTER^] 1 [%]   (Answer: 0.6800 Ohms)

The computation performed is: y % x = (y*x)/100

Now here's the part that's different. As you know, all other 2-number functions operate by removing both numbers from the stack, performing the operation, and returning the result to the stack. After the operation, both original numbers are gone. (But the number in the X register just before the operation was performed can be retrieved with [LAST x].)

But the [%] function does not work this way. Only the second number is taken off the stack; the base amount (in the Y register) remains. The original contents of the X register (the percent rate) is replaced by the calculated percentage.

Why does [%] work this way? Well, the most common percentage calculation is to take a base amount and add or subtract the percentage to get a net amount. This is how we can calculate markups, discounts, and taxes. Having the [%] function preserve the base amount on the stack simplifies this kind of calculation -- you don't have to key in the base amount a second time.

The following examples use amounts in U.S. Dollars ($). Set your calculator to display 2 decimal places: [FIX] 2

Example: A shopkeeper wants to raise the price of a $5 battery by 25%. What is the price increase? What is the new price?
Solution: 5 [ENTER^] 25 [%]   (Answer: $1.25 price increase)
          [+]   (Answer: $6.25 is the new price)

Example: A cell phone manufacturer reduces the price of a $50 phone by 18%. What is the price decrease? What is the new price?
Solution: 50 [ENTER^] 18 [%]   (Answer: phone costs $9.00 less)
          [-]   (Answer: the new price is $41.00)

Let's look at the stack for the last example:

```
T  0.00                0.00      0.00      0.00
Z  0.00                0.00      0.00      0.00
Y  0.00               50.00     50.00      0.00
X  0.00               18.00      9.00     41.00
        50 [ENTER^] 18       [%]       [-]
```

Notice how the base amount, $50.00, is still on the stack after the [%] operation.

We can also use [%] to perform chain calculations:

Example: A store is running a clearance sale -- every item in the store is being discounted by 30%. If the store normally sells the HP-48GX for $120, what is the discounted cost? What will the customer pay if a 7.5% sales tax is in effect?
Solution: 120 [ENTER^] 30 [%] (Answer: calculator costs $36.00 less now)
[-] (Answer: the sale price is $84.00)
7.5 [%] (Answer: sales tax is $6.30)
[+] (Answer: customer pays $90.30)

One last point: If you are just calculating straight percentages and aren't interested in the base amount, keep in mind that the base amount is still there anyway. You may wish to discard it.

Excercises:
... (None yet. Would be similar to examples. Answers at the back of the book.) ...

Notes:
1. [Delta %] also leaves its first operand on the stack. But unlike [%], I can't think of any reason why this might be useful.

2. Unlike the classic RPN calculators, the HP-48's [%] operation removes both numbers from the stack and just returns its one result. If you need the base amount for the next calculation, you must duplicate it before you do the [%]. This makes the calculations shown above more difficult on the HP-48. Exercise for HP-48 owners: write a program 'MY%' that calculates the percentage but preserves the base amount as described above.

(Solution: << SWAP DUP ROT % >> 'MY%' STO)

Re: Here's a sample, Luiz
*Message #26 Posted by **Vieira, Luiz C. (Brazil)** on 20 Mar 2003, 11:07 a.m.,*
in response to message #25 by Michael F. Coyle

Hello, Michael;

I sent you an e-mail with an attached file.

Did you get it?

best regards.

Luiz C. Vieira - Brazil

Yes, I got it
*Message #27 Posted by **Michael F. Coyle** on 20 Mar 2003, 1:59 p.m.,*
in response to message #26 by Vieira, Luiz C. (Brazil)

Hi Luiz,

Your PDF page looks very good! I like the calculator key symbols.

I notice you show sample keystrokes and displays from several calculators. This is nice. But I thought one of the ideas here was to make the document "generic", that is, not specific to any one calculator. I think this may mean that we should not show shift keys since they are always specific to each model. (Example: squart root is unshifted on some machines, gold-shifted on others, and blue-shifted on yet others.) We would probably have to write something about shifting in general and encourage the user to look at his own calculator to find out how to evoke each function. Since this just amounts to matching the function color to the shift key color, I don't think it's too much to ask.

As I look at this, it's looking like a bigger project than I anticipated. Writing the text is not hard, but tedious. Coming up with lots of examples and exercises will be hard work. It might be nice to get one or two others on board.

As for credit, I would have to insist that if we do the work, we should get the credit. I'm sure Dave will understand. If worst comes to worst we might have to host it on another site and just link to it from the museum site. I don't think it will come to that, though.

Other than that, good job!

Some questions. What do you think of the content of what I've written? Is it at the right experience level? Is there any slang or idiomatic usage that a foreigner might have difficulty with? (If so, I will rewrite.) Will using American dollars as a currency in the examples upset anyone?

Should we continue this in the forum or take it off-line? I'd prefer this to be a public exercise if possible.

Talk to you soon.

- Michael

Re: Yes, I got it
*Message #28 Posted by **Vieira, Luiz C. (Brazil)** on 20 Mar 2003, 2:29 p.m.,*
in response to message #27 by Michael F. Coyle

Hi, Michael;

we can (and must) continue this subject as a public one. The reason I sent you the PDF was that it's not yet finished, and I intend allowing it to be downloaded after removing as many "bugs" as possible. See, I justified all display contents to the right, and they must be all left-justified.

I used many calculator layouts because I have no idea about what is the user see when experiencing the examples. If I use a Voyager-like LCD character set, maybe Vintage owners will believe it's not for them. I just thought about a better, perhaps fancy look when using specific character set for the display. Maybe it's not exactly a good idea. That's the same for prefixed functions.

As the example deals with the same subject - percentage computations - I thought that using different "calculator environments" would be nice, too.

About US currency. I see no problem at all, mostly because world wide market is based in Euro and Dollar nowadays. Other currency are also used, but these two are mentioned constantly. I do not think anyone in here will complain, though.

I'll finish the "paper" and allow it to be downlaoded. if needed, I'll start a new thread asking for comments and suggestions. And believe me, this is something almost everyone in here will love to see and work through, and many new ideas and suggestions will happen. I think you have shown everything that can be done with [%] function, if I am not wrong. Later, when others see the PDF and suggest over it, we'll see the particular view from each one.

Best regards and thank you.

Luiz C. Vieira - Brazil

Re: How about an 'RPN Excercises' ARTICLE?
*Message #29 Posted by **Paul Brogger** on 19 Mar 2003, 2:00 p.m.,*
in response to message #1 by Jeremy

I haven't read every post in response, so this may have been suggested already:

How about drafting an RPN "Article" for the MoHPC Articles Forum? There will be no shortage of volunteers for editing, review and contribution. Once the material is gathered in one place, Dave Hick might then elect to "elevate" that article to a page in its own right, or to link to the article from the MoHPC RPN page.

(Mining the MoHPC Forum Archives for RPN-related topics and challenges would be where I'd start . . .)

RPN Book
*Message #30 Posted by **Chan Tran** on 20 Mar 2003, 7:26 p.m.,*
in response to message #29 by Paul Brogger

I got here the HP32E manual. It doesn't cover RPN at all but rather refers to the book "Solving Problems With Your HP Calculator". I remember now that was the book that covered RPN in general. The book came with the Spice series. I wonder anyone here have a copy?

Re: RPN Book
*Message #31 Posted by **Karl Schneider** on 20 Mar 2003, 11:33 p.m.,*
in response to message #30 by Chan Tran

Chan --

Excellent suggestion!

Yes, I have two copies of "Solving Problems With Your HP Calculator", received with two HP-34C's I got on eBay auctions. It's 55 pages long, well-illustrated -- the way they used to be. A nice little book, with ID 5955-5267 (Rev. B 8/80).

I'm not sure if it has been scanned on the MoHPC CD-ROM/DVD-ROM set, and I don't have a modern scanner.

Re: RPN Book -- Apparently on CD 6
*Message #32 Posted by **Paul Brogger** on 21 Mar 2003, 5:37 p.m.,*
in response to message #31 by Karl Schneider

The "Manuals on CD" page lists "Solving Problems ..." as being on CD # 6.

Re: How about an 'RPN Excercises' ARTICLE?
*Message #33 Posted by **Ed Martin** on 20 Mar 2003, 10:23 p.m.,*
in response to message #29 by Paul Brogger

This is an excellent idea, and one of the best threads I have seen (out of quite a few good ones).

What would be great is for someone to develop an outline for this article, then people could contribute to the various sections (each section could even have a thread of its own). I personally don't feel qualified to put together the outline, but I'm sure several of the MoHPC contributors are.

- Ed

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP 65
*Message #1 Posted by **Bengt Walerud** on 18 Mar 2003, 10:15 a.m.*

I have a HP 65 calculator that needs minor repair. There is a sound - a loose screw? - in the magnetic card reader. Can anyone advice me on where I can get help to fix this problem, preferably in Europe. Also in need of new battery.

Re: HP 65
*Message #2 Posted by **Richard Parfitt (UK)** on 18 Mar 2003, 12:38 p.m.,*
in response to message #1 by Bengt Walerud

Bengt, have a look at the 17th March entries under my name about batteries. As for taking the HP65 apart it all unscrews, Iv'e taken apart my 35,45,67,41C,41CV with no problems. You have to be careful with the srews when you put them back so as not to cross thread, TIP!! run them anti-clockwise with light pressure applied until they click and drop a threads distance, then they will go in nicely. As to the real problem, you will not know what is is until you strip it down. Where are you in Europe??. Can you strip it and then post a new message?.

Re: HP 65
*Message #3 Posted by **Bengt Walerud** on 19 Mar 2003, 4:27 a.m.,*
in response to message #2 by Richard Parfitt (UK)

Thanks for the reply. Don't feel too comfortable to take my HP 65 apart but will try it out. Read your posting regarding batteries. I would like to preserve the calculator in original condition i.e use the battery pack and find Ni-Cd batteries that fit in the pack. Any ideas? I live in Sweden.

Re: HP 65

*Message #4 Posted by **David Smith** on 19 Mar 2003, 6:13 p.m.,*
in response to message #2 by Richard Parfitt (UK)

The biggest problem in disassebling the HP65 is the two two screws under thwe upper corners of the label. You can get to them without too much problem by very carefully sliding a razor blade under each upper corner. You want to lift about 1/2 inch of label. Try for a gentle curve in the label. A sharp fold will leave a more visible mark in the label when you put it back together. When reassembling the machine I do NOT replace the label screws... otherwise you risk more damage to the label the next time you repair the machine.

Usually the label adhesive will be sticky enough to hold down the corners again, but sometimes you need to glue them down. I use a rubber contact cement that you paint on the calculator case and the label, let dry, and the rub the corners back down. Before applying the contact cement, clean off the old adhesive with alcohol. Make sure the contact cement does not pool in the seam of the lifted label corners.

The top two screws are under the little green plugs. Remove them by sliding the razor blade under the BOTTOM edge of the plug and gently prying it out. Do not pry from the sides or top of the plug.

The bottom two screws are under the bottom rubber feet. These feet are actually little hinged flaps. Only the inner side of each foot is held down. Just lift the outer edge of each foot with a small flat blade to get to the screws.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP67 Card Reader

*Message #1 Posted by **Howard** on 18 Mar 2003, 4:09 a.m.*

The card reader on my HP67 gives the message "error" when it reads a card. It does not do this when it records a card. Does anybody know any possible cause this problem? Thank you.

Re: HP67 Card Reader

*Message #2 Posted by **David Smith** on 18 Mar 2003, 5:56 p.m.,*
in response to message #1 by Howard

First, I am assuming that the reader drive wheel has been rebuilt, and the heads, etc have been cleaned. If another machine can read the cards that you write, then the problem is almost certainly a bad small blue colored dipped tantalum capacitor. It is located near the top end of the card reader chip. This cap filters the power supply to the reader chip. It develops a high ESR and quits filtering properly.

Re: HP67 Card Reader

*Message #3 Posted by **Howard** on 19 Mar 2003, 5:53 a.m.,*
in response to message #2 by David Smith

Dave, I do not have another reader to test whether the cards I write can be read but I would be willing to try your solution. However my HP67 does not have a blue capacitor. It had a small (approx .25" long - .125" dia) tubular thingy with coloured stripes on it. I could replace it. I'll have to see what the size is. I think the coloured stripes are a code. Are the blue capacitors interchangeable with the one I have. Which, if any, is the better one? Thank you. Howard. PS I wonder if this is what is causing my problem with my card reader for the HP41. It just give "malfunction" on every attempt to read or write.

Re: HP67 Card Reader
*Message #4 Posted by **David Smith** on 19 Mar 2003, 6:17 p.m.,*
in response to message #3 by Howard

You have a very old reader circuit. The striped component you mention is a resistor that sets the motor speed. Don't mess with it. There are three tubular silver capacitors on these older boards. Two connect to the head winding circuitry and the other is the filter cap. I can't remember which is which. I do not know if the filter cap on these older readers is prone to the problem or not. I replace that little blue devil on any reader that I rebuild. I think they will all go bad someday... just like the rubber roller.

Re: HP67 Card Reader
*Message #5 Posted by **Howard** on 20 Mar 2003, 4:37 p.m.,*
in response to message #4 by David Smith

So do you think I should replace all three of those capacitors?

Re: HP67 Card Reader
*Message #6 Posted by **David Smith** on 20 Mar 2003, 5:50 p.m.,*
in response to message #5 by Howard

I would try to find the one on the power supply first. But replacing all three would be almost as easy.

Re: HP67 Card Reader
*Message #7 Posted by **Howard** on 26 Mar 2003, 8:27 a.m.,*
in response to message #6 by David Smith

David, I don't have much of a clue about electronics. The three capacitors are marked 4v and 15k and two 4v 22k. Radio Shack and other places I made enquiries at looked at me like I was stupid when I asked for these. They are all measured in micro and pico farrads now. Are they interchangeable. Can you give me a clue. What should I ask for? Thank you. Howard.

Re: HP67 Card Reader

*Message #8 Posted by **Bengt Walerud** on 19 Mar 2003, 4:24 a.m.,*

in response to message #1 by Howard

Thanks for the reply. Don't feel too comfortable to take my HP 65 apart but will try it out. Read your posting regarding batteries. I would like to preserve the calculator in original condition i.e use the battery pack and find Ni-Cd batteries that fit in the pack. Any ideas? I live in Sweden.

Sorry!

*Message #9 Posted by **Bengt Walerud** on 19 Mar 2003, 4:27 a.m.,*

in response to message #8 by Bengt Walerud

Ignore last message I posted in wrong thread

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Soft Forth for the HP-71B
*Message #1 Posted by **J-F Garnier** on 18 Mar 2003, 3:22 a.m.*

In a recent thread http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/archv010.cgi?read=28643, I mentionned the existence of the soft Forth for the HP-71B (soft Forth means that it can be used in a standard RAM or EPROM module).

I looked into my archive and recovered the Soft Forth. Version is VER$='SFTH:E'. When I enter Soft Forth by executing 'SFTFORTH', 'HP-71 Soft FORTH E' message is displayed. I also have a preliminary manual (release 2.4, dated Feb 3, 1986).

Does someone have a more recent version of Soft Forth code and/or manual, or an application built with Soft Forth?

Thanks for any information.

J-F

Re: Soft Forth for the HP-71B
*Message #2 Posted by **Mike (Stgt)** on 18 Mar 2003, 5:11 a.m.,*
in response to message #1 by J-F Garnier

Sorry, I have no Soft Forth. Only a question: T'a le temps pour le rencontre à Berne? See www.mfk.ch

Ciao.....Mike

Re: Soft Forth for the HP-71B
*Message #3 Posted by **Philip** on 18 Mar 2003, 9:48 a.m.,*
in response to message #1 by J-F Garnier

Could you make those files available?

Re: Soft Forth for the HP-71B
*Message #4 Posted by **andy** on 18 Mar 2003, 7:02 p.m.,*
in response to message #1 by J-F Garnier

Can you make "soft forth" available?

Is it a LEX file?

Re: Soft Forth for the HP-71B
*Message #5 Posted by **J-FGarnier** on 19 Mar 2003, 3:26 a.m.,*
in response to message #4 by andy

Soft Forth needs a 64k RAM module (not 2 x 32k, a real 64k one). It is made of 2 files: a SFTFORTH LEX file and a FORTHEADER FORTH file. It creates a FORTHSYS FORTH file as the first RAM file (similar to FORTHRAM with the FORTH/ASS module).

From what I understood from the documentation, the Forth module is still needed to develop the application. Soft Forth is only a way to make Forth based applications that can run without the Forth module.

Actually, I never run Soft Forth until a few days ago, because I don't have a 64k RAM module. I used my Emu71 to test it (I modified Emu71 to emulate 64k/128k module, just in order to test Soft Forth!).

I read the original 17 years old floppy disk without any problem, I even didn't have a backup copy!

I will put some information on my site soon. I will let you now.

J-F

Re: Soft Forth for the HP-71B
*Message #6 Posted by **andy** on 19 Mar 2003, 12:41 p.m.,*
in response to message #5 by J-FGarnier

Please let us know when you make it available (would you mind emailing me a copy sooner?).

I have a 128k RAM module...do you think it will work with that?

thanks,

Andy

Re: Soft Forth for the HP-71B
*Message #7 Posted by **kim** on 19 Mar 2003, 3:34 p.m.,*
in response to message #5 by J-FGarnier

Monsier Garnier

Where is you Web page?

Kim

Re: Soft Forth for the HP-71B
*Message #8 Posted by **J-F Garnier** on 20 Mar 2003, 6:50 a.m.,*
in response to message #7 by kim

http://membres.lycos.fr/jeffcalc/

Regards.

J-F

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Re. Most useless function
*Message #1 Posted by **John Mosand** on 18 Mar 2003, 2:38 a.m.*

One contributor felt that 'grad' was questionable. 'Grads' (400 deg) has been standard for surveying in many countries for a long time, as evidenced by e.g. the many slide rules with 400 deg trig scales.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

How to add a 'constant' using RPN?
*Message #1 Posted by **joe** on 17 Mar 2003, 9:57 p.m.*

Question:

how do you add a constant over and over again? I have an HP12c and I would like to take a starting value and keep adding 128 to it.

I can do this by taking the original value 1240 + 128. One would do it like this:

1240 ENTER 128 +

This gives me a total to which I want to add 128 to. What is the easiest way to do that? I can hit ENTER and 128 + once again, but is there a better way?

On certain 'regular' calculators, one has to just hit the plus button and you get your answer. Is there something similar using RPN?

Thanks, joe

Re: How to add a 'constant' using RPN?
*Message #2 Posted by **Michael Meyer** on 17 Mar 2003, 10:22 p.m.,*
in response to message #1 by joe

It's easy!

Simply type in "128", Enter, Enter, Enter.

Then type in an X value, hit "+".

You can keep adding 128 to the total by hitting "+".

Or, to add another number to 128, hit "CLX"; type in the new X, then hit plus.

Any value placed in the "t" register will be duplicated when the stack "drops".

Easy!

Michael

Re: How to add a 'constant' using RPN?
*Message #3 Posted by **db(martinez,california)** on 17 Mar 2003, 10:24 p.m.,*
in response to message #1 by joe

128 (# in your example), enter, enter, enter, whatever # you want to preform arithmatic on, + - X or /, note or store your answer, roll down, key in the next number you want to preform an operation on, then + - X or /, note or store the answer, roll down, repete till your tired of it. this works on any rpn with a replicating t register, not just hp.

Re: How to add a 'constant' using RPN?
*Message #4 Posted by **Scuba Diver** on 17 Mar 2003, 11:00 p.m.,*
in response to message #3 by db(martinez,california)

Just a word of caution;

This doesn't work on all HPs, only those with 4-level stacks.

Filling the t-stack with your constant won't work on the 28 and 48, for instance, because neither calculator has a t-level

Interestingly, it does work on the 17BII and 19BII, eventhough they don't actually have a standard 4-level stack...their stack expands to a maximum of 4 levels, depending on the number of items placed in it.

B.

Re: How to add a 'constant' using RPN?
*Message #5 Posted by **Richard Garner** on 17 Mar 2003, 11:16 p.m.,*
in response to message #1 by joe

I am not familiar with the 12c, but if it is capable of it. Do a 128 STO 01, then every time you wanted to +, -, *, or / you could do a RCL+ 01, RCL- 01, RCL* 01 or RCL/ 01. This has the advantage of leaving the stack elements in place for other calculations.

Re: How to add a 'constant' using RPN?
*Message #6 Posted by **joe** on 17 Mar 2003, 11:46 p.m.,*
in response to message #1 by joe

Thank you all for the timely answers. I appreciate it.

joe

Re: How to add a 'constant' using RPN?
*Message #7 Posted by **James M. Prange** on 18 Mar 2003, 2:43 a.m.,*
in response to message #1 by joe

I'd probably use the LASTX command. Press the prefix key g, then LST*X* (the ENTER key), and then +.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

calculator emulator on windows?
*Message #1 Posted by **lokhin** on 17 Mar 2003, 12:52 p.m.*

are there any emulators for windows that emulates the pioneers (hp 17bii, hp 42s, hp 32sii, hp 20s), like the emu48?

Re: calculator emulator on windows?
*Message #2 Posted by **Erik Ehrling (Sweden)** on 17 Mar 2003, 3:26 p.m.,*
in response to message #1 by lokhin

Christoph Giesselink released the source code for an alpha version of an excellect HP42S emulator (Emu42) some months ago. If you search the message archives you should be able to find a pointer to it.

Regards, Erik

Re: calculator emulator on windows?
*Message #3 Posted by **R Lion** on 18 Mar 2003, 2:09 p.m.,*
in response to message #2 by Erik Ehrling (Sweden)

I've got the zip file... and now, how can I use the emu42? Can you help me?

Raul

Re: calculator emulator on windows?
*Message #4 Posted by **lokhin** on 19 Mar 2003, 4:12 a.m.,*
in response to message #3 by R Lion

thanks, I found it. but how to make it work?

Please, please, please, help us! (no text)
*Message #5 Posted by **R Lion** on 19 Mar 2003, 4:39 a.m.,*
in response to message #4 by lokhin

Thanks

Thanks to Erik Ehrling...
*Message #6 Posted by **R Lion** on 21 Mar 2003, 2:13 a.m.,*
in response to message #5 by R Lion

...for sending a full working emu42

Raul

Re: Thanks to Erik Ehrling...
*Message #7 Posted by **lokhin** on 21 Mar 2003, 6:25 a.m.,*
in response to message #6 by R Lion

may i have a copy?

Re: Thanks to Erik Ehrling...
*Message #8 Posted by **lokhin** on 21 Mar 2003, 10:37 a.m.,*
in response to message #7 by lokhin

thank you very much! I got it

Re: calculator emulator on windows?
*Message #9 Posted by **Mike (Stgt)** on 18 Mar 2003, 5:13 a.m.,*
in response to message #1 by lokhin

Once there was one for the HP-10B on a french site of HP.

Ciao.....Mike

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

9114 disk drive - battery
*Message #1 Posted by **Terry Ingram** on 17 Mar 2003, 11:46 a.m.*

Hello,

Does anyone know where I can find a battery pack & charger for the hp9114 portable disk drive.

I've contacted Digi-Key regarding the "P262-ND" battery as suggested by an article on this web site, but was informed the battery is no longer available.

Also, are there a substantial difference between the 9114 & and 9114B disk drives?

Thanks, Terry Ingram

Re: 9114 disk drive - battery
*Message #2 Posted by **andy** on 17 Mar 2003, 2:27 p.m.,*
in response to message #1 by Terry Ingram

I think that there was an extensive discussion on this just last week...there was some good information passed around too. See postings on 3/16.

Andy

Re: 9114 disk drive - battery
*Message #3 Posted by **andy** on 17 Mar 2003, 2:28 p.m.,*
in response to message #2 by andy

Sorry...see posting on 3/12.

Andy

Re: 9114 disk drive - battery

*Message #4 Posted by **Dave Mabry** on 17 Mar 2003, 2:39 p.m.,*

in response to message #1 by Terry Ingram

I just replace the cells in a 9114a disk drive last week. Per Tony Duell's suggestion I acquired some sealed lead acid batteries made by Hawker Energy (formerly Gates). They are shaped like D-cells but are 2.5ah 2volt cells with both terminals on one end. There is a pack of three sold with a part number 0810-0077AJ. The plastic pack can easily be taken apart to get the three cells out, already wired in series. That set of three fits almost perfectly inside the battery pack for the 9114a drive, and it seems to be perfectly compatible with the charging circuit. Took about 15 minutes for me to assemble, once I found the batteries. And it now works fine.

Re: 9114 disk drive - battery - rephrase question

*Message #5 Posted by **Terry Ingram** on 17 Mar 2003, 2:50 p.m.,*

in response to message #4 by Dave Mabry

Thanks for information. But I think my question was worded incorrectly.

I haven't purchased a 9114 yet, but through a phone conversation with the seller, I was told the entire battery pack was missing. I was also told the AC adapter plugged directly into the battery pack.

I'm assuming that I would need an original battery pack, or possibly some other method to hold the cells in place, and also be able to connect the AC charger.

Does anyone have a working 9114 for sale?

Thanks, Terry Ingram

Re: 9114 disk drive - battery - rephrase question
*Message #6 Posted by **Dave Mabry** on 17 Mar 2003, 3:01 p.m.,*
in response to message #5 by Terry Ingram

I don't have one to sell, however I might have some information that will help. The connector on the drive, inside the cavity that the battery pack goes into, where the battery pack itself connects to the drive, is a standard two-pin connector. You can buy it many places. All you need is a 6 volt source to power the drive. Tony said that you should have a source that can handle 2 amps. I've seen them powered with wall warts and external battery packs. Of course you would need to be able to charge the pack if you use one of your own design externally. The charging circuit was part of the original battery pack and was powered by the "standard" HP wall wart 82059 that put out 8vac, 3W. Obviously it could not power the drive, just charge the pack.

Hope this helps.

Re: 9114 disk drive - battery - rephrase question
*Message #7 Posted by **Raymond Del Tondo** on 18 Mar 2003, 5:14 a.m.,*
in response to message #5 by Terry Ingram

Hi,

maybe I have that suitable battery drawer for sale. I'll look in my stock, if you're interested.

As I mentioned in another post, the original replacemnet battery pack from Panasonic costs about 11 to 12 Euros plus shipping here in Germany. No fiddling with discrete cells, just a five minute replacement of the whole block.

I could include a new Panasonic block, just drop me a note via email.

Regards,

Raymond

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Calculators I would market
*Message #1 Posted by **Ron Ross** on 17 Mar 2003, 11:26 a.m.*

I feel that Hp has missed the boat (BIG TIME).

I think Hp should market 3 types of calculators (scientific).

The first would be a low end calculator like the recently discontinued Hp20s with RPN/Algebraic option. This was a quality calculator that could have just as easily been released in RPN and the price should be about $30. Give it plenty of RAM for a low end unit ie 1-8K of RAM. More is a waste since you want to keep it cheap so no I/O or real programming support.

Next is the calculator I would Have to Have. A full blown POCKET calculator. All the functions and features of a 48G with 128K RAM, but no graphics, to keep it the size to fit in a standard shirt pocket, ie a 42sX type unit. If you could squeeze in an Hp28s type display GREAT. If not, Don't. But give it everything else. I/O, And RAM. 128K or even 1 Meg with it being able to run 48G type software with little or no modifications (of course not the graphics). Keep everything compatable with the 48G if possible aside from graphics. Make it definitely RPN, but with this being such an all powerful pocket calc, maybe algebraic as well. Price $100-200, I would probably even pay more.

Third calculator, would be to re-release the 49G with new Hardware, ie new keyboard (more like the 48 with a thinner form factor) and a faster CPU. Double or triple speed so that it can compete with Ti's Motorola CPU. Price has to be less than $200 to compete with any school graphics.

None of these suggestions require any large expendurture of R&D from HP. These would be quick turnarounds. And I think would grab quick market share. Would Hp ever gain market control?? No, I do not believe that is possible while selling quality as todays calculator market is dominated by a disposable mentality of calculators. Many people want a $10 calculator so that if it is lost or broken, it is not a real loss. HP calculators were not ever supposed to be in that market. (At least not MY HP's)

I agree, except on one point...
*Message #2 Posted by **Jeremy** on 17 Mar 2003, 12:43 p.m.,*
in response to message #1 by Ron Ross

The middle model should be less than $100. This is fully possible with HPs muscle. If it cost more than $100, people would compare it to the TI86 and HP48G and it would never sell. (except to us... ;)) -Jeremy

Re: Calculators I would market
*Message #3 Posted by **Tom (UK)** on 17 Mar 2003, 1:08 p.m.,*
in response to message #1 by Ron Ross

All the suggestions use code that has to run on a Saturn processor. This is (or will be very soon) obsolete.

So HP will have to either:

1) Redesign the Saturn using a modern semiconductor process

2) Re-write the code to run on another processor

3) Have an emulator running on a faster processor

I wish they would do one of the above (my preference would be '3') but all of them will take a fair amount of time and money - something HP have not been famous for lately.

Re: Calculators I would market
*Message #4 Posted by **Chan Tran** on 17 Mar 2003, 2:24 p.m.,*
in response to message #3 by Tom (UK)

I disagree with Jeremy on price. I don't think HP can ever steal customers away from TI by selling calculators at lower price. If the calc is of very high quality I think $300 isn't too much. I think HP users are used to that kind of prices like the 65,67,41,48 etc....

A comment for Chan...
*Message #5 Posted by **Jeremy** on 17 Mar 2003, 6:40 p.m.,*
in response to message #4 by Chan Tran

I respect what you're saying, but many of the best future consumers of HP calculators simply cannot afford that much. In a market where a high school student can get a perfectly functional Casio for $12, $100 + is too much for a scientific calculator. (especially one that doesn't graph) Maybe it's not too much for you, but for many a struggling high school or college student, $300 is way too much. I suppose you could argue in favor of the cheaper RPN/algebraic model in this case... But then it might not have all the requisite features. It's tough to say, I guess. -Jeremy

Re: A comment for Chan...
*Message #6 Posted by **Steve Hanson** on 17 Mar 2003, 10:51 p.m.,*
in response to message #5 by Jeremy

You might be surprised.

I recently bought my first luxury car after 35 years of driving and then I found a forum dedicated to it. Within the first week, someone posted a poll that just said "what's your age" and the options were:

Under 18, 18, 19-20, 21-22, 23-25, or over 25.

I thought that was ridiculous - where would 25 year-olds come up with that kind of money? Well the top answer was 18 and I was the ONLY vote in the over 25 category.

There are a lot of kids (or parents) with a LOT of money. Of course not EVERY kid maybe not even most kids but I don't think HP needs to sell to everyone. Right now I'd settle for SOMEONE.

Re: Calculators I would market
*Message #7 Posted by **Christof** on 17 Mar 2003, 11:32 p.m.,*
in response to message #4 by Chan Tran

I think that something like a 42X (maybe running full rpl, maybe running an updated keystroke 42 like model) with 256-1024k, clock, and the display capabilities of the 28S cna be done. probably at 4mhz. probably sold in a pioneer form factor for under $120.

what do you do about the more than $30, but less than $120 range? an 8k 32sii variant. you ahve to be able to do it for $65, though.

on the low end, I don't think you can do a $30 calc with 8K RAM. I really don't- not with any sort of decet quality. the 20S was fairly priced, and with technological advances can probably be bumped up to rpn/alg switchable, some solver ability, and more ram- but maybe closer to 2k.

But let's look at it- 99steps of fully merged keystroke programming? give it a stack (make it RPN) and for $30 the 20SII would be the equivalent of any pre 67. it's not that bad, even with 99 steps. Since you have to keep the simpler LCD to do that price range (probably), anything over about 300 steps is just too bothersome to program. give me alphanumerics and it's a different story.

Re: Calculators I would market
*Message #8 Posted by **Monte Dalrymple** on 17 Mar 2003, 2:51 p.m.,*
in response to message #3 by Tom (UK)

Option 1 could be done in 6 months and for about $200K in the absense of a bloated beaurocracy (sp?). I would stay away from the bleeding edge of technology and use a .35u gate array, giving a packaged chip cost of less than $1.50. The advantage of the Saturn architecture is it's power consumption characteristics, but I expect that it would run in excess of 60MHz in this kind of technology if you really wanted speed. If there were more documentation available and I didn't have three kids in college I might even start this as a back-burner project (but put it in an FPGA to start with).

Re: Calculators I would market

*Message #9 Posted by **Masao Kinoshita** on 18 Mar 2003, 9:16 a.m.,*

in response to message #8 by Monte Dalrymple

I don't know about this Forum designing its own calculator. I remember back when Richard Nelson left PPC and started CHHU. All he (we that followed him to CHHU) wanted was a users' group, not a business to compete with HP. I don't think HP will ever ask Dave to do anything again like sending RPN manuals to Kinpo, if they felt this Forum could become their competitor.

Deja vu

PPC #8585, CHHU #123, HPCC #1031

Dean Schwartz denied me an HP 71B back then. Then my parents gave me a Casio FX-802P. I was grateful and all, but ...

Re: Calculators I would market

*Message #10 Posted by **Masao Kinoshita** on 18 Mar 2003, 9:59 a.m.,*

in response to message #9 by Masao Kinoshita

And Paul Ceruzzi gave me his Sharp PC-1250. This was one reason I decided against Seiko's wrist terminal with the Z8 BASIC programmable base station. I didn't want to have to carry around a mini-keyboard, but still wanted to be able to input info on the fly. Casio's Data Bank watches, though more limited, let you do this.

Re: Calculators I would market

*Message #11 Posted by **Monte Dalrymple** on 18 Mar 2003, 12:45 p.m.,*

in response to message #9 by Masao Kinoshita

I wasn't proposing to start a group project. If HP is reading this I'd be happy to talk to them. Designing microprocessors is what I do for a living.

Re: Calculators I would market - comments about emulation

*Message #12 Posted by **Bill Wiese** on 17 Mar 2003, 4:46 p.m.,*

in response to message #3 by Tom (UK)

Tom & folks...

> Tom(UK) wrote: > ...(snip) So HP will have to either: > 1) Redesign the Saturn using a modern > semiconductor process > 2) Re-write the code to run on another processor > 3) Have an emulator running on a faster processor > I wish they would do one of the above (my preference > would be '3') but all of them will take a fair amount > of time and money - something HP have not been famous

Option 3 is not so bad. Saturn is probably quite similar; a 68HC05 8051+4K ROM could do an emulation of 'Nut architecture and still have room for some application code and a small hardware-abstraction layer.

If function call overhead minimized (steals speed) this could even be done in C on such a microcontroller. Prob some of the code structure/flow of the HP45 emulator on this website could be used!!

Doing a professional job of this (i.e, planning ahead to not back oneself into a corner, plan for future changes, doing test suites, documentation, etc.) might be a 2 month job - quite a bit faster to just do a one-time hack to get something out.

I have a nice Rockwell 350 desktop sci calc (algebraic) from mid-70s. VFD and nice keyboard and fullsize keys - but it's inaccurate as hell. I think I can find a double-size keytop that says "Enter" and that fits this (standard keyswitch) keyboard - and redo this into an RPN monster with an 8051. (I don't have to worry about power consumption here.) One of these days when I have time - reall soon now :)

As HP calcs' innards start to fail more & more - even though physical case, KB, displays may be OK - putting an emulator inside a microcontroller may be the way to go.

Bill Wiese San Jose, CA

What should the price points be?
*Message #13 Posted by **Scuba Diver** on 17 Mar 2003, 11:12 p.m.,*
in response to message #12 by Bill Wiese

Someone mentioned a 3-calc scientific line. If the first one is cheap, and has RPN/ Algebraic, then it would attract a large population, namely high school students. High school students don't have much disposable income, and this calc would meet all of their needs (let's be honest, high school math and physics do not require powerful calculators!) Another nice feature would be a built-in RPN tutorial; it would allow people to learn RPN at their leisure if they don't already understand it.

The other two units could easily be priced at $100 and $300 accordingly; the market there would be university and professionals.

You can argue that university students don't have much disposable income (When I went to school, Kraft Dinner was a staple of my diet!) however, I know many people who bought 28Ss and 48Ss at the campus bookstore.

People would have an expectation that the higher end units would have the old HP feel to them; they would have to be rugged, and well designed. And don't forget the documentation! Concise, yet comprehensive. Everything you need to know, plus loads of stuff you may look up someday.

And, finally, revert back to the old serial numbering system (eg. 3424AXXXXX)! The new protocol (ID1XXXXXXX) mandates a maximum shelf life of 10 years for a product (otherwise the serial numbers would start repeating!)

B.

Re: Calculators I would market
*Message #14 Posted by **Christof** on 17 Mar 2003, 11:34 p.m.,*
in response to message #3 by Tom (UK)

the z80 still lives....

yeah, redoing the saturn with modern chipmaking techniques would be nice.

but the 48GX isn't functionally much slower than the ti89 in anything except graphics. it's not that bad :)

Re: Calculators I would market
*Message #15 Posted by **Eddie Mabillard** on 18 Mar 2003, 9:45 a.m.,*
in response to message #14 by Christof

hello HP fans, very glad to read this serie "calculator I woukd market", as I already wrote before, the entry one should be cheap and RPN only, once those kids having tasted the power and ease of calculation of RPN will be ripe to put big bucks for the old HP quality whith the new capabilities of modern hardware, and then HP could gain a big share of the market of calculators. Eddie

Re: (Voice from the Wilderness) The Z-80 is AVAILABLE today . . .
*Message #16 Posted by **Paul Brogger** on 20 Mar 2003, 12:04 p.m.,*
in response to message #14 by Christof

. . . if you haven't yet, consider reading this. (Especially, the paragraph beginning, "Also, ..." and thereafter.)

I keep promising to shut up about this, but it seems everyone is circling about and yet not seeing a very nearly complete solution, and with an underlying air of futile resignation -- perhaps just because of the label on the hardware. That, for me, is the most frustrating aspect of all! I mean, you're allowed to do so, but if what you want is a FULLY configurable/programmable calculator platform with a computer link and (relatively) open, currently-supported technology, it's not HP, but it's just ~$100.00 away . . .

If anyone cares to rant at me in private (using non-Forum-compatible language, for example), take the "NoHormel" (i.e., No Spam) out of my email address above, and fire away. Meanwhile, I'll go to my Nagger's Anonymous meeting and promise (again) to get back **"on the** (be *QUIET!*) **wagon"**. (I'm sorry -- I can't help myself . . .)

Re: (Voice from the Wilderness) The Z-80 is AVAILABLE today . . .
*Message #17 Posted by **Bill Wiese** on 20 Mar 2003, 4:09 p.m.,*
in response to message #16 by Paul Brogger

Hi...

Yes, newer TI calcs (TI-8X) can indeed be re-flashed and reconfigured. Their Z80 architecture is reasonably speedy, and it could in fact be purged & replaced with a Coconut emulator that'd run stuff roughly as fast as a 41C, maybe 42S.

Unfortunately the real issue is not software. We can pretty much, if there's a way to introduce new program firmware into a handheld device, make "anything" be an HP. Whether that's done in BASIC, C, Tiny-C, or assembly is moot, as long as it's fast enough.

The problem is the physical embodiment and 'making a nice product' (well, device) of it. You have to deal with keys and keytops, legends above keys, etc. You'd really need to have a double-sized [ENTER] key too.

RPN on a TI platform without appropriate key layout isn't a real solution. HP spent some nice time figuring key layouts, spacings, etc for each line of calcs and did a great job - look how they've stood the test of time.

Frankly, if we found someone that could injection-mold keys and silk-screen a metallic KB overlay/mask we could buy HP12Cs, put in a new CPU (based on a low-power 8051 w/HP emulator firmware). Then we'd have a nice robust HP. Heck, we could even add a 10 or 12 char ASCII matrix display as well.

It's all about the packaging & form-factor now: we can handle the software/firmware readily in a variety of ways.

Bill Wiese San Jose, CA

Re: (Don't encourage him!)
*Message #18 Posted by **Paul Brogger** on 20 Mar 2003, 7:49 p.m.,*
in response to message #17 by Bill Wiese

Soooooo . . .

Rather than a *full-blown* hardware and software development effort, a gonzo RPN calculator creation approach might consist of:

Software -- Implement RPN OS with following features:

- four-level stack, Roll up/down, swap, Last x , etc. with appropriate display behavior and keyboard mapping
- connect operation of all existing math functions to RPN/stack context. (e. g., y^x function is now called as a strictly postfix, rather than an infix operation)
- implement storage register (A-Z) access with STO/RCL “storage register arithmetic” (**RCL + x**, etc.)
- create keystroke programming environment (entering, editing, and executing) with alphanumeric routine and variable naming, subroutine call & return, SST, etc., etc.
- implement ability to load and save programs & data to PC (TI has already implemented something like this, but seems to maintain an obsessive degree of control over aspects of application “signing” and permissions)
- (there is certainly more . . .)

Hardware -- Given (for example) a working TI-83+:

- disassemble case front and keyboard
- cut path between two chosen keys
- epoxy a new “enter” key over two existing keys (or replace with a newly-molded unit)
- paint the front (& back?) case and keys
- silkscreen new keyboard and keytop legends
- (*is* there anything else???)
- reassemble
- install latest version of new RPN OS & test

The above is certainly non-trivial, but isn't it a much shorter list of doable details than it would be if one were to start from scratch? By working with a system that has most of the key elements already packaged together, couldn't the whole job be made *substantially* simpler and more realistic?

I suppose your comment about retrofitting an HP-12C approaches the same idea from a different starting point -- but the 12C doesn't have PC connectivity, and (probably because I'm intimidated by electronics design) that seems to be a rather more significant drawback than the lack of a big "Enter" key . . .

Just some thoughts . . .

Re: HP coated keys are getting better
*Message #19 Posted by **Frank Travis** on 21 Mar 2003, 8:26 a.m.,*
in response to message #18 by Paul Brogger

A few years ago I called HP's calculator tech support number in Oregon. The person who answered said that although HP no longer injection molds the symbol through the keys, the coatings on the hard plastic keys of HP calculators such as the HP 48GX have gotten much better than before. I have not had any key symbols wear out on any of my several HP 48GX calculators (newer or older). If this is the case, HP could still save on cost, yet produce a high quality keyboard.

Re: (Don't encourage him!)
*Message #20 Posted by **Bill Wiese** on 21 Mar 2003, 3:09 p.m.,*
in response to message #18 by Paul Brogger

Paul..

> I suppose your comment about retrofitting an HP-12C > approaches the same idea from a different starting > point -- but the 12C doesn't have PC connectivity, > and (probably because I'm intimidated by electronics > design) that seems to be a rather more significant > drawback than the lack of a big "Enter" key . . .

Nice looking cases & KBs, etc are harder to do and can cost more than electronics!!! Right now, the cost of assembly, packaging (cardboard box + manual), device packaging (case + keys + PCB) exceeeds the cost of basic calc CPU + LCD.

For mfgrs using off-the-shelf chips there's no NRE for electronics. But molds, etc. for quality-appearing product can run into lots of dollars just to get Product One out the door.

Some PROM microcontrollers can be had for $1-$2.50 in very small quantities (TI MSP430 for example). In even small mfg qtys much much less.

Bill Wiese San Jose, CA

I need new HP 200LX !!!
*Message #21 Posted by **mapet** on 18 Mar 2003, 4:23 a.m.,*
in response to message #1 by Ron Ross

I agree on HP20S and HP42S but the third one should be a HP 200LX like calc with VGA color display and Intel 486 CPU with 16 MB RAM.

Re: I need new HP 200LX !!!
*Message #22 Posted by **Mike (Stgt)** on 18 Mar 2003, 5:32 a.m.,*
in response to message #21 by mapet

If you are good in soldering you may build your own. See http://member.nifty.ne.jp/toyozou/palmpc/release_English.html

Ciao.....Mike

Re: I need new HP 200LX !!!
*Message #23 Posted by **Erik Ehrling (Sweden)** on 18 Mar 2003, 12:09 p.m.,*
in response to message #21 by mapet

...and running Linux...

Re: I need new HP 200LX !!!
*Message #24 Posted by **Christof** on 18 Mar 2003, 11:59 p.m.,*
in response to message #21 by mapet

Why bother with a 486?

the jornada 720 or 728 have everything you need to replace a 200LX- except one thing. a real OS. the ARM is supported by many real OS flavors that cna provide you with the software you need. In rough order of suitability:

QNX

NetBSD

Linux. (yeah, I'm a heretic, I put linux last. it's really not all the hot for this application. too much cruft and bloat and ....stuff!)

It would be harder at this point to redo a 486 than to use a mk arch for a dragonball. (though it'd be nice to have the MMU back, you know).

16MB RAM is... not competitive. if it isn't at least 32MB, no one outside of a 200 fanatic will buy it- and a 200 fanatic will just spend the money to upgrade his RAM and put a backlight on his 200LX (whihc I'm considering, I can't stand the windowsCE on my 720, as much as I like the wireless pcmcia connectivity)

Sharp has a new ARM based linux core 4 inch VGA keyboard palmtop. it's only produced for japan, but some importers are brining it into the US priced at about $600.

(this is sounding cool enough to almost convince me to sell off the 680, 720, both 320LX machines and my 200LX to afford a pair for me and the budding mommy next to me)

the 200LX is, alas, too far behind the modern world to really work in an upgrade type of system. I love my baby, but it's just not going to be succeeded by another DOS based device.

There is no need for a 200LX
*Message #25 Posted by **Nenad (Croatia)** on 20 Mar 2003, 5:12 a.m.,*
in response to message #24 by Christof

Just to add a little bit to Christof's excellent point:

The Jornada 720 and 728 would have a funcionality of a 200LX. There is a program, called PocketDOS, which brings up the complete funcionality of your good, old, well tested, reliable DOS programs to your Jornada.

After trying PocketDOS on my 720, I have decided that I would not look for a 200LX anymore.

And, do not forget Jornada 710. It often sells for a much less price than both 720 and 728, but, AFAIK, the only important difference is 710's lack of modem.

Re: Calculators I would market

*Message #26 Posted by **James M. Prange** on 19 Mar 2003, 7:23 p.m.,*
in response to message #1 by Ron Ross

At least three (all RPN entry, of course) that I think *some company* should market. I'm not convinced that HP will ever give its calculator group (Does it have a name? Is it a "division"?) a fair chance, so maybe a different company will pick up what HP seems to have mostly discarded. On the other hand, HP has dropped calculator development and good (at least they seemed good to me) products before, and then started up development and introduced new products again, so perhaps it'll do it this time, although it's lost a lot of credibility with it's recent models.

1: A very simple "4-banger" but with RPN entry (not the 4-level stack; two levels should suffice for this). Just the basic arithmetic +, -, X, and / keys, and, of course, ENTER, Clear Entry, and perhap Clear or Clear All. Maybe keys for one memory register, change sign, square root, 1/x, and SWAP. Maybe even a % key, although I personally find that about as useful as a screen door on a submarine. Something that's cheap enough but also robust enough to give to elementary school students as their first calculators, before they get indoctrinated into using an algebraic entry calculator. Or to carry in a pocket, or toss in a glove box, toolbox, briefcase, backpack, book-bag, or whatever (oh yeah, a lady's purse! I know a few geeky ladies, and this wouldn't be a geeky calculator anyway) without worrying that it may be too expensive if it gets lost or broken. For that matter, for the company to use as promotional handouts instead of putting their logo on the same calculator that other companies are handing out. Or to have the company's logo molded in somewhere on calculators that other companies are handing out (imagine a TI "promotional item" with HP's logo molded in). If someone "catches on" to RPN entry (and it isn't the least bit difficult, despite its reputation), would they ever go back to algebraic entry? This could have a low profit margin; the main purpose would be to introduce them to RPN entry calculators and doing things the right way; profit would come mostly from future sales of more advanced RPN entry models that many users would eventually want. For an established company with deep pockets (like, I suppose, HP), this could even be a no-profit model.

2: A more advanced "scientific" RPN calculator small enough to fit in a typical shirt pocket and robust enough that it could stand some rough handling, with a reasonable profit margin but still at a reasonable price. I expect that some of HP's discontinued models would be just fine, except perhaps for HP's typical premium price.

3: An "everything but the kitchen sink" RPL model redesigned from the 48 series, which could have a high price and profit margin. Of course, with the high price, one should expect it to be very reliable and robust, and have a long warranty. Put the operating system in flash memory like the 49G so that it can be upgraded, but thoroughly debug it before release; don't take the attitude that it can be released with known bugs and fixed up after the customers complain too

much. Add a USB port both for speed and because many new PCs don't have a serial port built-in. Maybe add a port for more or less "industry standard" (relatively) low cost flash (no battery) removable memory, like what's used in some cameras, or perhaps use one of those miniature hard-disk drives. Maybe keep a port for additional system (high speed) memory, if there's any realistic possibility that the built-in system memory might not be enough for some users. Add the useful features from the 49G, but not its flaky keyboard or its habit of not restoring modes and flags at the end of a command or various other bugs. If there's really a need to cover up the display with a chunk of plastic, at least make it user-replaceable. Keep the keyboard overlays like the 48 series for user or third-party customization. Maybe the ability to switch to algebraic entry mode if it can be done without introducing new bugs in RPN mode; but I have my doubts about that one; I'd never use it and I'm afraid that the algebraic entry option encourages those who don't know any better to continue their bad habits.

Of course there's plenty of room for various intermediate and special-purpose calculators. Some of HP's out-of-production models might fit in the gaps quite nicely.

It seems to me that a lot of HP calculator's problems may be from each HP group being unwilling to share technology with other groups. What might HP calculators be like if they shared more technology developed for "computers"? After all, a 41 series (perhaps with HPIL peripherals) or an RPL model seems to me to be very much like a full-fledged "computer", but designed for hand-held use and with a keyboard designed for crunching numbers.

Given that calculators seem to have a very low priority at HP, I wonder whether they could be persuaded to sell off their calculator product line (to someone with a *lot* more money than I have). Or maybe they could spin it off as a separate company that could go it's own way, sink or swim, without interference from HP corporate headquarters; I'm convinced that a good profit could be made on RPN calculators. On the other hand, if HP gets out of the calculator business or continues as a weak competitor, then it may be a golden opportunity for someone else to start up an RPN calculator company, or for a company already established in calculator products to market RPN models as a premium line of calculators.

Regards,
James

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

OT: Need help finding 2 TI PPC Notes editors from past

*Message #1 Posted by **Gene Wright** on 17 Mar 2003, 10:14 a.m.*

Hi. A project is underway to convert much of the old TI Calculator group's material into PDF the way Jake Schwartz did with the HP PPC Notes.

Before it is made available, we need help finding or contacting two of the early TI Newsletter editors...

Richard Vanderburgh

and

Maurice E. T. Swinnen

If anyone has a current email address or contact info for these men, please EMAIL it to me (do not post it here) so I can contact them to get proper permissions.

We hope to have 12+ years of the TI PPC Notes scanned, well over 100+ TI-59 user library programs scanned, and misc documents available as well.

I know most of you are HP only, :-), but it would be a shame to have this material disappear into the past either way.

Thanks! Gene

Re: OT: Need help finding 2 TI PPC Notes editors from past
*Message #2 Posted by **HrastProgrammer** on 17 Mar 2003, 10:18 a.m.,*
in response to message #1 by Gene Wright

You have their e-mail addresses on the following page:

http://www.ti59.com/people.htm

I cannot wait for this material :-)

Best regards.

Those email addresses don't work
*Message #3 Posted by **Gene** on 17 Mar 2003, 10:24 a.m.,*
in response to message #2 by HrastProgrammer

I've been to www.ti59.com but those don't work. I've tried another email for Maurice and have left a phone message for Richard at what I think is his home number, but I'm just trying to cover all the bases!

Thanks for the suggestion...anyone have other leads?

There are lots of things coming...all this TI material, including PDF of owners manuals, etc.

The scanning of the 100+ HP-67 game programs is coming along too.

C'mon folks...who has lots of this stuff stuck in a closet? :-)

Gene

Nevermind! I have spoken with both men and they say OK!
*Message #4 Posted by **Gene** on 17 Mar 2003, 4:17 p.m.,*
in response to message #3 by Gene

Hurray!

Both men have given permission for this material to be published in PDF form on the web.

That means that once the scanning is complete, the entire TI PPC Notes will be available just like the HP PPC Notes are today.

Yippee! Gene

Re: Nevermind! I have spoken with both men and they say OK!
*Message #5 Posted by **Jordi Hidalgo** on 18 Mar 2003, 7:03 a.m.,*
in response to message #4 by Gene

Gene wrote:

> the entire TI PPC Notes will be available just like the HP PPC Notes are today..

Do you mean in a convenient CD (Jake) or freely available on the Web (Warren)?

Jordi Hidalgo
HPCC #1046

At least the web, perhaps a CD
*Message #6 Posted by **Gene** on 18 Mar 2003, 10:39 a.m.,*
in response to message #5 by Jordi Hidalgo

We do not wish to charge for these, but of course, mailing any CD created would take a few $$.

I know that it will be put on the web. I'm sure a CD could be made available too, as long as we price the cost to cover the postage/materials only.

Hopes are for placing these online:

TI calculator manuals: SR-56, SR-52, TI-58/59 Personal Programming, SR-52

Programming Workbook, TI-58/59 Master Library User Guide, TI-58/59 Master Library Survival Manual

TI PPC Notes: Beginning with the first issue of 52 Notes in 1976 and going through 1984 or so.

TI 58/59 User Library Programs: I have about 100+ TI-59 games and misc programs from the user library that are being scanned.

Perhaps some PPX Exchange (the TI version of Key Notes) copies.

maybe more! :-)

Thanks to the guys doing the scanning too.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Forget Yahoo, here's where I wish I invested my money!
*Message #1 Posted by **Steve** on 17 Mar 2003, 9:33 a.m.*

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=11713&item=3012513554&rd=1

Imagine you bought 1000 of these at cost in the 80's! Wow,

Steve

Re: Forget Yahoo, here's where I wish I invested my money!
*Message #2 Posted by **Frank Wales** on 17 Mar 2003, 4:08 p.m.,*
in response to message #1 by Steve

Then you'd have been Zengrange. :-)

I believe the production run was 1,000 units, and I think that's all that got made. As I said to one of the other programmers the other day, we need to figure out a way to get a royalty on these prices. :-)

Re: Forget Yahoo, here's where I wish I invested my money!
*Message #3 Posted by **David Smith** on 17 Mar 2003, 6:01 p.m.,*
in response to message #1 by Steve

If you had bought 1000 of them back when they were new, you would have lost money big time... I think they were around $300 new. Only doubling your money over a 20 year time frame is a rather poor investment.

Re: Forget Yahoo, here's where I wish I invested my money!
*Message #4 Posted by **Frank Wales** on 17 Mar 2003, 8:38 p.m.,*
in response to message #3 by David Smith

Actually, Zenrom was 99 dollars from EduCalc, according to Datafile V3N6. Still, had just one person bought them all at the time, I guess they wouldn't be so sought-after now. :-)

Re: Forget Yahoo, here's where I wish I invested my money!
*Message #5 Posted by **Chris Catotti (Florida)** on 17 Mar 2003, 10:18 p.m.,*
in response to message #4 by Frank Wales

My wife gave me a big hug when three years ago I sold my extra one on ebay for $127.00 ... sigh.

Re: Forget Yahoo, here's where I wish I invested my money!
*Message #6 Posted by **Patrick** on 17 Mar 2003, 11:57 p.m.,*
in response to message #5 by Chris Catotti (Florida)

Well, you might have gotten less money, but certainly better "interest".

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

More Uncredited MoHPC Pictures AND Text on EBAY
*Message #1 Posted by **Spice_Man** on 17 Mar 2003, 8:34 a.m.*

Text and back label pictures stolen from MoHPC:

Uncredited Ad for HP35 on EBAY

Spicey

Re: More Uncredited MoHPC Pictures AND Text on EBAY
*Message #2 Posted by **Robert** on 17 Mar 2003, 5:09 p.m.,*
in response to message #1 by Spice_Man

seller must have read your message. He added a credit today!

robert

Re: More Uncredited MoHPC Pictures AND Text on EBAY
*Message #3 Posted by **Dave Hicks** on 17 Mar 2003, 7:28 p.m.,*
in response to message #2 by Robert

Either that or my email (which was in response to Spicey's post anyway.)

Re: False ad?
*Message #4 Posted by **Mike Rivera** on 17 Mar 2003, 11:57 p.m.,*
in response to message #1 by Spice_Man

This morning I asked the seller if this was a red dot model since he states, "Yes this is truely the FIRST production model calculator from Hewlett Packard, and this particular offering is of the "earliest production series"."

I questioned him on this as I thought I might bid on a nice red dot. After the seller said is was not, and I informed him of the museum and that his ad was incorrect, he's done nothing to correct it.

Re: False ad?
*Message #5 Posted by **Mike Rivera** on 18 Mar 2003, 12:05 p.m.,*
in response to message #4 by Mike Rivera

He corrected his ad. He seems like an up-front, honest guy. It's a nice looking calculator.

- Mike

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP97 Printer Idle Gear
*Message #1 Posted by **Chan Tran** on 17 Mar 2003, 7:40 a.m.*

I just got a 97 in good condition as a gift. The battery was shot but I have rebuilt the battery. It worked fine for a day and then the printer quit. I took it apart and found that the idle gear between the motor and the screw drive that drives the print head was stripped. I wonder where can I find the replacement gear short of getting a bad 97 to get the gear? I was pleasantly surpised that the card reader worked very well only sadden because the printer broke after 1 day of using it.

Re: HP97 Printer Idle Gear
*Message #2 Posted by **Katie Wasserman** on 17 Mar 2003, 11:47 a.m.,*
in response to message #1 by Chan Tran

This is a very common problem. Take a look at an article that I wrote about this here:

http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/articles.cgi?read=84

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HPchess challenge
*Message #1 Posted by **mapet** on 17 Mar 2003, 3:53 a.m.*

The challenge is for the fastest mate in HPchess 0.8 game. You can download it here: www.hpcalc.org. Human plays white. Set level to 1.

My solution: 7 moves.

mapet

Re: HPchess challenge
*Message #2 Posted by **hugh** on 17 Mar 2003, 12:48 p.m.,*
in response to message #1 by mapet

1. e4 e5 2. Qh5 Nf6 3. Qxe5+ Be7 4. b3 Nc6 5. Qg5 O-O 6. Bb2 Nxe4 7. Qxg7#

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

A tired hp45, tools, and a quiet night. (long)
*Message #1 Posted by **Jeremy** on 16 Mar 2003, 10:19 p.m.*

I'll start off by saying that if you've never taken and old hp apart, or if you don't have much electronics background, this might sound a little greek to you.

That said, I'd like to thank everyone for their support. As mentioned in my thread below, I bought a well-used hp45 on eBay for $42 or so. The seller said that everything worked, but that you had to push some of the buttons pretty hard. It didn't include a battery, manual, case, or any other fluff. But that is why I got it for so cheap.

So I asked some questions about the battery situation, and got some helpful replies. I decided not to go with a cordless phone battery pack, because then, I would also have to buy a suitable charger, and that kind of defeats the point of the whole adventure for me. So I went to Radio Shack and considered my options for about an hour. They didn't have a 3 AA or AAA holder. I decided that the AA holder was too thick anyhow. So I wound up buying two 2 AAA holders, with plans to meld them together.

Next, I got home and took the '45 apart. As I had read somewhere, I discovered that old HPs are a dream to work on. The chassis' are screwed together instead of using cheezy sonic welding. In fact, there were 6 screws and no latches to figure out! Nice. I got into the circuit boards, and found that they were screwed down to the front chassis piece. Again, no latches or anything cheezy. My next pleasant surprise was that the PCB with the circuitry on it was held to the contact board by friction pins. (I don't know if that is the official word..) Nice work!

On to business. I followed the wires, just to be sure the battery reference page on this site was correct, and naturally, it was. Now a good plan was forming in my head. I wired the separate 2-AAA holders together in series. (see photo links, below) The last bay of one holder was sacrificed, and I brought the lead out from there. With my trusty rotary tool and cutoff wheel, I made a couple of small cuts. One for each wire to escape the battery compartment, and one in the side of the circuit board for the positive wire to route through. The two battery holders wouldn't quite fit into the compartment, width-wise, so I had to fire up the old Dremel and cut the end off of one battery holders, so that they would fit side-by-side. Since my personal supply of Crazy Glue has dried up, I made do with a rubber band until work tomorrow. (where we have industrial strength Cyanocrylate

glue)

So the final result is that I have an old HP45 that is not dependent on the dumb proprietary battery packs or anything resembling them. I can put rechargable AAAs or alkalines in it. Right now, it has a fully charged set of NiMH AAAs in it.

I got it back together and discovered that the shift key didn't work. So I took it apart and got a toothbrush soaked in 91% Isopropyl alcohol underneath the contacts a few times. I put it back together, and now the shift key worked, but the x>y/y>x key didn't work. So I took it apart and tried my best to clean under all of those little spring metal contacts as best I could. Now, the x>y/y>x key worked, but I had to press pretty hard on the shift key for IT to work now. C'est la Vie.

The caculator is together and 100% functional now and I'm a happy man. I do have to press pretty hard on some of the keys for them to register.

I kind of like the fact that this particular one has been used hard. The plastic of the enclosure has that nice worn feeling. The stippled surface on all the corners is worn smooth, and it feels like an old friend.

Just copy and paste the links below into a new browser window if you're interested in a tour...

Here's an overall shot of the front. (It looks much cleaner in person) http://user.mc.net/~jzorns/HP45_Overall.JPG

Here's a shot of the worn-out plastic barrier that goes between the keys and the spring metal contact strips. I replaced it with a piece of the wrapper from one of the battery holders. (shown next to it, left) http://user.mc.net/~jzorns/HP45_Barrier.JPG

Here's the first shot of my jury-rigged battery pack: http://user.mc.net/~jzorns/HP45_Battery_Pack.JPG

Another view: http://user.mc.net/~jzorns/HP45_Battery_Pack1.JPG

Here are a couple of shots of the new battery holders installed in the hp 45: http://user.mc.net/~jzorns/HP45_Wiring.JPG

http://user.mc.net/~jzorns/HP45_Wiring1.JPG

Here's a shot of what it looks like from the back with the battery door removed: http://user.mc.net/~jzorns/HP45_Finished_Product.JPG

A shot of the triumphant display: http://user.mc.net/~jzorns/HP45_Display.JPG

A shot of the Ikea nesting table I did all the work on, along with some of the tools. http://user.mc.net/~jzorns/HP45_Workbench.JPG

Last but not least, time to celebrate! http://user.mc.net/~jzorns/HP45_Celebration.JPG

Now, withing a few days, I should get the HP48G in the mail that I won from eBay over a week ago... X-(

Cheers! -Jeremy

Re: A tired hp45, tools, and a quiet night. (long)
*Message #2 Posted by **Michael Meyer** on 16 Mar 2003, 10:34 p.m.,*
in response to message #1 by Jeremy

Congratulations! The world is a better place, once again! Check out the posts on sanding the contacts. You'll be happier with error-free, reliable keys.

Thanks for sharing, Michael

I'm on the lookout for 1000 grit sandpaper. Thanks. (NM)
*Message #3 Posted by **Jeremy** on 17 Mar 2003, 12:13 a.m.,*
in response to message #2 by Michael Meyer

No Message

Re: A tired hp45, tools, and a quiet night. (long)
*Message #4 Posted by **Richard Parfitt** on 17 Mar 2003, 5:38 a.m.,*
in response to message #1 by Jeremy

Dont' use abrasive paper use small contact switch cleaning strips or what is know as blotting paper, soaked in iso-propyl-alcohol. Cut a small strip just wide enough to go under the metal humps. Grip each end with tweezers and get someone else to gently press down on the metal hump, then slid the strip backwards and forwards, it's bit fiddly but it works. This is a very gentle way to clean the contacts. I have done it on all my "classic" machines with no harmful effects. Regards Richard

Re: A tired hp45, tools, and a quiet night. (long)
*Message #5 Posted by **David Smith** on 17 Mar 2003, 6:08 p.m.,*
in response to message #1 by Jeremy

A piece of brown paper grocery bag soaked in alcohol ususally works very well for cleaning the switches. I use 1500 grit sandpaper. A single pull though on each side seems to clear up the worst of switches. I have checked its effect on gold plated PCB contacts and it does not damage them. I usually wet the sandpaper with a contact cleaner/conditioner like a Caig Gold Pen or Deoxit Pen.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP31E for 22EUR on eBay
*Message #1 Posted by **Nenad Vulic (Croatia)** on 16 Mar 2003, 3:03 p.m.*

A question to eBay experts:

Auction No. #2917340815, HP31E, buy-it-now EUR 22. As I understand, the machine has not been tested.

No bids yet, for about three days. I do not understand why?

Normally, this would be considered as a bargain and sold in a few hours after the auction begins, when the first of us here sees this.

BTW, I don't have any relations with the seller. Just curious.

Re: HP31E for 22EUR on eBay
*Message #2 Posted by **Emmanuel, France** on 16 Mar 2003, 5:25 p.m.,*
in response to message #1 by Nenad Vulic (Croatia)

```
Tested 'Buy it now' and got this message (?!):
Dear Bidder/Buyer
This item is restricted to pre-approved bidders/buyers.
You may place a bid or buy the item once this seller has
approved you. In order to get approved, you'll need to
contact the seller and request to be added to the pre
approved bidder/buyer list for this item
...
```

Re: HP31E for 22EUR on eBay
*Message #3 Posted by **Raymond Del Tondo (Germany)** on 16 Mar 2003, 7:20 p.m.,*
in response to message #2 by Emmanuel, France

Hi Emmanuel,

I looked at the auction, and I think it isn't too much of a bargain, because of the corroded battery contacts. Ok, the calc seems to look good from the top, but do you know if it even works? My Spanish isn't good enough to understand the seller's expanation;-)

Regards,

Raymond

Re: HP31E for 22EUR on eBay
*Message #4 Posted by **Roberto Flores** on 17 Mar 2003, 12:23 a.m.,*
in response to message #3 by Raymond Del Tondo (Germany)

The message says: "Not tested for lack of a suitable power supply"

Regards;

Roberto

Re: HP31E for 22EUR on eBay
*Message #5 Posted by **Raymond Del Tondo (Germany)** on 17 Mar 2003, 7:56 p.m.,*
in response to message #4 by Roberto Flores

Many thanks for enlighting!

Regards,

Raymond

Re: HP31E for 22EUR on eBay

*Message #6 Posted by **David Smith** on 17 Mar 2003, 6:12 p.m.,*

in response to message #1 by Nenad Vulic (Croatia)

I have found Spice machines to be the absolute worst about comming in defective. Most of them have bad corrosion problems. Also broken battery contacts. Also broken battery flex cables. Also broken battery doors. Also broken screw posts. Also very bad design of the chip compression contacts. Unless you know what you are getting into I would NOT recommend buying ANY spice series machine that was not fully tested by a knowledgeable person.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Last X
*Message #1 Posted by **Patrick** on 16 Mar 2003, 2:04 p.m.*

Bought an HP-21 recently and was amazed to find out that it has no Last X function! I never realized that. In fact, I'm ashamed to say I never realized that any of the old HP's didn't have Last X. Until recently, I've only ever owned the 25, 41 and 32SII.

Looking at the pictures in the museum, I think I only see the 21, 22, and 35 that don't appear to have Last X.

Interesting. You learn something every day.

Re: Last X
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 16 Mar 2003, 2:19 p.m.,*
in response to message #1 by Patrick

Hi;

add the HP70, HP80 and the HP81 (desktop).

Anyone else?

(to be also very honest, I knew about the fact, but I was not aware of the fact the HP21 and the HP22 did not have LastX feature. And I deal with HP calculators since 1982; infact, I've been dealing mostly with the LCD types, I have only three LED-display models)

Thank you! Good point!

Vieira, Luiz C. (Brazil)

RPL programs to replace LST*x* command

*Message #3 Posted by **James M. Prange** on 19 Mar 2003, 9:51 a.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

Some time ago, I posted a 48 series / 49G replacement program for the "Classic RPN" LST*x* command. But in that program, if the last arguments buffer is empty, then, unlike the classic RPN LST*x* command, it returns nothing to the stack and puts the real number 0 in the last arguments buffer.

As (I hope) everyone here knows, on a classic RPN calculator (well, at least those that have a LST*x* key), the LAST X register always exists and always contains one object. Even after a reset of continuous memory, it contains the number 0 (perhaps arguably 0h in the case of my 16C). The LST*x* command always returns one object to the stack.

On an RPL calculator, the situation is rather different. It doesn't have a LAST X register or LST*x* command; instead, it has a last arguments buffer, which contains from 0 through 5 objects, and a LASTARG (LAST on a 28 series) command which returns from 0 through 5 objects to the stack. Also, it's possible to disable last arguments save and recovery entirely, for example, by setting system flag -55 on a 48 series or 49G, or by clearing system flag 31 on a 28 series; in this case the LASTARG (LAST on a 28 series) command errors out.

The following programs should work on any 48 series or 49G calculator, but for a 28 series, the LASTARG command would have to be changed to LAST, and, in the second and third programs, the sequence "-55. SF CF" changed to "31 CF SF".

Not tested on a 28 series or with "ROM" revisions other than 1.19-6 on a 49G. Tested on 48SX ROM version E, 48GX ROM version R, and 49G "ROM" revision 1.19-6.

Now that I think of it, on a 48 series or 49G, LAST is a synonym for LASTARG; it compiles to the same thing as LASTARG, but that always decompiles to LASTARG.

The following programs differ in how they handle the case that the last arguments buffer is empty. The last arguments buffer will be empty immediately after a warmstart, and immediately after last arguments is enabled (-55 CF on a 48 series or 49G, or 31 SF on a 28 series) after being disabled (-55 SF on a 48 series or 49G, or 31 CF on a 28 series).

All of these programs require that last arguments be enabled (the default). If last arguments is disabled, then they error out, leaving the stack and flags unchanged.

The following programs retrieve the level 1 argument of the last command that took any arguments from the last arguments buffer and return it to the stack, unless the last

arguments buffer is empty. Note that some commands (CLEAR, DEPTH, STD, MEM, and so on) don't take any arguments, and leave the last arguments buffer unchanged. Also note that for commands that evaluate an expression or program, the last arguments are saved from the evaluated expression or program, not from the original command. In the case that more than one object is in the last argument buffer, only the one returned by the program will be in the last argument buffer when the program finishes.

You can copy the programs (include the "%%HP: T(3)A(R)F(.);" ASCII header), paste them to a text file, and use the Kermit protocol to transfer that to your 48 series or 49G.

In the case that you type these in, note that \<< and \>> represent the opening and closing program delimiters, and \-> represents the right arrow.

I consider these programs to be simple enough that they don't really need comments. If you want to see the details of how they work, you can single-step through them.

I expect that most users, especially those accustomed to classic RPN calculators, would prefer this first program. If the last arguments buffer is empty, then the real number 0 is returned to the stack and also stored in the last arguments buffer.

Checksum on 48 series: # ECA9h
Checksum on 49G: # A414h
Bytes: 69

```
%%HP: T(3)A(R)F(.);
\<<
  DEPTH \-> d
  \<<
    LASTARG DEPTH d -
    IF
      DUP
    THEN
      DUP2 2. + ROLLD DROPN
    END
    DUP DROP
  \>>
\>>
```

Some RPL users might prefer this second program, although it takes more memory and I suppose that it might be a bit slower. If the last arguments buffer is empty, then the real number 0 is returned to the stack and the last arguments buffer is left empty. Note that there is a very remote possibility that if the user does a warmstart or CANCEL (ATTN on the 48S

series) while the program is running, then the calculator will be left with last arguments disabled.

Checksum on 48 series: # F5Dh
Checksum on 49G: # D44Fh
Bytes: 94.5

```
%%HP: T(3)A(R)F(.);
\<<
  DEPTH \-> d
  \<< LASTARG DEPTH d -
    IF
      DUP
    THEN
      DUP2 2. + ROLLD DROPN DUP DROP
    ELSE
      -55. DUP SF CF
    END
  \>>
\>>
```

Some RPL users might even prefer this last program. If the last arguments buffer is empty, then (unlike the classic RPN LST*x* command) it doesn't return anything to the stack. This one also leaves the last arguments buffer empty. Like the previous program, there is a very remote possibility that if the user does a warmstart or CANCEL (ATTN on the 48S series) while the program is running, then the calculator will be left with last arguments disabled.

Checksum on 48 series: # D527h
Checksum on 49G: # CD47h
Bytes: 97

```
%%HP: T(3)A(R)F(.);
\<<
  DEPTH \-> d
  \<< LASTARG DEPTH d -
    IF
      DUP
    THEN
      DUP2 2. + ROLLD DROPN DUP DROP
    ELSE
      DROP -55. DUP SF CF
    END
```

```
  \>>
\>>
```

Regards,
James

Correction
*Message #4 Posted by **James M. Prange** on 19 Mar 2003, 10:47 a.m.,*
in response to message #3 by James M. Prange

Oops! I wrote:

The following programs should work on any 48 series or 49G calculator, but for a 28 series, the LASTARG command would have to be changed to LAST, and, in the second and third programs, the sequence "-55. SF CF" changed to "31 CF SF".

Make that:

...the sequence "-55. DUP SF CF" changed to "31 DUP CF SF".

Re: RPL programs to replace LST<I>x</I> command
*Message #5 Posted by **Jeff** on 19 Mar 2003, 1:12 p.m.,*
in response to message #3 by James M. Prange

I (obviously) don't know much about programming the 48, so please excuse the simple question. I use the following for Last X. I don't remember exactly where I got it. How do yours compare with this one?

```
\<<
  DEPTH \-> n
  \<< LASTARG DEPTH n -
      DUP \-> s
    \<< ROLLD s 1 - DROPN
    \>>
  \>>
\>>
```

Re: RPL programs to replace LST<I>x</I> command
*Message #6 Posted by **James M. Prange** on 19 Mar 2003, 2:10 p.m.,*
in response to message #5 by Jeff

I expect that you got it from Joe Horn's Goodies Disk #3. Credit for writing it should go to Darryl Okahata.

It's smaller than any of mine (an advantage).

I'd guess that it would be slightly slower than mine because of the nested procedures, but any of these should be fast enough that this shouldn't be an issue.

It doesn't change any flags, so there's no possibility that it could leave last arguments disabled in the event that the user terminated the running program (a tiny advantage over two of my programs).

The biggest problem that I have with it is that it leaves the argument for DROPN in the last arguments buffer so that (unlike the classic RPN LST*x* command and my programs), if you run it twice without running anything else that should change the last arguments buffer (or LAST X register on a classic RPN), then you'll probably get something different the second time. Perhaps, in most "real-world" usage, this won't matter very much, but I consider this to be a disadvantage (or maybe even a bug).

If the last arguments buffer is empty, then (unlike the classic RPN LST*x* command and two of my programs), it returns nothing to the stack. I expect that those accustomed to classic RPN would consider this to be a bug.

Regards,
James

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Batteries and analog stuff (or: Hi, Norm! I'm back)
*Message #1 Posted by **Vieira, Luiz C. (Brazil)** on 16 Mar 2003, 9:15 a.m.*

Hello, Analog-related guys.

Norm, have a look at this post (I found it!) written in January 23.

You se, I have mentioned about that concern of your when using new, "high-powered" NiCads in vintage calculators. The NiMH is also a concern, of course.

That's why I thought about using AAA-Nicads instead of AA-type. Also, I intend building a battery pack tfor the HP82143A with new, 850mAH AA-NiCads because my pack is showing definitive signs of retirement request. I have a spare case so I'll build a new pack with AA-Nicads. I'll try to find 1,000 mAh AA-type NiCads. What's the size of the batteries used in the HP82143A pack? It's the same pack used it Topcats (HP91/92/95C/97).

There are other experiences described by other contributors in that thread.

Comments?

Best regards.

Luiz C. Vieira - Brazil

Re: Batteries and analog stuff (or: Hi, Norm! I'm back)
*Message #2 Posted by **Andreas Müller (GER)** on 16 Mar 2003, 11:23 a.m.,*
in response to message #1 by Vieira, Luiz C. (Brazil)

Hi Luiz, the batteries used in the HP82143A pack are named 'Sub-C'. It is the same type used to 99% in electro motorized model aircrafts. The highest available capacity, at the moment, is 3300mAh NiMH(GP-Batteries or Sanyo). These types have nearly 3 times the capacity of the original NiCds. The 'chance' to charge them to death is very less compared to the originals, IMHO. Regards, Andreas

Re: Batteries and analog stuff (or: Hi, Norm! I'm back)
*Message #3 Posted by **Vieira, Luiz C. (Brazil)** on 16 Mar 2003, 12:20 p.m.,*
in response to message #2 by Andreas Müller (GER)

Hallo, Andreas;

I will try to track them around here. Have you used any of these in Vintage calculators? Say, have you at least seen a set of these (not a 3.3 Ah, instead a lower-capacity) as part of HP97 or HP82143A battery packs?

Viele danke, Andreas.

Luiz C. Vieira - Brazil

Re: Batteries and analog stuff (or: Hi, Norm! I'm back)
*Message #4 Posted by **David Smith** on 16 Mar 2003, 2:48 p.m.,*
in response to message #3 by Vieira, Luiz C. (Brazil)

I use 2200maH nicads in my HP9x and 82143A, etc packs. I would like to use the NiMH cells, but for some reason they are ungodly expensive compared with the NiCad cells (about three times as much). The AA NiMH cells are only around 20 percent more expensive than NiCads.

Batteries! Chargers! Zeners! HP-25C!

*Message #5 Posted by **Norm** on 16 Mar 2003, 5:11 p.m.,*

in response to message #4 by David Smith

Hi everybody, We had such a long chain going earlier, looks like we are going to continue it.

Well, one thought was AAA vs AA. When i said 'concern' I didn't mean it negatively. I meant that I would use the highest capacity batteries I could possibly get, thermonuclear if possible, so that these "red LED" calculators would run much longer than originally before requiring a charge. Why cut the capacity back down by dropping to AAA? Don't follow that thought. I was surprised nobody has tried rechargeable Lithium? Maybe I'll be the first one. Sure, if there's a technical problem it'll set your calculator on fire, but why fear the worst.

We were homing in on the current output of these chargers. I've got an HP-25C charger that says "1.8VA" not "0.8VA". Any further opinions on that or shall we let "1.8VA" be the official number (10VAC, 1.8VA = 180mA max output).

The acceptable leakage thru a clamp part was said that should be perhaps only 10 - 50 uA max (at 3V).

That was based on the battery being 70mAH. Is everybody sure about that spec of 70mAH for 2 series connected AA batteries? Sure it is not 700 mAH ????????

I really hope we can nail this down. (a recommended mod for the HP-25C, to add a specific zener item).

I was recommending a 4.7V 1W zener, the other guy was recommending a 6.2V 1W zener.

My concern was overheat if the charger is on with no battery pack present.

the other guys concern is leakage in the part while the battery sits idle.

Suggest that I am coming around to agreeing with the other guy about not wanting leakage. I just also don't want it to overheat. The 6.2V definitely has no leakage at 3V, its I/V curve is very sharp for a 6.2V part.

If somebody is willing to step forward and do mod's, I'm willing to mail out a few sample Motorola zeners from my basement stash.

Or we can chat this out a little more, from this fresh new perch atop the forum board.

- Norm

Re: Batteries! Chargers! Zeners! HP-25C!
*Message #6 Posted by **David Smith** on 17 Mar 2003, 6:15 p.m.,*
in response to message #5 by Norm

The 82120A pack uses 1/2N sized Nicads. 70 maH... yes seventy... These cells are no longer made by anybody. The closest thing now that will fit is either 50maH 1/3AAA or a 150maH NiMH cell that is impossible to find (unless you want to buy a 1500 piece case).

That is not AA and not HP-25C
*Message #7 Posted by **Norm** on 18 Mar 2003, 12:36 a.m.,*
in response to message #6 by David Smith

Hi David,

Well, that does explain some discrepancies.. We were originally just trying to figure out best-mod for an HP-25C which uses "AA" cells. Apparently the original capacity must be somewhere around 700 mAH for the batteries in HP-25C, however, I have no spec.

When you mentioned 70 mAH capacity, I thought it referred to the AA batteries in HP-25C. Sure, if you have micro-batteries, then you might have other choices of zener. It would be more important to have a sharp transition in the conductivity of the zener.

A 6.2V zener has one of the sharpest transitions due to the choices of doping in the silicon junction. As the spec voltage falls (5.6V, 5.1V, 4.7V, 4.3V, 3.9V etc) the transition gets softer & softer and is so gradual as to be useless

for our purposes.

In your application, sure, a 6.2V makes more sense because of the limited available power, and the lower operating currents in all various operating situations.

It might even turn out that your recommendation of 6.2V is a fair one for protection of the HP-25C. I will find out before we give up on this.

Anybody got a mAH spec for the factory original AA cells? And what can I increase it to with NiMH or Lithium?

Re: That is not AA and not HP-25C
*Message #8 Posted by **David Smith** on 18 Mar 2003, 10:39 p.m.,*
in response to message #7 by Norm

The original woodstock cells were 500maH. Later increased to 600maH then 700 maH. I think the 6V zener will be just fine. The is no way the battery alone will cause it to conduct. What you are protecting against is the half wave peaks of the AC adpater. This voltage does go through a low ohm (2W) resistor and a diode before being applied to the battery.

I disappeared for a day,
*Message #9 Posted by **Norm** on 20 Mar 2003, 4:44 p.m.,*
in response to message #8 by David Smith

Hi,

I disappeared for a day. Had to work on the furnace. Thanks for the 500 mAH specification, later upgraded to 700mAH, for the AA cells used in HP-25C or HP-34C. And did I hear right that the NiMH in AA size would give me 3300 mAH ??

That would solve the problem of HP-34C draining down the battery too fast. And it wouldn't even require any Lithium technologies, which admittedly cost far more than NiMH.

But I would really be grateful if you could tell me your preferred source for buying those batteries. Do you get them from an internet dealer ?

I am definitely coming around to the notion of the 6V zener. Could you tell me the value of the resistor that is in series? Where is it? Inside of the wall-charger ? And is it just half-wave not full? That schematic is gone from before.

So we might consider part # 1N4735A, however, I would still like to conduct an over-heating test in actual use in an HP-25C .

Re: I disappeared for a day,
*Message #10 Posted by **David Smith** on 20 Mar 2003, 5:54 p.m.,*
in response to message #9 by Norm

The 3300maH cells are the sub-C size used in the HP97 and the HP41 printers. The largest AA cells you wil probably find are 1800maH. There are some new 2100-2200 maH AA cells out there, but are pretty difficult to find. A while back, Fry's had 1800maH cells for 59 cents each in four packs. I like to get my cells welded together, so I pay $2.50 each at the local battery store and they weld them for free.

youre getting closer
*Message #11 Posted by **Norm** on 21 Mar 2003, 6:02 a.m.,*
in response to message #10 by David Smith

you're getting closer, closer to a store to which I could go.

Thank you for the information about 1800 mAH.

I know where Fry's is. I can go to the one in Wilsonville, OR. But you're still a little vague about which brand of battery I should be looking for. Is it with flashlight batteries like "Energizer" or off someplace else ?

You mentioned "the local battery store". I've never heard of a store that would weld the cells together. Any suggestion how I find it? Is it there for purposes of construction guys with cordless tools, did you just go to the yellow pages and look under 'batteries' ?

Yeah, welded sounds desirable. Thanks for the tip.

I haven't lost interest in this, will check back in a day.

Re: youre getting closer
*Message #12 Posted by **Dave Shaffer** on 21 Mar 2003, 12:46 p.m.,*
in response to message #11 by Norm

Norm,

Yeah - head for the Frys - and go to the regular battery area. You will find a wide selection of regular and rechargable batteries. In my experience (at Frys and elsewhere), pick the cheapest rechargables that you can find. (If they happen to be a brand name, so much the better.) If there's a Radio Shack closer to home, you might just go there and pay a small premium (but save some gas - which here in Las Vegas could be substantial!).

The battery fix-it stores have names like Batteries Plus. They are basically a "batteries are us" type of place, and cater to a very wide market. The yellow pages would probably be a good place to start. Again, in my experience, they will almost certainly have what you need, at perhaps a slight premium, but (as noted by others) they will be happy to spot weld your new battery collection together (included in the price) with or without tabs and perhaps even put in the plastic case which you bring in. I had the local one rebuild an HP97 pack, and the results were quite nice.

Re: youre getting closer
*Message #13 Posted by **David Smith** on 21 Mar 2003, 5:33 p.m.,*
in response to message #11 by Norm

The two main national chains are Batteries Plus and Batteries Etc. They can open up just about any battery pack that yoy bring them and replace the cells for a very reasonable fee. Most major cities also have independent places that specialize in supplying industrial batteries.

The NiMH cells that Fry's had advertised were from some unknown Chinese source. The name probably changes weekly. The most common cell suppliers with a stable name are GP (Gold Peak) or Sanyo.

Re: Batteries and analog stuff (or: Hi, Norm! I'm back)
*Message #14 Posted by **Andreas Müller(GER)** on 17 Mar 2003, 6:02 a.m.,*
in response to message #3 by Vieira, Luiz C. (Brazil)

Hi Luiz, yes, I am using them - the ones earlier available with 2700mAh - in my HP 82161 drive and HP 82162 printer since half a year and the 3000mAh types in my HP 2225B printers. The 3300mAh are brand new and became available just when I was rebuilding my HP 2225Bs battery packs. There is no concern about overheating the charger or charging circuit. It is built for charging the original battery pack (4.8V/1200mAh) in about 5h. That is the reason why many battery packs are charged to death! Many people have had the charger connected permanently to the drive or the printer. This is poison for the Standard NiCds. There are special types available that can withstand overcharge for a longer time, but they are hard to get, very expensive and have relatively low capacity. So, IMHO, the risk of overcharging the 3300mAh NiMHs drops. Regards, Andreas

Memory effect? (and other stuff)

*Message #15 Posted by **Vieira, Luiz C. (Brazil)** on 17 Mar 2003, 11:23 a.m.,*
in response to message #14 by Andreas Müller(GER)

Hi, Andreas;

thank you for the informations you posted. One more question: as seen in many previous posts, my concerns are mostly about battery life and, in other aspaect, battery leakage. What was the specified charging time for the former original 4.8V/1,200mAh batteries? If it is designed to charged in about 5 hours, then we have about 20%-figure charging current, say, considering fewer loss, more than 240mAmps, right?

If you are using the same circuit and if this circuit delivers the same 240mAmps fo the bateries, as you are using a 3,300 mAh batteries, charging time should increase to about 12 hours if you want to increase operation time. If you keep the same 5 hours charging time, you'll keep the same operation time (a bit more, as new batteries are more efficient and charging curent is lower than expected). Two questions:

1 - Did you change the charging circuit OR use an external charger?
2 - isn't it better allowing longer charging periods in higher capacity batteries so you'll have bigger operating time?

I based the second question in the fact that NiMH batteries operating below their nominal capacity do not suffer the same memory effect observed in NiCads when used this same way. Is it correct?

I know I've been a lot incisive and annoying in these concerns, and I did not find (yet) time and adequate equipment (load patterns, recorders, precision measurement instruments OR RS232/USB connectible data collectors and a good SW) to proceed with experiments. Norm, if you're also reading, that's why I did not answer to your specific requests for lab testings: personal inadequate "financial" (temporary, I hope) condition. I'm running for better days so I can seat in front of my analog and digital set (many of them I built, a few I bought) and proceed with the so demmanded experiments.

Thank you all for contributing with a subject I believe is very important and, in some aspects, crytical enough to cause "injuries" in our dearest handheld calculators. Leakage, dammaged batteries will surelly be avoided if used correctly.

I think as soon as we have some more experimental and brand-related material will be time to compile all of this and write a good, concise battery-related article.

Best regards, folks.

Luiz C. Vieira - Brazil

Re: Memory effect? (and other stuff)
*Message #16 Posted by **Andreas Müller(GER)** on 17 Mar 2003, 1:57 p.m.,*
in response to message #15 by Vieira, Luiz C. (Brazil)

Hi Luiz, 1. I am using the original HP Wall adapter with the original built in (printers, drive, ASO). 2. So, you are right I have to charge about 12h for fully charge a battery pack. BTW the 5h is only correct for the 82161 and 82162. The NiMHs do have a memory effect that is negligible to the older NiCds. Newer NiCds should not have a noticeable memory effect, because the engineers of the battery manufacturers learned to make the area of the negative plates a bit bigger than the positive one and 'voila' the memory effect was a thing of the past! So, there should not be any noticeable memory effect when using fresh produced NiCds or NiMHs. About your leakage concerns I can say: Charge only to 90% of the rated capacity, or better use a good(often expensive) external charger that really uses the $-dV/dt$ method and/or the $-d^2V/dt^2$ method to find the 100% charged point and you should not have problems with leakage anymore. The Sub-C cells are used for power tools, RC-Models ASO. In the RC-Model scene you will find battery packs made from Sub-C cells f.e. 20 cells in series to deliver 60A(not a joke!) to the motor for a very short time(1 to 2 minutes). So, the Sub-C types are really rugged. Don't hesitate to ask your questions. That's what a forum lives from, IMHO. Regards, Andreas

Can you give a part # for AA cell?
*Message #17 Posted by **Norm** on 17 Mar 2003, 5:49 p.m.,*
in response to message #16 by Andreas Müller(GER)

Hello Andreas, I am very interested in your usage of a 3300 mAH NiMH cell. Do I correctly understand that to be AA ??

If the original NiCd cells were 700 mAH and what you suggest is 3300 mAH then that is a wonderful improvement. Especially if the charger circuit can be used without modifications.

However, you did not give me a mfr. or a part #. Could you provide a link, a part #, or a suggestion about where to buy them?

My passion is not HP-25C but it is HP-34C and I will pretty soon want to re-cell some battery packs.

Also in this thread, we are wanting to nail down a part number for a Zener diode for HP-25C. Perhaps we can have part numbers both for the better AA cells and for the zener diode before we are finished .

- Norm

Re: Can you give a part # for AA cell?
*Message #18 Posted by **David Smith** on 17 Mar 2003, 6:18 p.m.,*
in response to message #17 by Norm

The 3300maH cells are a sub-C size. The highest capacity AA cell you are likely to find is 1800maH. Works great in a spice series machine with 15+ hours run time on a full (36 hour) charge.

Re: Can you give a part # for AA cell?
*Message #19 Posted by **Andreas Müller(GER)** on 18 Mar 2003, 7:35 a.m.,*
in response to message #18 by David Smith

Hi David,

you can even get 2100mAh AA-cells from GP or Sanyo these days. They are brandnew!

Regards, Andreas

Re: Can you give a part # for AA cell?
*Message #20 Posted by **Andreas Müller(GER)** on 18 Mar 2003, 7:33 a. m.,*
in response to message #17 by Norm

Hi Norm,

what David sais is correct. The 3300mAh NiMH is of Sub-C type NOT of AA type! So, the improvement is from 1200mAh to 3300mAh. Here - http://www.gpbatteries.com.hk

and http://www.sanyo-energy-europe.com/frameset_cells.htm-

you can get info about a variety of cells.

Regards, Andreas

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-IL 9114 Disk drive - accessing > 128K w/HP-41?
*Message #1 Posted by **Gene** on 16 Mar 2003, 8:12 a.m.*

Gene: the quote below is from an Ebay auction for this drive. I'm curious about the utility program he mentions below. Anyone have an idea about an HP-41 program that can do this without using the functions built into the Ext IL module?

This is an auction for a HP 9114A+ Disc Drive, Radio Shack 6volt 1.8amp AC to DC adapter, 1(one) 0.5 meter HP-IL cable, original Operator's Manual, and the supplement USING YOUR DISC DRIVE. The plus (+) to the title 9114A+ indicates that I have modified this unit to avoid the sealed lead acid battery as the power source. ...I'm also including a utility program that "circumvents" the 128K media limit of the HP-IL Module. This may require additional hardware for the HP-41

Re: HP-IL 9114 Disk drive - accessing > 128K w/HP-41?
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 16 Mar 2003, 8:43 a.m.,*
in response to message #1 by Gene

Hi, Gene.

The HPIL standard NEWM for the 9114B media allows creation and access of about 128KBytes. Anyway, double-sided, single-density disks allow 630KBytes (extra 80KBytes used as spare space) when used with HP71B or HP75.

There is a program listed in the 9114B (pages 12-19, 370 steps; big guy, more than 120 registers) that may be used in the HP41 WITH extended I/O (HP82183A ROM module) that allows the HP41 to access all 630Kbytes in a disk.

As mentioned by Dan (he wrote an article about file formats and HPIL file streams) one must take care about disk names when disk data will be read in a PC. HP71 and HP75 allow name volume, but disks "formated" with an HP41 as a controler will have no label. Standard programs that read disks generated this way will not recognize HP41 generated disks.

Hope this helps.

Luiz C. Vieira - Brazil

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Now Here's Something You Don't See Every Day...
*Message #1 Posted by **John K. (US)** on 16 Mar 2003, 7:16 a.m.*

Anybody need a spare HP 10B -- or ten?

Re: Now Here's Something You Don't See Every Day...
*Message #2 Posted by **Scuba Diver** on 16 Mar 2003, 10:11 a.m.,*
in response to message #1 by John K. (US)

Well, actually I needed 97, one to use and 96 as backups...any idea where I could find them? Hehehe

He had this on auction once before with a Buy It Now price of $2,000.00 Funny, no takers then, so I guess he decided to lower his asking price!

B.

Re: Now Here's Something You Don't See Every Day...
*Message #3 Posted by **John K. (US)** on 17 Mar 2003, 11:56 p.m.,*
in response to message #2 by Scuba Diver

Well, actually I needed 97, one to use and 96 as backups...any idea where I could find them?

I guess this is your lucky day... :^)

Oddly enough, some of the language in the description ("Each case of 100[...]") makes it sound like he's got more of these boxes somewhere...

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-35 chip photos, assembly code

*Message #1 Posted by **Peter Monta** on 16 Mar 2003, 2:55 a.m.*

As an exercise in reverse engineering I've been playing with the HP-35 ROMs to extract the firmware. The code seems to work fine under the CASMSIM emulator---all the keys and functions behave as expected.

Code, chip photos, and emulator screenshot are here:

http://www.pmonta.com/calculators/hp-35

HP has not answered my two emails regarding permission to publish it, but then it's almost an exact subset of the HP-45 code already in one of their patents.

I wouldn't mind having an extracted netlist of the processor and register chips. (The image quality needed, though, may be a bit beyond my low-end microscope and digital camera.) One could then run a transistor-level emulation using Spice or (at the switch level) a Verilog simulator.

It would be mildly interesting to know what the bug was in the first HP-35 version. I suppose it's asking a lot, but would anyone care to send me the hardware so we could find out? I'd try not to break any bond wires during the chip surgery; there's some chance I could return it in working condition.

Cheers, Peter Monta

Re: HP-35 chip photos, assembly code

*Message #2 Posted by **HrastProgrammer** on 16 Mar 2003, 4:05 a.m.,*
in response to message #1 by Peter Monta

Excellent work! Congratulations!

Re: HP-35 chip photos, assembly code
*Message #3 Posted by **Mike Sebastian (Texas)** on 16 Mar 2003, 9:45 a.m.,*
in response to message #1 by Peter Monta

That's fantastic! Thank you very much for sharing your research with us!

Re: HP-35 chip photos, assembly code
*Message #4 Posted by **Vieira, Luiz C. (Brazil)** on 16 Mar 2003, 10:22 a.m.,*
in response to message #1 by Peter Monta

Hi, Monta;

I second the others: Congratulations.

Just for the records: all of the technology mentioned in your post was available for consumers in 1972. I guess the technology was available in 1970 or less for ptototyping purposes.

I was 9 years old in 1970.

Best regards.

Luiz C. Vieira - Brazil

Re: HP-35 chip photos, assembly code
*Message #5 Posted by **Michael F. Coyle** on 16 Mar 2003, 11:32 p.m.,*
in response to message #1 by Peter Monta

WOW!!! That is one hell of a good reverse engineering job you've done here. I've done some smaller jobs of reverse engineering and know (in principle) how to read ROMs but I've never tried it myself. I'm jealous :)

A couple of questions for you.

Is this a Mostek or AMI chip set?

Did you record the part numbers of all of the chips for future reference?

How did you get the chip packages open? Did you put them back together and if so, did the machine work?

Again, congratulations on a terrific job!

- Michael

HP-35 chip photos, assembly code
*Message #6 Posted by **Peter Monta** on 17 Mar 2003, 12:15 a.m.,*
in response to message #5 by Michael F. Coyle

> WOW!!! That is one hell of a good reverse engineering job you've done here.

Thanks! (And thanks for the other nice replies in this thread.)

> Is this a Mostek or AMI chip set?

AMI for all chips: ROMs and the processor and register chips.

> Did you record the part numbers of all of the chips for future reference?

Not for the ROMs, unfortunately, no, but the part numbers for the processor and register chips are still visible. I hope to take images of these at some point.

> How did you get the chip packages open? Did you put them back together and if so, did the machine work?

That's the nice thing about these old chips---the packages are either metal cans or ceramic with metal covers, very reverse-engineering-friendly. Plastic needs nasty acids to remove.

The ROMs were in TO-8 metal cans. I abraded off the top of the can with a Dremel tool, working all the way around the edge, kind of like a can opener. It's best to mask off the rest of the board so that metal dust doesn't get all over it. (For the ceramic chips, just a soldering iron or hot-air gun and a small knife should be enough.)

Unfortunately I broke a bond wire on the third ROM, so unless I can get access to a wirebond machine to repair it, the board will be nonfunctional. If I were to do it again, I'd rig up some holder for the work instead of grinding freehand.

The chips should work with their covers off (though they probably should be kept dark to avoid any photocurrents), but best would be to put something over them, like a microscope-slide cover glass tacked on with RTV, so no dust or grit gets inside.

Cheers, Peter Monta

HP-35 chip photos, assembly code
*Message #7 Posted by **Peter Monta** on 17 Mar 2003, 12:55 a.m.,*
in response to message #6 by Peter Monta

There's a photo of the HP-35 processor board at the bottom of the web page. The three exposed ROM chips can be seen.

Cheers, Peter Monta

Re: HP-35 chip photos, assembly code
*Message #8 Posted by **David Smith** on 17 Mar 2003, 6:21 p.m.,*
in response to message #6 by Peter Monta

A lot of these early chips were not passivated with a silicon dioxide coating. Once you open the package, the outside world gets in and slowly corrupts the magic inside. Even if you fixed the wire bond, the chips would probably die in a few months anyway.

HP-35: please post in the Articles Forum also!
*Message #9 Posted by **Andrés C. Rodríguez (Argentina)** on 17 Mar 2003, 6:30 a.m.,*
in response to message #1 by Peter Monta

Congratulations! Would you like to post your work in the Articles Forum, to make it more "static" and thus available than in this discussion forum (more dynamic and volatile)?

Re: HP-35 chip photos, assembly code
*Message #10 Posted by **Bill Wiese** on 17 Mar 2003, 1:22 p.m.,*
in response to message #1 by Peter Monta

Bravo, Peter, tour de force! You da man.

A few comments and perhaps some interesting background for some folks here: I've been involved with more than a few reverse-engineering activities on (P)/ROM firmware in my past.

In one case, we used a shop that used fuming nitric acid to 'decap' the plastic (epoxy) DIP packages. Ugly job, but there are co's that do it - not just for reverse engineering but for product failure analysis, etc. Cost us about $400 total to decap 3 chips and photomicrograph the dies.

In this particular situation, unfortunately, the parts we really cared about had EPROM not mask ROM, and we couldn't get the data out (not enough chip info, semiproprietary part/pinout, address mappings, etc. These were Japanese Motorola/Toshiba custom flavors of 68HC11s.)

The parts we didn't care as much about were 4-bit CPUs w/mask ROM and there were no equivalent E/PROM microcontrollers available except special eval board stuff so we couldn't do retrofits even if we'd taken the time to extract ROM data. FPGA/CPLD stuff today could've changed this perhaps.

Getting data on Japenese lower-end microcontrollers tied with Japanese products is quite difficult. These are not always 'custom' parts but they never make it into databooks. Many of these parts are not sold in US or Europe either (esp 4-bitters and some of the low-end 8-bit variants).

On chips with smaller much feature sizes, the glass passivation layer can interfere with reading ROM contents; if the ROM metallization layer is not in the top 2 layers life can be hard too, looking at the bits. Sometimes ROM row/column lines are staggered or are in funny order too - do not have directly incrementing address relationship vs. #rows/#columns traversed.

However, we've had success with quite a few EPROM microcontrollers in the late 80s/early 90s. Many had "security bits" that were subvertible - in some cases on 8051 variants, the EPROM security bit(s) were not latched except at full reset, so booting the CPU 'wild' - straight power up w/no forced reset - allowed external program to, after awhile, get control of the free-running CPU, deal with /EA ROM-bank toggling and have external program begin to fetch & emit internal ROM data. Later revisions of these parts latched the /EA (external access) pin at power-up, not reset.

CPUs that offer either 'ROM verify' (but no readback) or even 'encrypted verify' as an option (and left enabled by mfgr in shipped product) allow a scripted EPROM/CPU burner to verify against a ROM image constructed "on the fly". Sometimes a bit of logic is needed to reset targeted CPU each pass (one pass per byte; each pass has to start back from $0000 again and verify upward to the next new byte to test.) In theroy this process could take 256*ROM_size passes, and is thus time consuming and can take overnight (depending on size of PROM area & speed of burner verify pass & communications speed). Using byte test sequences sorted by some prior knowledge of avg opcode/operand frequency (or a 2nd-order predictor - knowing some opcodes, likely operands can be chosen with higher degree of confidence) instead of just trying $00...$FF can speed things up. PROM data read back as 16 bit words would be a real b*tch to deal with since 65536 possibilities per location: set the process running and go on vacation.

Even with encrypted verify - where the data read out is still encrypted - these are usu simple XOR/XNOR masks with a short key (16 or 32 bytes), and the typical mask string has something like ***5/89 ACE CO./ ROBERT SMITH *** - that is, the key has a partially known or partially predictable plaintext. Key values that are unknown can be examined by checking decrypted/disassembled code for sensibility and checking for ROM checksum (often $00 or $0000).

Happy hacking!

Bill Wiese San Jose, CA

Re: HP-35 chip photos, assembly code
*Message #11 Posted by **David Smith** on 17 Mar 2003, 6:25 p.m.,*
in response to message #10 by Bill Wiese

There are chip doctors out there that can suck the brains out of just about any chip that you can imagine. They can read E(E)PROMs, etc with polarized light or e-beam probing. They can generate full mask sets and reverse them into schematics. All it takes is money...

Re: HP-35 chip photos, assembly code
*Message #12 Posted by **Bill Wiese** on 18 Mar 2003, 3:48 a.m.,*
in response to message #11 by David Smith

> There are chip doctors out there that can suck the > brains out of just about any chip that you can imagine. > They can read E(E)PROMs, etc with polarized light or > e-beam probing. They can generate full mask sets and > reverse them into schematics. All it takes is money...

Yes, we were reverse-engineering engine-control firmware. Polarized light? Hmm, dunno about that.

Doing e-beam stuff (I've heard it's a bit problematic reading EPROMs & flash in terms of reliability) would be a bit pricey for one engine computer from one model sub-year for one make/model/engine variant of a car.

One other trick for dumping 'locked' or 'secured' EPROMs on microcontrollers is to UV-expose only the security bit area - these are often in a separate physical position than the actual EPROM array in question, and if EPROM array is covered and security bits are exposed, access can be gained.

In Silly Valley here, it's quite common for prototype chips to have 'surgery' performed on them using FIB (Focused Ion Beam). Some re-metal patches can be applied too: this can save a prototype chip from needing to be respun when just one portion has failed and is locking things up yet engineers wanna test the rest of it without delay.

Getting schematics from mask peels costs $$$ and you end up with, um, a schematic. Still can take a lotta sussing out to figure out what's going on on a functional basis, very

much like getting a disassembly without comments :)

Bill Wiese San Jose, CA

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

A couple of simple questions on the hp 45

*Message #1 Posted by **Jeremy** on 16 Mar 2003, 12:48 a.m.*

I just got one in the mail today from an eBay auction I won about a week ago. It is very well used, the sides are all shiny, and some keys don't bounce back as well as others, but the thing still feels very solid. It had the nameplate of some engineering firm on it, which is gone now.

While hanging out here, I learned that HPs of this era were designed for HPs proprietary battery pack. However, I didn't know they put the contacts on the bottom instead of the end. So I'm going to have to figure out how to wire this baby up properly. I don't care much for athenticity or collectibility; I just wanted an old-school LED RPN HP. So now the barrage of questions begin. ;)

1. What voltage is the input, 3.6? 4.5? (the battery input, that is..)

2. As you look at the open battery compartment from behind, which terminal is positive? the upper or the lower one?

3. Lastly, what is a good way to jury rig this to hold AAs or AAAs. I'm thinking that if it is 4.5 volts (or 3.6 for Ni-Cads) a three cell holder from Radio Shack might be just the thing to hardwire in there...

What are your thoughts? Thanks.

-Jeremy

PS- the next step will be to tear this baby down and clean the keypad contacts. Some of them are a bit sticky. It is obvious to me that whoever used this, didn't not treat it gently. Maybe some chucklehead even did some durability demos on it... ;)

Re: A couple of simple questions on the hp 45
*Message #2 Posted by **Nenad Vulic (Croatia)** on 16 Mar 2003, 5:24 a.m.,*
in response to message #1 by Jeremy

1. 3 ENTER 1.2 X gives 3.6 V

2. The lower one is positive

3. Three NiCd's preconnected together (intended for wireless honme phones) would be OK.

It is not a big issue to open the battery pack with Exacto knife, replace the NiCd set and glue it back together by super glue, but, be carefull not to cut yourself.

Thanks, and more questions.
*Message #3 Posted by **Jeremy** on 16 Mar 2003, 9:14 a.m.,*
in response to message #2 by Nenad Vulic (Croatia)

Yeah, I didn't know if it took 2,3, or 4 1.2V cells. Now I know. I had forgotten the part about cordless phone batteries.

I don't have the original batter pack to cut open, replace the cells and super glue back together. I think what I will do is open it up, find the terminals where the spring connections are made and solder leads there so I don't have to mess up the spring clips. Then, if I can find a cell holder from Radio Shack or something that will hold Alkaline cells, I will just hardwire that in. I really don't like the idea of having rechargable batteries in a calc, because they die on you when you least expect it. As a student, the stakes are too high.

However, I will assume for now that I won't be able to find something to fit and do the cordless phone battery pack idea. Assuming that, I will need to know the ratings of the stock battery charger:

1. What are the voltage and current or power output on it? 2. Was the original a simple linear transformer charger, or did it have some sort of logic built into it? (switch-mode)

Thanks for all your help! -Jeremy

Re: A couple of simple questions on the hp 45
*Message #4 Posted by **Dan M (Vermont, USA)** on 16 Mar 2003, 2:06 p.m.,*
in response to message #1 by Jeremy

Jeremy,

Help can be found not too far away... Check out the following sites for hp battery information:

http://www.hpmuseum.org/batts/battery.htm

Battery Pack with Polarity Marked:

http://www.hpmuseum.org/batts/battcls.jpg

Battery Compartment with Polarity Marked:

http://www.hpmuseum.org/batts/bccls.jpg

I've found good prices on 3-pack NiCds at the clearance bins at Staples, Office Depot, etc. Good Luck!

Dan

Re: A couple of simple questions on the hp 45
*Message #5 Posted by **Richard Parfitt (UK)** on 17 Mar 2003, 5:22 a.m.,*
in response to message #4 by Dan M (Vermont, USA)

Jeremy, I have sent this info to many people I have seen on MoHP concerning batteries in the "Classic series, eg 35,45,55,65,67,80 etc). The batteries I have found are normally used in Cordless handset phones, and I obtained them in the UK from RS Components, (www. rswww.com) stock No.595-491 and cost £7-20 plus local tax. They are Ni-Cad 3.6V/700mAh, and I have used them in three of my HP35's and a HP45 with no problems. They come as a unit with two tags and I just solder on flying leads (very thin wire is best) which I then solder to the battery terminals in the back of the calculator, I solder them halfway down the terminal so as not to modify the ends that might want to be used in the future. As they are shrink wrapped with insulator I just let them rest in the battery compartment. It might be possible to take the three cells and incorporate them into the HP battery pack after cuting around the joint on the plastic. The other thing I do is to take 3 AA Alkaline cells and put them into a HP battery pack again after cutting around the joint to separate the two halves. This is a solution I have used very succesfully in my HP25, just take 2AA's and place them in the battery pack from your HP25,21,27,29 etc. I have

enclosed some pictures to show you what I have done. RS Components has a place in the USA called "Allied Electronics in Texas, their web address is www.alliedelec.com, I found this from the RS catalogue I receive regularly. I hope this is of some help, let me know if it's helpful or makes sense, please feel free to let others know and call me if you want more info if I can provide it. Regards Richard.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

More Info:16C 68bit I Register

*Message #1 Posted by **Steve** on 15 Mar 2003, 10:16 p.m.*

Based upon some testing, I believe that the I register does in fact have more than 64 bits. First, you need to set the complement mode to unsigned since it appears in 1 and 2 complement mode, if the high order bit is on, the sign is extended when the value is stored in I.

Using the following program steps:

LBL A RCL I PSE ISZ GTO A R/S LBL B RCL I PSE DSZ GTO B R/S

Set the word size to 64. In the X enter FFFFFFFFFFFFFFF8, store X into I. Execute A (GSB A). You will see the values go to all F's, then 0, 1, 2, 3..., but the ISZ will not skip the GTO A, meaning the I is never 0 even though the 64bit wide X says it is. To prove it another way, with the "small" value still in X, do a GSB B. The values will decrement, 3, 2, 1, 0, FFFFFFFFFFFFFFFF, but the DSZ will not skip the GTO B.

Maybe something else is going on to cause this behavior, it's hard to tell. If only one of the 16C designers was around to ask, we would know for sure. Oh well!

Steve

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Problem with HP42S
*Message #1 Posted by **Glenda** on 15 Mar 2003, 2:48 p.m.*

Hi all. My 42S just out of the blue displays "machine reset". The batteries are new and no other problems. It happens very regular. No loss of memory or any other problem. Any explanations? Thanks.

Re: Problem with HP42S
*Message #2 Posted by **Kris** on 15 Mar 2003, 6:46 p.m.,*
in response to message #1 by Glenda

Mine does this when I change the batteries. Check and clean the contacts.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

How to: HP-IL copy all files ???
*Message #1 Posted by **Dave Mabry** on 15 Mar 2003, 10:50 a.m.*

Is there an easy way to copy an entire medium from an HP-IL mass storage device to another mass storage device? It looks like the Extended I/O module on an HP-41C would do it, but I don't have that module. I would like to be able to copy all the files from a tape to a diskette or vice versa. I have a tape drive and a diskette drive.

I've been looking at the manual for the Extended I/O module and it looks like there is a function in it that would with one command do the entire medium.

ISTR that the Extended I/O module generally brings big bucks on e-pay, and it seems that they don't come up very often, so I'm hoping there is an easy alternative.

Thanks.

Re: How to: HP-IL copy all files ???
*Message #2 Posted by **Frank Wales** on 15 Mar 2003, 11:44 a.m.,*
in response to message #1 by Dave Mabry

Sounds like a job for the Autostart/Duplication module (P/N 00041-15042). (See HP Key Notes Volume 6 Number 3)

Re: How to: HP-IL copy all files ???

*Message #3 Posted by **Christoph Klug** on 17 Mar 2003, 9:50 a.m.,*

in response to message #2 by Frank Wales

alternatively this would be a nice and easy job for EMU41 with virtual EXT-I/O module. And you need the HP-IL/PC interface card for adapting the to real mass storage drives to the PC.

Furthermore EMU41 gives you much more features and solutions for real and virtual HP41 handheldcomputer applications.

Refer to HP-Museum article forum item 311 "HP41-PC gateway & emulator".

Best wishes from Germany - Christoph Klug

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Our Military and the 41
*Message #1 Posted by **Katie Wasserman** on 15 Mar 2003, 1:18 a.m.*

FYI. There's an ad that someone in the military just posted in the Classified section here urgently requesting spare HP 82242A infrared modules for use in KC-10 aircraft during the impending war. Assuming that this is for real, it begs the question of why our military is using 20 year old computer technology for what sounds to be an important application. It's also a ringing endorsement for the 41 system, of course.

So who here has all the excess stock of 82242A modules that I keep seeing on ebay? I'm sure that Rumsfeld and company will pay handsomely for them!

-Katie

Re: Our Military and the 41
*Message #2 Posted by **Spice_Man** on 15 Mar 2003, 4:19 a.m.,*
in response to message #1 by Katie Wasserman

I have some doubts regarding the honesty of the person posting that wanted ad...

Spicey

Re: Our Military and the 41
*Message #3 Posted by **Emmanuel, Normandy** on 15 Mar 2003, 5:40 a.m.,*
in response to message #2 by Spice_Man

```
According to some P-3B/C Orion aircrew men I know,
HP-41 is not still used for weight and balance calculation.
There's some PCs with software or slide rules for that.
But however it could be a personal use on board too.
Then I can be wrong because I don't know all about KC-10,
but you can visit the following URL:
www.af.mil/photos/tankers_kc10.shtml
Benefit of the doubt ... ;o)
```

Re: Our Military and the 41
*Message #4 Posted by **Holger Weihe** on 15 Mar 2003, 6:13 a.m.,*
in response to message #2 by Spice_Man

I know from a friend that the german artillery still used HP-67's on board of tanks about 10 years ago. It was some kind of backup system. So why shouldn't it be used in planes by now? What newer calculator would better serve for this purpose? A Casio? ;-)

Holger

Re: Our Military and the 41
*Message #5 Posted by **Dave Mabry** on 15 Mar 2003, 6:36 a.m.,*
in response to message #2 by Spice_Man

> I have some doubts regarding the honesty of the person posting that wanted ad...

> Spicey

Why do you say that?

Re: Our Military and the 41
*Message #6 Posted by **Spice_Man** on 15 Mar 2003, 2:44 p.m.,*
in response to message #5 by Dave Mabry

Why do I have doubts? Because:

1. Why can't the "f_'ed up" printers mentioned in the ad be repaired or replaced?

2. Why use 20 year old calculators to do such mission-critical tasks? There are much better and more modern solutions. (e.g. laptops, palmtops, pda's, or even current TI calculators etc, with a whole slew of portable printing solutions)

3. If an HP 41 is actually being used, why not use the wired 82143A printers, which are more readily available (at least in the used/antiquated equipment marketplace)?

4. If an HP 82240A/B infrared printer must be used, why not acquire the 48G series (or many of the pioneer series) with built-in infrared ports as the driver for these printers?

I will admit that it is within the realm of possibilities that the poster of the ad is completely honest, that some equipment provided by our USAF is so "f_'ed up" that a soldier must rely on whatever antiquated equipment he can personally obtain outside the Air Force to aid him in doing weights and balances calculations for a critical airborne refueling system known as the KC130.

Spicey

Re: Our Military and the 41
*Message #7 Posted by **peter (Germany)** on 15 Mar 2003, 4:41 p.m.,*
in response to message #6 by Spice_Man

I have some HP-41 ROMs for Military Aircrafts like KC-135, Boeing B52D and B52H. I know of at least ROMs for the C141B and C9B airplanes. Seems that HP sold a lot of 41s to the army those days. Remeber, some of these aircrafts are even (much) older than the 41C. And in aerospace things, it's not so easy to replace equipment, because everything goes through a lot of certification and testing before getting approval.

I would take the ad for real.

Re: Our Military and the 41
*Message #8 Posted by **Emmanuel, nOrmandy** on 16 Mar 2003, 4:02 a.m.,*
in response to message #7 by peter (Germany)

```
Flight engineers are always using HP-41
for motor power control on BAC Concorde.
And some of us are using HP-41 for preflight too or astronavigation.
Peter, you are right about the certifications...
We don't change a winner team too!
```

Re: Our Military and the 41
*Message #9 Posted by **David Smith** on 16 Mar 2003, 2:39 p.m.,*
in response to message #1 by Katie Wasserman

I know for a FACT that there are at least some current military applications for the 41C family. I have very recently provided some CX machines, etc and was paid by Uncle Sam. I originally refused to provide the machines because of the million pages of paperwork that would have been required to sell to the govenrment, but the need was apparently great enough and the dollar amount small enough that a workaround was found.

As far as the IR printers go, the 82143A is a MUCH more cost effective and reliable solution.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Minimal Scientific Calculator: A Modest Proposal (long!)
*Message #1 Posted by **Michael F. Coyle** on 14 Mar 2003, 7:12 p.m.*

Introduction

A recent thread here asks, "What is the most useless function on a scientific calculator?" Many people have answered and a spirited discussion has ensued. One argument against functions such as x^2 and % is that it's easy to calculate the function without needing a special key.

That got me to wondering: how *few* functions can we use to build a scientific calculator. Right now I'm looking at my 11C: a beautiful machine, to be sure, but loaded with keys and functions. The engineer in me asks, "How can I reduce its complexity? What can I get rid of?" The 10C was a step in the right direction but in my opinion was a failure because it did not go far enough.

Let's see how much of the extra functionality we can remove. True, we will have to learn some new key sequences but HP users are used to doing things a little diffenently, what with RPN and all.

Let's call this new machine the HP-11C-. (Although some other names, like HP-11D- or HP-11F may come to mind too.) Readers of the other thread will be happy to learn that the 11C- does not include %, x^2, Grads, n!, or hyperbolics; thus, it should make everyone happy.

Hello, Numbers, Goodbye -, /, Trig and Logs

First, let's mention a few things we'll keep. All of the number entry and stack manipulation keys: [0]-[9], [.], [CHS], [EEX], [ENTER], [<-], [x<>y], [R Down], [R Up], [LST x]. Display Mode keys: [FIX], [SCI], [ENG]. Shift keys: [f], [g]. Not to mention [ON].

Now let's get rid of some stuff. We still need to add, so [+] stays. But with [CHS] to negate numbers we don't [-] any more; use the sequence [CHS] [+] to subtract.

Similarly, we may eliminate [/] if we keep [1/x], which is useful in contexts other than just straight division, in forming negative exponents, for example.

All trig functions will be done in radians so [DEG], [RAD], [GRD] go away. We don't need the trig functions either: **angle** [ENTER] 1 [->R] gives us the cosine in x and the sine in y. They can be divided to get the tangent. [->P] gives the arctangent; the other inverse trig functions can be calculated from the arctangent with the appropriate formulas. [0] [1] [CHS] [->P] [x<>y] gives us pi, so there goes another key. With pi still available, we don't need [->DEG] or [->RAD].

Let's hold onto [LN] and [e^x]. We can then calculate common logs and antilogs, and arbitrary powers and roots, so we don't need [LOG], [10^x], [y^x], [x^2] or [sqrt x]. Hyperbolic functions and their inverses are defined in terms of exponentials and natural logs, so they go out the window, too.

Other Functions

Memory ([STO], [RCL]): Keep.

[%], [Delta %]: Not necessary, compute using formula on back panel of calculator.

[ABS]: Trivial to do by hand or in a program.

[CLEAR Sum], [CLEAR PRGM], [CLEAR REG]: Don't need. Get rid of them.

[CLEAR PREFIX]: Useful for correcting incorrect prefix key press. Keep.

[CLx]: Not sure about this one. Let's get rid of it and put it back later if it proves necessary.

[RAN #]: Too hard to duplicate. Keep.

[Py,x], [Cy,x]: Can be computed with factorials. Get rid of them.

[x!]: Get rid of it unless you need the gamma function.

[->H.MS], [->H]: Drop; easy to implement.

[FRAC], [INT]: We don't them both. Keep [INT] and compute fractional part with Frac(x) = x - INT (x).

[USER]: Just a conveinence function. Don't need it.

[MEM]: Why bother? Get rid of it.

Statistics: [Sum+], [Sum-], [x bar], [s], [y hat, r], [L.R.]: Can all be computed by hand. Get rid of

them.

Programming Functions

We will keep all of the programming stuff with the following exceptions:

[BST]: We can just go back to the start of memory and [SST]. Drop.

[DSE], [ISG]: Can rewrite with other sequences of instructions. Get rid of them.

Flags: We can duplicate their effect using regular memory registers. Out they go!

Conditionals: We certainly don't need eight of them! First, get rid of the four "compare x to 0" tests. We can just put the zero in ourselves and use the "compare x to y" tests. Next, [x=y] and [x!=y] are exact opposites; we only need one. Let's keep [x=y]. Finally, [x<=y] and [x>y] are also opposites; let's keep [x>y]. This eliminates six of the eight conditionals and leaves just two nonredundant ones.

Examples

Now let's put it all together. First some simple examples (all to 4 decimal places):

Square root of 625: 625 [LN] .5 [X] [e^x] (Answer: 25.0000)

Common log of 2: 2 [LN] 10 [LN] [1/x] [X] (Answer: 0.3010)

Common antilog of 2.775: 2.775 [ENTER] 10 [LN] [X] [e^x] (Answer: 595.6621)

2^5: 2 [LN] 5 [X] [e^x] (Answer: 32.0000)

cos 0.75: .75 [ENTER] 1 [->R] (Answer: 0.7317. [x<>y] gives sin 0.75 (0.6816))

And finally, a larger example:

Arc sin 0.6, in degrees: [LN] [LST x] [x<>y] 2 [X] [e^x] [CHS] 1 [+] [LN] .5 [X] [e^x] [->P] [X] 180 [X] 0 [ENTER] 1 [CHS] [->P] [X] [1/x] [X] (Answer: 36.8699)

Isn't this more satisfying than hitting just two keys, like on other calculators? Here you have a real sense of ownership of your answer, having worked hard for it. The HP-11C- will give you many opportunities for this kind of satisfaction.

Conclusion

The appeal of the proposed HP-11C- is clear. Fewer built-in functions mean less ROM and fewer keys. This translates to lower manufacturing costs and higher reliability. Fewer keys also means that the calculator can be made smaller without sacrificing key size or spacing, preserving the excellent Voyager series ergonomics. And as can be seen from the description above, the calculator provides a built-in never-ending refresher course in math, as opposed to other calculators which only act as a mental crutch the more you use them. This aspect alone could make the 11C- a hit in the educational market.

Comments and suggestions are always welcome.

Re: Minimal Scientific Calculator: A Modest Proposal (long!)
*Message #2 Posted by **Patrick** on 14 Mar 2003, 8:03 p.m.,*
in response to message #1 by Michael F. Coyle

Well, this is interesting as an academic exercise, but I wouldn't be buying any stock in the company which tried to build and sell them.

As is often the case with such brainstorming sessions, the goals of the exercise are not clear. Is it simply to think of a design that has few keys? Is it to build a calculator that is easy to use? Is it to increase the machine's reliability? Is it to reduce manufacturing costs? All of these appear to be alluded to in your discussion.

What your design clearly is not, IMO, is one which would actually sell and make money for its manufacturer. I, and I suspect a huge majority of people, would NEVER buy a calculator which didn't include a subtract key, asking me instead to hit CHS then ADD. I mean, come on... people buy these things (in large numbers) to make their lives EASIER, not more thought provoking. The missing subtract function is just the most obvious of deal killers for me. There are many, many others.

This is your thread, and you're free to state what the goal of this discussion is from your point of view, but ease of use and reliability are ones that could generate some great discussion. I don't think, for example, that reducing the number of keys by 50% ... sorry ... we don't have percents ... by a fraction of 1/2 (luckily I still have reciprocal) ... will increase the calculator's reliability all that much. Maybe I'm wrong, I don't know. What I would do is find out what the chief reasons are that caculators fail and try to do something about those. For example, I suspect human error -- leaving batteries in the machine long term -- is a chief culprit. Maybe some clever engineering can overcome that. Make the battery compartment sealed and replaceable?? I dunno... there's gotta be a cheap way. In any event that would be my approach -- profile and attack the biggies first.

For ease of use, you'd have to likewise do some usability studies. Again, people seem to like machines with less busy keyboards. Can we be clever somehow in reducing the shift keys down to only one? That would help. I like and have often thought about Luiz' point about making tiny little LCD's above the calculator keys to show what the keys do at any given time. That sounds like it might be good from a usability standpoint (but take a giant step backwards in reliability, I suspect).

I've said enough for now, I think. Maybe too much ... :-)

Re: Minimal Scientific Calculator: A Modest Proposal (long!)
*Message #3 Posted by **Gordon Dyer** on 15 Mar 2003, 3:30 a.m.,*
in response to message #2 by Patrick

The humour seems to have got lost in the ROM with no key to access it !

Re: Minimal Scientific Calculator: A Modest Proposal (long!)
*Message #4 Posted by **Christof** on 15 Mar 2003, 4:24 a.m.,*
in response to message #2 by Patrick

Acknowledging the possibility of lcd keys, I'd like to suggest something else- which may seem odd, but has potential. more single line LCD displays above the next two rows of keys.

this gives you a 3 row soft menu effect very easily, without having to worry about the keys themselves going bad.

but looking at all these answers- I find that most solutions ahve been used in various HP calculators- just not all at the same time.

overlays- good ones like the 41 had, don't exist for the pioneers. Soft menus like you have for the 42, don't exist for the 41. (overlays aren't the ideal answer, since they are seperate and therefore losable pieces, but they are better than nothing, and I don't trust the quality of the lcd keys in a field calc.)

a display that displays 4 stack levels isn't on any machine previous to the RPL era.

the way the % key is implemented that works so well for VAT would be even better done as a program if you had a (minimum)two line display and a user configurable keyboard. This makes the need for the dedicated % key less. it also applies to many other keys.

x^2 would not be such a concern on stakc conservation if the stack was configurable.

natively supporting both keystroke and RPL programming models on the same machine would solve many problems.(such as dynamically adding to the functions usable by the keystroke programming 'language')

- personally, I like the 32Sii. I *like* the 2 shift keys. give me that keyboard layout, the functionality size of my 42S, the display of a 28, and 64K or better RAM and I'd probably keep quiet. (well, IR I/O and the ability to flash the OS would be nice)

Re: Minimal Scientific Calculator: A Modest Proposal (long!)
*Message #5 Posted by **bill platt** on 15 Mar 2003, 10:46 a.m.,*
in response to message #4 by Christof

Yes, right on my thoughts with:

stack configurable, and RPL/keystroke support, and 32sii is mighty nice generally (E-bay seems to be proving that!)

I think IR will be uneccessary in the future--look at what is on the market right now for memory transfer at very low cost....

The business (further up the thread) about saving lines by using <shift>x^2 etc only matters when the memory is rather "hard" rather than configurable. With memory more "soft" like the 32sii (the old 10-c series was on the right track already with the automatic line allocation) --the newer idea of having a pot of memory that can be used for anything, that makes the number of lines per se unimportant.

Re: Minimal Scientific Calculator: A Modest Proposal (long!)
*Message #6 Posted by **Michael F. Coyle** on 15 Mar 2003, 9:27 p.m.,*
in response to message #2 by Patrick

Hi Patrick!

You Wrote:

Well, this is interesting as an academic exercise, but I wouldn't be buying any stock in the company which tried to build and sell them.

Me neither!

...the goals of the exercise are not clear. Is it simply to think of a design that has few keys? Is it to build a calculator that is easy to use? Is it to increase the machine's reliability? Is it to reduce manufacturing costs? All of these appear to be alluded to in your discussion.

The only goal was to reduce the number of functions to a bare minimum. The other benefits (fewer keys, lower cost, reliability) were just icing on the cake, not actual objectives. Clearly ease of use was *not* a goal!

I don't think...that reducing the number of keys...will increase the calculator's reliability all that much. .... What I would do is find out what the chief reasons are that caculators fail and try to do something about those. For example, ... leaving batteries in the machine long term -- is a chief culprit. ... Make the battery compartment sealed and replaceable??

You could be right, I don't know. But for electronic equipment in general, mechanical components like switches, keys and connectors tend to fail more often than the electronic components. Thinking back on the repair threads on this forum, keyboards, battery packs, and LCD displays come up an awful lot, followed by ICs, with LED displays perhaps last. Card readers also seem to be a trouble spot. (My recollections, not to be taken seriously.)

Your sealed battery compartment idea sounds like a good one.

For ease of use, you'd have to likewise do some usability studies. Again, people seem to like machines with less busy keyboards. Can we be clever somehow in reducing the shift keys down to only one? That would help. I like and have often thought about Luiz' point about making tiny little LCD's above the calculator keys to show what the keys do at any given time. That sounds like it might be good from a usability standpoint (but take a giant step backwards in reliability, I suspect).

I suspect my proposed calculator would get laughed out of any useability study.

Getting down to one shift key would require either reducing the number of functions or increasing the number of keys. No obvious shortcut here.

Per-key or per-row displays would be nice but would add to the cost of the machine and greatly reduce reliability. (Think of the increase in interconnections alone!) Rather large pushbuttons with built-in displays are available but are very expensive. (Maybe $50 a switch?) Unless something new comes along, I think we're stuck with one row of softkeys below the display and/or keyboard overlay sheets. Oh well.

I've said enough for now, I think. Maybe too much ... :-)

Me too. Anyway, thanks for your reply.

- Michael

Re: Minimal Scientific Calculator: A Modest Proposal (long!)
*Message #7 Posted by **Patrick** on 16 Mar 2003, 1:54 a.m.,*
in response to message #6 by Michael F. Coyle

Hey, sorry if I missed the humour... I think I gave up half way thru... mea culpa.

When you look at reliability, I bet a lot of failures are not reported (uh... it kind of ... well ... slipped out of my ... uh ... shirt pocket as I was ... uh ... flushing the ...)

I guess my point is that human error is likely a huge problem with reliability. I realize mechanical parts are the major culprits otherwise. Bet a lot of keys fail, though, because they're trying to work through that layer of Coca-Cola that got laid down betwen them and the key sensors.

Re: Why stop there?
*Message #8 Posted by **Mike Rivera** on 14 Mar 2003, 10:57 p.m.,*
in response to message #1 by Michael F. Coyle

Great ideas!

While you're at it, let's get rid of the "8" key.

I hardly ever use it and if I need to I can always use: 7 <enter> 1 +

Happy Friday!

- Mike

Re: Why stop there?
*Message #9 Posted by **Michael F. Coyle** on 15 Mar 2003, 7:24 p.m.,*
in response to message #8 by Mike Rivera

Hi Mike!

Thanks for your suggestion.

I will give all the consideration it deserves. :)

- Michael

Re: Why stop there?
*Message #10 Posted by **mapet** on 17 Mar 2003, 3:50 a.m.,*
in response to message #8 by Mike Rivera

In fact the calc can run only in binary mode, so all number keys we need is "0" and "1" :-)))))). Sqrt and ln are not needed as well as we can program the calc with Taylor series based algorithms...

...and here's MY brainstorm on that... ;)
*Message #11 Posted by **Jeremy** on 14 Mar 2003, 11:23 p.m.,*
in response to message #1 by Michael F. Coyle

By the time you put all that thought into doing what we now consider basic calculation, why not completely eliminate the calculator?

If we instead used slide rules, we would never worry about batteries and corrosion. There would be no buttons to wear out. With today's technology, an accurate and rugged slide rule could be produced for mere pennies. I would think that the type of person who would eliminate the minus sign and common log would be all over slide rules. If you stop to think about it, slide rules are beautiful in their simplicity and reliability. With pen and paper, some nice laminated log tables, and a good slide rule or two and we'd be all set.

People would be more well educated in basic math, but by the time they got anywhere, they will have had their fill.

I'm thinking of it, and I'm trying to imagine jumping through all those hoops just to find a simple sine in degrees. (gasp) Talk about increasing your chance for erros, esp. math novices...

Anyway, I'm sure you've thought of all this and maybe the purpose of the post was just to illustrate that which features are really necessary is a matter of personal taste and knowledge base... Good thoughts!

-Jeremy

Re: ...and here's MY brainstorm on that... ;)
*Message #12 Posted by **Christof** on 15 Mar 2003, 4:27 a.m.,*
in response to message #11 by Jeremy

Binary!

all math on ten fingers.

Re: ...and here's MY brainstorm on that... ;)
*Message #13 Posted by **db(martinez,california)** on 15 Mar 2003, 5:46 p.m.,*
in response to message #12 by Christof

cristof - thats not binary: fingers are "digital" :-) - d

Re: ...and here's MY brainstorm on that... ;)
*Message #14 Posted by **Michael F. Coyle** on 15 Mar 2003, 8:41 p.m.,*
in response to message #11 by Jeremy

Jeremy wrote:

I'm thinking of it, and I'm trying to imagine jumping through all those hoops just to find a simple sine in degrees. (gasp) Talk about increasing your chance for erros, esp. math novices...

You find 28 keystrokes for an arcsine excessive??? Gee, way back when, men were made of sterner stuff. :)

Anyway, I'm sure you've thought of all this and maybe the purpose of the post was just to illustrate that which features are really necessary is a matter of personal taste and knowledge base... Good thoughts!

I hadn't thought of it that way but that sounds about right.

I have used slide rules and while they're fun to play with, I sure wouldn't want to give up my

calculators for them.

Thanks for your reply.

- Michael

Re: Minimal Scientific Calculator: A Modest Proposal (long!)
*Message #15 Posted by **Karl Schneider** on 15 Mar 2003, 12:44 a.m.,*
in response to message #1 by Michael F. Coyle

Mr. Coyle put together a nice tongue-in-cheek discussion (particularly the conclusion) that made for an interesting quick read. Patrick might have missed the point, I think...

I believe that the 10C (mentioned in Coyle's post) failed commercially (1982-84 lifespan) because its functionality was stripped down too much in the interest of creating an "entry-level" model. 12C-like programming capability and lots of stuff taken out for an $80 price tag in 1982? More like a marketing gimmick -- wise salesmen would have directed customers to the 11C and 15C. ("Yeah, it's cheaper, but you don't really want it -- here's why...") In those days, I'll bet those units not bought through mail order were sold by knowledgeable clerks at electronics counters.

Re: Minimal Scientific Calculator: A Modest Proposal (long!)
*Message #16 Posted by **Michael F. Coyle** on 15 Mar 2003, 7:37 p.m.,*
in response to message #15 by Karl Schneider

You're right about the 10C, of course. If someone's in the market for a Cadillac, they're just not going to be interested in a stripped-down Cadillac. Likewise with HP calcs.

I like your "sell-up" theory. I think you've something there.

- Michael

Re: Minimal Scientific Calculator: A Modest Proposal (long!)

*Message #17 Posted by **glynn** on 15 Mar 2003, 1:25 a.m.,*

in response to message #1 by Michael F. Coyle

Thank you Michael... LOL, at the wit of it all. (Um, his title should have been a clue-- Jonathan Swift's famous essay "a Modest Proposal", about breeding babies as a potential food crop, was actually castigated and Swift reviled for his cruelty and insensitivity when it was first published. Neither Swift, nor Coyle, are suggesting what they SEEM).

The purpose of ANY tool is to make efforts EASIER. Of course you can make a tool much more complex than it needs to be. You can also turn out beautiful work with stone axes and bone awls. You nearly ALWAYS have to know what the heck you are doing, with whatever tool you choose.

The question of when the learning curve of the tool exceeds the user's willingness to learn it, and the equally relevant question of when does automation interfere with understanding of the process--- hey, SOME of this was decided long, long ago when mathematicians invented various symbolic representations of concepts which we are now expected to know and understand enough about to IMPLEMENT when necessary.

We ALL understand the concepts behind and the rules regarding addition (+) and subtraction (-) of numbers; but it has become second-nature to us primarily because we were TAUGHT this symbol-manipulation from an early age. If you have had experience with little kids, you realize that even these concepts require a bit of training for a mind to grasp. Anyone remember having to memorize their multiplication tables?

I remember at the age I was introduced to division that I mused it wasn't as "clean" as multiplication (*I don't remember how exactly I expressed that*) because if division had Remainders, so should multiplication...

And we go through schools and more and more ARBITRARY ABSTRACT SYMBOLIC EXPRESSION is thrust upon us; I'm not condemning such, but trying to make the point that concepts such as negative numbers, SINs, degrees, logs, exponents, "imaginary" numbers-- all are attempts by the mathematical community to take real-world observations or logical extensions of them, and make a "language" of symbols and syntax whereby you can easily manipulate them IF you understand what they do, or at least what you can do WITH them.

On my 15c, I note that it does imaginary numbers. I frankly have never used them, and don't know HOW to. In my rather mundane life, I have never been asked to solve a problem that required them (or I am ignorant of the need I have, and have thus missed out on a potential use of my tool).

This is the truth of ANY function on a calculator: if you don't know WHERE to use it, you won't.

Percents and such "derived" operations are no more, no less a "convenience" than automated conversions or, as Coyle has so skillfully pointed out, many other mathematical operations. The whole purpose of them is to let the user avoid the derivation process by automating it to one little keystroke. The PERFECT calculator, in fact, might just have one key: "Answer". ;-)

Re: Minimal Scientific Calculator: A Modest Proposal (long!)
*Message #18 Posted by **Gordon Dyer** on 15 Mar 2003, 3:37 a.m.,*
in response to message #1 by Michael F. Coyle

Of course there would have to be 10 volumes of spiral bound 1" thick manuals which would add $200 to the price!
The only point I disagree on is reliability, you say it will be increased with fewer keys, but lots of keys used infrequently will wear out much more slowly...

Re: Minimal Scientific Calculator: A Modest Proposal (long!)
*Message #19 Posted by **Michael F. Coyle** on 15 Mar 2003, 7:50 p.m.,*
in response to message #18 by Gordon Dyer

LOL. I forgot about the manuals!

You do have a point about reliability. A calculator with a very small number of keys will get "used up" quickly. But a very large number of keys with little-used functions will not slow down the wearout of the commonly-used keys like [ON], [+] and [ENTER], but do add more points of potential failure. Clearly there is a minimum to this curve where there are enough keys to spread out the wear but no more. I suspect (but with no actual evidence) that current calculators are fairly close to this point already.

Maybe the way to improve reliability is to add redundant keys for the ones most prone to early wearout. How about 3 [ON], 2 [ENTER], 2 [+], etc.? Not much point though since most calculators now are throwaways.

- Michael

Re: Minimal Scientific Calculator: A Modest Proposal (long!)
*Message #20 Posted by **hugh** on 15 Mar 2003, 1:24 p.m.,*
in response to message #1 by Michael F. Coyle

this idea has merit.

recently i asked myself a similar question. given a fixed number of keys (eg 36) some of which are allowed to be shift keys. what is the best function layout that leads to the minimal number of keypresses on average for scientific functions.

thus a function hidden away in a submenu or on multiple shifts cannot have an alternative shorter computation. so the idea of using chs + to perform subtract could only pay out if `wasting' a key on minus meant making other popular operations longer. clearly not in this case.

in a gray area are operations like x^2. x^2 is actually quite common, but its only 2 keys if not present, one if present. does it justify that key?

also, some functions can share the same key. like pi and eex. early commodore used to have a 1 key memory. "M" is sto after = and rcl otherwise. a bit quirky yes, or should sto be f rcl or should rcl be f sto or should they have their own keys?

so this is a different minimization goal.

Re: Minimal Scientific Calculator: A Modest Proposal (long!)
*Message #21 Posted by **Michael F. Coyle** on 15 Mar 2003, 8:28 p.m.,*
in response to message #20 by hugh

Hugh wrote:

recently i asked myself a similar question. given a fixed number of keys (eg 36) some of which are allowed to be shift keys. what is the best function layout that leads to the minimal number of keypresses on average for scientific functions.

Thanks for your reply.

<didactic>

Clearly some functions are more important than others. No one would even dream of making [+] a shifted function, yet it seems perfectly reasonable for, say, hyperbolics.

So what you do is assign a weight to each function based on how ofter it's used. For

instance, give each of [0]-[9], [.], [+], [-], [X], [/], and [ENTER] a weight of 0.03 (3%). Then we're saying that taken all together these keys account for half the keystrokes. [STO] and [RCL] are also popular, but not quite as much, say 0.02 each. And so on, down to, say, inverse hyperbolics, at perhaps 0.005 each. (When we're done hopefully the weights add up to 1.0.) Then design a hypothetical keyboard arrangement and score it by counting the keystrokes required for each operation and multiplying it by that operation's weight. Now your job is to arrange the keyboard so as to minimize the score (which is the weighted average of the number of keystrokes to perform all operations).

My apologies if the above is already obvious to you.

I would be very very surprised if the calculator manufacturers were not doing this already. The layout of any given calculator reflects the engineers' attempt to minimize the keystrokes for the machine's expected use. Note that on some HP machines, square root needs a shift key to operate (some other operation was deemed more important), while on others, square root is unshifted (i.e. square root is very important).

This reasoning also applies to the question of what functions to include in the first place. Is 10^x so important that we must include it, even though y^x can be used instead? You get the picture.

</didactic>

Minimal Scientific Calculator
*Message #22 Posted by **Nenad Vulic (Croatia)** on 16 Mar 2003, 5:57 a.m.,*
in response to message #1 by Michael F. Coyle

If I might add something to the discussion, IMHO, what I would need in my everyday life (an would for sure carry it always with me) is an RPN scientific calculator (0-9, +, -, *, /, ENTER, RollDown, x><y, CHS, EEX, CLX, LAST X, x^2, SQRT(X), 1/x, y^x, LN, LOG, EXP, 10^x, SIN, COS, TAN, ASIN, ACOS, ATAN, DEG, RAD, >HMS, >H, STO, RCL, SIGMA+ and nothing else) built into my mobile phone, which should be designed and manufactured in an oldHP fashioned way...

Or perhaps a mobile phone built into a HP11C :)

Re: Minimal Scientific Calculator
*Message #23 Posted by **Michael F. Coyle** on 18 Mar 2003, 5:33 p.m.,*
in response to message #22 by Nenad Vulic (Croatia)

Hello Nenad,

That's an interesting suggestion -- RPN calc + cell phone.

The good news is that from a technological standpoint, it's easy.

The bad news is that you would have to convince a cell phone manufacturer that there's a market for it. :(

Thanks for writing.

- Michael

Re: Minimal Scientific Calculator
*Message #24 Posted by **James M. Prange** on 19 Mar 2003, 9:12 p.m.,*
in response to message #23 by Michael F. Coyle

RPN calc + cell phone? Sure there'd be a market for it. I'd bet students would love it, at least until the instructors figured out what was going on and banned them from the classroom.

Regards,
James

Re: Minimal Scientific Calculator
*Message #25 Posted by **Paul Brogger** on 20 Mar 2003, 1:38 p.m.,*
in response to message #22 by Nenad Vulic (Croatia)

. . . and add a programmable, universal remote control capability. If I'm going to carry a phone around, it'd be nice if it could substitute for the always-misplaced VCR or TV control!

Universal remotes are cheap, small, and not too hard on batteries. One could easily be built into a Personal Multi-Function Device.

Have you heard about the Turing machine?
*Message #26 Posted by **Andrés C. Rodríguez (Argentina)** on 16 Mar 2003, 1:21 p.m.,*
in response to message #1 by Michael F. Coyle

Just a comment by a not-so-convinced minimalist :-)

Re: Have you heard about the Turing machine?
*Message #27 Posted by **Michael F. Coyle** on 18 Mar 2003, 5:09 p.m.,*
in response to message #26 by Andrés C. Rodríguez (Argentina)

Hi Andrés,

Yes I do know about Turing Machines.

Of course a calculator is already a T.M. and can compute anything any other T.M. can, within the limits of its memory (and the patience of its owner).

I was thinking of building a T.M. but I couldn't find out where to buy the infinite tape. :)

Thanks for writing.

- Michael

Re: Have you heard about the Turing machine?
*Message #28 Posted by **David Smith** on 18 Mar 2003, 5:59 p.m.,*
in response to message #27 by Michael F. Coyle

Have you tried www.infinitetapes.com? There seems to be a specialized seller out there for just about anything else you could imagine.

Re: Have you heard about the Turing machine?
*Message #29 Posted by **Andrés C. Rodríguez (Argentina)** on 19 Mar 2003, 6:51 p.m., in response to message #27 by Michael F. Coyle*

Michael:

I enjoyed the thread, and some of your points are valid indeed, but... don't get too minimalist!

Best wishes!

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-41 Software Moduls
*Message #1 Posted by **Robert** on 14 Mar 2003, 3:06 p.m.*

Hello all,

visited the forum for the first time and am wondering if someone can shed some light on two HP 41 software moduls. First Modul

TOMSROM 1: No writing on the module, no additional info. Didn't have time to look at the code yet but will do this eventually.

Second Modul: ASTRO: Developed for or by E K Surveying Inc. Could not find this company on the internet, probably it doesn't exist any more.

Any help is appreciated.

cheers

Robert, San Jose CA

Re: HP-41 Software Moduls
*Message #2 Posted by **db(martinez,california)** on 14 Mar 2003, 7:16 p.m.,*
in response to message #1 by Robert

i believe that tomsrom is a construction oriented surveying program written by a guy in the marin-sonoma area. it and d'zign software was popular with people in the operating engineers union around here. sorry, but i no longer know anyone with a manual.

i never heard of the astro rom but it is no doubt a program to take shots of the sun or polaris and with ephemeris data and the exact time it will give you the orientation to astronomical north. are you sure it was not K&E?

Re: HP-41 Software Moduls
*Message #3 Posted by **Chris Catotti (Florida)** on 15 Mar 2003, 2:41 a.m.,*
in response to message #2 by db(martinez,california)

I have both modules with manuals. If needed I could scan manuals in Adobe PDF. I am often a little slow to get things scanned ... I can scan it at work during lunch, when I am not working through lunch.

Re: HP-41 Software Moduls
*Message #4 Posted by **Robert** on 17 Mar 2003, 4:56 p.m.,*
in response to message #3 by Chris Catotti (Florida)

Thanks to your responses. The company name might be E&K, I have to check again.

Chris, thanks for "volunteering" to scan the manuals. I would like get my hands on them. You can contact me at rhaefe(at)myway(dot)com and we can arrange the datails.

Thanks

Robert

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Cleaning a 2-part LCD
*Message #1 Posted by **Nathan Wendland** on 14 Mar 2003, 12:14 p.m.*

I have an early model 22S with the two-part LCD display. It's been well used, and some dirt and dust has collected between the LCD and plastic face. Is there any way to clean the display, or would the cure be potentially worse (damage, unable to reassemble, etc.) than just leaving the dirt? Thanks for the help.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-71B Survey Module
*Message #1 Posted by **Stefan Hauschild** on 14 Mar 2003, 7:26 a.m.*

Hello,

I got a survey module for the HP71 (HP-No 82494) but I didn´t find any manual on the museums´ DVD (or have I overseen something?). I would be very happy if someone could mail me a copy of his manual. If the copy is clearly readable I can make a scan for future versions of the DVD. Maybe there is a trick to override the "private file" protection. If I could read the Basic-files it would be possible to make a manual on my own :)

Best regards

Stefan

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP41 Card reader Malfunction

*Message #1 Posted by **Howard** on 14 Mar 2003, 7:04 a.m.*

I've successfully replaced the "gummy wheel" on my card reader. It worked for a while but after many problems it gives the message - "malfunction" both reading and writing. The book says use the cleaning card. I've done that. No good! Is there any other reason why this fault comes up? Thank you.

Re: HP41 Card reader Malfunction

*Message #2 Posted by **Stefan Hauschild** on 14 Mar 2003, 8:10 a.m.,*
in response to message #1 by Howard

Sometimes I have had this problem, too. First all is well but after reading a few cards or after some days it stopps working with "Malfunction" in the diplay. I my case the reader didn´t transport any card and the motor gave a weird sound. The reason was that I have not proper reassembled the motor. The two screws on the front of the motor can be used to adjust the "motor-wheel"-system. If they are not proper adjusted or if they get loose after a few cards the transporting system gets stuck. Another problem may occur if the nylon clutch that connects the axis to the motor is worn out (maybe after transporting a few cards very nice). Then you don´t get any connection and the card is not proceeding while the motor is still running. To compensate this you can take super glue instead of the clutch but then you have no "safety reserve" if the motor gets stuck. But for me this method is working well with two readers.

Hope it helps...

Stefan

Re: HP41 Card reader Malfunction

*Message #3 Posted by **Vieira, Luiz C. (Brazil)** on 14 Mar 2003, 9:30 a.m.,*
in response to message #1 by Howard

Hi;

I know this may be far from being the reason, but the first time I opened my card reader, I inverted to of the wires that connect the magnetic head to the control board. In my case, the message MALFUNCTION appeard and the calcualtor crashed, it was necessary to remove the batteries and then the reader. After believing I sc..d it off, I opened it again and saw the inversion. Wires back to normal position and all's weel till today (about eighteen years later...).

My US$ 0.05

Luiz C. Vieira - Brazil

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Electrolytic Capacitors in 67/97
*Message #1 Posted by **Malcolm Brooks** on 14 Mar 2003, 1:36 a.m.*

I read in these forums where the electrolytic capacitors used in these old calcs, classics etc. have a limited lifespan.

Are the sizes used still available?

What is the likely timeframe when they will give out?

Are they passing AC that will damage other components?

Should they be replaced now?

This was prompted by examing an abit motherboard that just died. Most of the capacitors were like old tin cans that have popped out at the ends.

It would be interesting to have some views on this.

Thanks Malcolm

Re: Electrolytic Capacitors in 67/97
*Message #2 Posted by **Gordon Dyer** on 14 Mar 2003, 1:51 p.m.,*
in response to message #1 by Malcolm Brooks

Electrolytic caps do have a limited life with storage rated at 4 to 8 years, but this is usually extended if they are powered up frequently but well under their max voltage rating. I have used many for 20 years with no problems and the failures will normally be seen as increased leakage and marginally reduced capacitance.
Tantalum electrolytics, the small bead type, can have a shorter life but are more prone to catastrophic failre, with high leakage currents. The failures are usually random, except when a badly manufactured batch has got out. If the circuit uses them at their voltage limit or with spikes going above their limit then the life can be very short (but I dont expect HP calculators to

have this sort of design problem!)
I suggest you wait until you have a problem, but then check capacitor leakage if the problem could be associated with a capacitor.
The experience of others who have repaired these calculators will be the most useful info.
Did that help? I'm not sure.....

How not to commit corporate espionage
*Message #3 Posted by **Dave Hicks** on 14 Mar 2003, 1:57 p.m.,*
in response to message #1 by Malcolm Brooks

This might explain your Abit catastrophe:

Leaking Capacitors Muck up Motherboards

Re: How not to commit corporate espionage
*Message #4 Posted by **Gordon Dyer** on 14 Mar 2003, 3:43 p.m.,*
in response to message #3 by Dave Hicks

That backfired on them!
I doubt there are any as bad as that in the older HP calcs.

Re: Electrolytic Capacitors in 67/97
*Message #5 Posted by **David Smith** on 14 Mar 2003, 4:13 p.m.,*
in response to message #1 by Malcolm Brooks

Generally, if it ain't broke, don't fix it. Most of the capacitors in HP calculators are under very little stress and/or their characteristics are not critical. The vast mahority of the caps are just fine and will stay that way for a long time to come.

There are two main exceptions. The first is a small blue tantalum cap used in the power supply filter of the HP65/67/97 card reader circuit. It develops a high ESR and quits filtering properly. The reader quits reading, but writes just fine.

The other is the 400 uF (approx) orange filter cap in the HP35/45/55/65/67/70/80 charger. I have seen a couple dozen chargers with it gone bad.

Other than these two caps, I have seen only a couple of random failures in several hundred machines.

Re: Electrolytic Capacitors in 67/97
*Message #6 Posted by **Malcolm Brooks** on 14 Mar 2003, 4:24 p.m.,*
in response to message #5 by David Smith

David,

So your saying the tantalum capacitors are the ones to worry about?

What are the symptoms of the filter cap in the charger going?

Are these capacitors still readily available?

Thanks Malcolm

Re: Electrolytic Capacitors in 67/97
*Message #7 Posted by **Katie Wasserman** on 14 Mar 2003, 8:22 p.m.,*
in response to message #5 by David Smith

I've seen a bunch of failed tantalum capacitors in the Woodstock models. They are used to filter the higher voltages derived by the internal circuit. Fortunately, tantalum capacitors are readily available and even if the same values are no longer made you can simply replace it with a standard one at the next higher voltage and/or capacitance rating. In addition, electrolytics have gotten quite a bit smaller over the past 30 years; they are usually small enough to fit into the same space as the original tantalum ones and in my experience work just fine.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Gunzen on TV
*Message #1 Posted by **Mark** on 13 Mar 2003, 10:40 p.m.*

There is a shot of a Gunzen on a show called Projectiles: from Bomerangs to Ballistics on the TLC channel. This is an HP-41 complete with the Zengrange Battle Case and artillery ROMs. You might still catch it on the West Coast...

Re: Gunzen on TV
*Message #2 Posted by **Emmanuel, Normandy** on 14 Mar 2003, 12:39 a.m.,*
in response to message #1 by Mark

Once upon a time in the West...Morzen and Gunzen!

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Poll: What is the most useless function on a scientific calculator?
*Message #1 Posted by **Jeremy** on 13 Mar 2003, 10:09 p.m.*

My vote is for factorial. (n!) The only time I have EVER used that function was for a test in high school just to prove I knew what it was. Other than that, does it have any practical use? There are some other statistical functions that are pretty lame and seldom used too...

Re: Poll: What is the most useless function on a scientific calculator?
*Message #2 Posted by **Mark** on 13 Mar 2003, 10:50 p.m.,*
in response to message #1 by Jeremy

=

Re: Poll: What is the most useless function on a scientific calculator?
*Message #3 Posted by **Scuba Diver** on 13 Mar 2003, 11:19 p.m.,*
in response to message #2 by Mark

Actually, I've used factorials for combinations and permutations when the calc doesn't offer those functions...

The most useless function? Well, it only applies to my Sharp EL-9000 "Super Scientific"...

...the ON button!!

:)

B.

Re: Poll: What is the most useless function on a scientific calculator?
*Message #4 Posted by **Masao Kinoshita** on 13 Mar 2003, 11:47 p.m.,*
in response to message #2 by Mark

A shifted square function on a non-programmable calculator, e.g., HP 27A, gets is my vote. For some reason, I always use [ENTER] [×] instead of [f] [x²]. I think RPN encourages the mind to think more when calculating. The Zen of calculating... to be at one with the numbers. :-) Whereas with algebraic entry, the ultimate goal seems to be for the users to be able to input the equation just like in the textbooks, i.e., just copying. imho

Re: Poll: What is the most useless function on a scientific calculator?
*Message #5 Posted by **Vieira, Luiz C. (Brazil)** on 14 Mar 2003, 1:42 a.m.,*
in response to message #4 by Masao Kinoshita

Hi;

in many situations, preserving the T-register contents may be desirable. I almost always use [f][x^2] instead of [ENTER^][×] simply because of this. Otherwise, if you want to throw away T-register contents, that's fine.

Cheers.

Re: Poll: What is the most useless function on a scientific calculator?
*Message #6 Posted by **Karl Schneider** on 13 Mar 2003, 11:59 p.m.,*
in response to message #1 by Jeremy

True, factorials are seldom used in interactive computations, but they do have real-world applications. For example, if your base calc lacks permutation and combination functions (e.g., HP-17Bii, HP-41CX, HP-28S):

P(n,k) = n!/(n-k)! and C(n,k) = n!/(k!*(n-k)!)

Q: You bought a "pick six" lottery ticket with the numbers 1-50 in play. What are your chances of winning?

A: 1 in 50!/(6!*(50-6)!) = 15,890,700

Q: You pulled the spark plug wires off your 4-cylinder car's distributor cap, and can't quite remember which ones went where. How many ways are there?

A: 4! = 24

Q: Same as above, with a V-8?

A: 8! = 40,320 (oh, s***!)

Factorials are also useful for programming Taylor series -- a calculus topic.

Note: If your HP has an "x!" function instead of "n!", it's also a gamma function -- like a continuous factorial that will work with non-integers.

Re: Poll: What is the most useless function on a scientific calculator?
*Message #7 Posted by **Chris Randle (UK)** on 14 Mar 2003, 3:21 p.m.,*
in response to message #6 by Karl Schneider

<<For example, if your base calc lacks permutation and combination functions (e.g., HP-17Bii, HP-41CX, HP-28S)>>

28S does have Perm & Comb under the Stat menu.

Re: Poll: What is the most useless function on a scientific calculator?
*Message #8 Posted by **Christof** on 14 Mar 2003, 12:02 a.m.,*
in response to message #1 by Jeremy

Well, I do use the n! pretty often.

Then again, I consider probability and statistics to be pretty normal everyday tools (and I occasionally go off that more people should use them more often, at least so they can stop being lied to so often wiht manipulated stats)

If I was going to pick one based on the machines I use, I'd pick x^2 - but admittedly, this is HP specific.

looking around further... on a scientific? % gets a strong vote from me. that's about useless, IMO :)

Re: Poll: What is the most useless function on a scientific calculator?
*Message #9 Posted by **Karl Schneider** on 14 Mar 2003, 12:54 a.m.,*
in response to message #1 by Jeremy

GRAD

Who has ever been given an angle measured in gradients? Where is the advantage in the 0-100 scale between vertical and horizontal? "x" grad is not an "x" % slope...

Re: Poll: What is the most useless function on a scientific calculator?
*Message #10 Posted by **Patrick** on 14 Mar 2003, 12:55 a.m.,*
in response to message #9 by Karl Schneider

Ha! We posted the exact same comment at the exact same minute.

It MUST be true.

Re: Poll: What is the most useless function on a scientific calculator?
*Message #11 Posted by **Christof** on 14 Mar 2003, 12:57 a.m.,*
in response to message #9 by Karl Schneider

outside of school... I don't think *I* have ever used grads.

GRADS in Surveying (land measurement)
*Message #12 Posted by **Vieira, Luiz C. (Brazil)** on 14 Mar 2003, 1:55 a.m.,*
in response to message #9 by Karl Schneider

Hi;

there are still some "active" surveying instruments (land measurement) scalled in GRADS. I know GPS technology is definitely taking place, but not all surveyors can afford a precise GPS station. And some portable GPS do not offer required precision. These old (ancient?) instruments are still being used. Anyway, converting from decimal degrees to grads and back are two operations easy to perform.

BTW, is there any scientific HP (not the HP16C) that does not have GRAD angular mode? I cannot remember if any.

Cheers.

Luiz C. Vieira - Brazil

Re: GRADS in Surveying (land measurement)
*Message #13 Posted by **GE (France)** on 14 Mar 2003, 3:34 a.m.,*
in response to message #12 by Vieira, Luiz C. (Brazil)

You're right, and many recent calculators don't have a GRAD mode. Actually, to push this a little further, I never used DEG in 'real life' either : in maths there is no such thing but Rads, and in physics it's the same as it tends to be more and more maths, even to the point where it defies common sense (quantum theory anyone ?).

This is true for students, probably not so for professionals. Actually, in my field (Finance), we never use trigonometric functions (apart from some special cases like deriving normal random numbers from uniform distributions...).

My vote would be for hyperbolic functions, these are good for testing the internal precision (like in tanh-1(tanh(15))), but not much else.

Re: GRADS in Surveying (land measurement)
*Message #14 Posted by **R Lion** on 14 Mar 2003, 11:36 a.m.,*
in response to message #13 by GE (France)

Neither n! nor %, definitely: my vote is for hyperbolic functions too.

Raul

Re: GRADS in Surveying (land measurement)
*Message #15 Posted by **Masao Kinoshita** on 14 Mar 2003, 8:40 a.m.,*
in response to message #12 by Vieira, Luiz C. (Brazil)

The HP 21A doesn't have GRADS mode. It has a DEG/RAD rocker switch.

Thanks for the T-register comment to my post on this thread. It is an important consideration. (I did think of it *after* I did the post.)

Re: GRADS in Surveying (land measurement)
*Message #16 Posted by **Vieira, Luiz C. (Brazil)** on 14 Mar 2003, 9:12 a.m.,*
in response to message #15 by Masao Kinoshita

Hello, Masao;

you know what? There are listings for programs to be used in the HP55 that have this particular procedure to comput X². In this particular case, the contents of the Z- and T-registers are irrelevant, and as program steps, [ENTER^] [×] use two steps, but in the HP55, [f] [X²] do not merge in one code, they still use two steps. In other calculators (most of them) this is also something to be considered, if memory space is critical.

I once was typing in a program written by an unknown person in my HP41 and I replaced two occurrences of [ENTER^][×] for two [X^2]. The program simply generated wrong results. It considered that the Z-register contents were duplicated, and by using [X²] I removed this occurrence.

That's why I posted that note.

I'm happy you understood the reason.

Thank you, too. I forgot that the HP21 has a switch for DEG and RAD, no GRAD available.

Best regards.

Luiz C. Vieira - Brazil

Re: GRADS in Surveying (land measurement)
*Message #17 Posted by **Masao Kinoshita** on 14 Mar 2003, 6:02 p.m.,*
in response to message #16 by Vieira, Luiz C. (Brazil)

Hi Luiz,

Yes, I agree completely with you. One has to be very careful modifying programs written by other people.

I remember that how the numbers were manipulated in the stack was one of the crucial points when programming these calculators, especially the earlier machines with limited program steps. Stack usage must have been a major

consideration when programming the HP 55 (and even the HP 65, since not all merged).

Thank you for the story behind the post.

Masao

Re: GRADS in Surveying (land measurement)
*Message #18 Posted by **Michael F. Coyle** on 14 Mar 2003, 1:05 p.m.,*
in response to message #15 by Masao Kinoshita

Don't forget the HP-35 -- no radians!

You were expected to use PI to convert everything to/from degrees.

Re: Poll: What is the most useless function on a scientific calculator?
*Message #19 Posted by **Patrick** on 14 Mar 2003, 12:54 a.m.,*
in response to message #1 by Jeremy

How about grad mode for angles? Academically, I'm a mathematician and I never heard of grads until I picked up I saw them on one of the early HP's.

I'm sure someone will pipe up, though, and say they use it. The question is, how prevalent is it?

Re: Poll: What is the most useless function on a scientific calculator?
*Message #20 Posted by **mapet** on 14 Mar 2003, 3:56 a.m.,*
in response to message #1 by Jeremy

cubic root in HP6S...:-)

Re: Poll: What is the most useless function on a scientific calculator?
*Message #21 Posted by **Axel** on 14 Mar 2003, 4:34 a.m.,*
in response to message #20 by mapet

I always found the % key the most useless. It doesn't belong on a scientific calculator. Only non-scientist need the extra multiplication by a factor 100.

For statistics and some number theory n! is needed. Especially, I like the implementation of the gamma function on the HP calcs. I only found it on an old Commodore (SR-4190R). On the 40G, it even works for complex arguments! May be, the ti89/92 can do it either, anyone knows?

Axel

Re: Poll: What is the most useless function on a scientific calculator?
*Message #22 Posted by **Frank Wales** on 14 Mar 2003, 1:46 p.m.,*
in response to message #21 by Axel

Ah, but '%' has the advantage that it doesn't pop y. So, if you need to know both x per cent of y, and the total of y+x%, for example, then

y enter x % (note percentage) +

seems slicker to me than the simple arithmetic alternatives where you have to make your own arrangements to duplicate y.

In nearly a quarter of a century of use, I can safely say I've never used the LN1+X and E^X-1 functions on the HP-41, and I don't recall them ever appearing on another HP product that wasn't explicitly HP-41 compatible.

Re: Poll: What is the most useless function on a scientific calculator?
*Message #23 Posted by **Masao Kinoshita** on 14 Mar 2003, 5:38 p.m.,*
in response to message #22 by Frank Wales

I do sometimes use HP's version of the % function, which makes more sense to me than the % function that 4-bangers have. But when I need to add a percentage, I usually use multiplication by 1 + 0.nn . For example, to add 5% (Massachusetts (USA) sales tax rate) to $100, simply multiply 100 by 1.05 and you have $105.

This technique is necessary with Casio's Data Bank Calculator (DBC) watches, which have never (AFAIK) had the % key. I have always worn a Casio Data Bank watch on my wrist since they first appeared, starting with the CD-40. I wore a Seiko C439-5000 calculator watch for 5 years before that (no % key here either).

To reiterate, I _like_ HP's % key (a lot better than on the other brands that I have encountered).

Re: Poll: What is the most useless function on a scientific calculator?
*Message #24 Posted by **Vieira, Luiz C. (Brazil)** on 14 Mar 2003, 5:43 a.m.,*
in response to message #20 by mapet

The HP6S itself... (although my own daughter and many of my students have one)

Re: Poll: What is the most useless function on a scientific calculator?
*Message #25 Posted by **Paul Brogger** on 14 Mar 2003, 9:45 a.m.,*
in response to message #20 by mapet

I actually threw my 6s impactuflly, vionlently (and, I confess, with intent to harm) into the trash, angered by mushy, inexact input and key feel. I didn't even *think* of retrieving it, an have never regretted the action for one second. (I remember an old National Lampoon article, "Games You Can Play With Calcualtors" -- golf, baseball, tennis . . . I think the 6s would be a good candidate for all of those.) But I digress . . .

I vote for **%**. Absolutely brain-dead. That it is implemented is bad enough -- to think that it takes up an extremely rare and valuable (albeit, shifted) position on the HP-32s and -42s keyboards rather than being buried in some dips**t menu somewhere . . . Amazing!

Re: Poll: What is the most useless function on a scientific calculator?
*Message #26 Posted by **J.Manrique Lopez de la Fuente** on 14 Mar 2003, 4:39 a.m.,*
in response to message #1 by Jeremy

Well, using a RPN calc, () are the most useless key I've found ever.

Best regards,

J.Manrique

#1077 HPCC Member

Re: Poll: What is the most useless function on a scientific calculator?
*Message #27 Posted by **Christof** on 14 Mar 2003, 12:40 p.m.,*
in response to message #26 by J.Manrique Lopez de la Fuente

well, () is useful if you have the solver, for example.

I suppose it depends on how we limit our definitions.

I've got keys here that are utterly useless on a non progammable scientific- or one without Solve.

I find it interesting how many variations you get depending on RPN vs AL, 4 level stack vs. 48 style stack.

It looks like the only one that I can find to be really useless to me that is present on almost all calculators I own- TI, Commodore, sharp, casio, computex, and of course HP- is %

So I will stick with that one :)

Re: Poll: What is the most useless function on a scientific calculator?
*Message #28 Posted by **Jan (Switzerland)** on 14 Mar 2003, 12:58 p.m.,*
in response to message #26 by J.Manrique Lopez de la Fuente

All algebraic signs on my 17BII and 19BII such as ( ) =

remark: had they rather implemented SIN, COSm TAN and ARC instead, the 17IIB would be unbeatable pocket calc

Jan (Switzerland)

Re: Poll: What is the most useless function on a scientific calculator?
*Message #29 Posted by **Bill Smith** on 14 Mar 2003, 1:01 p.m.,*
in response to message #1 by Jeremy

i agree with the convergence towards the % key.

while i never use the n! or probably even the x^2 functions in work, i remember them being important for programming, and in statistics and numerical methods courses.

the post with the =, what is that for? it doesn't appear on _any_ of my calculators.

;)

Re: Poll: What is the most useless function on a scientific calculator?
*Message #30 Posted by **Gordon Dyer** on 14 Mar 2003, 1:57 p.m.,*
in response to message #1 by Jeremy

Have a look at my program for HP-11C and HP-41C in the Software Library for this site... this extends your uselessness by many orders of magnitude!
But in stats and probability factorials are very useful.

Re: Poll: What is the most useless function on a scientific calculator?
*Message #31 Posted by **R Lion** on 14 Mar 2003, 2:12 p.m.,*
in response to message #30 by Gordon Dyer

I agree!!

Raul

Why all the % bashing here?
*Message #32 Posted by **Michael F. Coyle** on 14 Mar 2003, 2:33 p.m.,*
in response to message #1 by Jeremy

I don't want to start a war here, but I *like* the % function. It's very conveinent for figuring taxes and the like.

I also especially like the delta-% -- it provides a simple way to see how some quantity changes.

I guess the main point of x^2 is to permit squaring without using up a stack level. Not unlike 12x and 12/ on the financials.

My vote for most useless function is a tie -- GRAD and hyperbolics -- never used 'em, probably never will.

I'm surprised that none of the non-computer people have mentioned the bit and logical functions. Or the scientific folks the financial functions.

This has been an interesting thread. Since everyone would like to get rid of their least-favorite functions, I think I'll write a proposal for a minimum-function scientific and post it here.

Re: Why all the % bashing here?
*Message #33 Posted by **R Lion** on 14 Mar 2003, 2:54 p.m.,*
in response to message #32 by Michael F. Coyle

"I don't want to start a war here, but I like the % function. It's very conveinent for figuring taxes and the like. I also especially like the delta-% -- it provides a simple way to see how some quantity changes."

I agree. And I love the %T function too, and I've programmed it in my 15C and in my 42S.

Regards

Raul

Re: Why all the % bashing here?
*Message #34 Posted by **Mike Rivera** on 14 Mar 2003, 5:06 p.m.,*
in response to message #32 by Michael F. Coyle

I agree - I use the % function regularly on programs I write on my 41CX when I need to keep the stack from changing. It's easier than storing and recalling numbers. I also use the change in % when compairing items (costs, profits, etc.) in my business.

Not eveyone uses scientific calculators for "science". I use them because they have great programing capabilities (large memories, lots of conditionals, and Alpha characters on the 41 series) and I like playing with them. I consider high-end scientific programables a "do-all" machines.

I have a 25C, 15C, and 41 (CV and CX) and I've never used them for "science" or higher math. Mostly for sales and business use, but I wouldn't trade any of them for a 12C.

For me, I never use SIN, COS, etc., or any of the LOG functions (but I still like having them available because .... you never know)!

- Mike

Re: Why all the % bashing here?
*Message #35 Posted by **Christof** on 14 Mar 2003, 5:22 p.m.,*
in response to message #34 by Mike Rivera

I think I'm losing the thread.

% isn't necessarily a useless one byte instruction- a useless function. having it be a useless key isn't the same.

I'd claim that having x!=0? on the keyboard is useless, too. That's hardly meaning that the function is useless for a scientific programmable.

now, is it the most useless key on a scientific, an RPN scinetific, a financial, a 'do everything', RPNB versions of all of the above, or a handheld programmable computer (like the 41?)

Looking at the HP41 keyboard, with it's tight space, I think I'd prefer vastly to have delta-% than % on the keyboard.

Even Better, RUP.

so for that case- % still wins with me. though x^2 is a close second. (again, programming is one thing, keys for regular use another)

looking at- for example- the old old ti30-slr I have, I'd say % again. and as this calc has no stack, having x^2 and y^x (it does) is pretty useless, too. Replace with a delta% and a xROOT y and I'd be a lot happier. (make it RPN, give it 10 storage registers, and I'd be happier still. but it's TI)

Re: Why all the % bashing here?
*Message #36 Posted by **Mike Rivera** on 14 Mar 2003, 5:29 p.m.,*
in response to message #35 by Christof

You said "Looking at the HP41 keyboard, with it's tight space, I think I'd prefer vastly to have delta-% than % on the keyboard".

I see your point and I agree.

The regular % function is very useful for programming, but it didn't need it's own key where real estate is very limited.

- Mike

Re: Why all the % bashing here?
*Message #37 Posted by **Christof** on 14 Mar 2003, 5:14 p.m.,*
in response to message #32 by Michael F. Coyle

well, I'm not talking abotu financial function and bit operators because most oftne financials aren't on scientific calcs :)

and bitwise operations are useful!

% is useless for me because it doesn't do anyhting I cna't do just as easily (and with less thought as the gesture is implanted by years of math) with .8 x instead of 8 0 %

and part of it is that it is a *scientific* calculator. I am leery of the idea of people needing

scientific calculators and not being able to figure out that 80% is .8 x :)

delta% is a different key and a differen toperation altogether, though! that one I sometimes like.

Re: Why all the % bashing here?
*Message #38 Posted by **Frank Wales** on 14 Mar 2003, 6:27 p.m.,*
in response to message #37 by Christof

% is useless for me because it doesn't do anyhting I cna't do just as easily (and with less thought as the gesture is implanted by years of math) with .8 x instead of 8 0 %

Except '%' doesn't just do that. When I need to work out VAT (sales tax) on an invoice, which must be quoted separately on the invoice and included in the total, I can do:

17.5 % (write down VAT) + (write down total)

Much better than:

enter enter .175 * (write down VAT) + (write down total)

I can't use just one enter, because of stack-lift disable after the first one, and I have a long-ingrained dislike of operations that push the stack unnecessarily.

Is there such a useless function?
*Message #39 Posted by **Vieira, Luiz C. (Brazil)** on 14 Mar 2003, 5:07 p.m.,*
in response to message #1 by Jeremy

Hi, folks;

I posted a few comments in this thread about related stuff and I decided not to post anything about function usage and usefullness.

Some months ago I lost a big chance to "keep my big mouth shut" and I wrote some criticism about the CAS and I mentioned that it would be better keeping the Equation Library available in the HP48G.

I remember I received my "painfull" and instructive payback: a concise and positive view about CAS and its creators, and that CAS was very usefull for that contributor (I don't remember who was it, but it's post lies in the archives). I'm thanked for him everytime I think I have a vage idea

of many resources available in the HP48/49, mostly if we consider they allow sys-RPL programming and many of these features are active, available and known by a few audience.

And they are all usefull somehow.

This thread begins with an specific question, and it is related to one of two families: the scientific calcs. Financial family and the HP16C ("a class for itself") not included. I thought seriously about it and I got no answer.

This post, written by Chris Randle, mentions COMB and PERM are available in the HP28S' stat menu. Also, in this very menu, there are many statistics test not available in previous calculators. I remember I wrote programs for the HP41 in order to compute some of these tests, and they are now part of the function set. If I only have them at that time...

I thought about the functions I seldom use, but this was not the question. Maybe many in here answered to "What is the function that's less used in a scientific calculator?" instead of the original question. I'd rather list the few I use most. But I feel a lot comfortable knowing all others are there to be called anytime, anywhere. And that each model has its particular, small or big set of resources. Knowing that they exist is the big deal. Moreover, the calculator in your hands was already "born" with these extra functions. Better having they there when you need them.

My thoughts, just my thouhghts.

Best regards.

Luiz C. Vieira - Brazil

Re: Is there such a useless function?
*Message #40 Posted by **Christof** on 14 Mar 2003, 5:28 p.m.,*
in response to message #39 by Vieira, Luiz C. (Brazil)

Luiz,

I've had to intperpret this as the "most useless keyboard function" from the start. Since most of the scientifics in use around here are programmable, and have many (even hundreds!) of functions not on the keyboard, I have assumed that we weren't trying to weed out functions buried in menus.

I can think of ways to streamline a keyboard- to better use the 'real estate'.

And I cna see programming uses for some functions I never use in practice- like x^@ and % (many HPs have x^2 as a shifted key, with y^x as an unshifted key, so it is easier to touch type that or hit <enter> x)

So I guess we are back at the beginning question- what *is* a useless function? on the keys, off the keys, rpn or alg? programmable or non?

Re: Is there such a useless function?
*Message #41 Posted by **Vieira, Luiz C. (Brazil)** on 14 Mar 2003, 5:41 p.m.,*
in response to message #40 by Christof

Hello, Christof;

Your aguments are value and I cannot figure a solution out that's better than the "love-them-or-hate-them" menus. I read another post sometime ago suggesting that key inscriptions should change. You know what? For my biggest surprise, it's possible to be done because there is already an applicable solution: a new "LCD"-type design that can be incorporated in the keyplate. Also, the same technology expands to the keyface itself. Custom keys instead of custom menus... Daring dream, isn't it?

This way, we have the "final solution"... not yet implemented. At lest, so far.

Best regards.

Luiz C. Vieira - Brazil

Poll: the least used function on a scientific calculator?
*Message #42 Posted by **Nenad Vulic (Croatia)** on 15 Mar 2003, 2:49 a.m.,*
in response to message #1 by Jeremy

Interesting that nobody mentioned SIGMA MINUS (at least for the time being).

One of my almost everyday jobs is approval of propeller drawings. Designers often omit to specify thickness at r/R=1 and I have to extrapolate it from the thicknesses at r/R=0.9 0.95 and 0.98. If I enter an incorrect value, I simply start from the beginning, avoiding to correct an incorrect entry by SIGMA MINUS.

When I have to use a linear regression or something with more than two-three points I use Excel instead of any of my HP's.

Re: Poll: the least used function on a scientific calculator?
*Message #43 Posted by **Vieira, Luiz C. (Brazil)** on 15 Mar 2003, 4:01 a.m.,*
in response to message #42 by Nenad Vulic (Croatia)

Hello, Nenad;

I always found this as a big handicap, but in the HP28C/S, HP42S and the HP48/49, this problem was "minimized" with the use of lists. of coures you need memory space for each entry, but the list is an elegant solution for this particular problem. If there are some entries wrongly entered, you simply edit the list, correct them (if it is only one, it's even better) then you store the edit list adn you do not need to enter everything again. You can create a small program in the HP41 to achieve this, and even use X-Memory to store sample data.

Have you already tried this? O.K., far from being as fast and easy to edit than Excell. And you'll never need this sort of correction anywhere but at your desk, right?

Best regards, pall.

Luiz C. Vieira - Brazil

Statistic functions by lists
*Message #44 Posted by **Nenad Vulic (Croatia)** on 16 Mar 2003, 6:01 a.m.,*
in response to message #43 by Vieira, Luiz C. (Brazil)

Hi Luiz,

Thanks for your (as always) valuable information. I have never used this possibility of making lists, but I am going to try.

Re: Statistic functions by lists - Briefs
*Message #45 Posted by **Vieira, Luiz C. (Brazil)** on 16 Mar 2003, 8:31 a.m.,*
in response to message #44 by Nenad Vulic (Croatia)

Hi, Nenad (and others interested on this subject);

In the HP42S you need to explicitly create a N×2 matrix, N equals the number of pairs of data available in the sample, column #1 for X-data, column #2 for Y-data. You should store it in a variable so it can be edited later, if needed. The name of the variable does not need to be an specific, reserved name, but I suggest not using REGS for data safety.

This matrix must be recalled to the X-register prior to execution of [Ê+], being Ê the Sigma greek symbol; all matrix contents will be read, line by line, and statistical data - Êx, Êx², Êy, Êy², etc - is generated automatically. If you need to edit Ê-data matrix and use new data set, you need to clear previous data - [CLÊ] - prior to enter new data.

In the HP28C/S and HP48/49, ÊDAT is already an N×M matrix. In these calculators, your Ê-data base is allowed to have more than two columns (Ê-variables) and you choose which variables you want to wrok with as for related statistics with two variables (curve fitting, forecasting, tests, etc.). Also, editing ÊDAT in these calculators means edit data base directly, what means you should not clear statistical data because this means cleareing ÊDAT matrix.

A lot more exists about this, many other resources. I hope this helps as brief notes. Do you use any of these calculators? If you have an HP41C/CV with X-Functions or an HP41CX, I have (somewhere in here...) a program to deal with statistics data stored in a matrix in the X-memory. If full space is available, standard X-registers may hold about 60 pairs of statistic sample data. It is a bit slow to read data and generate statistical data - Êx, Êx², etc.- but allows handling of lots of pairs without "fear"... If you need the program, tell me. I just have to find it...

Best regards, my friend.

Luiz C. Vieira - Brazil

Re: Statistic functions by lists - Briefs
*Message #46 Posted by **Nenad Vulic (Croatia)** on 16 Mar 2003, 2:41 p.m.,*
in response to message #45 by Vieira, Luiz C. (Brazil)

Thank you very much, once again.

So, I will have to bring my HP32SII home and take the HP42S or HP28S to work.

Honestly, I did not remember the procedure you have described (though I have read both 42S manuals about two years ago).

Re: Statistic functions by lists - Briefs

*Message #47 Posted by **Vieira, Luiz C. (Brazil)** on 16 Mar 2003, 7:29 p.m., in response to message #46 by Nenad Vulic (Croatia)*

Hello, my friend.

I'm glad this information is usefull for you somehow. I also hope others read and use, and that's why I'm posting more data instead of e-mailing you, O.K.?

If you have the English version of the HP42S Owner's Manual, go to page 237, under *Using Statistical Data Stored in a Matrix*. The *Programming Examples and Techniques* has some complementary data in Chapter 6, p. 174, with some applications and examples. I think it may help, too.

Hey, I am interested on your activity. Do you deal with sea vessels? What sort of propellers? Can you say a few words about it? Sounds interesting...

Best regards, my friend. As always, my pleasure.

Luiz C. Vieira - Brazil

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Opening HP48GX
*Message #1 Posted by **R.E. Greene** on 13 Mar 2003, 8:21 p.m.*

Thanks 4 reading,

I have an HP 48GX that got soda spikked on it and then it was covered up for about 3-4 hours!!! It will turn on and that is ALL!!, it won't even turn off. I nee to know how to open the calculator so that I can clean it!!!

Does anyone know how?, I've tried, but get nowhere (without breaking it).

T. Y.,

Re: Opening HP48GX
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 14 Mar 2003, 2:05 a.m.,*
in response to message #1 by R.E. Greene

Hi;

there are ten plastic rivets (heat molded) that maintain the top (four) and bottom edges (six) locked together. Also there are six "interlocks" (I have no idea if this is the correct term in English), three for each side of the calculator's "case".

I have one HP48G in my hands right now and it's opened. I can scan both halves and you'll see how they are kept togheter. unfortunately this computer does not have the scanner and I have do digital camera.

Wanna see the pictures? If so, let me know and I'll "scan" the calculator's image and post them here.

Best regards.

Luiz C. Vieira - Brazil

Re: Opening HP48GX
*Message #3 Posted by **DF** on 14 Mar 2003, 10:16 p.m.,*
in response to message #1 by R.E. Greene

I've posted an article in the article's forum,

http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/articles.cgi?read=125

Adrian Drury has taken photos, added some of his own pointers, and written a detailed web page:

http://www.contrib.andrew.cmu.edu/~drury/how2open.htm

I've also seen postings advocating drilling out rivets from the front of the calc and replacing with countersunk black machine screws.

Good luck,

Dave

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-71b + barcode wand
*Message #1 Posted by **Tezza** on 13 Mar 2003, 3:11 p.m.*

Have a HP-71b with the Zenwand barcode wand and the in/out interface. When wand is plugged in it says "Scan ID barcode" and appears to scan but not recognise any code I show it. Even one from this site as an example doesn't help. Is there an ID barcode available that would help? Does this machine read any other codes other than the ones it self generates, with the programms available on here? Any and all help gratefully received.

Regards

Tezza

{moderator transplant}

Re: HP-71b + barcode wand
*Message #2 Posted by **Emmanuel, Normandy** on 13 Mar 2003, 3:55 p.m.,*
in response to message #1 by Tezza

```
Is that wand the famous Zengrange Ltd Zenwand-71?
I have scanned its user's manual and PDF file is somewhere.
```

Re: HP-71b + barcode wand

*Message #3 Posted by **Raymond Del Tondo** on 14 Mar 2003, 5:34 a.m.,*

in response to message #1 by Tezza

Hi,

I don't have the keywords handy here, but the wand ROM has some functions to read specific barcodes (READEAN or alike) into a string or numeric variable, and at least one keyword to read generic codes. It works well reading product barcodes, which are on nearly every product box.

If your wand doesn't work with the commands, it could be a custom version.

Regards,

Raymond

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

16c 68 bit Index register???
*Message #1 Posted by **Steve** on 13 Mar 2003, 1:00 p.m.*

This is an open question on comp.sys.hp48, but I figured someone here would know. The 16c manual says that the Index register is always 68 bits regardless of the word size. Should it say 56 bits, or is there a reason for 68 bits? Thanks,

Steve

Re: 16c 68 bit Index register???
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 13 Mar 2003, 5:15 p.m.,*
in response to message #1 by Steve

Hi;

it's been the subject of one thread a couple of months ago (begining of this year). It's a fact and there is no "know" way to access the four MSB's, unless you allow the calculator to count up over (2^{64}-1). This could be a test. Set 64 as WSIZE, store **FFFF FFFF FFFF FFFF**$_{16}$ in RI and write a program with **ISZ GTO x**, etc. and verify it it jumps to **x** in the next count. RI contets will return **0** but internaly it will be **1 0000 0000 0000 0000**$_{16}$, so it should not jump until it passes through **F FFFF FFFF FFFF FFFF**$_{16}$ and back to **0 0000 0000 0000 0000**$_{16}$, what gives us 2^{68} - 2^{64} cycles.

Wow! Is it correct? Gee...

Best regards.

Luiz C. Vieira - Brazil

Re: 16c 68 bit Index register???
*Message #3 Posted by **Jordi Hidalgo** on 14 Mar 2003, 6:48 a.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

Luiz wrote:

> it's been the subject of one thread a couple of months ago

Wouldn't you love a way to search **all** the forum archives **at once**?

Jordi Hidalgo
HPCC #1046

I'm suspicious to talk about this...
*Message #4 Posted by **Vieira, Luiz C. (Brazil)** on 14 Mar 2003, 9:21 a.m.,*
in response to message #3 by Jordi Hidalgo

...because I offered myself to organize them in subjects and I tried, I swear I tried. I have already began, and I "talked" to Dave about this. He sent me all information I needed and I started at the moment I got the data. I had a 8MBytes text with almost all posts I found about Voyagers, having any mention, in all Forum database available at that time and I overwrote the file for a new, 80KBytes fresh, empty new text... I got to bed and tried not to think about it. I'm organizing them again, but my time is somewhat shorter for these days. I promisse I'll post news about this subject as they make any difference.

Thank you.

Luiz C. Vieira - Brazil

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

hp-71b "HR" & "HMS" functions
*Message #1 Posted by **Terry Ingram** on 13 Mar 2003, 11:49 a.m.*

Hello,

Does anyone know how to add the "HR" & "HMS" functions to the hp71b? I realize these functions are available in the JPCROMX.BIN file, as posted previously. However, I do not have a way to add these to my 71b. I have the basic unit with a card reader.

Is it possible to type the code into BASIC, creating these functions in a similar manner as the "Command Stack Extender" program posted previously?

The "Command Stack Extender" program is really useful. Would like to see more programs as such.

Thanks, Terry Ingram

Re: hp-71b "HR" & "HMS" micro challenge
*Message #2 Posted by **J-F Garnier** on 14 Mar 2003, 6:58 a.m.,*
in response to message #1 by Terry Ingram

Hello HP-71 fans,

May be we can turn this question into a micro challenge: write the smallest DEF FN functions to implement the HR and HMS features on the HP-71B.

J-F

Re: hp-71b "HR" & "HMS" micro challenge
*Message #3 Posted by **andy** on 14 Mar 2003, 10:01 a.m.,*
in response to message #2 by J-F Garnier

How about one of the many HMS Lex files. You can utilize the "makelex" program to get a LEX file into your 71b by typing the binary code in line by line.

Let me know if you're interested in this path and I can help further.

Andy

Makelex program & typing code
*Message #4 Posted by **Terry Ingram** on 14 Mar 2003, 12:22 p.m.,*
in response to message #3 by andy

Hello Andy,

Yes. I am interested...

I found a file on this site named "hmshrsrc.txt". Is this one of the lex files that you are referring to?

Thanks,

Terry

Re: Makelex program & typing code
*Message #5 Posted by **andy** on 14 Mar 2003, 3:26 p.m.,*
in response to message #4 by Terry Ingram

hmshrsrc.txt is the source code to the LEX file. You would need the Forth/Assembler rom to create a lex file from it.

The makelex program will work on a standard 71b but you'll need the hex listing of the lexfile to use makelex (these come from running dumplex). A lot of lex file's hex listings are on Jake Schartz's CD rom archive of the PPC and DataFile Journals.

Andy

Re: Makelex program & typing code
*Message #6 Posted by **Chris(FLA)** on 15 Mar 2003, 6:51 a.m.,*
in response to message #4 by Terry Ingram

Here is the BASIC program for making LEX files.

```
0010 SFLAG -1 @ ON ERROR GOTO 30 @ DESTROY ALL
0020 PURGE DUMMY
0030 ON ERROR GOTO 220
0040 INPUT '# of bytes: ';N
0050 CREATE TEXT DUMMY,N
0060 A=HTD(ADDR$('DUMMY')) @ A1=A @ P$=RPT$("-",16)
0070 Q=1 @ X=0 @ INPUT '000: ',P$;A$ @ C$=A$ @ GOSUB 200
0080 Q=2 @ X=1 @ GOSUB 190
0090 A$=A$&C$ @ A=A+37 @ N=N*2+31 @ Q=3 @ SFLAG 5
0100 FOR X=2 TO N DIV 16-1
0110 GOSUB 190
0120 IF FLAG(5) THEN C$=C$[6]
0130 POKE DTH$(A),C$ @ A=A+16-5*FLAG(5,0) @ NEXT X @ Q=4
0140 DISP DTH$(X)[3]; @ INPUT ': ',P$[1,MOD(N,16)];C$
0150 GOSUB 200
0160 L=LEN(C$) @ IF C$[L,L]='-' THEN C$=C$[1,L-1] @ GOTO 160
0170 POKE DTH$(A),C$ @ POKE DTH$(A1),A$
0180 OFF ERROR @ CFLAG -1 @ END
0190 DISP DTH$(X)[3]; @ INPUT ': ',P$;C$
0200 DISP DTH$(X)[3]; @ INPUT ' ck ','--';C1$
0210 S=0 @ FOR Z=1 TO LEN(C$) @ S=IP(NUM(C$[Z,Z])*Z+S) @ NEXT Z
0220 IF C1$=DTH$(MOD(S,256))[4] THEN RETURN
0230 DISP 'Checksum Error' @ BEEP @ POP @ ON Q GOTO 70,80,110,140
0240 DISP 'Error:'&ERRM$ @ BEEP @ GOTO 180
```

I have about 30 LEX files I got from the /lif/swap disk library that I striped of headers and trailers. I have some of these on cards the rest are on my PC that I transfer with my IL/RS232 interface.

```
appt1.lex      setalarm
attnlex.lex    attn
beeplex.lex    chirp, mgun, sing, zap
bytefcns.lex   indir, peekb$, pokeb
chronolx.lex   chrono$, chrono
clockdsp.lex
clocklex.lex   clock
cmd16lex.lex
cmdlex.lex     cmdstk
comlex.lex     clock, cmdstkq, cmdstk, cntrstq, crateq, dsp$, lock$, lrateq,
pwidthq, widthq
datalex.lex    ddelete, dinsert, drecords, expand, reclen, swap
datelex.lex    dateadd, datestr$, ddays, dmy, dow$, dow, mdy
```

```
dsplex.lex     bld, blink, clr, dot, invert, lcd, mirror, nrmal, set, small
dtlex.lex      dt
escapelx.lex   boldoff, boldon, compress, eightlin, expand, expcmp, normal, perfoff,
perfon, sixlin, underoff, underon
findlex.lex    find
helplex.lex    help
hexlex7.lex    esc$, hextoa$, hex$, inhex$
hmslexp.lex    hms+, hms-, hms, hr
kbeep.lex
keywait.lex    keywait$
listlex.lex    listlex$ ("lexfile")
lockoff.lex
menulex.lex    menu
noise.lex      noise
romcopy.lex
textutil.lex   delete, fileszr, insert, replace, search
yesnolex.lex   yes/no
```

Chris

Re: Makelex program & typing code;RS232 interface procedure
*Message #7 Posted by **Andy** on 15 Mar 2003, 10:27 p.m.,*
in response to message #6 by Chris(FLA)

How do you transfer programs to/from your PC using the 82164 and your 71b?

Andy

Re: Makelex program & typing code;RS232 interface procedure
*Message #8 Posted by **Chris(FLA)** on 16 Mar 2003, 7:26 a.m.,*
in response to message #7 by Andy

I use Tony Duell's lifutils suite of programs for Linux.

I tried to find the URL in my bookmarks but a quick scan didn't turn it up.

I have to get my 82164 out of storage and load up the jpc-rom that is available now which has most if not all of the keywords I sited.

Chris

Re: Makelex program & typing code;RS232 interface procedure
*Message #9 Posted by **Alain (Canada)** on 16 Mar 2003, 8:07 a.m.,*
in response to message #8 by Chris(FLA)

Hello,

you can find "LIF Utilities for linux v1.4" from Tony Duell at the following URL :

http://www.hpcc.org/hpil/lif_utils.html

They are very usefull. If you don't have Linux installed, try Knoppix (http://www.knopper.net/knoppix/index-en.html), the distribution that you can boot from a CD with no install on your hard disk.

Alain

Thanks! "HR" & "HMS" works...
*Message #10 Posted by **Terry Ingram** on 16 Mar 2003, 10:32 a.m.,*
in response to message #9 by Alain (Canada)

Thanks everyone for the help with the "HR" & "HMS" functions.

I used the MAKELEX program & hex dump of HMSLEX2.

This procedure really works great. Just what I needed.

Would like to understand the underlying process a little better... source code, creating the hex dump, etc.

Thanks, Terry Ingram

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

What is a Del. Serv. 1 Module???
*Message #1 Posted by **Steve** on 13 Mar 2003, 11:21 a.m.*

Does anyone know what a "DEL. SERV. 1" Module is? Was it a special ROM produced for the USPS? What kind of functions does it have? Thanks!

Steve

Re: What is a Del. Serv. 1 Module???
*Message #2 Posted by **Emmanuel, Normandy** on 13 Mar 2003, 3:06 p.m.,*
in response to message #1 by Steve

```
Delivery Service is a 8K module
made by HP for the US Postal Service.


FAT 1st page:


A000 015 XROM   21
A001 01D FCNS   29
A002 200 `U
A003 040 ADDR   A040
A004 200 `K
A005 07C ADDR   A07C
A006 200 `L
A007 0A1 ADDR   A0A1
A008 201 `RN
A009 069 ADDR   A169
A00A 201 `DI
A00B 0A9 ADDR   A1A9
A00C 201 `CC
A00D 0CA ADDR   A1CA
```

```
A00E 201 `2
A00F 0E6 ADDR   A1E6
A010 202 `Q
A011 018 ADDR   A218
A012 202 `P
A013 037 ADDR   A237
A014 202 `M1
A015 05A ADDR   A25A
A016 202 `RP
A017 07A ADDR   A27A
A018 206 `3
A019 0F0 ADDR   A6F0
A01A 207 `O
A01B 03B ADDR   A73B
A01C 207 `9
A01D 06A ADDR   A76A
A01E 207 `7
A01F 0E8 ADDR   A7E8
A020 207 `QF
A021 0FA ADDR   A7FA
A022 208 `3C
A023 01A ADDR   A81A
A024 208 `TC
A025 030 ADDR   A830
A026 209 `SP
A027 06E ADDR   A96E
A028 209 `11
A029 07F ADDR   A97F
A02A 209 `W
A02B 0D4 ADDR   A9D4
A02C 00D CLFL
A02D 00A ADDR   AD0A
A02E 00C CRFLD
A02F 0AB ADDR   ACAB
A030 00D GETX
A031 02F ADDR   AD2F
A032 00D SAVEX
A033 029 ADDR   AD29
A034 00C SEEKPTA
A035 075 ADDR   AC75
A036 20D `V
A037 058 ADDR   AD58
A038 20D `CL
```

```
A039 0ED ADDR   ADED
A03A 20E `S
A03B 002 ADDR   AE02


FAT 2nd page:


B000 01F XROM   31
B001 010 FCNS   16
B002 200 `SR
B003 026 ADDR   B026
B004 200 `Z
B005 05F ADDR   B05F
B006 200 `US
B007 076 ADDR   B076
B008 201 `T
B009 001 ADDR   B101
B00A 201 `2C
B00B 01A ADDR   B11A
B00C 201 `M
B00D 033 ADDR   B133
B00E 201 `SG
B00F 049 ADDR   B149
B010 201 `6
B011 060 ADDR   B160
B012 201 `R
B013 09C ADDR   B19C
B014 201 `N
B015 0B3 ADDR   B1B3
B016 201 `5
B017 0CC ADDR   B1CC
B018 202 `I1
B019 0BF ADDR   B2BF
B01A 208 `1
B01B 01B ADDR   B81B
B01C 209 `L1
B01D 0E7 ADDR   B9E7
B01E 20F `X
B01F 0BB ADDR   BFBB
B020 20F `Y
B021 0D2 ADDR   BFD2
```

Re: What is a Del. Serv. 1 Module???
*Message #3 Posted by **Steve** on 13 Mar 2003, 3:41 p.m.,*
in response to message #2 by Emmanuel, Normandy

Ok, but what do the functions do? Why was this module produced for the USPS, were mail carriers going to be outfitted with 41cx's?

Re: What is a Del. Serv. 1 Module???
*Message #4 Posted by **Emmanuel, Normandy** on 13 Mar 2003, 3:50 p.m.,*
in response to message #3 by Steve

```
I don't know a lot about it.
Some functions are used for shipping costs calculation.
I got one without any user's manual, such Gunzen or Morzen
too. A mystery but really insteresting when you are
studying HP-41 MCode... ;o)
```

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Little HP-15C challenge for the weekend

*Message #1 Posted by **Ex-PPC member** on 13 Mar 2003, 7:41 a.m.*

Hi, here's a new, little challenge for all HP-15C fans out there. If you think you know your 15C inside out, this is your chance to prove it:

The challenge

Assume a *master-cleared* HP-15C. We want to compute the value of **e^(-Pi/2)** [=0.2078+] on a 15c. The direct way to do it would be:

```
PI
2
/
CHS
e^x
```

That's 5 steps. The challenge is to do it in ***four*** steps. A simple way would be using trigs, like this:

```
1
SIN-1 (arcsin)
CHS
e^x
```

but that *doesn't work* on a master-cleared HP-15C, because this procedure assumes *radians* mode and a master-cleared HP-15C defaults to *degrees* , so you would need an additional RAD step at the beginning, making 5 total. Can you do it in ***four*** ?

By the way, should you be interested in the solution to my latest *Short & Sweet Math Challenge #6*, I've posted two short, commented programs for the HP-71B, see the post **S&SMC#6: An HP-71B solution** in its proper thread below.

also ...
*Message #2 Posted by **Ex-PPC member** on 13 Mar 2003, 7:54 a.m.,*
in response to message #1 by Ex-PPC member

By the way, a little remark is in order:

By "master-cleared" I don't mean an actually all-erased 15C (i.e: Pr Error), but just use the term to state that *you cannot depend on any particular mode or register contents*, i.e: you cannot assume that RAD mode is set, or even that the X-register initially contains a 0 value (which would be the case after a real "master clear"). If you need a particular mode you must set it, and if you need some definite value in X to begin with, you must put it in there yourself.

Re: Little HP-15C challenge for the weekend
*Message #3 Posted by **Werner Huysegoms** on 13 Mar 2003, 10:36 a.m.,*
in response to message #1 by Ex-PPC member

I don't even have a 15C, but that's easy, no?

PI CHS e^x SQRT

Werner

Re: Little HP-15C challenge for the weekend
*Message #4 Posted by **Ex-PPC member** on 13 Mar 2003, 10:47 a.m.,*
in response to message #3 by Werner Huysegoms

Yes ! Give the man a cigar !! (just joking)

Now that you've found a 4-step solution so easily, let's see if you would succeed in finding another 4-step solution that doesn't include **any** of the four operations you did use, namely without using ***neither Pi, nor CHS, nor e^x, nor SQRT !!***

:-)

If you succeed under those conditions, a cigar won't suffice, you'll deserve the whole box ... (there **is** such a solution, of course)

Re: Little HP-15C challenge for the weekend
*Message #5 Posted by **Axel** on 13 Mar 2003, 11:34 a.m.,*
in response to message #4 by Ex-PPC member

Hello,

I don't have the 15C (longing for it for years...), only read the documentation at the hp-museum about entering complex numbers.

Assuming an empty stack (all levels are zero) it should work like that, unfortunately I can't prove it...

1 fI Enter ^

Best regards Axel

Proof of Axel's solution
*Message #6 Posted by **Karl Schneider** on 14 Mar 2003, 2:33 a.m.,*
in response to message #5 by Axel

```
HP-15C      HP-42S


1           1
f I         COMPLEX
ENTER       ENTER
y^x         y^x



calculates j^j = exp(-pi/2) ~= 0.20788, where j = sqrt(-1)


THE PROOF
=========


Euler's Identity:  exp(jw) = cos(w) + j*sin(w)
```

```
==> for w = pi/2 radians, exp(j*pi/2) = 0 + j*1 = j


j^j = exp(ln(j^j))

    = exp(j*ln(j))

    = exp(j*ln(exp(j*pi/2)))

    = exp(j*j*pi/2)

    = exp(-pi/2)
```

Re: Proof of Axel's solution

*Message #7 Posted by **Axel** on 14 Mar 2003, 4:23 a.m.,*

in response to message #6 by Karl Schneider

Glad to see that it worked that way. "I can't proof" meant I can't check it on a real 15C. However, thank you, Karl for explaining it so nicely.

BTW, what I always missed on my HP calcs (32sii, 48s, 40g) is that there is no direct way to enter i. My nephew's TI-83 e.g. has the i on the keyboard. May be HP decided so because, in everyday math, you don't it so often.

Regards Axel

Re: Proof of Axel's solution
*Message #8 Posted by **R Lion** on 14 Mar 2003, 11:41 a.m.,*
in response to message #7 by Axel

"I always missed on my HP calcs (32sii, 48s, 40g) is that there is no direct way to enter i."

Please, try this on your 48:

i ENTER ENTER y^x ->NUM

Regards.Raul

Re: Proof of Axel's solution
*Message #9 Posted by **Karl Schneider** on 15 Mar 2003, 12:12 a.m.,*
in response to message #8 by R Lion

Raul wrote that

"i ENTER ENTER y^x ->NUM"

will enter i and calculate i^i on an HP-48.

It works! I never knew that. Also, the HP-49G has an "i" entry key. {blue left shift}, (TOOL}

Thanks...

Re: Proof of Axel's solution
*Message #10 Posted by **R Lion** on 15 Mar 2003, 2:32 a.m.,*
in response to message #9 by Karl Schneider

Very happy for helping you: I'm enjoying your "New multiple Varaible 15C Solver"... ;-)

Raul

Re: Little HP-15C challenge for the weekend

*Message #11 Posted by **Karl Schneider** on 14 Mar 2003, 12:45 a.m.,*

in response to message #1 by Ex-PPC member

Taking advantage of the HP-15C's fine and complete implementation of functionality with domains of complex-valued input and output.

f I (or, g SF 8)

g COS-1

CHS

e^x

Axel's post below is the cleverest, and quite likely the solution: So, perhaps the trick is to prove that

j^j = exp(-pi/2)

by Euler's identity: exp(j*w) = cos w + j*sin w

and the trig/hyberbolic identities for complex arguments.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Oh, My...!
*Message #1 Posted by **John K. (US)** on 13 Mar 2003, 5:03 a.m.*

Talk about scalping...

US$380 for a 32SII?!! Granted, it's new-- but, still...

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Strange turn of events
*Message #1 Posted by **Tony David Potter** on 12 Mar 2003, 9:38 p.m.*

Last week I wrote about the form letter I got from HP regarding the future of calcuators there. The next day I got a survey request (has anyone else gotten these, from a company called tnsofres.com) from them, regarding my recent Customer Service venture, and I let them have it, letting them know I wasn't satisfied with their blatently incorrect statements and their vague comments in the form letter.

Today, I got the following:

Hello,

It is important to us that we answer your question. If you need further assistance, please reply to this message, we will be happy to help you.

Sincerely, Amanda HP Consumer e-Support

Apparently my poor showing on the survey got someone's attention, since HP is now soliciting information from me.

Of course, my reply asked for more detail about the "upcoming" RPN calculator, will it be graphing or not, programmable or not, robust or like the HP-9x (i.e., not,) as well as some clearer information about tentative release dates.

We'll see. It's a bit comforting to have HP ask its consumers for advice. Then again, maybe it's just another ride on the merry-go-round.

--Tony David.

You won't get far. I've been there.
*Message #2 Posted by **Jeremy** on 12 Mar 2003, 9:44 p.m.,*
in response to message #1 by Tony David Potter

The part quoted below is also a form letter from HP. The reason I know is because I saw it twice, once from Amanda, and once from some other guy. I asked a similar question of them, and got no useful information.

If you're interested, search the forum for my name in the past couple weeks, and you will see the thread I started to try to keep everyone informed on the new HP calculator.

-Jeremy

HP form response:

"Hello,

It is important to us that we answer your question. If you need further assistance, please reply to this message, we will be happy to help you."

Sincerely, XXXX HP Customer blah blah blah

Re: Strange turn of events
*Message #3 Posted by **Tony David Potter** on 13 Mar 2003, 11:34 a.m.,*
in response to message #1 by Tony David Potter

Here's the result of my latest inquiry - According to her, the scientific will not be graphing, and it _should_ be from a different manufacturer than the HP-30 & HP-9 series.

Of course, it'd be nice if the website (http://www.hp.com/support/calculators) actually worked. Letter attached:

Hello,

Here in technical support, all we know is that there will be at least one new finance, one new RPN scientific, and one new graphing calculator out by the end of the year. We have not been given any release dates, nor any further info about the calculators.

I can say that the difference between the Scientific and the graphing is the scientific does not have graphing, therefore, the new RPN scientific would (hopefully) be RPN, non-graphing, shirt pocket size. I'm sure they will continue to create new RPN calculators. In case you haven't

heard, www.fixthatcalc.com repairs and refurbishes the pioneer series, including the 42S, 32S, 32SII, 17BII, etc.

As for the body or keyboard, yet again, we have no idea. I can say I believe (nothing official at all) that we have new designers so maybe they will be very different from both styles.

I hope what little information we can offer is helpful, and keep an eye out at www.hp.com/support/calculators for new models.

It is important to us that we answer your question. If you need further assistance, please reply to this message, we will be happy to help you.

Sincerely, Amanda HP Consumer e-Support

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

9114B HP-IL Disk Drive - Battery replacement options?
*Message #1 Posted by **Gene Wright** on 12 Mar 2003, 4:53 p.m.*

Hi all.

If I want to get a 9114B battery pack repaired, what would you suggest?

Alternatively, what can I do? Power supply how?

Assume I'm fairly ignorant of these types of things (fairly close to the truth). What would you suggest? :-)

Gene

Re: 9114B HP-IL Disk Drive - Battery replacement options?
*Message #2 Posted by **Tony Duell (UK)** on 12 Mar 2003, 5:04 p.m.,*
in response to message #1 by Gene Wright

I am told a similar lead-acid block battery is still made, and can be fitted inside the original battery pack. I've never done this though. 3 2.5Ah 'Cyclon' lead-acid cells fit almost perfectly in the HP pack. Connect them in series (to give a 6V battery). That's what I did to both my 9114s. You can also use a 6V (or so) unregulated mains PS, connected in place of the battery pack. The connector inside the battery pack holder is a standard 2-pin mini-jones plug, so it is possible to get a suitable socket. The polarity is marked on the case mouldings inside the disk drive unit. If you do this, be aware that the 9144 can take considerable current -- 2A or so. You need a fairly large PSU.

Re: 9114B HP-IL Disk Drive - Battery replacement options?
*Message #3 Posted by **Dave Mabry** on 13 Mar 2003, 7:48 p.m.,*
in response to message #2 by Tony Duell (UK)

Tony,

Your help and suggestions have helped me before, and I want to thank you again. I just acquired a 9114A from a guy who is "liquidating" some of his HP stuff. It arrived without a battery pack just yesterday. This thread is so timely, kind of uncanny. Today I got ahold of the Gates "D" SLA batteries (they are a different brand these days, Cyclon) and they fit perfectly, just like you said. Popped them in, charged all day today and checked out the drive tonight. Worked perfectly, thank you very much!

Strange how something like this is so much fun. I couldn't afford it when it was current, but now they are much more affordable. In any case, it is certainly fun to tinker with today. I knew I'd use those 730k diskettes sooner or later. :)

Re: 9114B HP-IL Disk Drive - Battery replacement options?
*Message #4 Posted by **Philip** on 12 Mar 2003, 5:05 p.m.,*
in response to message #1 by Gene Wright

This was an easy fix for me. I used a PowerSonic PS-628 from here:

http://www.batterystation.com/gelcell.htm

Re: 9114B HP-IL Disk Drive - Battery replacement options?
*Message #5 Posted by **Gene** on 12 Mar 2003, 5:41 p.m.,*
in response to message #4 by Philip

Hi. Looked over the battery. It's a 6V, so that should work. Any special effort required to get it inside the old battery pack case or connect it?

Re: 9114B HP-IL Disk Drive - Battery replacement options?
*Message #6 Posted by **Alain (Canada)** on 12 Mar 2003, 7:56 p.m.,*
in response to message #5 by Gene

I bought HP9114a unit and found out that the battery was apparently dead. So, after a little research, I found that in my location "Interstate Batteries" had an equivalent replacement battery for around 25 $Cdn. I received and install the unit (15 minutes) and everything worked fine since then !

Alain

Drop in replacement
*Message #7 Posted by **Mike** on 13 Mar 2003, 9:06 p.m.,*
in response to message #5 by Gene

It's a drop in replacement. Exactly the same size and terminal arrangement.

Re: Drop in replacement
*Message #8 Posted by **db(martinez,california)** on 15 Mar 2003, 8:50 p.m.,*
in response to message #7 by Mike

mike; i'm lost. there are three batteries being discussed. which one did you find is a "drop in replacement"? thanks - d

Re: 9114B HP-IL Disk Drive - Battery replacement options?
*Message #9 Posted by **Christoph Klug** on 13 Mar 2003, 3:06 a.m.,*
in response to message #1 by Gene Wright

Now I found a Germany source for 6V/2,4Ah replacement lead-cells for the IL-Drive : www.batt-mann.de or info@batt-mann.de is a distributor for power modules and batteries for modell cars /ships /airoplanes....

Size of the replacement battery part is identical to the original battery. This battery you also find in the IL-Datalogger and IL-Digital-Multimeter....

Best wishes from Germany - Christoph Klug

Re: 9114B HP-IL Disk Drive - Battery replacement options?
*Message #10 Posted by **Raymond Del Tondo** on 13 Mar 2003, 5:24 a.m.,*
in response to message #9 by Christoph Klug

Hi,

another source is www.battery-kutter.de , where I bought my replacement lead battery.

They're located in Hamburg.

They have the exact Panasonic replacement battery for the IL drive. Replacing the battery is a task of about five minutes then. First charging of the thing takes somewhat longer, about 20 hours, IIRC.

I can look up the order number, if someone's interested.

Regards,

Raymond

About the cost...
*Message #11 Posted by **Raymond Del Tondo** on 13 Mar 2003, 8:17 a.m.,*
in response to message #10 by Raymond Del Tondo

I forgot to mention that the replacement battery costs about 11 Euro + shipping.

Raymond

Re: 9114B HP-IL Disk Drive - Battery replacement options?
*Message #12 Posted by **Wayne Brown** on 13 Mar 2003, 7:38 a.m.,*
in response to message #1 by Gene Wright

I took mine to Batteries Plus a couple of years ago. They rebuilt it and it doesn't look like it's ever been opened. I'm not certain, but I *think* it cost about $30 or $35.

Re: 9114B HP-IL Disk Drive - Battery replacement options?
*Message #13 Posted by **Vassilis Prevelakis** on 13 Mar 2003, 8:28 a.m.,*
in response to message #1 by Gene Wright

```
> Trying to do a directory on the disk in the drive returns a "IL loop broken"
> message.
```

if the battery is almost dead, then trying to start the motor will cause the rest of the electronics to experience a significant power drop.

This may explain the "IL loop broken"

Try to send the drive a command that does not require a disk access (e.g. the ID command that returns the type of the device).

If this works then chances are that the 9114 electronics are OK, however, it doesn't tell you anything about the diskette drive itself.

To test this you need a fresh battery, as Tony Duell mentioned, an unregulated power supply will do, but you need to make sure that it can deliver around 2 Amps. I have succesfully run an 9114 off a bench power supply so the procedure works. Just make absolutely certain thatn the polarity is correct (since you are feeding DC to the drive).

If you can open the case, things will be easier for you as there is lots of space inside the case so the wires and connections are easy to reach.

If you can get a floppy cleaning diskette, you should clean the drive heads before testing.

Once you determine that the drive works you can get a replacement battery for the battery pack and you are back in business.

As preagan@houston.rr.com wrote:

```
> I used a PowerSonic PS-628 from here:
>       http://www.batterystation.com/gelcell.htm
```

I have used the same PowerSonic part for my 9114 and it fits like a glove.

To get inside the battery pack, you just remove the two screws and carefully lift the top cover after you lift the various latches situated around the top cover. Apart from the TORX screwdriver, you don't need any other tools to replace the battery inside the pack.

**vp

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

hp48sx -> hp48gx compatibility
*Message #1 Posted by **juergen Rodenkirchen (GER)** on 12 Mar 2003, 2:21 p.m.*

Hi all!

Because there are nice features on the Solve Equation Library card for the HP48sx that are not available on the HP48g (e.g. the Periodic Table of Elements, I think), I wondered if it's possible to run this card in an HP48gx. Just thought that it would be good to ask the experts in here before probably damaging the card or the machine ;-)

Thanks for your time, Juergen

Re: hp48sx -> hp48gx compatibility
*Message #2 Posted by **Frank** on 12 Mar 2003, 2:25 p.m.,*
in response to message #1 by juergen Rodenkirchen (GER)

All cards labeled specifically for the 48sx I have tried (which has been about 6) all worked flawlessly on the 48gx.

Re: hp48sx -> hp48gx compatibility
*Message #3 Posted by **Vieira, Luiz C. (Brazil)** on 12 Mar 2003, 2:30 p.m.,*
in response to message #1 by juergen Rodenkirchen (GER)

Hi;

there are many system-level operations that are not compatible in both models, mostly the ones related to new G-featurs and new objects defined only in the G-series. I remember that libraries created for the S-series 48 MAY crash (not dammage) if loaded in a G-series 48.

About the periodic table, does it need the card to run? Have you thought about copying and sending it from the SX to the GX by the IR link? I'm sorry I do not know the card's contents, but loading a "file" in an HP48G through the IR link will not dammage it.

Hope this helps.

Vieira, Luiz C. - Brazil

There's a free version of PTLIB for the GX
*Message #4 Posted by **Raymond Del Tondo** on 13 Mar 2003, 5:44 a.m.,*
in response to message #3 by Vieira, Luiz C. (Brazil)

Hi,

as subject indicates, HP has released a version of their Periodic Table Library for usage with the HP-48G(X). It's available at www.hpcalc.org .

BTW: Some years ago, I wrote a 1:1 replacement for PTLIB, which is *much* faster, and of course, much smaller. Also on www.hpcalc.org ;-)

Regards,

Raymond

Re: There's a free version of PTLIB for the GX
*Message #5 Posted by **Juergen Rodenkirchen (GER)** on 13 Mar 2003, 1:34 p.m.,*
in response to message #4 by Raymond Del Tondo

... thanks to you too, Raymond! I'll check this out!

Juergen

Re: hp48sx -> hp48gx compatibility
*Message #6 Posted by **Juergen Rodenkirchen (GER)** on 13 Mar 2003, 1:32 p.m.,*
in response to message #3 by Vieira, Luiz C. (Brazil)

Good point, Luiz, thanks! I'll try ...

Juergen

Further info
*Message #7 Posted by **Vieira, Luiz C. (Brazil)** on 12 Mar 2003, 2:39 p.m.,*
in response to message #1 by juergen Rodenkirchen (GER)

Hi;

have a look at the HP48G Series User Guide, pages 29-20 and 29-21, under *Using HP48S/SX programs with the HP48G/GX*, mostly the topics dealing with cards and libraries.

Cheers.

Luzi C. Vieira - Brazil

Re: hp48sx -> hp48gx compatibility
*Message #8 Posted by **R Lion** on 12 Mar 2003, 2:47 p.m.,*
in response to message #1 by juergen Rodenkirchen (GER)

If you want a good Periodic Table, this is the best:

http://www.hpcalc.org/hp48/science/chemistry/chemlb27.zip

I can send you a version where the Cl "solid" has been changed to "gas".

Raul

I'm interested...
*Message #9 Posted by **Vieira, Luiz C. (Brazil)** on 12 Mar 2003, 2:57 p.m.,*
in response to message #8 by R Lion

Hola, Raul; como estás?

Can you send me this "corrected" version?

My e-mail address is: lcvieira@quantica.com.br (there are so many spams and roax's comming to my e-address I'm about to change it...)

Do you know if it installs in the 49G too?

Best regards.

Luiz C. Vieira - Brazil

Sure, I'm interested!
*Message #10 Posted by **Juergen Rodenkirchen (GER)** on 13 Mar 2003, 1:52 p.m.,*
in response to message #8 by R Lion

Hi Raul!

Sure, I'm interested in that version of the Periodic table! I'd be happy if you would send me a copy ... you can use the e-mail address above.

Juergen

Re: Sure, I'm interested!
*Message #11 Posted by **R Lion** on 13 Mar 2003, 3:20 p.m.,*
in response to message #10 by Juergen Rodenkirchen (GER)

I'll send you. Don't forget to check the Raymond's table too:

http://www.hpcalc.org/hp48/science/chemistry/pt.zip

Raul

Re: hp48sx -> hp48gx compatibility
*Message #12 Posted by **Masao Kinoshita** on 12 Mar 2003, 9:41 p.m.,*
in response to message #1 by juergen Rodenkirchen (GER)

Just stating the obvious - Sparcom's General Chemistry Application Pac (ROM card) for the HP 48GX has the Periodic Table of the Elements (and a whole lot more chemistry stuff, e.g., dilution equations galore, which you can mix and match to get your answer).

Re: hp48sx -> hp48gx compatibility
*Message #13 Posted by **Masao Kinoshita** on 12 Mar 2003, 10:35 p.m.,*
in response to message #12 by Masao Kinoshita

Oops - I forgot to mention that Sparcom's General Chemistry Application Pac was originally available as an HP 48SX ROM card; so make sure you get the 48GX version or you will be back to where you started. I used to have a 48SX with the Chemistry ROM card (and the great 41CV Emulator ROM card), but don't have them now. The problem is that my 48GX Chemistry ROM card doesn't have "GX" written anywhere on the card. IIRC, the 48GX cards have an extra contact.

Re: hp48sx -> hp48gx compatibility
*Message #14 Posted by **Chan Tran** on 13 Mar 2003, 10:09 a.m.,*
in response to message #13 by Masao Kinoshita

I know that the 41CV emulator card won't work on a GX. I have tried and it caused the GX to lose memory. Not permanently damaged the GX though.

Thank you all !!!
*Message #15 Posted by **Juergen Rodenkirchen (GER)** on 13 Mar 2003, 1:39 p.m.,*
in response to message #1 by juergen Rodenkirchen (GER)

Thank you all so much for the lots of interesting and really useful information on my request!

Best Wishes, Juergen

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-67, Classic or Second Generation?
*Message #1 Posted by **Mike Rivera** on 12 Mar 2003, 10:48 a.m.*

I'm looking to maybe pick up a "Classic" series calculator to compliment my HP-25C, 41CX, 15C, etc. I don't really like anything newer than the 41 series although I used a 48G for a while.

I always wanted a "67", but couldn't afford one when new, and therefore bought the "25C" back in 1976. I figured it might be nice to now have one of the early series in my small collection.

My question is, I keep reading conflicting information about whether this is a classic or second generation. I always assumed it was second series based on it was sold alongside the "Woodstock" series for most of it's life, has the same type of keys, boxes, etc. It seems most the classic series have squared off keys, darker cases, etc.

Also, wasn't the "65" a true "Classic" series and the "67" an upgrade during the transition from "Classic" to "Woodstock".

What's everybody else think?

- Mike

Re: HP-67, Classic or Second Generation?
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 12 Mar 2003, 11:49 a.m.,*
in response to message #1 by Mike Rivera

Hi;

I think my "sources" are the same as yours, but three particular points must be considered in this "judgment":

1 - External look - the HP67 "has" a classical look, not a "Woodstock" look. Even teh HP19C and 29C belong to a different class: Stings
2 - Available resources - there are programmable features available in Stings and Woodstocks not availble in the programmable classics: HP65 and HP55. These resources - subroutine, indexed registers and labels - became available in the HP29C and HP67/97 (being the hP97 a "topcat")
3 - Electronic design - I believe this is the major "proof": internals. The HP67 has internal improvements not available in the classic models. Some of them are mentioned at the MoHPC pages for these calculators.

I have my own concerns about this particular classification and when I think of this I remember many "mixed" equipment (any sort of equipment) that fits in more than one cathegory and cannot be classified in only one. Even nature has some animals in this particular condition. Maybe the HP67 is one of the kind that has "the best of two worlds"; why not?

Best regards.

Luiz C. Vieira - Brazil

Re: HP-67, Classic or Second Generation?
*Message #3 Posted by **John Smith** on 12 Mar 2003, 12:12 p.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

Luiz wrote:

"Even teh HP19C and 29C belong to a different class: Stings"

No. According to this very site:

http://www.hpmuseum.org/collect.htm

```
"Sting
     The HP-10 and HP-19C. (Don't confuse these with the voyager series.)"
```

The HP-29C is a "Woodstock", not a "Sting". Regards.

Oops! My mistake..
*Message #4 Posted by **Vieira, Luiz C. (Brazil)** on 12 Mar 2003, 1:04 p.m.,*
in response to message #3 by John Smith

Hi;

thank you.

I wrote a wrong information.

Cheers.

Also ...
*Message #5 Posted by **Ex-PPC member** on 12 Mar 2003, 12:37 p.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

Luiz wrote:

"2 - Available resources - there are programmable features available in Stings and Woodstocks not availble in the programmable classics: HP65 and HP55. These resources - subroutine, indexed registers and labels - became available in the HP29C and HP67/97 (being the hP97 a "topcat")"

No. Also according to this same site:

http://www.hpmuseum.org/hp65.htm

the HP-65 *did* have both subroutines (1 level) and labels (0-9, A-F). Regards, again.

Re: Also ...
*Message #6 Posted by **John Smith** on 12 Mar 2003, 12:40 p.m.,*
in response to message #5 by Ex-PPC member

Yes, I forgot to point out that, too ... :-)

Regards to both of you.

Re: Also ...
*Message #7 Posted by **Vieira, Luiz C. (Brazil)** on 12 Mar 2003, 1:14 p.m.,*
in response to message #5 by Ex-PPC member

Yes, you're right. I should be more specific.

I put both characteristics as a generical difference. The HP55 doesn't have both and the HP65 does not have indexed registers and indexed labels.

Thank you.

Luiz C. Vieira - Brazil

Re: HP-67, Classic or Second Generation?
*Message #8 Posted by **Mike Rivera** on 12 Mar 2003, 1:19 p.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

Thanks for your input Luiz:

You said regarding why the HP67 is a classic series: "...External look - the HP67 "has" a classical look, not a "Woodstock" look."

I think the HP67 looks more like a Woodstock series due to it's keys and case colors than a classic series, even if it's case shape is closer to the classic.

Other than the shape of the case, I think everything else on the HP67 says "Woodstock".

I'm still up-in-the-air over this. More convincing anyone?

- Mike

I once had an HP67...
*Message #9 Posted by **Vieira, Luiz C. (Brazil)** on 12 Mar 2003, 2:20 p.m.,*
in response to message #8 by Mike Rivera

... for two days, a weekend, a test-drive before buying, when the original owner gave up selling it. Well, he was a classmate, and if I spent the money I had at that time, I would not be able to buy a new HP41C six months later... <8-) Many of you in here will tell you'd not sell it or buy an HP41C in place of an HP67, I know.

I remember one important aspect: the HP67's LED display. It is exactly the same as the one available in all classics. It uses a complete digit to show the radix mark because the radix mark is inside the digit, not beside the digit as found in Woodstocks. This same LED display with magnifying lenses is also available in the HP91, HP92 and HP97. I do not know if this is also true in the off-road 95C's LED display.

About the keyboard, you're right. I'd only mention the three prefix keys [f], [g] and [h], available later in the HP34C.

Just to add a few "reliable" (I hope) points.

Cheers.

Re: I once had an HP67...
*Message #10 Posted by **Dave** on 12 Mar 2003, 2:27 p.m.,*
in response to message #9 by Vieira, Luiz C. (Brazil)

Once and for all,

HP-67 is a classic series and not Woodstock series. Sheesh!

Re: I once had an HP67...
*Message #11 Posted by **David Smith** on 12 Mar 2003, 4:05 p.m.,*
in response to message #10 by Dave

Nope, the HP-67 absolutely, positively IS a woodstock. It uses the same internal chips and architecture as the HP21/25/29C. The only thing classic about it is the case and the charger/battery that it uses.

Re: I once had an HP67...
*Message #12 Posted by **Mike Rivera** on 12 Mar 2003, 4:35 p.m.,*
in response to message #10 by Dave

Hi Dave:

You said, "Once and for all, the HP-67 is a classic series and not Woodstock series. Sheesh!"

Based on what? It seems like it has as many "Woodstock" features (key shape, key colors, case color, original box, internal architecture, etc.) as "Classic" features (LED, case shape, etc).

If you put an HP-35, an HP-55, an HP-25, and an HP-67 on a table and were asked to group them, where do think they'd go. I think it's be (35 & 55) and (25 & 67).

Even the Museum lists the 67 as Second Generation Mag Card Programmables (1976), not "classic".

Maybe we need a new catagory, "Post-Classic/Pre-Woodstock" - just kidding.

No offense with all this, but I'm just wondering what everybody else thinks.

- Mike

Re: I once had an HP67...
*Message #13 Posted by **Michael Meyer** on 12 Mar 2003, 10:26 p.m.,*
in response to message #12 by Mike Rivera

It's a breath mint! It's a candy mint!

It's two mints in one!

Must be the "Certs" model!

Re: HP-67, Classic or Second Generation?
*Message #14 Posted by **Tony Duell (UK)** on 12 Mar 2003, 5:08 p.m.,*
in response to message #1 by Mike Rivera

To me the 67 is a Woodstock (and always will be). It's got the Woodstock electronics (ACT processor,etc) -- the only reason it's in the 'classic' case is that yuo can't fit the card reader into the 'woodstock' case. The 65 is interesting. To me it's a classic (it has an electrically similar processor to the other classics), but it's somewhat unusual in that all the chips on the CPU board, apart from the ROMs, are in a 6-chip hybrid module.

Re: More evidence the HP-67's a Woodstock
*Message #15 Posted by **Mike Rivera** on 12 Mar 2003, 9:50 p.m.,*
in response to message #1 by Mike Rivera

I'm not trying to throw eveyone into a tiz, but look at when the HP-67 was released by HP, AFTER six Woodstock calculators!

HP-21 2/1975 HP-25 8/1975 HP-22 9/1975 HP-27 5/1976 HP-25C 7/1976 HP-67 7/1976 !!!!!

Hmmm, looks fishy to me that this is a "classic" series?

- Mike

Re: More evidence the HP-67's a Woodstock
*Message #16 Posted by **Dave** on 12 Mar 2003, 10:32 p.m.,*
in response to message #15 by Mike Rivera

In the book "Codenames of HP Handheld Calculators and PDAs: facts and speculations" by M.J.P. Staps the HP-67 is listed as a Classic with codename Hawkeye. Quote "There are 5 scientific models (2 business models) in the Classic series and the HP-67 is the last of them". What makes an HP calculator is the design and size of the case to be like the HP-35 classic calculator. It has nothing to do with the electronics inside.

Woodstocks had the same type of cases (but NOT always the same electronics)

Re: More evidence the HP-67's a Woodstock
*Message #17 Posted by **Mike Rivera** on 12 Mar 2003, 10:59 p.m.,*
in response to message #16 by Dave

Hi Dave:

So what you (and M.J.P. Staps) are saying is that even though the HP-67 was released towards the end of the Woodstock era, has Woodstock type keys, Woodstock type interior design and processor designs, Woodstock case colors, Woodstock shipping box and manual design, etc.; that it's a "classic" because HP couldn't fit the card reader into a Woodstock case and already had the tooling for the older classic case (where it would fit)?

If IBM brings out a new high-end personal computer (do they still make PCs?), and they package it for sale it in a PC XT case, is it an "XT family" computer?

I'm no expert and if that's the way the HP calculator collecting comunity sees it, I'm certaily in no position to argue.

It just seems silly to me that with all the things that go into making a calculator, that it's the plastic "box" shape that determines its' family - because it's era (and most everything besides the case)is, by most accounts, Woodstock.

I'm done. I'm new around here and I don't want everybody mad at the new guy.

Thanks,

- Mike

To be or not to be?
*Message #18 Posted by **Vieira, Luiz C. (Brazil)** on 12 Mar 2003, 11:55 p.m.,*
in response to message #17 by Mike Rivera

Hey, *new guy*; for what I can tell, welcome!

Your evaluation is correct, your opinions are not wrong and I think if people around here were mad at you, the thread you started was already in the past. I sometimes post something and I see the post vanishes without any comment (sob!), others go bigger than this one (so far). IMHO, you're doing fine. At least you know this is a "touchy" point: what in haven is the HP67?

So far, many diverging analisys, all with their complete and concise basis. All diverging, all correct their way.

Isn't it great?

Others will disagree with me, but this is the sort of subject that allows different opinions in a very polite environment.

Man, this site rules... (Oops! Now I'll be flammed...)

Luiz C. Vieira - Brazil

Re: To be or not to be?
*Message #19 Posted by **Masao Kinoshita** on 13 Mar 2003, 9:40 a.m.,*
in response to message #18 by Vieira, Luiz C. (Brazil)

Categorizing is a human endeavor, usually for convenience or to try to make sense out of things. The HP 67 "looks" like a classic from the outside, so in photos it is sometimes grouped with the Classics (even HP's own "HP calculator family" photo at the HP photo scans section of this Web site). The HP 55 packaging resembles early Woodstock in the "Classics [plural] and 20 series" HP photo, but it is, of course, always considered a Classic. By its electronics, the HP 67 is considered a second generation mag card programmable. The internal programming specifics are very different between the HP 65 and the HP 67, e.g., 6 bit vs. 8 bit. Programs in the HP 65 were held in capacitors that were constantly refreshed. How's that for different! BTW, the fabled Classic HP 65 started the "Woodstock" type keys. APD just expanded the use of the inverse prefix key and made it another general prefix key for the HP 67 (or perhaps I should say the HP 55/25/67). Will a new version of the HP 12C [even by Kinpo?] still be considered a Voyager? Probably, if it still looks like one.

"Mark Twain said that historians have to rearrange past events so they make more sense." Paul Ceruzzi "A History of Modern Computing" MIT 1998 (2000 paperback, page 226)

Re: HP-67, Classic or Second Generation?
*Message #20 Posted by **Gordon Dyer** on 15 Mar 2003, 3:51 a.m.,*
in response to message #1 by Mike Rivera

You are all wrong.
It is either a Clastock or a Woodic....
Now let's hear about which of these two it is!

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Woodstock Cases
*Message #1 Posted by **Garry** on 12 Mar 2003, 9:53 a.m.*

Hey, guys. I just tried an HP Jornada case on my 29C, and found it to be an almost perfect fit. I have enjoyed reading the HP FORUM for some time now. You all have asked, and answered many questions about various HP calcs that I own. Now if I can just find a ZENROM, PPC, or CCD module to fool around with, and not have to pay $500+. I used to see these on Ebay, and before that Educalc, for next to nothing. Whoever bought them up when they were cheap is now sitting on a goldmine. Of course we all know that after the fact.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Repairs in Australia
*Message #1 Posted by **Howard** on 12 Mar 2003, 8:27 a.m.*

Does anybody know who repairs HP calculators in Australia? Thank you.

Re: Repairs in Australia
*Message #2 Posted by **Les Bell [Sydney]** on 12 Mar 2003, 5:15 p.m.,*
in response to message #1 by Howard

Howard, I don't know of anybody who does repairs, but I have had an 82143 printer's battery professionally rebuilt by a company in Newcastle who did an excellent job. I can dig out details if that would help.

Best,

--- Les [http://www.lesbell.com.au]

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Biographies Suggestion for Dave Hicks
*Message #1 Posted by **Fred Lusk (CA)** on 11 Mar 2003, 9:09 p.m.*

Dave…

How about adding the date that each biography was posted, like for Articles or Memories??? I like to read the bios and a date would help me remember which ones I have looked at. One of these days, I'll post my own non-Pulitzer-Prize-winning entry.

Thanks, Fred

Re: Biographies Suggestion for Dave Hicks
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 12 Mar 2003, 1:38 a.m.,*
in response to message #1 by Fred Lusk (CA)

Hello, Fred;

I'm not sure this is what you want, but my Bios was entered in December 19th, 2001. This date is already at the Bios header, but you have to open one's Bios to see it.

Do you mean the entering date at the Bios listing?

Just to understand.

Cheers.

Luiz C. Vieira - Brazil

Added
*Message #3 Posted by **Dave Hicks** on 12 Mar 2003, 10:12 p.m.,*
in response to message #1 by Fred Lusk (CA)

How's that?

Re: Added
*Message #4 Posted by **Fred Lusk** on 13 Mar 2003, 12:29 a.m.,*
in response to message #3 by Dave Hicks

Awesome…exactly as I was reading Luiz' post, you jumped in with your response…I watched it flash on screen before my very eyes!

Luiz, what Dave just did to the bios is what I had in mind.

Dave - again, "U da man"!!!

Thanks, Fred

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

32Sii do the keys rub off ?
*Message #1 Posted by **Norm** on 11 Mar 2003, 8:38 p.m.*

I bought one of the last new-in-package 32Sii. Paid ticket-scalper prices.

Would appreciate people's opinions about, are these the keys where the letters rub off because they were painted not molded?

They look a little suspicious if I compare them to a 10 year old 32S. The new 32Sii looks like a thin paint was used on the keys for the white lettering.

Would appreciate any actual rub-off descriptions (or the lack thereof) experienced by others.

Re: 32Sii do the keys rub off ?
*Message #2 Posted by **GS Leong** on 11 Mar 2003, 11:13 p.m.,*
in response to message #1 by Norm

I have an Indonesion 32 SII I have had since '97 I use it on the average of 3 times per week, it travels with me in its case, (as i am unwilling to let some of my others travel) and have noticed no problem with the paint wearing on the keys. I have not used any of the ones made in China. I trust when you say new that you mean the Chinese series. Please give me an opinion of your calc do the keys feel as good as the old hp's?

Thanks

32Sii Indonesia vs. China

*Message #3 Posted by **Norm** on 12 Mar 2003, 5:34 a.m.,*

in response to message #2 by GS Leong

Well I can't give you a fair answer for comparison, because the packaging says "calculator made in Indonesia".

I'll take it that's good, and according to what you said that the paint wont rub off the keys. Sure looks like it would, though. The calculator should be presumed equivalent to what you've already been using.

I don't know how long this packaged unit was sitting around, the graphics do say (c) 1999 which means it was made sometime between 1999 and now (in Indonesia then). Maybe chinese calculators are just stuff like 9G for Walmart.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

An introduction.
*Message #1 Posted by **Jeremy** on 11 Mar 2003, 7:52 p.m.*

I've been posting here for about a week or so now, and finally discovered that there is actually a place to post your bio. I just did that, so if anyone's interested, it's there.

There was a guy from Wisconsin there, and another guy from an unspecified area of Illinois. We might be in proximity to meet up one day and have a dorky calculator meeting over lunch one day... Drop me a line if you're interested. (Yes, the email address is real. I ride a Suzuki SV650 motorcycle without any bodywork, hence the 'naked' part.)

-Jeremy

PS - There are a lot of regular contributors who don't seem to have bios...

Re: An introduction.
*Message #2 Posted by **Scuba Diver** on 11 Mar 2003, 7:53 p.m.,*
in response to message #1 by Jeremy

Another bike rider here!

Honda CBR600F4i...black and silver. Has all of its fairings, so I'm not naked *blush*

B.

An introduction for bikers !!!!!
*Message #3 Posted by **Frédéric** on 12 Mar 2003, 6:25 a.m.,*
in response to message #2 by Scuba Diver

Hello Bikers

BMW R1100 RT

20000 kilometers per year !!!!!! Yeah !!!!!

Re: An introduction for bikers !!!!!
*Message #4 Posted by **Scuba Diver** on 12 Mar 2003, 9:21 a.m.,*
in response to message #3 by Frédéric

Wow! 20,000k per year, that's quite a bit!

I put 13,000km on in one year; I decided to prove my friends wrong. They told me that sport bikes are too uncomfortable for long journeys, so I rode from Toronto to Miami in 2 days...

I didn't feel any worse than I would have in a car for that length of time!

B.

OT: motorcycles, etc.
*Message #5 Posted by **Jeremy** on 12 Mar 2003, 1:09 p.m.,*
in response to message #1 by Jeremy

20,000 km... let's see that's (click-click-click) 12,428 miles. Not too shabby! The first year I had my SV, I put 15,000 miles on it. (24,139 km.) The next year, only 12,000 miles. (19,311 km.) Last year, only 8,000 miles. (12,874 km.) I got into woodworking last year, so that cut into my riding time.

Scuba: Since you like to ride lots of miles, take my advice and get a Corbin seat. They are very expensive, (Mine was ~$200) but they double your stamina. The BMW probably has a pretty good stock seat, but I've read bad things about the long-term ergonomics of the Honda CBR F4i seats.

Last year, I made road trip from Chicago to Franklin TN. and back on the SV. I took twisty side roads on the way down, (about a 16 hour ride) and interstates back. (8 hours.) I vowed never to

do that again on the stock seat. So I think I'm going to do that again soon, possibly even this summer.

One last line of thought... You both wear helmets, right? Good. How about earplugs? Far too many people ride without earplugs, IMO. The windblast will damage your hearing in short order, even through the helmet. If you have ever ridden without a helmet, and later upgraded and realized how much quieter and less dramatic it is, it is the same step with going from no earplugs to earplugs. I use foam ones that you buy in a big box. At the very least, try it for a week. My bet is that you will not want to go back. (like Algebraic to RPN?...)

Frederic: Off the top of my head, I don't know what kind of wind protection your bike has, but I bet it is pretty good. The earplugs might not do as much for you as it does for the Scuba Diver and myself.

-Jeremy

Re: OT: motorcycles, etc.
*Message #6 Posted by **Scuba Diver** on 12 Mar 2003, 7:54 p.m.,*
in response to message #5 by Jeremy

Hi Jeremy! Funny you should mention the seat! I was THIS close to buying a corbin at the Motorcycle show this year!

My helmet's a Quantum/e; they are notoriously loud, so I've worn earplugs ever since I've purchased it. I can also say that in Ontario, helmets have been the law since the early '80s, so I have NEVER ridden without one. I know that there are some states where its not mandatory, but I couldn't imagine riding without one.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

My HP25 really dead?
*Message #1 Posted by **PeterL** on 11 Mar 2003, 8:16 a.m.*

Hi there, when i tried to use my HP25 days ago, nothing happened. Thinking of low nicads i hooked it on a 5V DC-supply that i used to charge the HP25. (with 1400mAh NiMh cells) Switching on the HP, only erratic Stuff ist displayed.

Did I kill my HP by bad battery contacts? The display only comes up when the supply voltage is near 5V. And then it is flickering or displaying an 8 in the second rightmost digit.

Is there some help or do I have an eyecatcher for the bookshelf? :-(

73 Peter

Re: My HP25 really dead?
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 11 Mar 2003, 8:32 a.m.,*
in response to message #1 by PeterL

Hi;

chances are your HP25 is alive and well, O.K.? Now, let us know how long does it take since the last time you used it. If it takes too long (maybe years or even months) chances are you have a battery leakage problem.

Please, be carefull with chargers for these calculators. The avarage output for the Woodstocks AC adapters is 10Vac, but you should only use a charger when good batteries, even if discharged, are correctly placed AND in perfect connection with the calculator's terminals. Batteries are used as voltage reference and using an AC adapter when they are not installed OR not correctly mounted OR if you are using old, dried and high-impedance dammaged batteries, chances are you'll have a burnt circuitry. Please, be carefull.

Success and best regards.

Luiz C. Vieira - Brazil

Don't forget HP-25 problem ..
*Message #3 Posted by **Norm** on 11 Mar 2003, 7:03 p.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

Don't forget this important HP-25 problem..... the battery charger puts out a high voltage, and it relies on the presence of the battery to clamp the voltage to something safe.

If you pull the battery pack while the charger is plugged in, the voltage shoots up and you can blow the whole unit. Or like the prior post, if the batteries get dried out (or just dirt on the contacts) again its like there is no battery and the voltage can shoot up.

Atrocious design principle ?? Sure! But there's not many other design mistakes like this.

You could modify such a calculator with parts that clamp the voltage to something safe. It is really quite shameful that the original design didn't sport protective clamp parts. Some zener diodes would suffice. They cost mere dimes even at the earlier time. If i was an HP-25C fan I'd be inside of there adding those parts.

Re: Don't forget HP-25 problem ..
*Message #4 Posted by **Vieira, Luiz C. (Brazil)** on 12 Mar 2003, 3:04 p.m.,*
in response to message #3 by Norm

Hi, Norm;

I did not measure voltage across batteries when they are charging, but I guess its not far beyond 3.2Vcc; what about 3.3Vcc zener diode, 1Watt dissipation power? I am not sure about test current, but I remember some types need about 5ma to 8mA to reach zener voltage. As NiCad's deliver about 2.5Vcc when fully charged, this 3.3Vcc zenner is invisible while charging and in normal operation with batteries in. As it does not have the zener as standard component, would adding a zener diode cause troubles to the charging circuit? I have an HP25, not a 25C unit.

I've been thinking the same: why not to protect the unit against the possibility of having a simple bad contact? If we think over the design itself, the number of components to add is minor.

And Woodstocks were desined when HP used to be HP.

Cheers.

Luiz C. Vieira - Brazil

The HP-25 idea, I didn't pick your parts
*Message #5 Posted by **Norm Hill** on 13 Mar 2003, 4:14 a.m.,*
in response to message #4 by Vieira, Luiz C. (Brazil)

About protecting an HP-25C against missing battery pack:

There's a reason I threw out the idea but did not pick your parts. It has to be done carefully !! Now that you're asking me "ok what parts" well, lets take a look at that. I'm an analog designer who deals with the esoteric qualities of discretes, so "don't worry, trust me" (said the Enron executive).

For starters, NO, you can't just go grab a 3.3V 1 Watt Motorola Zener. That old family of discrete zeners (1N4733, etc) performs very nicely at 6.2V (abrupt conduction transition) but down at 3.3V the zener family performs badly. Such a model will shunt too much current at 3.3V, and not only that, it will draw current at 3V or even 2.5V The Current/voltage characterization graph does NOT have a sharp knee.

Anyway, you don't want it conducting at 3.3V. Figure the battery voltage may go higher than that while charging. NEXT, go ahead and remove the battery pack, what happens? All of the current excess goes thru the zener. How much is that?? I don't know you tell me. Say its 700 milliamps. How much wattage in the 3.3V zener? 3.3 x 0.7 = 2.3 watts. NOPE, you've cooked the zener, melted the solder where you reworked it, and probably put a dimple into the plastic case on your fine nostalgic calculator.

3.3V Zener WILL NOT WORK.

We've even got other issues to worry about.... if the zener is leaking (drawing current) while you are using the battery only, you're going to shorten the run-time. And when the calculator is sitting in the fur-pouch, a leaky zener across the battery is going to drain the battery down.

Here's what I would do.....

I would grab about 3 zener diodes of value 4.7V Part #1N4732A. Put all those parts in parallel, not series, across the switched voltage on the circuit board, NOT directly across the battery.

They won't conduct noticeably at the battery voltage of 3.0 - 3.6V . However, they WILL conduct heavily if the voltage gets to 4.7V. NEXT, I am deliberately choosing a lower voltage zener. WHY? Because they are soft in transition. The zener family performs with a very sharp knee if the parts are doped to 6.2V. But if doped to 4.7V, the knee is still soft.

What's that spell? CURRENT SHARING! The excess current will divide between these zeners and none of them overheats.

Even this solution is a little reckless for sure, but this is not a moon-launch. I'm throwing it out on 5 minutes of consideration. One could keep designing better but then the circuit requires a schematic, further parts, further foolin' around, and I don't even have an HP-25C. This idea will protect your calculator when the battery pack is bad or missing. BTW the circuits in the HP-25 appear to be from the 5V logic era and won't be blown unless you get to 7V, 8V, or beyond and the zeners will prevent that.

AGAIN, Dr. Analog recommends (3) Zener diodes, P/N 1N4732A, in parallel.

One other reason for this recommend..... if you somehow reverse the voltage on the main supply, the zeners will protect nicely by conducting in reverse, and since they are in parallel they will all conduct.

www.onsemi.com/productSummary/0,4317,1N4732A,00.html

The only thing that bugs me is that the arrangement I suggest you add may draw an extra 30-40mA just when you are running the battery pack, BUT, these older units are power-hogs with way more than that going into the calculator, I doubt you'd notice an obvious shortening of battery life. Meanwhile I presume all you enthusiasts for the "REAL" HP calculators figured out how to put NiMH or rechargeable Lithium into a red-LED unit? It would run all day anyway on that.

Look at this!!!

*Message #6 Posted by **Vieira, Luiz C. (Brazil)** on 13 Mar 2003, 7:44 a.m.,*
in response to message #5 by Norm Hill

Hi;

Thank you, Norm. This is what I call the best of two words: analog as power source for a digital device. Not that analog is only for power sources, far from me thinking like this. I learnt analog electronics first, digital electronics (not digital design) came after.

Just to figure out the charging current. If batteries are 250mAh and you need 12 to 14 hours to charge them, power supply should not deliver more than 25mA at the batteries contacts, should it? If the calculator is ON, that's another story.

AC adapters specs (Voyagers) read .8Watt, 10 Vac. output. This means they cannot deliver more than 80mA. So, when calcualtor is switched to ON and charging batteries, this is all they can offer.

Look at this image.

(picture unavailable)

This is the power supply for the HP21. The HP25 is about the same, but there is an interesting circuit: an addition if you want to use the calculator without batteries. What is used as voltage reference? Voltage drop over four NP junctions (five diodes plus the b-e junction), what gives us about 2.5 to 2.8 Vcc. This is exactly what we need! So, I believe instead of zeners we could try four switching diodes connected in a series arrangment, and this set connected parallel to the batteries. They are fast and will remain quiet until conductive voltage is reached.

I think this is a better, easier solution. What do you think, Norm? Something to be tested?

Please, I'd like this proposal to be questioned and, if applicable, replaced by another, better one.

Best regards.

Luiz C. Vieira - Brazil

the HP-25C protector circuit

*Message #7 Posted by **Norm** on 13 Mar 2003, 3:16 p.m.,*

in response to message #6 by Vieira, Luiz C. (Brazil)

Hi; ---------- Luiz Viera wrote: > I learnt analog electronics first, digital electronics > (not digital design) came after.

Well I'm pretty much all analog, which is a neglected specialty these days. As you saw by my prior writeup, even a simple thing like a diode has a considerable amount of complexity in its application (i.e inadvertently drain the battery while trying to add some protection). Obviously the digital guys did not do analog, at HP, when designing the HP-25C or we wouldn't discuss a convenient protective circuit. It gets real humorous these days when a company needs a bit of classical control theory involving feedback. They let the digital software guys run wild with a stepper motor, they can't solve the problem to save their life, they totally refuse the trusted and true classical linear man (me) and are blowing a $10Million dollar opportunity as we speak and can't even be bothered to sit down for lunch to talk about it. So, analog has its place. Even today in the microsoft culture. For specialty topics only, of course, the rest goes digital I admit.

---------- Let me firstly answer about the 5 or 6 diodes in a row. Uh-uh, don't do that. Again, the diodes are too smoooooshy in their turn on characteristic. They might measure at the casually phrased "0.6V" if they have a quarter amp going thru them. But take them down to 0.4V and they may still have 10-20 mA going thru. That is the problem. They don't turn on & off at an abrupt voltage threshold. The strong temperature variation is a further concern which points you back towards a zener.

Remember this is a clamp application. You want the protector to be as inert as possible when its voltage is not exceeded. Above its threshold, you want it to conduct heavily. Regular diodes are a relatively poor performer for abrupt conductivity on the I/V curve.

BTW you could substitute a transistor wired with Base to Collector, in lieu of a diode. Such a transistor is a 2-terminal device (BC and E) and the beta kicks in and it has a much sharper threshold where it starts to conduct current. But even then it varies with temp and operating current.

Lastly, although you might not include it as a criteria, I really like that the thing should conduct in reverse should somebody ever stick a battery in

backwards. I think that important. You don't get that benefit if your choice of protector is 5 diodes in a row.

Let me chug along presuming a 4.7V zener for a moment.

Luiz Vieira wrote:

> If batteries are 250mAh and you need 12 to 14 hours to > charge them, power supply should not deliver more than > 25mA at the batteries contacts, should it? > AC adapters specs (Voyagers) read .8Watt, 10 Vac. output. > This means they cannot deliver more than 80mA.

That's a very miniscule wattage rating for an AC wall transformer. U sure the POINT 8 watt is not just a little ding in the plastic ? I mean, 8 to 10 VA (i.e. 8 to 10 watts) is a very common wallbug rating.

Well let's consider a small number like 80 mA @ 10VAC I'll temporarily revise my proposal to a single 4.7V zener as a rework offering protection.

If you had a 4.7V zener in there (one only) then the dissipation is P = E x I = 4.7 x .08 .08 ENTER 4.7 TIMES gives 376 mW zener power for an 80mA charger current. This is an acceptably low value for a 1 Watt zener.

I would suggest up to 0.6 W is OK in a 1 Watt zener, which would suggest a current of I = P / E 0.6 ENTER 4.7 DIVIDE 127 milliAmps max. (try that on your 49G, blecch)

SO, if you have more than 127 milliAmps in that charger, you've got a problem if using a single 1N4732A zener.

My concern is, how could the adapter current output possibly be so low.

The charger would be so weak that it wouldn't simultaneously run the calculator and charge as well. I just naturally presumed the output capability was around 1/2 ampere or so, which is why the talk of several parallel zeners.

HMMMMMMM some of this is coming back to me. I knew a guy with HP-25C. And I think he pulled the pack a few times with the charger on, and the display got DAMN BRIGHT (but nothing blew up). AND, I'm remembering that 8.2 ohm resistor. 0 But can you run the calculator while the battery

simultaneously recharges? It's fair game ? Or no? At 0.8W I don't see how it could do both. And BTW 10-14 hrs is a rotten recharge time, I'd want to speed that up.

Your schematic is helpful. Nice job. Is it an authentic HP diagram? Unclear who is providing the 5-diodes on a transistor base added regulator circuit (that's 5 diodes MINUS the Vbe of the transistor, not Vbe added). Like is that a non-HP circuit, or, did they sell you a little module, etc. So you'd presume 4 x 0.6V = 2.4 V output.

There appears to be a small oscillating switcher regulator, but without some explanatory circuit notes I didn't follow that immediately. It is sufficient to see that B+ can be overvoltaged if the battery disappears, and the schematic is clear in that regard.

Luiz Vieira wrote:

> I think this is a better, easier solution. What do you > think, Norm? Something to be tested?

By the schematic, our focus point would be to add a protective clamp item to the calculator itself, electrically across the 60uF 6V B+ capacitor. With that in mind consider the following circuit choices:

A. At this juncture I still would not consider a 3.3V zener to add there. It will shunt away too much current when the battery voltage is normal at about 3.3V , as well as concern about its power handling.

B. I'd recommend against the 5 diodes in a row. Again, it may shunt away too much current when the battery voltage is normal at about 3.3V , and, nothing I was proposing brought the discrete count to 5. Lastly, it does not offer reverse protection if the B+ line somehow gets hooked up backwards.

C. If the charger current is less than 125mA, a single 1N4732A diode will suffice (link provided earlier).

D. If the charger current is 125 mA - 250mA then (2) 1N4732A diodes in parallel will suffice.

E. And you can triple or quadruple the diodes for higher power handling. The slightly reckless argument for current sharing is valid for a 4.7V zener (soft turn-on knee) though not true for higher voltage units. The units should at least be from the same box from the same mfr., to encourage sharing if paired together in parallel (not a mil-spec technique but OK for this situation).

I hope this exchange is useful, knowing that HP-25C has a design error that plagued it from day #1. It would be good if we could settle in on a 'best rework' thru this forum so that an 'official recommended' rework could be established. I'd sure want one if I had an HP-25C.

I am trying to avoid the most serious analog error, which is very common and undermines the whole specialty of analog, which is to say 'use the circuit I said, because I thought of it not you'. This is very common engineering practice in the analog area but does not stack up. Instead, any circuit proposal should be approved or rejected based on its merits.

It is hoped that we are considering different types of clamping circuit rework, only by how well the rework will perform, in terms of cost, rework-ability, simplicity, and reliability all as issues.

The fruit of this, is that maybe enthusiasts of this calculator can make the rework and avoid irreversible damage that probably destroys specimens to this day.

I have no HP classic equipment here whatsoever. Actually thru this forum I made progress in buying an HP-34C but it is not delivered yet. There is no way I can check the charger or its current if I don't have any.

If I provide some theory and practice (and I have) you could provide the test-out on the bench, Luiz, see if the rework does the job, and then we would get it all squared away thru use of this forum.

Regards,

- Norm analogee@gte.net

Re: the HP-25C protector circuit

*Message #8 Posted by **Vieira, Luiz C. (Brazil)** on 13 Mar 2003, 5:56 p. m.,*

in response to message #7 by Norm

Hey, Norm; good words!

Spice AC adapters run around .8Watt. Topcats and portable HPIL devices (82162A printer, tape driver) have the same 3Watt AC adapter. I use a Spice AC adapter to charge the HP25 batteries (I use an original Woodstock pack rebuilt with original Spice batteries, and they are the same NiCad's for both), and I know the original Woodstock charger delivers 10Vac instead of the 9Vac available at the Spice AC adapter. As seen in the circuit, it seems this .5Vac (upper half wave) is neglectible. I know that the slow passive (dummy, overnight) charger and the fast (inteligent) charger are two charging options, but I do not know which one is the best for battery life extend. The HP21 (and many Woodstocks, if not all of them) charger circuit is limited to the 8.2 ohm/1W resistor and the half-wave rectifier. A small "pumping" action over the batteries will be observed as we see there is no filter capacitor right after the diode, only in paralell with the battery. And this is a critical value for a capacitor: about 20% over average voltage. Without the batteries this capacitor will be in this voltage limits... As you mention, no clamping device to protect anything.

Other fact is that we should reall increase the charging current to reduce charging time, and consequently use another transformer. I think the max current is limited also having in mind the low current for the charging period. And I am almost sure these AC adapters deliver more than the 80mA in the beginning of the charge period, for an almost completely discharged battery, because they get somewhat hot (not to burn). As the battery is being charged, charging current reduces and may go below specified 25mA, unless the calculator is switched to ON.

And you are right: many moer may be written about diodes and their use. Im an Electrical Engineer and I deal with electronics (analog and digital) because of pasion. I love this...

Oh, the schematics. I'm not the author, I simply took part of an "uncredited" GIF image dated Jully 17th, 1997. Strange fact I did not notice: date stamp reads 17 Jul 1997; it's not a north-american standard for date stamp. Also, replacement power supply is noted as inserted, say,

not availble in original diagram. And this insertion will use a few miliamps to run, and these miliamps are probably less than the 25mA supposed to charge batteries.

About David's comments: the +B from the power supply in the HP21, that comes straight from the battery power line, goes right to the LED drivers. As expected, these IC's will deal with more current than the rest of the circuit and some are design to "survive" even to external short circuits. I imagine why these guys survive under a "no batteries" operation...

Wow! Good words, Norm. Thank you for the enlightment. This is good, very good stuff.

Best regards.

Luiz C. Vieira - Brazil

Another subject
*Message #9 Posted by **Vieira, Luiz C. (Brazil)** on 13 Mar 2003, 6:07 p. m.,*
in response to message #7 by Norm

Norm wrote:

It gets real humorous these days when a company needs a bit of classical control theory involving feedback. They let the digital software guys run wild with a stepper motor, they can't solve the problem to save their life, they totally refuse the trusted and true classical linear man (me) and are blowing a $10Million dollar opportunity as we speak and can't even be bothered to sit down for lunch to talk about it. So, analog has its place. Even today in the microsoft culture. For specialty topics only, of course, the rest goes digital I admit.

I cannot agree more. You're right. I got what I could from both worlds, and I must admit both analog and digital theory may become hard and heavy if limits for both are not well defined. I myself feel as if I'm lazy for analog concerns and I tend to use digital as much as I can, but I know this is because of lack of my own resources.

What you mention is completely true. Let's face it: there are moments when analog should allow some digital action and also the opposite is

true. All digital and all analog system will always have their crytical points and in some cases a mixed technology will be somewhat mor reliable. Let's take one classical, current example: digitally controlled UPS. There is no way to have them in all analog or all digital design.

Best regards.

Luiz C. Vieira

Re: The HP-25 idea, I didn't pick your parts
*Message #10 Posted by **David Smith** on 13 Mar 2003, 4:36 p.m.,*
in response to message #5 by Norm Hill

For the protection to work in the 25C and 29C machines it MUST be on the battery side of the switch. Basically these machines connect the battery directly (or mayby through a low drop Schottkey diode) to the RAM chip so that it will still be powered up while the machine is off. I suspect that a 6V diode would do a perfectly good job of protecting the machine. The killer seems to be the peak voltages generated by the half wave rectfied AC transformer.

Interestingly, almost all dead Woodstock machines have a bad ACT chip. For the 25C, the RAM chip is usually toast also. For the plain HP25, mayby half the machines have a bad RAM chip also. The ROM chips and display driver are almost always good.

Let's keep trying,
*Message #11 Posted by **Norm Hill** on 13 Mar 2003, 9:26 p.m.,*
in response to message #10 by David Smith

Greetings Luiz, David:

I like that we are continuing to come up, thru teamwork, discussion, and a consensus, for a "best fix" for the HP-25C overvoltage problem.

David objects to placing a clamp at the 60uF 6V capacitor. He said that the RAM chip gets fried on overvoltage even if the unit is turned off, as it's connected separate from the B+ node I focused on. OK fair 'nuff I'm accepting of new data, HOWEVER, that was not shown on the schematic in the earlier post "LOOK AT THIS". I take it that the RAM power comes the

switch where the wire is labelled "A2" .

With the new data in mind, where are we putting the clamp then? At the "A2" node, to ground, then. Works for me.

Now, we are still getting hung up on part # selection. David said 'I feel that a 6V diode will do a perfectly good job of protecting the machine'.

Well OK, the 4.7V is out, because I would still be concerned about leakage thru that part when the battery is sitting at 3.3V which it can. You might lose a couple mA and find the battery doesn't hold charge as long as w/o the protector. That's unacceptable.

OK, what say we select a 5.6V, 1Watt Zener. Part #1N4734A .

http://www.onsemi.com/productSummary/0,4317,1N4734A,00.html A substitute by "Diodes Inc" out of Digi-Key is inferior by the I/V curve tracer but would still suffice.

By jumping the voltage higher in our choice, I am no longer concerned that it will leak at 3.3V. It will not.

OK, but still that final concern of cooking the zener!!!!!!

I live near Boeing, you have to consider worst case (the plane is really high up, the cabin pressure is set really high, the air outside is really cold, the turbulence is really bad, etc etc)

So our worst case is if the battery pack is pulled out, the charger is connected (and strongly powered) and the calculator is "OFF". In that case, the zener diode sinks heap plenty current. You will have exceeded 0.75W if you exceed 130mA.

SO, it's now on you Luiz. Drop in the 5.6V part, 1N4734A, where David said. Connect your strongest charger, pull the battery pack, and turn off the calculator. Wait 5 minutes, see if the zener is unacceptably hot. (We are winging this rather than calculating because we're still non-committal on the true current delivery of the charger with a 5.6V clamp on its output).

IF the zener is too hot, you can parallel TWO 5.6V zeners, but only as follows:

Add a 1/4W 3.3 ohm in series with EACH ZENER (an R, then a D) THEN, parallel such sub-assemble resistors and zeners. A 5.6V zener is sharp enough that the extra resistance must be added to each zener to encourage current sharing, otherwise one gets hot and cooks itself.

Another good 'bench test' would be to take TWO 5.6V zeners and connect them "back-to-back" (stripes facing outwards) to create a 2-terminal device. Then, simply attach this load to your charger, but with an AC ammeter in series as well (a true-RMS is best, but I'm not fussy, any multimeter will do). If you note the current output into a set of diodes arrayed thus, then that is the current rating we are looking for, and then we can get very scientific rather than just guess about zener overheating.

You've now got specific things to try, I hope that Luiz can check this out, so that it becomes a 'standardized' recommendation for the Woodstock calculator enthusiasts.

I wonder is there ANY merit to adding TWO diodes one on either side of the switch. That way if the power switch is set to "off" and somebody attaches power backwards to the main board (an errant open-back test?) you've got a diode-drop for reverse protection. Probably too fussy to talk about, probably just the A2 addition is sufficient but wanted to bring it up anyway.

- Norm

Re: Let's keep trying,
*Message #12 Posted by **David Smith** on 14 Mar 2003, 4:26 p.m.,*
in response to message #11 by Norm Hill

You can always use a 5W or 10W zener...

When I rebuild the three pin version of the 82120A rechargeable HP41 pack, I place a 6V zener directly across the output of the 4-cell battery string. The circuit of this particular pack can dump a lot of voltage into the system if the battery string opens up. Hopefully if the battery string opens up, the system will act flakey and the user will stop using the pack. If the diode fries, so be it... it is certainly better than no protection at all. There is not enough room for a more elaborate fix.

I have checked battery life compared with unmodified packs, and can't tell much difference. The self-discharge rate of the cells seems to swamp the diode leakage current farly well.

Two analog-related questions:
*Message #13 Posted by **Vieira, Luiz C. (Brazil)** on 14 Mar 2003, 5:30 p.m.,*
in response to message #12 by David Smith

Hi, Analog folks (as I am, too)

I read some stuff about batteries a few years ago and I try to keep track with inovative products, but I watn to know your thoughts and concrete knowledge about two subjets:

- charging methods - charging current

By charging methods I mean slow against fast, constant current against "pumping" constant current. I saw an inteligent charger project that use charging periods and monitors battery voltage and current between periods. It charges batteries in the shortest requested time, but battery life may be reduced if it is charged with current that's bigger than 20% the recomended load current. Say, if you have a 1,000 mAh battery and the recommended load current average is 250mA, than you should never charge it with more than 50mA.

I know these aspect depend mostly on battery specs and recomended

charging procedures. Is there a "rule of thumb" (I always remember Steve Oedekerk) that will lead to the least pain for the batteries? I mean that because not everytime we have access to the battery model and type (old ones), neither the chance to test battery's current and voltage before charging it in deep.

Just to add more knowledge in my "knowledge" bank...

Cheers and best regards.

Luiz C. Vieira - Brazil

about battery charging

*Message #14 Posted by **Norm** on 14 Mar 2003, 7:03 p.m.,*
in response to message #13 by Vieira, Luiz C. (Brazil)

Hi Luiz Vieira:

Well your question was fairly general in how it was asked; let me be fairly general in the reply.

Firstly, I'd not heard that rule about charging at 20% the rate of discharge. And yet, there's a lot of appeal to that. I'm not disagreeable. Meantime there are plenty of systems these days that charge batteries fast. Go to Home Depot and look at the cordless power tools, bet you'll be surprised.

Here is an answer you can count on: Do whatever the mfr. allows you to do. If a company releases battery cells and state a certain allowable charge rate then go ahead and do it.

If you don't have data handy, yeah, that 20% figure sounds like a darn good rule of thumb. Think I learned something myself there, thanks for bring it up.

The other topic I'd bring up with you, is just that effective charging for batteries is very, very, VERY fickle. It's like a recipe for getting a high quality paint finish, or a good batch of cookies. Do one thing wrong and you blow it.

One thing that amazed me once was I tried to charge batteries

with a pure DC current. The battery voltage went up real fast and it refused to take any more charge.

Upon discharge, the battery had no real oomph in it and discharged almost immediately.

TURNS OUT THAT the ripple-charging from 60 cycle is NECESSARY. (You know, you get 120 bumps per second if there is no filter capacitor). It turns out that that nasty AC ripple sort of 'shakes up' the charge in the electrolyte and allows the charge to soak in properly.

So sometimes the best things in life are free. Its very easy to charge w/ the ripple present; remove it by using an expensive regulated supply, and use pure DC and it works WORSE.

Once a recipe is working then don't mess with it. BTW for HP Classics I find the battery topic VERY intriguing because we now have more powerful battery cells which could be substituted and make the unit run longer/brighter/better. NiMh and rechargeable Lithium come to mind. BUT I don't take it lightly, because you don't know if it will work properly until its been tested out with the presumed HP charger, tested over many charge-discharge cycles, etc etc.

I sincerely feel this clamp-zener thing for HP-25C is very important, and will be disapointed if nobody tests the actual parts which might solve the problem. It is part of having a better charge/ discharge system put into a classic. It is a total waste to just use the same lousy Ni-Cd cells that were available in 1960.

- Norm

Re: about battery charging

*Message #15 Posted by **Vieira, Luiz C. (Brazil)** on 15 Mar 2003, 3:52 a.m.,*

in response to message #14 by Norm

Norm wrote:

. BTW for HP Classics I find the battery topic VERY intriguing because we now have more powerful battery cells which could be substituted and make the unit run longer/ brighter/better. NiMh and rechargeable Lithium come to mind. BUT I don't take it lightly, because you don't know if it will work properly until its been tested out with the presumed HP charger, tested over many charge-discharge cycles, etc etc.

A few weeks ago I wrote about this same concerns with almost the same approach. One of the sollutions pointed out was using AAA-size NiCad's that have the same 250mAh capacity shown in the earlier 60's NiCads used in the Woodstocks and later in the Spices. I bought some of them and I am reasoning about one particular matter: physical size. I think I'll build an AA-size "suit" that can hold an AAA-rechargeable in side so I'll use them in an Woodstock. Charging and "discharging" time should obbey existing predictions: 12 to 14 hours charging (maybe a little less) and 2 to 4 hours using time average. Anyway, the idead (suggested by Renato, Brazil) is a good one and it seems it will work fine. Based on this same principle, I'll rebuild an HP82143A battery pack with four AA-size NiCads with 850mAh capacity for testing. I rebuilt one original of thse packs with two not-working ones, and it seems original bateries are, in fact, exhausted.

I did not read this post yet, but it seems... tastefull!

Best regards, Norm.

Luiz C. Vieira - Brazil

Re: Two analog-related questions:
*Message #16 Posted by **Andrés C. Rodríguez (Argentina)** on 15 Mar 2003, 4:03 p.m.,*
in response to message #13 by Vieira, Luiz C. (Brazil)

Luiz:

The capacity of a battery is usually denoted by "C". If a battery has a certain "capacity" (i.e.: charge) of, say 1500 mAh (milliampere hours), this value divided by ten (C/10 -> 150 mA) has been suggested many times as an appropriate average charging current fo a slow (or trickle) charger. Batteries are supposed to adequately tolerate C/10 charging currents without overheating. This seems adequate for NiCd and perhaps NiMH, I would not apply this rule of thumb to Lithium cells without more reassurance from the cell manufacturer.

In a perfect world, C/10 charging will produce 10-hour recharging cycles. In the universe we live in, some 20% to 40% losses are usual, so C/10 recharging cycles last about 12 to 14 hours (assuming a fully depleted cell). Fast chargers need some kind of feedback (i.e.: cell temperature and voltage) to modulate larger currents while avoiding overheating (or venting, explosions or fire)

5W zener, 10W zener, zeners the fry, big zeners, small zeners, zeners with extra pepperoni & cheese
*Message #17 Posted by **Norm** on 14 Mar 2003, 6:53 p.m.,*
in response to message #12 by David Smith

Topic:You can always use a 5W or 10W zener...

Reply: Those are quite large, with a #10-32 bolt-mount stud on them. When you get into even bigger power diodes, there is a big pigtail on the top that looks like a rope. Those get stuck into arc-welding equipment and stuff. Therefore was thinking that the 1W zener diode would be a good form factor for the HP-25C. Did you click on the link to the data sheet ??

Topic: When I rebuild the three pin version of the 82120A rechargeable HP41 pack, I place a 6V zener directly across the output of the 4-cell battery string. If the diode fries, so be it... it is certainly better than no protection at all. There is not enough room for a more elaborate fix.

Reply: Again, again, again, a "6V" zener, often found as "6.2V" (i.e. 1N4735A) will have a VERY sharp knee and if the battery stays below about 6.1V, fine, it won't conduct current, at 6.3V it will conduct a ton. Any of these is a +-5% tolerance just for threshold, so 4x1.5 =6V seems like you are cutting it too close. Meanwhile, plz consider that you said 'if the diode fries' however, what I'd like to do is come up with a recommended rework that has just as much integrity as if the factory designers had done it back in '76 . They wouldn't sell you things that would overheat & melt back then, we should be able to avoid that now. That's why I'm trying to choose a zener voltage-value and wattage-value that actually are compatible with the application. If word gets around it could become a reasonably standardized rework.

Topic: The self-discharge rate of the cells seems to swamp the diode leakage current fairly well.

Reply: Well, sure, there's some milli-amperes going thru the battery internally when it self-discharges. We want to arrange that the diode clamp leaks significantly less than the battery, when it is just sitting there. I didn't run numbers but I think you want LESS THAN 1 milliampere going thru this added protective clamp when it is in parallel across the battery.

Something like 200 microamps would be nice. See, I think we might get that with the recommendation from yesterday. What was it, a 1N4734A ?? Anybody check a data sheet or order some parts ?

Regards,

- Norm

Re: 5W zener, 10W zener, zeners the fry, big zeners, small zeners, zeners with extra pepperoni & cheese
*Message #18 Posted by **David Smith** on 16 Mar 2003, 2:30 p.m.,*
in response to message #17 by Norm

The cells in the 82120A pack are 70maH. A 1mA leakage rate would deplete the cells in less than three days. I get a couple of MONTHS before recharging. The zener is drawing VERY little standby current. Most 41CV and CX machines have a standby current of around 10uA. The 41C can go up to 100uA. Most nicads self discharge around 1-2% per day...

Yes, you could do a better job of protecting the early three pin 82120A packs. Just layout and build a new PC board for them. Not really practical considering the number that are floating around out there. That leaves the simple fix of adding the emergency backup protection zener.

Let's go back to the top.....
*Message #19 Posted by **Norm** on 16 Mar 2003, 4:49 p.m.,*
in response to message #18 by David Smith

Hi, If any of us post on this again, lets go back to the top of the forum.

The 70mAH specification was very interesting. It suggests that 100-200uA flowing thru a protective clamp is not acceptable, which was not what I originally expected.

I agree that maybe we aren't done yet, maybe that does point towards your choice of a 6.2V zener over anything else.

I think we should post again, but at the top of the board.

- Norm

Re: Let's keep trying,
*Message #20 Posted by **Vieira, Luiz C. (Brazil)** on 15 Mar 2003, 4:14 a.m.,*
in response to message #12 by David Smith

Hi;

I remember completely rebuilding an HP82120A, including the hand-drawing of a new PCB and replacing the rectifiers, and I am sure my unit has a zener diode accros the bateries. As the bateries never go beyond 6.2Vcc, it is probably a 6.2V zener. And I see it as completely necessary, because the zener diode is not only at the batteries poles, it is indeed at the calculator's batteries connectors, a lot-to-worried-about point. The 82120A circuit is merely a full-bridge rectifier that delivers 18VCC to a 12Vcc regulator (SOT package). Regulator output goes to a 1W resistor (don't have the value) and a zener to reduce its output to 6.2Vcc. If you want (I think it's not necessary) I can add the 82120A diagram in a post.

Just to add this info.

Luiz C. Vieira - Brazil

How about 1.8VA
*Message #21 Posted by **Norm** on 15 Mar 2003, 5:57 a.m.,*
in response to message #20 by Vieira, Luiz C. (Brazil)

Hi Luiz Vieira ,

I lied about something but not on purpose. I actually DO have an HP-25C around here. When I realized that, I made efforts to find a buyer and I think that somebody has now agree'd. Point is, its a fairly authentic old 25C package in the black/green box.

So I pull out the charger, and it says "10VAC 1.8VA". Why did you say "0.8" Sure you didn't mean "1.8" ??

In terms of the analog dialect, that "1.8VA" might as well say "1.8Watts" . The reason they say "VA" (watts = volts x amps) is because it is the transformer factory talking. Transformer guys always say "VA". It doesnt mean "Volts AC" it means "VOLT

AMPS". The reason is that they don't care about the phase relationship between the volts and amps, they only care about how much voltage, and how much amps, either one, because that is what sets the maximum capabilities of the transformer (ie how much before it gets fried). It's really just the current that cooks the transformer. The voltage is spec'd at full load. Multiply together to get "VA".

NOW THEN, that means that this thing can deliver 180mA max (10VAC x .18 mA = 1.8 VA)

OK, 180mA into a 6.2V zener is 1.11 W . NOW, I freely admit that we should be less than that, and should not melt the zener. Why? Well there seems to be half-wave rectification, and a zener is not even a full load, its a clamping load, conducting momentarily.

SO, we could presume the dissipation is SIGNIFICANTLY LESS than 1.11W on a 6.2V zener, with the charger in front of me. That's getting to be OK.

Personally, would I use the 4.7V zener for the HP-25C ?? Absolutely yes, I would. The 6.2V is still pretty high for the clamp point. The calculator is supposed to run on 2.4 - 3.4 volts not 6.2V .

The big problem is, what if somebody uses a completely different charger ? The 1.8VA rating is really, really low. Is it even enough to run the calculator and charge the battery at the same time ? If somebody puts on a bigger charger, we're going to have cook-the-zener problems again.

I'd feel safer with the 4.7V zener for HP-25C but use a 6.2V if you must.

You do have these parts kicking around? If not they can be ordered from Digi-Key. Or i have some in my basement.

Don't know why you would rebuild a battery pack with AAA. I thought all this stuff ran on 2 AA batteries.

If this thread-link disappears off the 2-day forum, I suggest we

post anew back at the top !

Regards,

- Norm

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

More Uncredited MoHPC Pictures
*Message #1 Posted by **Spice_Man** on 11 Mar 2003, 7:53 a.m.*

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3012714355&category=11713

Spicey

Here's how we fix that little problem, hehehe
*Message #2 Posted by **Jeremy** on 11 Mar 2003, 12:37 p.m.,*
in response to message #1 by Spice_Man

We talk to Dave and have him temporarily replace the image in the HTML code with a different image of the same name. This replacement image would just be an image of a sign which says: "I tried to steal this pic without permission, and got caught. I will soon be sued for this crime."

What do you all think?

-Jeremy

Whoops, that wouldn't work
*Message #3 Posted by **Jeremy** on 11 Mar 2003, 12:41 p.m.,*
in response to message #2 by Jeremy

... since whoever lifted the picture saved it to their computer and cropped it down a bit, thus changing the image a bit, and making my 'link trick' useless...

Still, I bet it would stand up in court.

-Jeremy

Re: Here's how we fix that little problem, hehehe
*Message #4 Posted by **Jürgen (CH)** on 11 Mar 2003, 3:04 p.m.,*
in response to message #2 by Jeremy

There are several techniques to prevent image theft, but none of them is save. You cannot prevent someone to capture the screen!

Other possibilities:
Use a text watermark to put copyright information over the image. Visitors can view the image through the watermark, but they wouldn't want to use it on their own sites.
It's too bad about the nice HP calc pictures.

Digital Watermarks embed identifying information in the image file. It can be an identification number, author information, or any other data that makes the image unique. People don't see the information on the Web page, but you can identify it using graphic program plug-ins or decoding programs. This doesn't keep people from using your images, but it does make the images uniquely identifiable should they be stolen.
Does not change much because we all know the MoHPC pictures so well and can identify them without digital watermarks.

So I guess there is no satisfying solution to this problem.

Jürgen

Of course none of this does any good
*Message #5 Posted by **Mike** on 11 Mar 2003, 3:40 p.m.,*
in response to message #4 by Jürgen (CH)

unless you are willing to spend thousands of $ prsecuting someone; which no one will.

However, you might consider...

Notifying the seller that you "were" considering bidding on their item but not until they give credit for the photo. Even if you are not, you can send the notice. Perhaps eventually, they will get the message.

Let's set things straight

*Message #6 Posted by **John Smith** on 12 Mar 2003, 5:05 a.m.,*
in response to message #5 by Mike

I think this problem of uncredited and/or misleading usage of David (or anyone else's) pics needs some rational thinking, i.e:

- First of all, not everyone including one of David's pictures on his/her auction is necessarily trying to mislead the potential bidders or intentionally infringing David's copyright.

  Many people simply don't know a thing about the HP calculators they're selling, because they got them from some relative, as part of a state, or something like that, they don't need them, and they simply want to get rid of them. Frequently, they don't have a digital camera suitable for objects of that size, nor any other easy means of getting an image, and they simply search the web for some pictures. Frequently, they find some on the newsgroups, where people post them all the time, and they might easily turn out to be some David's pictures.

  I know this scenario does happen in real life, because as a collector, I've found such persons more than once. I particularly remember a gentleman selling an HP-16C. He had a zero feedback, and the pic was taken straight from David's site. At first I was suspicious, but a few rounds of questions/answers convinced me that he was absolutely honest and simply didn't have any means of taking an adequate picture of his item. I won the auction and guess what, his HP-16C was as new or newer than the one featured in David's pic, so the image wasn't misleading after all !!

  So, in short, acting agressively against such people by default isn't justified. They might be acting in good faith, and they might not know at all that the image belongs to David. So I would suggest informing them politely, it's just a question of good manners, and we're all rational, educated people, aren't we ?

- Secondly, no matter how many people you inform about David's pictures, there's bound to always be others doing the same, all the time, constantly. Don't you think it's a tremendous amount of everybody's valuable time wasted to be always acting like that ? What's worse, the situation won't improve ever, it's an "infinite task". No matter how many people you contact today, they will be more tomorrow, and the day after, etc. You won't be making any progress at all.

What's needed is not complaining after the fact, but preventing the fact from ever happening. And it's pretty clear how to do it: simply include some non-obstrusive text inserted into the picture, that reads something like "(c) David Hicks, MoHP - NOT FOR SALE".

Put the text in a soft, transparent grey, over some part of the calculator where it doesn't cover any important features (between the display and the first row of keys, for instance, or between two key rows) and that's it !! It won't spoil the picture to any important degree, but no eBay seller will consider using such labeled image in his/her auction !! And they won't ever attempt to remove the text, because being in the middle of the image, and being transparent, it would be too much work, and would leave a noticeable "scar" which would detract a lot from the item's cosmetic looks.

That's it. I've proceeded like that with the pictures I took of my own collection, and they both look great and are unusable for selling purposes.

I would suggest David would do likewise. That way, he would avoid losing vast amounts of time with this problem, every concerned visitor would equally be relieved from doing likewise, and no further alert posts to the Forum would ever be necessary.

My 41 cents.

That is one way

*Message #7 Posted by **Mike** on 12 Mar 2003, 8:54 a.m.,*

in response to message #6 by John Smith

No one is suggesting getting "agressive." It is simply a notice that one could send to the seller. I have sent comments from time to time to sellers and they almost always accept the suggestions as constructive tips. What's the big deal?

But you seem to forget one thing. This is Daves "Museum." His photos are an online museum. Imagine that you had a real museum. Would you paint "(c) copyright" on the face of your calculators? Hardly.

While this does, perhaps, prevent theft of photos, it also somewhat spoils the pristine nature of the photos he is showing. And before you think Dave does not know of this, most of his photos have his notice on them. They are just off to the side for, likely, the reason I stated.

Also, your logic that "the seller might not know that they are Dave's" is somewhat bogus. The seller knows for sure that they are not "his."

Let's all help Mike out. He's on the right track..
*Message #8 Posted by **Jeremy** on 11 Mar 2003, 7:33 p.m.,*
in response to message #1 by Spice_Man

We should go to eBay and use the 'Ask seller a question' option to send a message to the seller.

I'm going over there as soon as I get done typing this. It is all too easy to throw up our hands in disgust and say we can't do anything about it, but if enough people emailed the guy and let him know that it is unlawful to steal images without asking permission or giving credit, and that the owner of the original images knows he's doing this, it might have an impact.

I encourage all who read this to visit that auction (if it is still open) and express your feelings on the matter to the seller. Personally, I'm going to say something like: "Do you have a picture of the ACTUAL calculator you're selling, or just that picture that you're illegally using from MoHPC?"

On the other hand, we haven't heard from the owner of the picture yet either. For all we know, he may have given his blessing...

-Jeremy

Overall, is this a bad thing?
*Message #9 Posted by **Patrick** on 12 Mar 2003, 1:59 a.m.,*
in response to message #8 by Jeremy

I'll probably make a lot of enemies here with this post...

While I'm not the owner/curator of this site or its content, I am wondering what would be the incentive to retard the propogation of the images here? Yes, I agree it is extremely poor manners to not thank and acknowledge the people who provide you a service, but is it really all that bad that people "steal" the images here?

David, this is really a question to you, since you are the owner of said images.

If this really is a problem, I'm wondering if I or others provide some good quality images of our calculators and put them in the public domain, would you host them here, identified as free for all to use?

I guess my gut feel is the benefit of having words and images of these old HP calculators being propogated as far and wide as possible outweigh any negative implications of "stolen" imagery. If this means more people start speaking the gospel of HP and RPN, who amongst us would complain? Evangelists of all types through history have had to make sacrifices to their cause. This doesn't seem too big a one to me.

Just my humble opinion.

Re: Overall, is this a bad thing?
*Message #10 Posted by **Christof** on 12 Mar 2003, 2:59 a.m.,*
in response to message #9 by Patrick

Unless I've been misreading Dave for a while, he's fine with credited reproductions/use of photos.

I agree, it's a nice thing to ask seller a question- I'd tone the phrasing down a bit, though.

The real problem is
*Message #11 Posted by **Mike** on 12 Mar 2003, 8:58 a.m.,*
in response to message #9 by Patrick

The real problem is that any auction that has a photo that is not of the item being sold, is a deceptive and misleading auction. That is the real problem.

Everyone knows that most sellers on eBay are not collectors and are not very knowledgeable about what they are selling. So, when they take their average condition calculator and show one of Dave's pristine images, they are suggesting that what you are buying is what they are showing.

It may not be intentional but it is real. By giving credit, they are accomplishing two things. 1) giving credit to the owner of the photo and 2) stating that the actual item may not look like the photo. At least this puts people on notice.

A good point.
*Message #12 Posted by **Jeremy** on 12 Mar 2003, 1:14 p.m.,*
in response to message #9 by Patrick

I think we're all civil people here, so something like this is not going to get us all excited. That is just another viewpoint I didn't consider.

I suppose that if we got enough people all over the internet hooked on HP calcs, they might gear up again and this market might take off again. That would be nice.

However... If the seller had mentioned that the picture was borrowed (with permission) from Dave Hicks of MoHPc, this site would get a lot more traffic, and people would not only be buying the calcs. but they woudl be educated here about the glories of them. So even though what the guy did is not 100% bad, it would be 100% better if he had some class.

BTW, I went to go 'Ask Seller a Question' and the auction had already ended with 'Buy it Now' Someone from this forum maybe is enjoying that calc quietly in the background, hopefully with just a tad of shame... :)

IP Crash Course
*Message #13 Posted by **John K. (US)** on 13 Mar 2003, 3:26 a.m.,*
in response to message #12 by Jeremy

[B]ut is it really all that bad that people "steal" the images here?

<disclaimer class="obligatory">
Of course, I'm not a lawyer, do not have a law degree, and am not licensed in any jurisdiction to act as a lawyer or to give legal advice. Before relying on **any** of the following information, I urge you to consult a (real) lawyer.
</disclaimer>

Yes and no. I don't know much about international copyright law, but in the US, it is necessary to make a nominal effort to protect one's "intellectual property" (IP). As I understand it, a simple copyright notice is usually sufficient to meet the minimum requirement, but there are cases where even this much isn't necessary. However, as with most things regarding civil suits, the more effort one makes ahead of the fact, the more likely a court is to decide in one's favor, should it come to that.

If no (or, in the court's opinion, insufficient) effort is made to protect one's IP, it can result in the loss of any rights of ownership. This has happened in the past -- the

most notable case being "aspirin" -- and almost happened to Xerox (over the brand-name of their xerographic machines) and J.R.R. Tolkein (over *The Lord of the Rings*).

So, yes, if Dave wishes to retain ownership, it's probably a good idea for him to at least try to protect his pictures from unauthorized use.

Re: A good point.
Message #14 Posted by ***Paul Brogger*** *on 13 Mar 2003, 10:22 a.m.,*
in response to message #12 by Jeremy

A fundamental tenet of engineering is (I believe -- keep in mind this is coming from an engineer wanna-be!) that there's a trade-off involved in EVERYthing.

Dave himself has expressed concern that the very existence of this fine site has probably fostered (perhaps) inordinate interest in calculator collecting, increased demand, and driven up prices. (Dave: I hope I didn't misinterpret or overstate on your behalf . . .)

I'm sorry, but I'm not sure evangelism, as such, is at all necessary or desirable. (We're not selling Apple computers or eternal life.) I think interested folks will find their way here (by word-of-mouth if by no other means), and the last thing I want is the Forum overrun with rants from uncommitted, uninvolved, non-contributors. (Do I sound like a preacher cautioning the New Membership Committee, or what?)

There's something to be said for *less* advertising rather than more.

With regard to the success of RPN in the long run: if HP manages to maintain production of a decent RPN model that competes on price as well as features, the market will decide. So I would ask the members of the brother- and sisterhood to simply recall and reaffirm their shared and unshakable belief in the omnipotent superiority of RPN, and to walk in faith, with calm assurance in the rightness of the outcome.

And the people said? "**<Enter> and Amen!**"

Thanks - and comments / responses

*Message #15 Posted by **Dave Hicks** on 12 Mar 2003, 3:54 p.m.,*

in response to message #1 by Spice_Man

I didn't see that in time to do anything since it ended with "Buy it now".

In response to some of the comments below my normal course of action is to ask the seller to include an appropriate statement/credit along with the URL to the site. That's much less than I *could* legally request but it's all that I currently do.

Once in a while that fails and I have the auction removed - usually much to the surprise of the auctioneer. (Feigned ignorance is not always bliss - go figure ;-))

In one strange case, a seller of a 12C kept "responding" to my request by switching to different pictures. But each one she came up with was another one of mine. Finally, she deleted the picture entirely rather than state where it came from. Another seller threatened to sue me and to report me to the FTC for restraint of trade.

There is a small watermark on my pictures. I prefer to not have an "aggressive" watermark. Some of the auctioneers have trimmed or cut and pasted over my watermarks already. (Sometimes creating a new shape of HP calculator in the process.) I assume they would be even more likely to do that if the watermark were more obvious. Last time I checked, the invisible watermarks tended to go away when the picture was edited or resized as many are on ebay.

What about...

*Message #16 Posted by **Vieira, Luiz C. (Brazil)** on 12 Mar 2003, 5:02 p.m.,*

in response to message #15 by Dave Hicks

Hi, Dave;

I know this is the sort of "hard-to-discuss" matter, mostly because there are legal subjects involved, personal interests and overall consequences, and I am not aware of what can legaly be done against this stealing gestures.

My suggestion would be a set of downloadable pictures where the MoHPC interferes in part of the image, like easy-to-see watermarks in the middle of th object, and another set, liek the ones we have now, that would come in the CD's/DVD packs.

Those who intend to link their posts, auctions and classified adds to the MoHPC pictures would also carry the MoHPC name and credit. And those who buy the CD's/DVD's would get the pictures with the small MoHPC logo as already seen on each picture.

I know this will lead you to generate two sets of data, but only one of them will be in your provider. And you'll have to modify all existing pictures, and I don't know if it worth the job. At least your pictures will be somehow "protected".

Just a suggestion.

Best regards.

Luiz C. Vieira - Brazil

Re: What about...
*Message #17 Posted by **Dave Hicks** on 12 Mar 2003, 9:57 p.m.,*
in response to message #16 by Vieira, Luiz C. (Brazil)

Hi Luiz,

I really prefer to keep the online pictures "clean". I don't feel that someone should have to buy CDs to see the pictures clearly. I don't want to make the museum site resemble nag-ware or cripple-ware.

If it gets really bad I may reconsider.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Nostalgic HP-34C Story
*Message #1 Posted by **Norm Hill** on 11 Mar 2003, 4:59 a.m.*

Probably belongs on the 'stories forum' but I'll put it here so the Texas Math Teacher spots it:

Before my story, yeah, I'm that advocate of HP-34C. It has the best cosmetics of all the units and the red LED display is crisper and more intriguing than the bland LCD's. It had a very rare quality... you could actually learn ALL of its functions and feel that you had mastered something at the end. This is not the case with 48G+ or even 41C. You never get to the bottom of it. With HP-34C you do. I like that a lot about anything..... a toaster, a TV set, a stereo. I don't want to keep learning about it forever. Yes, 34C drained batteries too fast.

********** STORY **********

I always will have the finest memory in high school mathematics class (I was in the 'advanced' calculus program). The time was 1980. At the time, the HP Calculators were around, but very expensive. Schools would encourage you to purchase a TI-30 for trig and calculus. People knew about the HP but refrained ("ugh, for Einsten, and there's no eeekwulz button). I was interested in the superior unit and had earned the money and bought one. I had been told how RPN would make the calculator work better than a TI-30 and I had mastered the 34C and really liked it. It was a fine fine complement to going thru teenager trig and calculus classes. (later I used it thru college).

The high school math teacher was skeptical. That was "Mr. Hilton" out near Lynnwood, WA. He preferred the 'one with the eekwulz button'. He was probably intimidated that I had bought this extremely expensive HP calculator that he couldn't afford on teacher's pay and would not know how to use. (HP calc cost a LOT of income at the time). And some of the students had noticed it and were wondering just what I was up to; was it worthwhile.

The TI-30 the schools & teachers recommended is pretty much useless for doing anything more complex than 2+2=4 . If you think about it, a calculator is for things more complicated than what an 8 year old can do in his head. RPN supports that complexity. An 'eeekwulz' button does not.

AND SO, we were going thru the calculus class one day and dealing with a problem. We had actual

numbers to plug into a big formula, the teacher wanted to get a numerical answer.

EXACTLY the situation for which RPN existed. So, we've set the stage for something humorous.

.....

The teacher pulled out his "Texas Instruments" pile of crap, the one with the eekwulz button.

He started pushing buttons, trying to use the memory (this plus this, eekwulz, I'll store this..... EQUALS, OOPS, got to start over, EQUALS, mumble mumble, store this, DARN, rats) yeah, he was carrying on like that because the formula was kind of complicated.

Like a relaxed sharpshooter, I reached down to the book-pile on the floor at my high school desk..... I pulled up the HP-34C (in its fancy fur-padded pouch).

I removed it from the pouch. I began typing the formula, ONE TIME ONLY, without hurrying, and in seconds I had the answer.

The teacher was still mumbling and saying 'eekwulz, recall that, eekwulz, store this, eekwulz, OOPS', and then, I stated the answer to him.

He simply put away his TI-30 calculator and wrote the answer on the board.

He said 'Norm has one of those expensive HP calculators. It uses a system called RPN which is supposed to make it more practical to use on difficult formulas like this. I don't know if its true..... well..... maybe it is".

"We'll just trust him on this answer".

Savored the moment to this day.

Re: Nostalgic HP-34C Story
*Message #2 Posted by **John K. (US)** on 11 Mar 2003, 7:14 a.m.,*
in response to message #1 by Norm Hill

Neat story -- definitely belongs in the Memories forum. :^)

Hmm. Lynnwood, huh? Still live in the area? I'm from Bremerton.

Re: Nostalgic HP-34C Story
*Message #3 Posted by **Mike (Stgt)** on 11 Mar 2003, 7:40 a.m.,*
in response to message #1 by Norm Hill

Great!

Had an experience close to yours too: The teacher showed the class how to calculate the volume of a sphere in the 4th dimension. While he wrote on the bord and explained this an that I used "my" HP-41 and the Romberg Integration in the PPC-ROM. Quite a while before the teacher I had the numeric answer - alas, numeric only. But - of cause! - the same as the teacher found in thermes of PI.

Ciao.....Mike

something like that
*Message #4 Posted by **Norm Hill** on 11 Mar 2003, 3:15 p.m.,*
in response to message #3 by Mike (Stgt)

Yes, it was something like that, some formula sort of like volumes or areas. Might've been integrating some geometric problem with a goat on a rope eating grass in a pen and the rope wraps around a peg (or some such). The teacher never did get any sort of answer with the TI-30. At that moment in time, that was where the proving ground for RPN and non-RPN, calculators like TI-30 vs. HP-34C. Like comparing a tricycle to a formula one racer.

Re: Nostalgic HP-34C Story (TI-30)
*Message #5 Posted by **Karl Schneider** on 12 Mar 2003, 3:26 a.m.,*
in response to message #1 by Norm Hill

Norm Hill wrote:

"The TI-30 the schools & teachers recommended is pretty much useless for doing anything more complex than 2+2=4"

That's a bit harsh. It also had trigs, logarithms, exponents, square root and square -- certainly enough for basic schoolwork, and quite a good value for the time. It certainly had its limitations, though, with only one memory and no programmability.

The TI-30 was my first calc in 1978 or so, and I was quite glad to get it for Christmas. It lasted me for a few years until yet another disposable 9V battery started to die in electronics class in 1981 (its rechargeable 9V had crapped out long ago). I hooked it up to a DC power supply set

to an indicated 9.0 V. The display quickly went screwy, and it was toasted. (Darn those LED's!)

I received a LCD Casio a few months later, but couldn't afford an HP until 1983 -- an HP-15C, which I chose over the HP-34C still available at the time.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

eBay -- be sure to read the small print
*Message #1 Posted by **Vassilis Prevelakis** on 10 Mar 2003, 10:05 p.m.*

Have a look at the following auction (closed now):

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3404561474&category=1247

The first time I read it I got really excited -- all those manuals in one grand auction. But having read the entire description, I realized that the auction was for only **ONE** of these manuals.

Amazing!

I am not making any statements (e.g. fair/unfair) regarding this auction, nor do I want to start another flamefest about eBay, all I want to say is **"be careful and read the whole text before bidding."**

**vp

Re: eBay -- be sure to read the small print
*Message #2 Posted by **Nick Nicholas** on 11 Mar 2003, 12:13 a.m.,*
in response to message #1 by Vassilis Prevelakis

It would have been better if the seller made it clear right at the beginning of the ad that the auction was for only one of the manuals instead of putting that critical piece of information at the end.

The problem I have with some sellers' ads relates to the omission of cosmetic or functional defects from the seller's ad. The onus is put on the buyer to fish out these defects from the seller. In one of my transactions, I ended up with a calculator with substantial cosmetic flaws even though I asked the seller specifically about this issue before I placed my bid.

Unfortunately, the buyer cannot rely on such subjective words as "great" or "near new" since these terms can be interpreted in a subjective manner.

Re: eBay -- be sure to read the small print
*Message #3 Posted by **Christof** on 11 Mar 2003, 12:36 a.m.,*
in response to message #1 by Vassilis Prevelakis

it's a shame, there are some of those manuals I'd love to get a hold of. but....

he's been doing this for a while, and while it's not exactly 'ebay wrong' or anything, it's a bit silly.

It *is* a good way to nickel and dime someone to death for 6 or 7 series 80 manuals

Illegal auction
*Message #4 Posted by **Mike** on 11 Mar 2003, 8:58 a.m.,*
in response to message #1 by Vassilis Prevelakis

This is a "Choice" auction, which is against eBay policies.

If it is rerun, and he leaves all the items in, you don't know which was already taken. Besides, ebay rules clearly state that such "choice" auctions will be cancelled.

If this auction is rerun, and it is reported, it will be cancelled.

Re: Illegal auction
*Message #5 Posted by **Bill Platt** on 14 Mar 2003, 5:34 p.m.,*
in response to message #4 by Mike

DOes that make the mint HP-41 CX auctions (from UK source) illegal? (The same photo is being used now as was being used a week back for a closed out auction)?

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

41CV Emulator card / 128K RAM card for HP48
*Message #1 Posted by **Bobby Lapointe** on 10 Mar 2003, 6:24 p.m.*

I saw this interesting item on ebay:
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=11713&item=3012634005
Where could I find a user's manual or a copy?
Thanks.

Re: 41CV Emulator card / 128K RAM card for HP48
*Message #2 Posted by **Jim L** on 10 Mar 2003, 7:40 p.m.,*
in response to message #1 by Bobby Lapointe

The HP Museum DVD has the HP 82210A Emulator card manual.

See http://www.hpmuseum.org/cd/cddesc.htm and http://www.hpmuseum.org/software/swcd.htm

Re: 41CV Emulator card / 128K RAM card for HP48
*Message #3 Posted by **Bobby Lapointe** on 11 Mar 2003, 12:49 a.m.,*
in response to message #2 by Jim L

Thanks!

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP 28c Memory Hack?
*Message #1 Posted by **John K. Mes** on 10 Mar 2003, 11:45 a.m.*

Way back when my 28C was new there was a hardware hack floating around on how to add memory (32K, I think) to a 28c. It involved cutting some internal plastic supports and the usual soldering in of a new chip but that's all I remember.

Does anyone else remember that hack or how to do it?

Re: HP 28c Memory Hack?
*Message #2 Posted by **Kim Holm** on 10 Mar 2003, 3:35 p.m.,*
in response to message #1 by John K. Mes

This is a tough one.

I made the hack with the help of a fellow on this page Wlodeck.

I removed the adhesive overlay on the right half kbd and drilled the heatstake pins. THATS THE EASY PART.

then I found a CMT 32Kb memory module and with the help of Wlodeck found the relevant pads for nibble, daisy in and out and power.

Then assemble heatstake reflow and done.

Iøm sure that comp.sys.hp28 has a description from about 1986-87.

best regards

Kim

HP Forum Archive 11

[Return to Index | Top of Index]

More a curiosity than a challenge...
*Message #1 Posted by **Vieira, Luiz C. (Brazil)** on 10 Mar 2003, 6:14 a.m.*

Hi;

One curiosity (or chalenge): given three numbers A, B and C in the stack (X-, Y- and Z- registers) what's the shortest way to get (A+B+C), A, B and C in any order in the stack by using only the stack registers and stack manipulations?

```
Before   After  or     or    or...


X  A     A      A+B+C  A
Y  B     B      A      A+B+C
Z  C     C      B      -
T  -     A+B+C  -      C


L  -     -      C      B
```

I know an easy way with the HP42S:

```
ENTER
RCL - ST Z
RCL - ST T
```

or in an HP41:

```
ENTER
R^  (ROLL-UP)
ST+ Y
R^  (ROLL-UP)
ST+ Z
```

but I would like to know the shortest way to do it in, say, a Voyager, or in an HP32SII, or in an HP12C. Restrictions are the calculator's resources themselves. Any clues?

This is intented to activate some stand-by, RPN-mode, stack-simulation areas of contributors' brains. And, of course, I want to know a better, shortest way to do it.

Hope you like it.

Luiz C. Vieira - Brazil

Oops!! Typo..
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 10 Mar 2003, 6:46 a.m.,*
in response to message #1 by Vieira, Luiz C. (Brazil)

Hi;

the HP42S procedure is:

```
ENTER
RCL + ST Z
RCL + ST T
```

Forgive me!

Luiz C. Vieira - Brazil

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Challenge
*Message #1 Posted by **mapet** on 10 Mar 2003, 4:15 a.m.*

Write a program that checks if the number is a prime. As input it takes last entered number and as output it shows 0 (not prime) or 1 (prime). Platform: 12C, 20S.

Re: Challenge (not yet an answer)
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 10 Mar 2003, 6:14 a.m.,*
in response to message #1 by mapet

Hi, mapet;

any particular restriction? I'm asking about this because sometimes the restrictions will dictate teasing conditions, just that.

I know no simpler way that the interactive one to generate prime numbers. Is there another? This is just to check if there is a newer algorithm running around that I was not told about. I'd like to know about it, if any.

If the classical is the only one, let's go for it. Fewer steps?

Good chalenge. I like the ones that may be usefull as a tool or as a general purpose routine. I remember those ones Ex-PPC member posted about trigs in the HP12C. Or another about replicating numbers in the stack (who proposed that one? I don't remember, sorry...).

As I have a possibility I'm posting.

Best regards.

Luiz C. Vieira - Brazil

Did you see this ?
*Message #3 Posted by **John Smith** on 10 Mar 2003, 6:54 a.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

Luiz wrote:

I remember those ones Ex-PPC member posted about trigs in the HP12C.

Did you see this, perchance ?

HP-12C Tried & Tricky Trigonometrics

Re: Did you see this ?
*Message #4 Posted by **Vieira, Luiz C. (Brazil)** on 10 Mar 2003, 7:03 a.m.,*
in response to message #3 by John Smith

Hi;

I downloaded the file right away (about 40K, very small!).

Thank you. I was not aware about it. I'll read it and add comments, if so.

Best regards.

Luiz C. Vieira - Brazil

Re: Did you see this ?
*Message #5 Posted by **John Smith** on 10 Mar 2003, 7:10 a.m.,*
in response to message #4 by Vieira, Luiz C. (Brazil)

May I suggest you print it ?

I've found it's easier to read and much more enjoyable (and easier to try it in your own HP-12C) if printed than reading from the screen.

Besides, once printed you can punch some holes in order to file it up with your collection of HP listings and articles, that's exactly what I did.

Did you also see this? (my turn...)
*Message #6 Posted by **Vieira, Luiz C. (Brazil)** on 10 Mar 2003, 8:05 a.m.,*
in response to message #5 by John Smith

Hi;

look at this article and you'll see Viktor Toth's solution. It is fiteen steps shorter.

Best regards.

Luiz C. Vieira - Brazil

Re: Did you also see this? (my turn...)
*Message #7 Posted by **John Smith** on 10 Mar 2003, 8:14 a.m.,*
in response to message #6 by Vieira, Luiz C. (Brazil)

Thanks, Luiz.

I'll have a detailed look at it and will try both approaches on an actual HP-12C, to see how they compare. I assume the 15 extra steps are probably used to provided faster execution time near extremes, extended accuracy/range, or both, but I'll have to actually test them to find out.

A remark.
*Message #8 Posted by **Vieira, Luiz C. (Brazil)** on 10 Mar 2003, 8:26 a.m.,*
in response to message #7 by John Smith

Hi;

mapet, forgive me for use your initial thread with another (instead related) matter; O.k.?

John;

Viktor added four shortcomings about a few restrictions; maybe the extra steps also have something with this, I did not read both articles in a comparision manner.

Hey, good reading postings and threads like this. Thank you for the

concise and usefull words.

Keep posting!

Luiz C. Vieira - Brazil

No restrictions at all
*Message #9 Posted by **mapet** on 10 Mar 2003, 7:20 a.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

Hi Luiz, No restrictions at all. The shortest listing wins. Second challenge could be for the fastest solution for 12C, as the calc is pretty slow...

Re: No restrictions at all
*Message #10 Posted by **Ex-PPC member** on 11 Mar 2003, 9:03 a.m.,*
in response to message #9 by mapet

No restrictions at all. The shortest listing wins.

Under that condition, "shortest listing", completely disregarding speed, there's a fairly trivial 17-step solution in the HP-12C, which will output 0 if the number is composite, and 1 if it is prime, for any number N>1. But it's extremely slow ...

Second challenge could be for the fastest solution for 12C, as the calc is pretty slow...

If size is not a problem, there's an equally trivial 20-step solution, much faster than the 17-step one. The fastest solution for large N will require probabilistic primality testing and, due to the lack of subroutine capability on the HP-12C, it may or may not fit in 99 steps.

Re: No restrictions at all
*Message #11 Posted by **Patrick** on 11 Mar 2003, 12:55 p.m.,*
in response to message #10 by Ex-PPC member

Probabilistic techniques are used to generate "Industrial Strength" primes, not true primes. There are sometimes used, for example, in cryptographic systems where the confidentiality rating of the data involved is modest.

Re: Challenge

*Message #12 Posted by **hugh** on 10 Mar 2003, 8:39 p.m.,*

in response to message #1 by mapet

the old a*b(mod c) problem in disguise again! here's what i have so far, attempted rabin miller strong pseudoprime test.

lblA fix0 sto1 2 x>y? gto3 x=y? gto4 0 sto6 sto8 rcl1 1 - sto7 lbl5 rcl7 rcl7 2 / int sto9 2 * x<>y? gto6 1 sto+6 rcl9 sto7 gto5 lbl6 rcl6 x=0? gto3 1 sto-6 lbl7 2 sto+8 rcl8 7 x=y? gto4 3 - x=y? dse8 rcl8 sto2 rcl1 x=y? gto4 1 sto3 rcl7 sto9 lbl8 rcl9 rcl9 2 / int sto9 2 * x<>y? gsbB rcl9 x=0? gto.0 rcl3 sto0 rcl2 sto3 gsbB sto2 rcl0 sto3 gto8 lbl.0 rcl3 1 x=y? gto7 chs rcl1 + x=y? gto7 rcl6 sto9 lbl.1 rcl9 x=0? gto3 rcl3 sto2 gsbB rcl1 1 - x=y? gto7 1 sto-9 gto.1 lbl4 1 rtn lbl3 0 rtn

lblB rcl2 rcl3 * rcl1 / frac rcl1 * rnd sto3 rtn

unfortunately, its only good for around 5 digits. the problem lies in subroutine B which computes 2*3 mod 1 -> 3 and therefore breaks if 2*3 is too big integer.

substitute this,

lblB rcl2 sto5 0 sto4 lbl1 rcl3 rcl3 2 / int sto3 2 * x==y? gto.3 rcl5 sto+4 rcl4 rcl1 x<y? sto-4 lbl.3 rcl3 x==0? gto2 2 sto*5 rcl5 rcl1 x<y? sto-5 gto1 lbl2 rcl4 sto3 rtn

and it should work in theory, but after 20 of waiting minutes who cares. just not fast enough these old machines :-)

Re: Challenge

*Message #13 Posted by **Vieira, Luiz C. (Brazil)** on 10 Mar 2003, 9:10 p.m.,*

in response to message #12 by hugh

Hi, Hugh;

I see that your listing is related to a wise, very well written program for the HP15C, as you have a GTO .3 and a GTO .1, and the only Voyager that has [GTO][.]n and [LBL][.]n is the HP15C, right? Or is it for another HP?

It seems mapet wants to know if there is a way to fit a program like this in the HP12C, that does not support subroutine calls, or an HP20S, that is algebraic.

I'm working on it and it's something "hard" to achieve...

Can your program be ported to an HP12C?

Best regards.

Luiz C. Vieira - Brazil

Re: Challenge
*Message #14 Posted by **mapet** on 11 Mar 2003, 4:00 a.m.,*
in response to message #13 by Vieira, Luiz C. (Brazil)

HP 20S has subroutine calls (but it is algebraic) so the program can be ported to it. I am working on my solution. On HP 20S it seems to be much easier…

Re: Challenge
*Message #15 Posted by **Vieira, Luiz C. (Brazil)** on 11 Mar 2003, 6:36 a.m.,*
in response to message #14 by mapet

Hi;

I already have a somewhat short program for the HP41 to compute primes after # 3 (1 and 2 are assumed found) but it has a major handicap to make it "fast": it stores all prime # already found in available registers, so it will compute new primes based on MOD with existing ones. I ran it once in an HP41CX (in the 80's) till it found prime # 2063, but even with time spent saved in the stopwatch, I did not took note (dam...). The program is 61 bytes longs, 39 steps (END not counted) without time measurement and 67 bytes long, 42 steps (END not counted) with time functions for measuring time spent and, in both cases, uses only register R00 as register index. Would you like it to be listed here?

Unfortunetely I cannot port it to the HP12C because of indexed register access and number of registers used. I will change it to save only last prime number, but it will surely make it a lot slow.

Cheers and congrats. This is one very good chalenge amongst others.

Luiz C. Vieira - Brazil

Re: Challenge
*Message #16 Posted by **hugh** on 11 Mar 2003, 7:04 a.m.,*
in response to message #13 by Vieira, Luiz C. (Brazil)

you are indeed correct. i decided to develop a program first on the 15c. its possible to eliminate the .x labels depending on what version of subroutine `B' is used.

although, the logic is correct, i am not very happy with this program and i might still find an improvement. i wanted to attempt something stronger that a trial division derived algorithm. so this is an attempt to verify that the the given number is a strong pseudoprime to bases 2, 3 & 5. this takes the valid range up to 161304000 if i eliminate the case 25326001.

the problem is that i need to compute a*b mod c (subroutine B) without loss of precision. you can see that a straightforward approach will only allow a and b to be of 5 digits. the other subroutine B gets around this at the expense of time, which these old machines havent got.

i might have a go at a 20s port. although i dont think it will fit. if some of the early tests are removed <2 ==2 and == 2, 3, & 5 some space is saved at the expense of incompleteness.

the bottom line is that it might not be feasible to fit and run this approach, meaning sadly that trial division is the only way, albeit lame.

Re: Challenge (also my HP41 PRGM for primes)
*Message #17 Posted by **Vieira, Luiz C. (Brazil)** on 11 Mar 2003, 8:08 a.m.,*
in response to message #16 by hugh

Hi;

I do not know the process of detecting pseudoprimes, instead I heard about it when I was at the university as a solution for the prime chain and math-grade students used to play many algorithms and methods for this subject. Even being an engineer guy, I always liked teasing math and algebraic problems (at least before buying an HP41C, when I developed a pasion for program development in portable devices), but I never found the time for studying them.

Is it easy to find e-literature at the www about this pseudo-primes detection? I remember reading briefly about obtaining new primes by adding groups of 2, 3 and 5, but I never got any paper that explained this subject in deep.

Thanks for the valuable explanation, Hugh.

Best regards.

Luiz C. Vieira - Brazil

(in time: my classical trial-division routine for the HP41 is listed below.

```
01 LBL "P"
02 RUNSW
03 SF 25
04 SF 10
05 1.001
06 STO 00
07 3
08 STO 01
09 LBL 08
10 FC?C 10
11 GTO 07
12 ENTER^
13 ENTER^
14 ENTER^
15 RCL IND 00
16 MOD
17 X=0?
18 SF 10
19 X<>Y
20 ISG 00
21 GTO 08
22 STO IND 00
23 FC? 25
24 STOPSW
25 FC? 25
26 OFF
27 RCL 00
28 INT
29 1 E3
30 /
31 GTO 06
32 LBL 07
33 RCL 00
34 FRC
```

```
35 LBL 06
36 1
37 +
38 STO 00
39 RDN
40 2
41 +
42 GTO 08
```

I'm 100% sure I improved it so I used only stack registers, but I cannot find the d*m listing. This is the CX version and you need to clear the stopwatch before starting it. After the last register is used, the program stops the stopwatch and switches calculator to OFF. If you wnat to use it in an HP41C or CV, simply remove lines 03 RUNSW, 23 FC?25 and 24 STOPSW.)

Oh, yes, one more thing...
*Message #18 Posted by **Vieira, Luiz C. (Brazil)** on 11 Mar 2003, 8:11 a.m.,*
in response to message #17 by Vieira, Luiz C. (Brazil)

The program tests only odd numbers, of course (see steps 40, 41 and 42)

Re: Challenge (also my HP41 PRGM for primes)
*Message #19 Posted by **Ex-PPC member** on 11 Mar 2003, 9:13 a.m.,*
in response to message #17 by Vieira, Luiz C. (Brazil)

"I remember reading briefly about obtaining new primes by adding groups of 2, 3 and 5, but I never got any paper that explained this subject in deep."

You might consider getting the book "Primes and Programming" by Peter J. Giblin, as it is a perfect mix of theory and explicit computer programs to illustrate it, written enthusiastically and with lots of numerical examples, quizs, teasers, challenges, you get the point ... All programs are written in Pascal, but the listings are well commented and extremely clear, so it's very easy to adapt them to most HP calculators, from the 41C or so onwards.

Primes and Programming

Thank you!
*Message #20 Posted by **Vieira, Luiz C. (Brazil)** on 11 Mar 2003, 9:25 a.m.,*
in response to message #19 by Ex-PPC member

I'll find a way to have it.

Best regards.

Luiz C. Vieira - Brazil

Re: Challenge
*Message #21 Posted by **Patrick** on 11 Mar 2003, 1:02 p.m.,*
in response to message #16 by hugh

For your precision problem, does it help to use the fact that

```
(a*b) mod c = ((a mod c) * (b mod c)) mod c
```

Re: Challenge
*Message #22 Posted by **hugh** on 11 Mar 2003, 4:57 p.m.,*
in response to message #21 by Patrick

unfortunately not, because 0 <= a, b < c already.

this problem i have encountered many times. its how to perform a*b (mod c) when all of a, b and c can be up to your machine precision. eg 10 digits on a calculator or 32 bits commonly on a pc.

the only attack i am aware of is to code the multiply yourself affecting the modulo as it goes and thus prevent overflow. there was a discussion of this some time ago on this forum. it was pointed out that an internal assembler routine could be used to prevent the requirement for double precision when implementing the mod function. this is correct. you do your multiply one binary digit at a time and subtract the mod if larger.

if you're interested, here is some c code that does what i am talking about,

http://www.voidware.com/primetest.htm

this was my starting point, although i cut a lot of stuff out.

Re: Challenge
*Message #23 Posted by **Vieira, Luiz C. (Brazil)** on 13 Mar 2003, 12:52 a.m.,*
in response to message #22 by hugh

Hi, Hugh;

I downloaded the page you mention and I'm "debugging" it (in fact, depicting line by line...) to get to the prime detection and the strong prime number definition.

Thank you. I was looking for something like this. That's the point where you think: "Thanks God I took some time to learn C..."

Shrink it to fit in an HP12C is another story...

I'm curious about Ex-PPC Member both solutions.

About the modulo: the discussion is included in this thread where Kate asked for a modulo function in fewer steps. This was considered the best yet the shortest answer because it gives correct results in a wide range of operators.

Best regards.

Luiz C. Vieira - Brazil

Re: (Prime #) Challenge
*Message #24 Posted by **Karl Schneider** on 11 Mar 2003, 11:13 p.m.,*
in response to message #1 by mapet

The 49G can be used to check the answers your program gives, using its "PREVPRIME" or "NEXTPRIME" functions.

Matlab computer software has an "isprime" command.

HP Forum Archive 11

[Return to Index | Top of Index]

HP-12C Solutions Handbook
*Message #1 Posted by **John K. (US)** on 10 Mar 2003, 4:13 a.m.*

Does anyone happen to have a copy of the *HP-12C Solutions Handbook*? If so, please let me know, either here or via e-mail. Thanks!

Check your e-mail (nt)
*Message #2 Posted by **mapet** on 10 Mar 2003, 4:18 a.m.,*
in response to message #1 by John K. (US)

nt

Re: Check your e-mail (nt)
*Message #3 Posted by **John K. (US)** on 10 Mar 2003, 4:48 a.m.,*
in response to message #2 by mapet

Um, nothing there. Did you try to send me something?

HP 12C Solutions Handbook
*Message #4 Posted by **mapet** on 10 Mar 2003, 5:10 a.m.,*
in response to message #3 by John K. (US)

As you requested I sent it to you

Re: HP 12C Solutions Handbook
*Message #5 Posted by **Dave Mabry** on 10 Mar 2003, 6:13 a.m.,*
in response to message #4 by mapet

Is there a chance you could e-mail that handbook to me as well? Thanks much.

Link to the HP 12C Solutions Handbook at the HP site...
*Message #6 Posted by **Vieira, Luiz C. (Brazil)** on 10 Mar 2003, 6:30 a.m.,*
in response to message #5 by Dave Mabry

Hi, folks;

have a look here.

Hope this helps.

Luiz C. Vieira - Brazil

Re: Link to the HP 12C Solutions Handbook at the HP site...
*Message #7 Posted by **John K. (US)** on 11 Mar 2003, 2:51 a.m.,*
in response to message #6 by Vieira, Luiz C. (Brazil)

Yup. Luiz is correct-- the manual on HP's site is the Solutions Handbook, not the User's Manual. I already had a copy, but had mis-named the file. Oops.

Thanks anyway to mapet for the quick response. Extra karma points for you, mapet! :^)

Re: Link to the HP 12C Solutions Handbook at the HP site...
*Message #8 Posted by **miken** on 11 Mar 2003, 4:33 p.m.,*
in response to message #6 by Vieira, Luiz C. (Brazil)

Luis Thank you.....once again. Mike

Another usefull link for financial calcualtors' owners
*Message #9 Posted by **Vieira, Luiz C. (Brazil)** on 10 Mar 2003, 6:39 a.m.,*
in response to message #5 by Dave Mabry

Hi;

This link leads to a PDF document written by Dr. Daniel J. Borgia that contains a lot of usefull procedures for many financial calculators, not onl HP but also Texas and others. It's a very good source of concise and fast, easy to read information that will allow users to compare procedures.

Hope you like it, too.

Luiz C. Vieira - Brazil

And another resource - my business math textbook
*Message #10 Posted by **Gene** on 10 Mar 2003, 7:25 a.m.,*
in response to message #9 by Vieira, Luiz C. (Brazil)

http://www.amazon.com/exec/obidos/tg/detail/-/1888840382

If anyone's interested, email me and I'll sell you a copy for less than Amazon.com's price.

From the description:

"Editorial Reviews Book Description Want to learn business math painlessly? Then this textbook is what you need. Written by the author after teaching business math for over 15 years, this book is written so that someone could sit down, read it, and have it seem as if they had a private tutor sitting there beside them, explaining the topic being covered. It is written using a very conversational style.

This text is presently used in the author's sophomore level Quantitative Analysis for Business class at a local university and covers two broad areas of math application to business problems: the time value of money and an introduction to basic statistics.

The book uses three commonly available business calculators - the HP-10B, the HP-12C, and the TI BAII Plus Advanced Business Analyst. The slight changes needed for the examples to work with the new HP-10BII are also covered. However, the approaches used (and even many of the key presses) would work with any business calculator or programmable calculator running a Time Value of money program.

Chapters included: Simple Interest, Compound Interest, More Compound Interest Topics, Annuities, More Annuity Topics, Special Annuities, Cash Flow Analysis, Data Collection and Presentation, Central Tendency and Dispersion, Basic Probability Concepts, Probability Distributions, and Correlation and Linear Regression.

This book is a great help to anyone studying for the CFA (Chartered Financial Analyst) exam or who desires to learn how to use their financial calculator effectively.

This is the third edition with several new sections and revisions from the earlier edition .

About the Author Gene Wright has been teaching business math to college students for over 15 years."

Congratulations, Gene!
*Message #11 Posted by **Vieira, Luiz C. (Brazil)** on 10 Mar 2003, 8:09 a. m.,*
in response to message #10 by Gene

Hi, Gene;

I was not aware about this. Good to know! When was it printed?

Congratulations.

I saw other three titles form yours; anyone else?

Thank you.

Luiz C. Vieira - Brazil

Sample downloads are here
*Message #12 Posted by **Gene** on 10 Mar 2003, 12:11 p.m.,*
in response to message #11 by Vieira, Luiz C. (Brazil)

It's in its third edition. First out in 1999.

You can download as PDF some sample pieces here:

http://www.rskey.org/gene/hpgene/book.html

I'm still trying to get in Amazon.com's top 500,000 seller list. :-)

Re: And another resource - my business math textbook
*Message #13 Posted by **Christof** on 11 Mar 2003, 12:19 a.m.,*
in response to message #10 by Gene

I'm assuming this will translate well to the 17bii?

and of course the 19 :)

Re: And another resource - my business math textbook
*Message #14 Posted by **Gene** on 11 Mar 2003, 7:24 a.m.,*
in response to message #13 by Christof

Pull down the sample PDFs and try them out.

I did write the entire book with the convention the HP12C uses (the value of i is always the periodic interest rate) and I mention early on how critical it is given that to make sure that the P/YR value is set to 1.

Otherwise, it should would fine with any business calculator.

Re: And another resource - my business math textbook
*Message #15 Posted by **Christof** on 11 Mar 2003, 11:22 a.m.,*
in response to message #14 by Gene

I did, on the 12C and (after a bit of tinkering) the 17Bii.

I have to say, it's really very well written.

thanks!

Doh!
*Message #16 Posted by **John K. (US)** on 10 Mar 2003, 5:16 a.m.,*
in response to message #2 by mapet

Please disregard the last message. Your e-mail was the victim of an overly-agressive spam filter. I've got it now. Thanks!

HP Forum Archive 11

[Return to Index | Top of Index]

HP41C service in UK?
*Message #1 Posted by **Michael Sayers** on 9 Mar 2003, 10:39 a.m.*

Does anyone know where I can get my 41C serviced in the UK? It was working a little while ago, but now it is completely dead. I have tried new batteries to no avail. If anyone can suggest any measures I can take myself, I would be most grateful.

Re: HP41C service in UK?
*Message #2 Posted by **Randy Sloyer** on 9 Mar 2003, 4:14 p.m.,*
in response to message #1 by Michael Sayers

Self-help most likely problems:

1. Batteries, and poor connections due to corrosion on battery contacts or springs. Doesn't take much green to prevent contact.

2. Cracked screw posts, creating poor connection with battery or logic board. See http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/articles.cgi?read=2 for help.

Randy, you're the MAN!
*Message #3 Posted by **Jeremy** on 9 Mar 2003, 9:14 p.m.,*
in response to message #2 by Randy Sloyer

It sounds as if you have a decent amount of experience working on HP calculators, eh?

Anyway, I just wanted to point out to everyone (and yourself) that we are lucky to have a guy like you around and offering free help. Thanks!

-Jeremy

HP Forum Archive 11

[Return to Index | Top of Index]

Battery Pack for HP35/45... - a good solution found
*Message #1 Posted by **Jan (CH)** on 9 Mar 2003, 9:53 a.m.*

I have been looking for a battery pack for a HP 35. I have tried: International Calculator company in Orlando and went onto their website > (www.internationalcalculator.com) and ordered the battery pack there. HP82001BR Price: $39.00

They ask for the old battery pack, since the plastic parts are no more available and send me another pack with fresh batteries and the contacts perfectly welded. It looks like new.

I found the solution perfect for a reasonable price. The service is good too (in fact they sent the new pack, before I could return the old one)

Just in case somebody gets the same problem

Best regards

Jan

(Switzerland)

(thinking aloud) That's a lot of dough...
*Message #2 Posted by **Jeremy** on 9 Mar 2003, 9:19 p.m.,*
in response to message #1 by Jan (CH)

I should go into business doing that, as it cannot be hard to crack open a battery pack and replace the cells.

Tool Kit:

- Dremel rotary tool with cutoff wheel - super glue - soldering iron - solder - spring contacts - small flathead screwdriver - patience - a steady hand

Still, you're a satisfied customer. I'm looking at their site now, so they must be doing a good job.

-Jeremy

Re: (thinking aloud) That's a lot of dough...
*Message #3 Posted by **db(martinez,california)** on 9 Mar 2003, 11:54 p.m.,*
in response to message #2 by Jeremy

there is someone on ebay selling a not-in-a-stock-case new bat pack for $15. if you are using, not collecting, then that is at least more affordable.

Re: (thinking aloud) That's a lot of dough...
*Message #4 Posted by **Jan (Switzerland)** on 10 Mar 2003, 5:07 a.m.,*
in response to message #3 by db(martinez,california)

It is not cheap, but this is something which is not needed too often. Deduct the cost of the rechargeable batteries and you may find the price more reasonable.

Lately I had to replace the rechargeable battery for my IBM Thinkpad. The price (in Switzerland) is around $300. No manual work to be done……

Should you start your own business with much better price and same performance, let us know

Jan Switzerland

Re: (thinking aloud) That's a lot of dough...
*Message #5 Posted by **Richard Parfitt (UK)** on 10 Mar 2003, 11:22 a.m.,*
in response to message #4 by Jan (Switzerland)

To All, The batteries I have found are normally used in Cordless handset phones, and I obtained them in the UK from RS Components, (www.rswww.com) stock No.595-491 and cost £7-20 plus local tax. They are Ni-Cad 3.6V/700mAh, and I have used them in three of my HP35's and a HP45 with no problems. They come as a unit with two tags and I just solder on flying leads (very thin wire is best) which I then solder to the battery terminals in the back of the calculator, I solder them halfway down the terminal so as not to modify the ends that might want to be used in the future. As they are shrink wrapped with insulator I just let them rest in the battery compartment. It might be possible to take the three cells and incorporate them into the HP battery pack after cutting around the joint on the plastic. The other thing I do is to take 3 AA Alkaline cells and put them into a HP battery pack again after cutting around the joint to separate the two halves. This is a solution I have used very succesfully in my HP25, just take 2AA's and place them in the battery pack from your HP25,21,27,29 etc. I have some pictures to show you what I have done. RS Components has a place in the USA called "Allied Electronics in Texas, their web address is www.alliedelec.com, I found this from the RS catalogue I receive regularly. I hope this is of some help, let me know if it's helpful or makes sense, please feel free to let others know and call me if you want more info if I can provide it. Regards Richard.

Re: Battery Pack for HP35/45... - a good solution found
*Message #6 Posted by **David Smith** on 10 Mar 2003, 4:09 p.m.,*
in response to message #1 by Jan (CH)

My local battery store will do the same thing using 1800 maH metal hydride cells for $16.50 plus tax. Any Batteries Plus, Batteries, Etc., or similar stores will do it for a similar price.

If you just need a workable pack, you can get a heat shrinked three cell Nicad portable phone battery on sale for $2.00, strip the leads about an inch and trim the length. Align the leads along the gaps between the cells and tape them down so they do not flop around. Insert pack in the calculator. Enjoy das blinkinlights.

Finding solutions in odd places....
*Message #7 Posted by **Michael Meyer** on 10 Mar 2003, 10:41 p.m.,*
in response to message #6 by David Smith

I was in Boston last year, looking around stores, when I joined my family in a doll store. They had rolls of adhesive copper strips used to wire doll houses.

I've used lots of this to rebuild battery packs with flat wires (it solders great), as well as to adhere in the two notches between phone packs and Lithium AA packs I've built. It works great as a classic series pack.

You never know where you'll find useful stuff....

Michael

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP48S self test?
*Message #1 Posted by **barry** on 9 Mar 2003, 12:22 a.m.*

picked up two HP48s units today; would someone please post the self test procedure? tnx in advance, barry, carson city, nevada

Re: HP48S self test?
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 9 Mar 2003, 2:21 a.m.,*
in response to message #1 by barry

Hi;

"major" self-test is started with the

```
[ON][E]
```

sequence, i.e., with the calculator switched to ON:

press and hold [ON] key
press and hold [E] key
release [ON] key
release [E] key

This starts a cyclic self-test that would ends/starts-over wiht a beep and a

```
OK HP48
```

message at the top-left corner. To stop the cyclic self-test use the

```
[ON][C]
```

sequence, i.e.:

press and hold [ON] key
press and hold [C] key
release [ON] key
release [C] key

this restarts the calculator and does not clear memory contents EXCEPT for stack, suspended programs and, consequently, local variables.

There is an interactive-mode test with the [ON][D] sequence, that starts, beeps and stops with three vertical lines. Press [E] key and a

```
KBD1
```

message appears in the top-left corner. Press all keys in each line from left-to-right, top-line to botton-line, [ON] key in the sequence, and after the last one is pressed, the message changes to

```
KBD1 OK
```

. If you miss or repeat a key, an ERROR message appears and you can start it over with the [ON][D] and [E] keys again.

Hope this helps.

Cheers.

Luiz C. Vieira - Brazil

beautiful! thank you Luiz! = ALSO . .
*Message #3 Posted by **barry** on 9 Mar 2003, 2:18 p.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

both "passed the tests"!! these came out of a high school, and they marked the units on the backside w/ the name of school in what appears to be felt marker - an attempt at cleaning w/ windex did nothing, what might i use to remove the markings which wouldn't hurt the cases? tnx in advance, barry carson city, nv

ALSO . . we need chemical advice!

*Message #4 Posted by **Vieira, Luiz C. (Brazil)** on 9 Mar 2003, 6:30 p.m.,*
in response to message #3 by barry

Hi, Barry;

I'm glad "they made it".

About the back inscriptions, I am not sure about what to use. I have not much knowledge on chemicals, but there is a contributor in here that deals with this subject, I'm not sure about which of them. Plastic used it the HP48 series is somewhat flexible, it's the same used in Pioneers (HP42S, HP10B, HP17BII, etc.) and I do not know how would it react to ink solvents.

I'm sorry I cannot help in this matter.

But I am sure you'll be answered soon.

Best regards.

Luiz C. Vieira - Brazil

Re: ALSO . . we need chemical advice!

*Message #5 Posted by **No ChemE here...** on 9 Mar 2003, 9:50 p.m.,*
in response to message #4 by Vieira, Luiz C. (Brazil)

Denatured alcohol does a reasonable job on permanent marker. Keep it away from the keyboard bezel and especially away from the older pioneers with the window in front of the lcd. It will leave stains you can't get out.

I have found the older brown Pioneer cases to start to show white specs if you rub too hard. Multiple applications without a lot of scrubbing pressure is better.

Re: ALSO . . we need chemical advice!
*Message #6 Posted by **Vieira, Luiz C. (Brazil)** on 9 Mar 2003, 9:59 p.m.,*
in response to message #5 by No ChemE here...

Hi;

thanks for the advice.

Should Barry be aware of what sort of marker (or ink) was used before trying any sort (even soft) chemicals? I think if he knows what ink was that it would easy the removing job.

What do you think? Hey, Barry, is it easy to identify what sort of ink is that?

Best regards

Luiz C. vieira - Brazil

Re: ALSO . . we need chemical advice!
*Message #7 Posted by **No ChemE here...** on 9 Mar 2003, 10:07 p.m.,*
in response to message #6 by Vieira, Luiz C. (Brazil)

If it's "Sharpie" marker, it should come off with the DA, paint pens are a different story. They tend to go gooey and smear, quite a mess. I haven't found anything for that, as it gets down in the "pores" of the textured finish.

Re: ALSO . . we need chemical advice!
*Message #8 Posted by **barry** on 10 Mar 2003, 12:35 a.m.,*
in response to message #7 by No ChemE here...

hard for me to tell, it LOOKS like sharpie or some other felt type marker; will report back tomorrow, THANKS to all who responded! barry carson city, nv

Re: ALSO . . we need chemical advice!
*Message #9 Posted by **Chris(FLA)** on 10 Mar 2003, 7:21 a.m.,*
in response to message #8 by barry

it LOOKS like sharpie or some other felt type marker

I have taken sharpie writing off of LEXAN with 70% isopropyl achohol no problem. Now with an HP case I have never tried.

Chris

Re: beautiful! thank you Luiz! = ALSO . .
*Message #10 Posted by **David Smith** on 10 Mar 2003, 4:13 p.m.,*
in response to message #3 by barry

The best ink solven I have found is called OOPS! Latex Paint Remover. It does not seem to affect the case or labels. Best to keep it off the keyboard and display though. Another solvent about as good is white gas/Coleman camping fuel/cigarette lighter fluid. Same cautions as above in regards to the keyboard. It does not hurt the LED/LCD window, and in fact I use it to wet red jewlers rouge to polish scratches out of the display windows.

I have found alcohols can leave white marks on the case and will definitely stain the LCD window.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

What happened !?
*Message #1 Posted by **John Smith** on 8 Mar 2003, 10:27 p.m.*

Seems that regular visitor/contributor Hrastprogrammer is very, very upset !! He's removed nearly all contents from his web site dedicated to his excellent HP-41, HP-42 and HP-71 emulators for the HP-48GX/49G machines, see this link:

http://hrastprogrammer.tripod.com

What happened !? :-(

He explained what happened in crystal, clear words...
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 8 Mar 2003, 11:01 p.m.,*
in response to message #1 by John Smith

Hi, John;

I have no private, personal contact with Hrast, but I could exchange a few e-mails with him. As Nenad, a croatian too, Hrast is very honest when expressing his thoughts, and since the begining he let it clear he is a professional SW developer. He metions (the link you pointed out) that some guy asked him for a free product. Asking him for a free product is the same as asking a taxi driver for a free ride. Not fair, isn't it? It seems to me he's realy upset with some particular disgusting events.

I'll not discuss other opinions, I'll respect Hrast's. That's the least we can do. I second you in that this is a complete, hard to replace lost.

The best regards.

(Hey, Hrast, be well.)

Luiz C. Vieira - Brazil

Re: He explained what happened in crystal, clear words...
*Message #3 Posted by **HrastProgrammer** on 9 Mar 2003, 2:06 a.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

> He mentions (the link you pointed out) that some guy asked him for a free product. Asking him for a free product is the same as asking a taxi driver for a free ride.

The reason for closing wasn't just a matter of asking a free product. Asking something for free isn't very harmful for me as I have used to be asked such questions. The guy I mentioned was extremly arrogant and disrespectful in another way and he wasn't the only one. I wan't explain in detail here because, at this level, I am still considering this as a private matter.

Best wishes to you, Luiz. If only there were more guys like you ... I really enjoyed reading all of your posts :-)

Regarding the e-mail address for friends, ask Nenad - I will sent a new one to him.

Best regards.

What happened!? - just a few more words
*Message #4 Posted by **Vieira, Luiz C. (Brazil)** on 9 Mar 2003, 2:36 a.m.,*
in response to message #3 by HrastProgrammer

Hello, Hrast;

thank you for the kind words.

Just to add these ones of mine: having the honor (I feel as if) to be accepted amongst a respectful and wonderful team like this one makes me think I must both act accordingly and behave accordingly. I can tell you I always express my own feelings, I do not have to become someone else before writing. I respect guys like you and many others that come and show they (you) have their merit, and also act based on your own thoughts and principles. I feel it on you and many others, I am sure I'm right about it.

Unfortunately some guys do never show themselves as they are, and for their own reasons, they keep themselves hidden under different, "hidden" names and temporary e-addresses. I have already contacted a few in here by telephone, I'd like having the chance to do the same with many others, and I keep and show my own name and e-address. As you kept your own name and e-address and, unfortunately again, did not receive the deserved respect.

I wish you the best, pall. Thank you again.

Luiz C. Vieira - Brazil

A bad expression to be corrected. Please, read!
*Message #5 Posted by **Vieira, Luiz C. (Brazil)** on 9 Mar 2003, 6:53 p.m.,*
in response to message #4 by Vieira, Luiz C. (Brazil)

Hi;

I used a bad sequence of phrases that may have been misunderstood by dearest people I have in great consideration.

I wrote:

Unfortunately some guys do never show themselves as they are, and for their own reasons, they keep themselves hidden under different, "hidden" names and temporary e-addresses. I have already contacted a few in here by telephone, I'd like having the chance to do the same with many others, and I keep and show my own name and e-address.

Guys I contacted by telephone are people I have in high consideration, and what I wrote does not express this fact correctly. Better if I had written:

Unfortunately some guys do never show themselves as they are, and for their own reasons, they keep themselves hidden under different, "hidden" names and temporary e-addresses. I have already contacted a few ***respectfull and dearest conributors*** *in here by telephone, I'd like having the chance to do the same with many others, and I keep and show my own name and e-address.*

I simply could not let it pass as a misunderstanding.

Thank you and forgive me.

Luiz C. Vieira - Brazil

Re: A bad expression to be corrected. Please, read!
*Message #6 Posted by **HrastProgrammer** on 10 Mar 2003, 9:54 a.m.,*
in response to message #5 by Vieira, Luiz C. (Brazil)

Luiz, I think that you have mail :-)

Re: He explained what happened in crystal, clear words...
*Message #7 Posted by **John K. (US)** on 9 Mar 2003, 9:31 a.m.,*
in response to message #3 by HrastProgrammer

Wow, sorry to hear that. Your stuff looked cool, and I just about convinced myself to order either your 42 or 41 emulator. Basically, I've been looking around for either an affordable 49G or 48GX memory card to install it on.

If you decide to start taking orders again, please be sure to let us know, won't you? Thanks!

Re: He explained what happened in crystal, clear words...
*Message #8 Posted by **Chris(FLA)** on 9 Mar 2003, 1:57 p.m.,*
in response to message #7 by John K. (US)

Wow, sorry to hear that. Your stuff looked cool, and I just about convinced myself to order either your 42 or 41 emulator. Basically, I've been looking around for either an affordable 49G or 48GX memory card to install it on.

Yes, Me too. I was just about to buy the 42S emulator since it is so hard to get a real 42. This is sad. I hope someday he can offer them again. I'm ready to buy.

You can get fairly priced RAM cards from this site for your 48GX.

http://uuhome.de/oklotz/index_e.html

Chris

Re: He explained what happened in crystal, clear words...
*Message #9 Posted by **John K. (US)** on 9 Mar 2003, 7:30 p.m.,*
in response to message #8 by Chris(FLA)

Thanks for the link. I may go ahead and order the 2M card, though I'll probably wait until the USD strengthens a little compared to the Euro before ordering the 4M one. :^)

Re: He explained what happened in crystal, clear words...
*Message #10 Posted by **Gray Wilson** on 9 Mar 2003, 11:19 a.m.,*
in response to message #3 by HrastProgrammer

Hrast - I'm so sorry about your decision - it's a real loss. I've been using your demo 42X on emu48 (my G+ can't cope) for several weeks now and am fascinated by the virtual machine hierarchy. To hell with boorish demanding stupid and insensitive twerps! Please know that you and your work are appreciated.

Re: What happened !?
*Message #11 Posted by **George Rose** on 9 Mar 2003, 9:02 a.m.,*
in response to message #1 by John Smith

In another thread I asked where to find the hp42s emulator. I was refered to this site, and I too found the same results. I am relatively new to the HP Forum. It's a shame, but it happens in all facets, that a few imbeciles can ruin something really great for so many other people.

Re: What happened !?
*Message #12 Posted by **John K. (US)** on 9 Mar 2003, 9:38 a.m.,*
in response to message #11 by George Rose

Indeed. This is the second developer of HP emulators in the last six months or so who has decided (or been forced) to stop distribution of their efforts. Most unfortunate.

Re: What happened !?
*Message #13 Posted by **Gray Wilson** on 9 Mar 2003, 11:07 a.m.,*
in response to message #12 by John K. (US)

John - Who was the first developer?

Re: What happened !?
*Message #14 Posted by **Mike (Stgt)** on 9 Mar 2003, 2:31 p.m.,*
in response to message #13 by Gray Wilson

The other one was Bernd Abel who never saw one penny from the distributer of his Coconut-emulator for PalmOS.

Hi HrastProgrammer! I'm very sad about your decission, but I respect it. You see that I announced my emulator for several years but up to today did not publish it. Such a publish would meen _all_ may use it. And _all_ includes about 50% women <G>, 15% supporter of war, 10% racists, several inanes, and some ignorants.

I'm still fighting with me to publish (or perish), the Gaia Hypothesis in mind (there is only one living beeing on earth and we _all_ are part of it) I must see that _all_ those I don't realy like are my brothers and sisters not to slander :(

Ciao.....Mike

Errata, typo
*Message #15 Posted by **Mike (Stgt)** on 9 Mar 2003, 2:39 p.m.,*
in response to message #14 by Mike (Stgt)

sorry, I typed too quick: inanes = insanes

BTW, I do not publish my eMail address any more on this list as it was used for spam (Nigeria-hoax).

Ciao.....Mike

Nigeria/Mauritius Ministry FRAUD
*Message #16 Posted by **Windsmurf** on 9 Mar 2003, 8:03 p.m.,*
in response to message #15 by Mike (Stgt)

You too? I received the below after I posted a wanted ad.

ATTENTION: PRESIDENT

Good Day ,

I am writing with a strong conviction that your personal health and that of

your business is sound.

I am a civil servant with the MAURITIUS URBAN AND RURAL DEVELOPMENT. I AM THE CHAIRMAN OF THE CONTRACT AWARD AND MONITORING COMMITTEE OF THE Ministry of Urban & Rural Development. Our duty is to conceive, implement, and monitor projects aimed at improving the basic amenities, and providing social and recreational activities in urban & rural areas, including deprived localities, and to coordinate projects on urban and rural development at the national level. During the course of our duty and with our various position.we could be able to secure the sum of US$15,500,000:00 MILLION{FIFTEEN MILLION,FIVE HUNDRED THOUSAND UNITED STATE DOLLARS}. Which money the Ministry of finance is waiting to grant approval for it to be transferred to any Bank account that may be submitted. We are anxious to transfer the fund out of MAURITIUS into an account of a very reliable, honest and dynamic businessman who will guarantee the safety and confidentialit! y of the fund. We are committed to surrender 30% of the entire fund to the person as commission for his assistance and services while 65% will be for myself and my partners, and 5% is to cover any expenses that may be incurred by both parties involved. This transaction is 100% legal and safe. We would prefer to use you and your company accounts for this purpose if you will oblige. Send the following details immediately by fax:

A. Name, Address, Telephone & Fax Number of your Company

B. Name and Address of your Bankers

C. Your Account Number (That can accept this figure)

Please send this information to my email address immediately to enable us forward it to Apex Bank for onward transfer. Note that the transaction of this magnitude requires UTMOST URGENCY,TRUST,HONESY AND CONFIDENTIALITY AT YOUR SIDE. I AM WAITING FOR YOUR URGENT REPLY THROUGH THIS EMAIL ADDRESS: anayiobi@37.com

MY REGARDS,

MR.ANAYI OBI.

REPUBLIC OF MAURITIUS.

Re: What happened !?
*Message #17 Posted by **John K. (US)** on 9 Mar 2003, 7:41 p.m.,*
in response to message #14 by Mike (Stgt)

Yep, that's who I was thinking of, though I didn't realize that his distributer (PalmSource?) hadn't paid him. A shame, really. Coconut is a pretty good emulator and I'd really like to use it with my new 515. :^(

Re: What happened !?
*Message #18 Posted by **Fred Lusk (CA)** on 9 Mar 2003, 8:16 p.m.,*
in response to message #14 by Mike (Stgt)

Mike…

I just bought a Palm Tungsten T and one of the first things I downloaded was the Coconut emulator. Except for having a lot of keyboard squeezed into a small screen, I like it very much. In fact, I was going to register it soon so I could keep a couple of programs loaded.

If the above is true - and I have no reason to doubt you - then this is a crying shame and I certainly don't want to register via the distributor. I will try the website listed in the Help|About screen and see if I can register with the author directly. I'm a firm believer in paying the right person for their hard work.

Fred

Re: What happened !?
*Message #19 Posted by **Fred Lusk (CA)** on 9 Mar 2003, 9:05 p.m.,*
in response to message #18 by Fred Lusk (CA)

Well, that didn't work. Bernd's website has been shut suspended. Next, I will try his e-mail.

FEL

Bernd's website shut suspended
*Message #20 Posted by **Mike** on 10 Mar 2003, 3:41 p.m.,*
in response to message #19 by Fred Lusk (CA)

Well, his formerly URL gives not much information any more. Frome time to time I just use G**gle see if may be something new. And I found his website shut suspended. But on G**gle there is a link "from the archives", an in there I found Bernd's complains about his distributor. I never contacted him about that (I am known to be not very diplomatic and if someone is angry I easily may use one wrong word), just not to make things worse.

It's a pitty, he lives near Stuttgart (that's near Heidelberg for those in the old US of A <G>) and I invited him once or twice to join the HP Palmtop meeting in Weiblingen (where I had the chance to test his emulator), but he never showed up.

There is an other sad story about an emulator for Pocket PC. It _is_ for free and big, well known ash*les try to sell it! Not funny.

Ciao.....Mike

no errata - too many typos :(
*Message #21 Posted by **Mike (Stgt)** on 10 Mar 2003, 3:46 p.m.,*
in response to message #20 by Mike

only the worst, sorry: "w_A_iblingen" of cause.....Mike

Re: Bernd's website shut suspended
*Message #22 Posted by **Fred Lusk (CA)** on 10 Mar 2003, 9:46 p.m.,*
in response to message #20 by Mike

Mike…

I am interested in reading Bernd's message, but I must be blind and I couldn't find a "from the archives" choice on G**gle. Could you post the URL?

Thanks, Fred

Re: Bernd's website shut suspended
*Message #23 Posted by **Mike (Stgt)** on 11 Mar 2003, 7:26 a.m.,*
in response to message #22 by Fred Lusk (CA)

Hi Fred!

it was there: http://www.google.de/search?q=cache:tAYP_rV8Ll4C:www.berndabel.de/home.html+bernd+abel&hl=de&ie=UTF-8. But that was several month ago. Now a copy of the sad "This site...no longer available." is in the Google archive too.

Re: What happened !?
*Message #24 Posted by **Chris(FLA)** on 10 Mar 2003, 7:11 a.m.,*
in response to message #18 by Fred Lusk (CA)

If the above is true - and I have no reason to doubt you - then this is a crying shame and I certainly don't want to register via the distributor. I will try the website listed in the Help|About screen and see if I can register with the author directly. I'm a firm believer in paying the right person for their hard work.

I payed for mine and feel the same as you do. I fully expected my payment to go to the author. This has really dissapointed me.

Chris

Re: What happened !?
*Message #25 Posted by **John K. (US)** on 11 Mar 2003, 3:01 a.m.,*
in response to message #24 by Chris(FLA)

I payed for mine and feel the same as you do. I fully expected my payment to go to the author. This has really dissapointed me.

Same here. In fact, I was hoping to register a second copy, but no-joy. I still have hopes that I'll be able to get in touch with him and pay him directly for the second copy.

Re: What happened !?
*Message #26 Posted by **Werner Huysegoms** on 11 Mar 2003, 2:21 a.m.,*
in response to message #18 by Fred Lusk (CA)

I use P41CV By Charles Lee. Registering is only 7$, and allows you to have more than two full calcs and to use grafitti to enter ALPHA data. Even though it wasn't really necessary to register it, (it is very usable as is) I did so right away. You can find it at PalmGear.

Werner

Re: What happened !?
*Message #27 Posted by **John K. (US)** on 11 Mar 2003, 3:12 a.m.,*
in response to message #26 by Werner Huysegoms

I use P41CV By Charles Lee.

It's a pretty good alternative to Coconut-- in some ways, it's even better. Module loading is **much** simpler than in Coconut and it is significantly cheaper. Plus, the new Memo Pad compiler is pretty cool.

Unfortunately, some of the memory-swapping features aren't as nice and it doesn't emulate the 41CX. Still, it's a good emulator for 41C hacking. The latest update was yesterday (to v0.11 -- I'm really looking forward to v1.0), so it has the advantage of continuing development. :^)

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP55 power supply
*Message #1 Posted by **Larry B** on 8 Mar 2003, 8:58 p.m.*

I have a couple of calculator from my dad. There are no batteries but the power supplies don't work either. Do these need a battery in place for the a/c adapters to work??

Thanks, Larry

Re: HP55 power supply
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 8 Mar 2003, 10:06 p.m.,*
in response to message #1 by Larry B

Hi, Larry;

I have an HP55 and the User's Manual does not explicitly state that you should not put the unit to work without the batteries inside the batteries compartment. It's clear that you should not insert the AC adaptor with the calculator switched to ON (may damage the unit) or use it with the plug partially inserted (may damage batteries and AC adapter). This is because the AC adapter delivers two voltage levels: aprox. 5Vcc, stabilized (internal calculator circuitry while charging) and 12Vcc not regulated (charger circuit). If you insert the adapter plug while the calculator is ON, chances are the internal circuitry will receive the 12Vcc instead of expected 5Vcc.

Mine was given by a friend that was using it without batteries for the last ten years, no damage at all. I accept the fact that the AC adapter already delivers the correct voltage to the circuits, so the battery is disconnected when you plug the charger/adapter while working with it. You can make a simple test: gently fasten the golden flat-spring "jumper" that connects both inlet connectors for the AC adapter in the calculator. The calculator will not turn to ON, batteries are disconnected while charged is plugged in. No need for the batteries while charging. That's why the User's Manual does not explicitly asks not doing it. Neither the opposite.

Just think of the fact the batteries contacts may fail wihle charging; should this damage the unit? My 82143A was damaged because I forgot to put the battery pack back inside before

connecting the AC adapter. I do not agree with this procedure when you have an equipment that allows batteries to be easily removed and are connected with surface connectors, not pressure-clamp or soldered type.

Hope this helps.

Luiz C. Vieira - Brazil

Re: HP55 power supply
*Message #3 Posted by **db(martinez,california)** on 9 Mar 2003, 12:36 a.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

luiz is right.

also, you said that you have a couple. if your other is an hp 65, 67, 97, 21 - 29, or 31 - 38 (except the 35) then NEVER CONNECT IT TO THE AC ADAPTER WITHOUT A GOOD RECHARGABLE BATTERY PACK IN PLACE AND WELL CONNECTED!!! doing so can fry it's little brain. this may not happen the first time, or the tenth, but it will happen and you dont know how many times it has happened in the past.

this warning does not apply to the 67cx :-)

Re: HP55 power supply
*Message #4 Posted by **Tony Duell (UK)** on 9 Mar 2003, 1:59 p.m.,*
in response to message #1 by Larry B

The HP55 should work correctly (and without risk of damage) from the AC adapter without a battery pack installed. When the adapter is connected, the battery is disconnected from the rest of the calculator, and the adapter provided 2 separate outputs -- a constant voltage one to run the calculator and a constant current one to charge the battery. I can e-mail you an Ascii-art schematic of the 'classic' series adapter if you are sure that's what the problem is. But why do you suspect the adapter rather than a fault in the calculator?

Re: HP55 power supply
*Message #5 Posted by **Larry B** on 10 Mar 2003, 11:35 a.m.,*
in response to message #4 by Tony Duell (UK)

Hi Tony, its a 50-50 toss up. I have been told that the adapters are notorious for their lack of ruggedness. Hence, the suspicion. Does that schematic show voltages at the pins? If so, your emailing it to me would be appreciated.

Thanks

Re: HP55 power supply
*Message #6 Posted by **TOny Duell (UK)** on 10 Mar 2003, 6:05 p.m.,*
in response to message #5 by Larry B

I can't remember if I included the voltages or not. However, with the connector 'holes upwards' and the cable going away from you (i.e. with the connector in the same position that it would be in if plugged into a calculator that's in use) : The middle pin is ground. The pin o nthe left is the constant voltage logic supply and should read 4.2V or so. The one on the right is the battery charger supply and will read about 16V off-load. Only the logic supply is important to getting a 55 to power up.

Troubleshooting Classics...
*Message #7 Posted by **Tony Duell (UK)** on 10 Mar 2003, 6:15 p.m.,*
in response to message #5 by Larry B

... is easy if you know the trick. The trick is that there are 12 testpoints on the logic board of a 35, 45 or 55, going down the RH edge of the PCB (looking at the component side of the PCB). From the 'top' (display end of the calculator) they are : Vss , Gnd, Phi_1, Phi_2, Vgg, IS, IA, Sync, WS, Init, Carry, Data Start by checking the voltage on Vss (should be +6.2V) and Vgg (-12) wrt ground (or the middle pin of the AC adapter) with the adapter connected and the machine turned on. If both voltages are missing, check the AC adapter, power switch, PSU circuit on the logic board, etc. If one of them is missing/incorrect, check the PSU circuitry on the logic board. When you've got that right, check the clocks Phi_1, and Phi_2 with a 'scope or logic analyser. If one or both is missing, check the clock buffer chip, the anode driver chip (on the keyboard/display PCB) and the oscillator 'tank'. Got power and clocks? Now check the IA and IS lines with a 'scope. They should show irregular digital puse trains (IA is the instruction (ROM) address from the C&T chip, IS is the Instruction data from the ROMs) If they're wrong, suspect the C&T or ROM chips.

Re: HP55 power supply
*Message #8 Posted by **David Smith** on 9 Mar 2003, 3:43 p.m.,*
in response to message #1 by Larry B

The 35/45/55/70/80 work just fine without a battery pack. The 65 and 67 are best not connected to the charger without a battery because the battery terminal is connected directly to the card reader circuit... without a battery there is a slight chance it may be damaged... even if the machine is off. The '21-29 are VERY easily damaged if conencted to the charger without a GOOD battery pack installed and making GOOD contact.

It is VERY common for the HP35 style charger to develop bad connections in the calculator plug. If you are careful, you can slice off the top of the plug and fix the connection and then reglue the top down.

Another problem is a bad filter capacitor in the charger. Usually shows up a dim, flickering digits.

Re: HP55 power supply
*Message #9 Posted by **Larry B** on 10 Mar 2003, 10:40 a.m.,*
in response to message #8 by David Smith

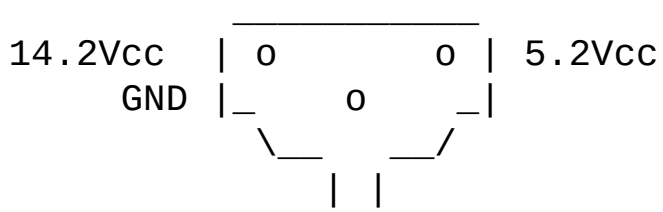
Is there a diagram somewhere that shows how the a/c adapter pins should read on a voltmeter??

Thanks, Larry

Re: HP55 power supply
*Message #10 Posted by **Vieira, Luiz C. (Brazil)** on 10 Mar 2003, 11:56 a.m.,*
in response to message #9 by Larry B

Hi;

looking at the pins form the connector, you see:



Measures were made with a common voltmeter (not such a good precision instrument,

yet somewhat reliable) and AC outlet (measured with same instrument) measured as 222Vac. The 14.2Vcc will be reduced to 12.8Vcc when connected to charge, i.e., voltages measured without current consumption.

Hope this helps.

Luiz C. Vieira

Re: HP55 power supply
*Message #11 Posted by **David Smith** on 10 Mar 2003, 4:17 p.m.,*
in response to message #10 by Vieira, Luiz C. (Brazil)

If the filter cap is bad, the voltages can look pretty normal and can even look good on a scope unless a load is connected.

Re: HP55 power supply
*Message #12 Posted by **Larry B** on 11 Mar 2003, 9:39 a.m.,*
in response to message #11 by David Smith

The adapters seem to be putting out a/c instead of dc. I measured 0 volts for dc for either output and 17.4/4.6 in a/c mode. Is that right?

Lar

Re: HP55 power supply
*Message #13 Posted by **Vieira, Luiz C. (Brazil)** on 11 Mar 2003, 10:47 a.m.,*
in response to message #12 by Larry B

Hi;

you should read DC instead of AC . There is something wrong.

For the records: can you have a look at the AC connectors side and check for their # ID? You should read:

```
    H E W L E T T - P A C K A R D
  82002A BATTERY CHARGER - AC ADAPTER
```

if there is another # ID instead of 82002A you have a differnet AC adapter type. Otherwise, there are problems in yours and it seems bad rectifier

bridge, filter capacitor is probably blown out and voltage regulator is dammaged, too.

I hope you have a different AC adapter and you have not tried them in your units. Anyway, transformer is fine and electronics may be repaired with new components.

Success. I'm waiting for good news.

Luiz C. Vieira - Brazil

Re: HP55 power supply
*Message #14 Posted by **Larry B** on 11 Mar 2003, 11:14 a.m.,*
in response to message #13 by Vieira, Luiz C. (Brazil)

It does say 82002A. Too bad.

It looks well-sealed. Can it be serviced internally?

Thanks, Larry

Re: HP55 power supply
*Message #15 Posted by **Vieira, Luiz C. (Brazil)** on 11 Mar 2003, 12:26 p.m.,*
in response to message #14 by Larry B

Hi, Larry;

mine has four screws, two at each corner at the AC connectors side and two coser to the three-wires cord. Have you checked if yours have them too?

Tony Duell seems to have the dircuit diagram for these adapter/ chargers. I think it's a good idea contacting him by his e-mail address, ard@p850ug1.demon.co.uk , as posted in this very thread.

I can open mine and figure its schematics out, if you want to. Be my guest.

Best regards.

Luiz C. Vieira - Brazil

Re: HP55 power supply
*Message #16 Posted by **David Smith** on 11 Mar 2003, 4:06 p.m.,*
in response to message #15 by Vieira, Luiz C. (Brazil)

Some of the units require a very small security torx bit to open (which can be hard to find), others have normal screws.

Re: HP55 power supply
*Message #17 Posted by **Larry B** on 13 Mar 2003, 2:09 a.m.,*
in response to message #16 by David Smith

Mine have Phillips head screws.

You guys have been incredibly helpful. Honestly, I cannot find the time or the will to rip into these adapters and start troubleshooting them at this time. Tony, I will keep your email address for later use, if that is ok? Luiz, please don't open yours up for the purpose of drawing me a schematic. When the time comes I will be back. Meanwhile, they are confirmed dead, to be resurrected later.

Thanks again, Lar

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP 48GX and the display
*Message #1 Posted by **Scuba Diver** on 8 Mar 2003, 8:07 p.m.*

Hello everyone!

I was walking through downtown Toronto today and I came across an electronics store that had some 48GXs and 17BIIs for sale (they were all in boxes, no blister packs, so I knew they were older units).

There was one 17BII left; it was Indonesian from 1998 and I found the keys to be extremely loose... nothing like the older Pioneers...I guess when production moved to Indonesia, HP decided to cut the production costs even further by reducing their quality thresholds...

Anyhow, I put the 17 back and grabbed a couple of the 48s. After about 30 minutes of playing, I caved in and bought one. I could have bought one on eBay, but by the time I add shipping, duty and the exchange rate it's usually the same price as buying one here.

I played with a couple of the 48s he had there and they all did something interesting when I turned them on; for a split second after pressing the ON key, every pixel fires except for a vertical line about 5 pixels in from the right hand side. The whole thing lasts for less than a second.

Once that's done, everything seems OK; the pixels that didn't fire during startup appear to work just fine.

I didn't check all of the units, but I do remember another one doing this...is it normal?

Thanks! B. P.S. Once production of the 48 ceased in Singapore, where did it move to? Indonesia or China? How do the new ones compare to the older ones? I know the newer black screen is nicer, but what about the keyboard feel?

Re: HP 48GX and the display
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 8 Mar 2003, 8:25 p.m.,*
in response to message #1 by Scuba Diver

Hi;

I had an HP48G and now I have two HP48G+. I keep an HP48SX and I also have an HP49G.

Since I bought the HP48SX it reacts like this: "randomly" chosen vertical lines (always vertical) sometimes come off; if the earlier (blue-over-cyan LCD) HP48G+ is reset or master cleared, it happens something like this.

Newer black-dots LCD units (both HP48G+ and 49G) do not show this behavior so often; I remember seeing this in the HP48G when I first placed batteries in and switched it to ON. The 49G has a different startup screen.

Hope this helps.

Luiz C. Vieira - Brazil

Re: HP 48GX and the display
*Message #3 Posted by **Scuba Diver** on 9 Mar 2003, 9:08 p.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

Thanks Luis!

So how do you like your black-dot 48G+? I assume that the other 48G+ you have is cyan-dot? Do you notice a quality difference between the two?

B.

Re: HP 48GX and the display
*Message #4 Posted by **Vi** on 9 Mar 2003, 9:55 p.m.,*
in response to message #3 by Scuba Diver

Hi, Scuba;

to be honest? I did not feel much differences, mostly because both 48G+ (you're right: one is blue-, other is black-dot LCD) are from Indonesia. Key feeling, overview quality... mostlu the same, no changes so far except for the LCD.

Serial # are:

ID02000xxx (earlier) and ID13900xxx (newer).

I use the blue-dots much more than the black-dots; I did not stop to think of it, maybe it's a way to preserve the newer for an "emergency call". I sometimes play the tests with the new black-dot so I can check for problems.

I know it's not much information, but they look so much alike it's hard to find major differences.

Best regards.

Luiz C. Vieira - Brazil

Re: HP 48GX and the display
*Message #5 Posted by **Vieira, Luiz C. (Brazil)** on 9 Mar 2003, 10:32 p.m.,*
in response to message #3 by Scuba Diver

Hi, Scuba;

to be honest? I did not feel much differences, mostly because both 48G+ (you're right: one is blue-, other is black-dot LCD) are from Indonesia. Key feeling, overview quality... mostlu the same, no changes so far except for the LCD.

Serial # are:

ID02000xxx (earlier) and ID13900xxx (newer).

I use the blue-dots much more than the black-dots; I did not stop to think of it, maybe

it's a way to preserve the newer for an "emergency call". I sometimes play the tests with the new black-dot so I can check for problems.

I know it's not much information, but they look so much alike it's hard to find major differences.

Best regards.

Luiz C. Vieira - Brazil

Re: HP 48GX and the display
*Message #6 Posted by **Jeffrey_G** on 11 Mar 2003, 7:40 a.m.,*
in response to message #1 by Scuba Diver

Hi Scuba,

Don't be alarmed by the LCD initialization. The "ON" pixels are simply displaying random bits remaining in the display register. It might not look elegant, but this will in no way harm the LCD.

Jeff

Re: HP 48GX and the display
*Message #7 Posted by **Vieira, Luiz C. (Brazil)** on 11 Mar 2003, 8:24 a.m.,*
in response to message #6 by Jeffrey_G

Hi, Jeffrey;

one thing I noticed is that if you let the 48 resting for a while before switching it to ON, chances are you'll have the vertical "traces", but if you switch it to ON right after switching it OFF, the display comes clear. The more time you wait till you turn it ON again, better are the chances the display lines "flick".

I thought this was more related to capacitive LCD characteristics, i.e., turning the unit ON and OFF quickly would keep previous charged condition, what means no current flow when turning them ON again. Otherwise, if you wait too much time (say, a day or so), scan circuits would find discharged capacitors (LCD cells) as brief short circuits (as seen by a circuit that "expects" tens of megohms) resulting in vertical traces because of voltage drop.

What do you think? Too much brainy actibvity for such a small "flickering" LCD?

I think yours is a better explanation. Mine is too ambitious...

Best regards.

Luiz C. Vieira - Brazil

Re: HP 48GX and the display
*Message #8 Posted by **Scuba Diver** on 12 Mar 2003, 7:57 p.m.,*
in response to message #7 by Vieira, Luiz C. (Brazil)

Thanks to both of you!

Yes, Luiz, you are completely correct; if you turn it on immediately after turning it off, it doesn't flick, however if you wait a couple of minutes before turning it back on, it does flick.

As for the reason, Luiz, I would take your ambitious explanations any day! I love to read your posts!

B.

I just try...
*Message #9 Posted by **Vieira, Luiz C. (Brazil)** on 12 Mar 2003, 9:20 p.m.,*
in response to message #8 by Scuba Diver

... to deserve being amongst you, being amongst the best. And I think this is the place where I find them.

Thank you. Reading your words makes me think I'm not in the wrong way.

Best regards.

Luiz C. Vieira - Brazil

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

The Good Old Day and Bad New Days

*Message #1 Posted by **Todd R. Kraemer** on 8 Mar 2003, 6:14 p.m.*

I'm a 36 year mechanical engineer in the automotive industry in Michigan.

This past week, there was the Society of Automotive Engineers (SAE) World Congress in Detroit, Michigan. My younger brother who is also an automotive engineer (in Germany) traveled to the US on business and we visited at the SAE show. He has a HP-48 but he mentioned that he liked the small but very functional HP-32-SII that I had. Before he returned to Germany, I gave him the calculator and owners manual thinking that I could easily buy a new one later in the week when I would be on the Michigan State University campus. To my surprise, MSU did not have any HP caculators in their student book store. I even drove to Ann Arbor, Michigan (University of Michigan) only to discover that they did not have any small RPN calculators. In disgust, I started my internet search for a replacement for the 32SII I gave away. I was shocked to find that HP has left this market. I am hoping that they will offer something similar to the 32S in the near future....

In my internet search, I discovered this site and forum. This sent my mind back to my initial experiences with HP's and RPN....those were the good 'ol days...

In 1980, my dad had given me an old HP-45 when I started High Shcool - that started my RPN addiction. As the Christmas of 1981 neared I was in the 10th grade and taking Chemistry. My Chemistry teacher had a HP-41 with a card reader that he used for various calculations and experiments - I thought it was the most impressive calculating machine on earth. I convinced my dad to let me pitch in $120 that I had saved to pay for roughly half the cost of a HP-41CV. He drove me to Ulrich's Bookstore in Ann Arbor, Michigan on the University of Michigan campus and we bought a HP-41 for $256.00 as my Christmas gift. I spent the entire Christmas break playing with and programming that wonderful little machine. It server me well through high school, engineering university and into my first engineering job. I only retired the calculator to back-up status in 1989 when I bought a HP-48SX. I fondly remember those days.

Looking back, I learned a lot about programming with the HP41 and that experience set me on my way with PC based programming and that ultimately helped me get hired into my first engineering job...

For me, a lot of my career was built on the knowledge foundation that started with a HP calculator. I would like to see other young students have this same wonderful experience. I hope HP will make this possible.

Re: The Good Old Day and Bad New Days
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 8 Mar 2003, 10:12 p.m.,*
in response to message #1 by Todd R. Kraemer

Hi, Todd;

I second you in your thoughts about HP calculators and RPN addiction. What bothers me is: are younger students being stimulated so they "have" to think the way we used to?

I'm an electrical engineer, I'm 41 Y.O. and I tell you I passed throughout the same neural and "synaptic"-level development. I have nothing, nothing against algebraic notation, but having a second way to work problems over and find the same results creates invisible "neural links" that surely will cause reasoning and math self development. We're engineers, it's necessary having the means to achieve a solution. And having more than one tool is always better.

I used to go through a problem in order to understand its solution so I could develop a program to test all available input data and check its behavior, plot it and study it. But this was in "our" time, with "our" available tools.

I do not belong to the time "slide rules" were used in universities, but I had teachers that were not "dam" pleased with the students that did not use slide rules, instead they prefer those "fancy electronic boxes full of buttons", as one of them used to curse. I was one of his victims...

I always asked myself: "Were they right? Was I wrong?". I defend my point of view for my time, as those teachers defended their own, with their slide rules. They built part of their world with slide rules as we built part of ours with electronic, digital calculators. We knew programmable, RPN tools that were not available at their time. And we complain about the fact that if we had accepted the slide rules instead of embracing electronic calculators, we should then go before the logarithmic tables and keep ourselves there.

I don't know what's about to come, but I expect the "new stuff" worth replacing our calculators for them. We have PC's, laptops, handhelds, palms, and we are now going to "organizers" and PDA's. I have not found my calculator's replacements. And at this very moment I think I do not want to be like my "slide rules dependant" teachers. And it is hard to change. I haven't yet. But I'm waiting for something that's dam pretty good so I accept it for my RPN calculators. But I'll not get rid of them, sorry.

BTW, I have a new-in-blister HP32SII (never opened). E-mail me if you have thoughts about

it...

Best regards.

Luiz C. Vieira - Brazil

Can still buy 32Sii
*Message #3 Posted by **Norm** on 9 Mar 2003, 2:05 a.m.,*
in response to message #1 by Todd R. Kraemer

Hi, Saw what you were saying about needing to replace your prior 32Sii. You can still get them on eBay of course. Not only that, there are still some new units available. Yes, at ticket-scalper prices. But if you want a new one, you can get one. I have a 32Sii new/sealed, and a manual also, but I just got it so you would not like what I paid. analogee@gte.net

Re: The Good Old Day and Bad New Days
*Message #4 Posted by **lars johansson** on 9 Mar 2003, 10:07 a.m.,*
in response to message #1 by Todd R. Kraemer

if you still have your old 41 you are not in any serious trouble :-)

--lars

Re: The Good Old Day and Bad New Days
*Message #5 Posted by **Renato** on 9 Mar 2003, 10:40 a.m.,*
in response to message #1 by Todd R. Kraemer

Todd, Yours is a perfect post for the "memories" forum. Best wishes, Renato

Re: The Good Old Day and Bad New Days
*Message #6 Posted by **James Stephens** on 9 Mar 2003, 11:40 a.m.,*
in response to message #5 by Renato

Excellent point, Renato. If hp isn't designing and manufacturing calculators, there is always cause for concern. Do note, though, that hp has closed down their calculator division more than once, only to establish a new one. The major product created by ACO was the hp-49g, and its failure was--I imagine--the reason ACO was closed. Look at it this way and I doubt too many members of this forum should see a problem justifying the shut-down of ACO (although I'm still one of the few who like the 49, have never had a problem with the machine itself--no scratches on the screen cover, no problems with the keyboard--but rather with the poor documentation).

When hp announced the hp-49g before it was introduced, experienced observers (not I, btw) noted that this was a departure from the norm. I'll bet we won't see any pre-announcement of new calculators, and am keeping my fingers crossed that hp will get back into the calculator design business.

Re: The Good Old Day and Bad New Days
*Message #7 Posted by **Christof** on 9 Mar 2003, 12:22 p.m.,*
in response to message #6 by James Stephens

>> When hp announced the hp-49g before it was introduced, experienced observers (not I, btw) noted that this was a departure from the norm. I'll bet we won't see any pre-announcement of new calculators, and am keeping my fingers crossed that hp will get back into the calculator design business. >>

It won't. Not as long as people like Carly are running the show.

This is the HP that cancelled the alpa to go with the *known DOA* itanium. Because they want to distribute, not manufacture.

This is the HP that prefers to license inkjet tehchnology and stop making printers. Because they want to distribute, not manufacture.

This is the HP that is offering the Kinpo 9g. Because they want to distribute, not manufacture.

it's a shame, but as my friends keep telling me "it's business, this is how it works." (not sure I'm buyin that as an excuse.)

Re: The Good Old Day and Bad New Days
*Message #8 Posted by **Wayne Brown** on 10 Mar 2003, 8:33 a.m.,*
in response to message #7 by Christof

This is also the HP that decided to discontinue the HP3000, the computer that put HP on the map in the computer business, and is still one of the most reliable systems around. (It's also still profitable for HP.)

Worst of all, this is the HP that threw Walter Hewlett (the son of founder Bill Hewlett) off the Board of Directors. That reason alone is enough for me to do everything I can to cost HP as much business as possible.

hp will have a triumphant return!
*Message #9 Posted by **Jeremy** on 9 Mar 2003, 9:56 p.m.,*
in response to message #1 by Todd R. Kraemer

A few days back, I sent an email to hp expressing my concern for their downgrade in build quality and lack of a scientific RPN calc that wasn't also a behemoth graphing calculator.

They replied and said that they would have a new RPN scientific out by the end of this year. So please don't panic, go to eBay and grab your ankles.

Here was my solution: I went to eBay and consider paying too much just to have one. (on the order of $220) I decided that it's not worth it. On eBay, they are practically GIVING away the hp 48G models. Yes, they're big and clunky, and somewhat slow. Even if you never use the graphing functions, remember that it is a like-new hp RPN calc. for $30-40 with an equation library. That will tide me over until I find out whether the next-generation will be well-built or not.

If you decide you really like the strictly scientific ones, look for models that offer the features you need, but which are not necessarily old enough to be collectible or new enough that people are buying them in a panick. I just lost an auction on a 42s that sold for $95. That's not too far out of whack, IMO.

I hope all my babbline has helped a bit.

-Jeremy

Re: hp will have a triumphant return!
*Message #10 Posted by **John K. (US)** on 11 Mar 2003, 3:47 a.m.,*
in response to message #9 by Jeremy

On eBay, they are practically GIVING away the hp 48G models.

Yeah, and the 48G has the oh-so-useful 32KB chip to turn your everyday, garden variety 42S into a beefy 42SV. :^)

Thanks for the great story
*Message #11 Posted by **Jeremy** on 9 Mar 2003, 10:07 p.m.,*
in response to message #1 by Todd R. Kraemer

Since I'm only 26, I love to hear stories like that. It is great when we can put our fingers on the source of our inspiration like that.

The thing that got me started on the electronics engineering/ technician path was when my grandpa taught me to solder at the age of 9. I spent hours in his basement shop building things with old touchtone telephone keypads. In fact, I still remember what my first 'Franken-Project' was: It was shortly after I discovered that each key was a simple switch. I hooked up a battery and made each button activate something different. Some keys activated LEDs, and some activated a little motor or something. Completely useless, but it was like magic to me...

As for the calculators, I've pretty much cut my mathematical teeth on my trusty TI-85. I have to admit that the features are much more intuitive. Still, I like the RPN entry for basic stuff. The argument that RPN is less prone to entry error doesn't apply to an algebraic graphing calculator, since you can see everything you just put in and double check it before you hit 'Enter'.

What I really like about the HPs is the build quality. You can tell they built these things to last. They make everything else look and feel cheap in comparison. It was great that they wouldn't compromise build quality for price and mass distribution. You have to respect that integrity. Sadly, many more people will buy the HP name not knowing that they have sold out.

I don't know if the HP people who are making the decisions are aware of this, but HPs little niche in the market was top quality calculators with RPN, and great build quality. Personally, I think it is much too late for them to compete with TI & Casio on this front. HP will get decimated on this front. (Unless of course, they read this forum, hehehe)

-Jeremy

Re: Thanks for the great story

*Message #12 Posted by **Scuba Diver** on 11 Mar 2003, 10:52 p.m.,*

in response to message #11 by Jeremy

Jeremy, I don't know if I agree with you.

You said that it's too late for HP to compete with TI & Casio; I think that in most people's minds, HP still represents quality calculators. The poor quality has only existed in the last 4 years or so; since most people have older calculators, they have no idea that the quality has dropped. HP still has a chance to win over people, however the demand for RPN is dropping. If HP makes a conscious decision to remain in the calculator *manufacturing* and marketing business, then they need to do a few things:

1. Build a wide range of RPN including basic 4-function. This will allow people of all ages to use RPN and get used to RPN. The calculators must also be well designed and a convenient size (note one of my earlier posts; let the engineers do the designing, not the marketers!)

2. Give away a whole whack of these to schools and teachers. If they are given new technology for FREE, then they will adopt it. Of course, we'll need to teach them RPN, but that's a story for another day!

3. Price them appropriately. If teachers tell their students to go out and buy a calculator, they will. It shouldn't be priced through the roof, however it doesn't have to be $12.99 at Wal-mart either.

4. Although this fits more with point 2, they should also have support products, such as something that can allow the screen to be displayed on an overhead, maybe even interactive tutorials, etc...these tools make teaching easy and show that HP is committed to students.

There we go...my 2 cents Canadian. I think that HP can recover, however it requires a clear long-term strategy as well as long-term corporate support. Without either one of these, RPN is sunk.

B.

A New RPN Manufacturer
*Message #13 Posted by **Bill Platt** on 13 Mar 2003, 10:48 a.m.,*
in response to message #12 by Scuba Diver

It is clear to me that the time has come to start a NEW company to make RPN machines.

Forget about big business--time to fill in a market niche.

When I lost my 11-C on an Airplane in 1996, I went to the store and was happily amazed to find that while my trusty 11-C was gone, the 32Sii was half the price, 15 years later, much more powerful, and totally compatible with the programming of the 11-C.

The fact that it was $70 and not $12 just did not matter. I would have happily spent $100 for the quality.

I know I am not alone. When I discovered the hpmuseum, hpcalc.org, this forum, etc, I realized that there is a critical mass...

Just as there are "super-premium" ice creams, "super-yachts", and "super-cars", there certainly can be "super-calcs".

Let's DO IT--Build a new company! Any players?

Re: RPN Manufacture -- What are the Statuses of HP's "RPN Patents"?
*Message #14 Posted by **Paul Brogger** on 14 Mar 2003, 10:42 a.m.,*
in response to message #13 by Bill Platt

This challenge has been brought up before -- search creatively in the Forum Archives and you'll find some of the concerns, hopes, fears, dreams, etc. that have surrounded the topic in the past. Some of the "how-to" technological aspects have been introduced by apparently knowlegeable and experienced folk. It all seems worth ferreting out, should one be considering this option.

One important issue relating to this is whether and how many patents HP may own relating to RPN and its implementation in calculating devices (or whatever). Can anyone shed any informal light on what the status may be of HP's body of patent protection in this area?

Quite apart from deciding whether to build competitive products, such information may help make sense of HP's actions of late. Might, for example, the imminent

expiration of certain key patents have figured in decisions relating to the calculator product line?

Re: A website with calculator patent information
*Message #15 Posted by **Frank Travis** on 14 Mar 2003, 10:58 a.m.,*
in response to message #14 by Paul Brogger

See website www.calcinfo.com. It has HP, TI, and other calculator patent information

I added this to my Favorites list
*Message #16 Posted by **Vieira, Luiz C. (Brazil)** on 14 Mar 2003, 1:19 p.m.,*
in response to message #15 by Frank Travis

Hi, Frank.

Thank you! This is a very important reference. I'm downloading the papers soon.

Best regards.

Luiz C. Vieira - Brazil

Re: RPN Manufacture -- What are the Statuses of HP's "RPN Patents"?
*Message #17 Posted by **Vieira, Luiz C. (Brazil)** on 14 Mar 2003, 1:13 p.m.,*
in response to message #14 by Paul Brogger

Hello, Paul;

let me freshen my memory up: was it you the one making experiences with an HP42S keyboard automatic input? If not, do you remember?

That thread was closer to others related to experiences, and I was one that called for a new design and brand. Names that come to my mind are Vassilis Prevelakis, Renato (Brazil), Tony Duel (not explicitly as a designer, more for hios concerns over the existing hardware), J.F. Garnier and others (unfortunately about 90% of my e-box contents was lost a few weeks ago, and I lost precious e-mails and e-addresses).

If it was not you, forgive-me. I'll try to dig the archieves and find something. For

sure the threads are located after Archieve 6 (2001, last months).

What do you think? Light up the fading fire? There are new, powerfull and unexpensive controllers that can make th trick and run a complete O.S. for calculators. KINPO designers already know about it...

Best regards.

Luiz C. Vieira - Brazil

Re: RPN Manufacture -- What are the Statuses of HP's "RPN Patents"?

*Message #18 Posted by **Paul Brogger** on 17 Mar 2003, 9:22 p.m.,*
in response to message #17 by Vieira, Luiz C. (Brazil)

Luiz:

Yes -- I experimented a bit with a Pioneer (17Bii) and found that, indeed, it should be possible to simulate keystrokes using (to my primitive notion) magnetic relays. The old Pioneer case and circuit board with a 17-line ribbon cable attached at various points is still in my electronics box.

Tony Duell sort of took over -- he wanted to use some more sophisticated electronics to effect the switching. It ended upon his "back burner" at last report, and I haven't heard anything since.

As a side effect of that investigation, if I remember right, Tony found that the second set of IC pads on the -42s circuit board is for an alternate PROM. The internal ROM could be disabled by tying a certain pin high or low, and the external ROM would be utilized instead. This promising development implied, for example, that one might be able to convert a 17BII circuit board to a 42s with a bit of electonics work.

But, I haven't heard anything for a long while -- maybe Tony will chime in?

I must say, as long as the HP-48 series is readily available, it's kind of overkill to go to extreme lengths to re-make other RPN models. True, the -42s size and 4-level stack are nice, but it's not like the -48 is absolutely unusable . . .

Also, I've chimed in on this topic in another way . . . If someone wants to

make an RPN calculator, take a look at the TI-83 and -89. These are in many ways general-purpose computer platforms, with industry standard CPU's (Z-80 and M68000, respectively), assembly language development tools, emulators, computer links, web sites, discussion boards, and (really) *tons* of documentation -- with all but the calculator absolutely free. . . . and the devices themselves are really not at all bad pieces of equipment!

I wrote a simple four-level RPN program in "TI-Basic" to try interface ideas -- X, Y, Z, T & Last X on the screen, simultaneously represented in both decimal and hex ('cause that's what interests me most), and with most of the typical math functions (*not* **%**!) executed when the appropriate key is pressed.

It's too slow and unresponsive to use regularly, but given what how that went, I'm sure something more satisfying could be implemented in assembler. But that's where it stands -- I haven't touched the thing in months, and haven't yet come up to speed on the assembly end of things. (In fact, when I get right down to it, my working 32S is all I need, and there are more important things . . .)

So, I'm sounding shrill and repetitive, but those of you wanting to customize your own RPN device should take a look at the current TI offerings.

Re: RPN Manufacture -- What are the Statuses of HP's "RPN Patents"?

Message #19 Posted by ***James M. Prange*** *on 19 Mar 2003, 10:19 a.m.,*
in response to message #17 by Vieira, Luiz C. (Brazil)

Eric Smith has an "HP Calculator Patents" page at http://www.brouhaha.com/~eric/hpcalc/patents/. I can't be sure that his list is complete, but of those that he has listed, it looks to me as if the one dealing with unit objects is the only one still in effect.

Regards,
James

Re: "RPN Patents"? -- Can't patents be renewed for a second 17-year period?
*Message #20 Posted by **Paul Brogger** on 19 Mar 2003, 1:54 p.m.,*
in response to message #19 by James M. Prange

Did I dream this, or is it true that patents may be renewed once for another 17-year period?

(I suppose I could look or an anwer on the Web . . .)
(Well, I guess I actually *am*, but I'm doing it **the lazy way!**)

Re: "RPN Patents"? -- Can't patents be renewed for a second 17-year period?
*Message #21 Posted by **Michael F. Coyle** on 19 Mar 2003, 2:08 p.m.,*
in response to message #20 by Paul Brogger

I Am Not A Lawyer, but...

No, U.S. patents are non-renewable. Perhaps you're thinking of copyrights, which I think can be renewed once.

BTW, the duration of patents has changed. It used to be 17 years from when the patent was *issued.* It is now 20 years from the patent was *applied for.* (I.e. the clock now starts earlier.)

- Michael

Re: RPN Manufacture -- What are the Statuses of HP's "RPN Patents"?
*Message #22 Posted by **David Smith** on 14 Mar 2003, 4:30 p.m.,*
in response to message #14 by Paul Brogger

Any patents on the basic RPN system would have expired 17 years after the 9100 was released in (?) 1968... if it was even patentable then. The basic technique was known several hundred years prior.

Re: RPN Manufacture -- What are the Statuses of HP's "RPN Patents"?

*Message #23 Posted by **Bill Wiese** on 17 Mar 2003, 5:02 p.m.,*
in response to message #22 by David Smith

The set patents on our beloved RPN version - the 4-level XYZT stack with T-copy-down and a LastX register - would've started counting down from early/mid-70s, not with the advent of the 9100 a few years earlier.

In any case, there's no issue NOW with RPN calcs. In fact, even in the 1970s there were other brands of RPN calcs that apparently weren't infringing: Omron, APF and Nat'l Semiconductor/Novus all built some RPN scientific calcs. These calcs did differ from HP though as (IIRC) they may not have had 4-level stacks OR a T-copy-down feature OR LastX.

I'm not sure about the (purportedly improved) RPL stuff that's on the 48. But they couldn't pay me to use one a 48 anyway! I'm a 4-level stack dude myself.

The only thing you'd wanna watch for in making a new RPN calc - let's say we started the Heward-Packett co to make good calcs - is to not violate HPs' current 'trade dress'. That is, don't make a calc that looks like a current HP calc: both the 12C and 20S/32SII are still 'current' representatives of Voyager and Pioneer series.

Bill Wiese San Jose, CA

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Zengrange Ltd Gunzen
*Message #1 Posted by **Emmanuel, Normandy** on 8 Mar 2003, 1:25 p.m.*

Last month I bought 2 of those artillery fire data computers.
Both are HP-41CV coming with 2 modules.

The first Gunzen (AFDC 02, 37-0198-01) had 2 Zeproms inside:
AFDC F-MDP2 (08K, XR 17 with 52 FCNs, XR 18 with 63 FCNs)
MFDC-2.3 MDP (16K, XR 16 with 61 FCNs, XR 17 with 35 FCNs,
                  XR 18 with 62 FCNs, XR 19 with 01 FCN)

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=588&item=3204754596

The second one had 2 Proms inside:
AFDC1F-MDP1 (08K, XR 15 with 30 FCNs, XR 16 with 55 FCNs)
AFDC1F-MDP2 (08K, XR17 with 52 FCNs, XR 18 with 63 FCNs)

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1247&item=2308511311

Both need an extra module with XR 31.
May be a 105, 155 or Abbot module.
If someone has further information or another ROMs, ...
Thanks for assistance.

Addendum

*Message #2 Posted by **Emmanuel, Normandy** on 8 Mar 2003, 1:29 p.m.,*

in response to message #1 by Emmanuel, Normandy

```
...
The second Gunzen (AFDC 01)
...
```

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-39
*Message #1 Posted by **Tom Cox** on 7 Mar 2003, 8:51 p.m.*

Have noticed a number of these new calculators on E-Bay. Just bought one for $26.99 Although it is not RPN, it does have IR output to printer. Also has a fair amount of RAM.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-41, HP-28s printers
*Message #1 Posted by **Michel Beaulieu** on 7 Mar 2003, 8:42 p.m.*

Hi, can you tell me if an IR module can print on a HP-82240B printer. Is a HP-28S able to do the same, in my manual it's only written 82240A... What is the difference between 82240A and 82240B printers?

Is there some printing advantage to have a IR printer over a HP-82143A printer for the 41C (new print functions, capabilities etc)

Thanks!

Michel

Re: HP-41, HP-28s printers
*Message #2 Posted by **Scuba Diver** on 7 Mar 2003, 8:46 p.m.,*
in response to message #1 by Michel Beaulieu

Yes, Michel, you can print to an 82240B printer with a 28S. The major difference between an 82240A and B is that the B has an easier-to-read character set and it also has some better power management...

Unfortunately, I cannot comment on the 82143A as I have never used it.

B.

Re: HP-41, HP-28s printers
*Message #3 Posted by **David Ramsey** on 7 Mar 2003, 9:29 p.m.,*
in response to message #1 by Michel Beaulieu

Yes, you can print to an 82240 printer with the IR module in an HP-41.

If you have one of these modules, I find myself with a spare 82143A I'd be happy to trade for it...

Re: HP-41, HP-28s printers
*Message #4 Posted by **Randy Smith** on 8 Mar 2003, 3:44 p.m.,*
in response to message #3 by David Ramsey

I have found that it takes a bit longer to print on the IR printer since the module has to convert the data to IR and send it to the printer. The IR printer is also a bit louder than the 82143. However, the 82240 takes up a bit less room than the 82143. The 82240 also uses common AA batteries.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Repairing an hp 32sii
*Message #1 Posted by **John MacLean** on 7 Mar 2003, 6:32 p.m.*

Can anyone offer any advice on how to repair a 32sii. The calculator works fine except the bottom row of keys (0 . R/S +) don't work. I'd like to crack the case and clean it out to see if that would help but not sure how to do that.

John MacLean

Re: Repairing an hp 32sii
*Message #2 Posted by **Jeremy** on 7 Mar 2003, 9:38 p.m.,*
in response to message #1 by John MacLean

If an entire row of keys isn't working, you might want to look for a severed trace on the circuit board. That would be my bet. It is unlikely, IMO, that dirty contacts would blast an entire row of buttons.

I recently disassembled and repaired a vintage Unisonic 888 calculator which I bought on eBay for $0. (Since it was not the one I won and since it didn't work 100%) Whoever had taken it apart before me didn't quite get the keypad back together properly, and I can see why. It was an absolute nightmare since each key had a spring, a contact bar, etc. Getting everything coordinated properly took a lot of patience, steady hands, some glue, and masking tape to hold the thing upside down while I worked on it. Anyway, good luck.

-Jeremy

Re: Repairing an hp 32sii
*Message #3 Posted by **Randy Sloyer** on 7 Mar 2003, 10:10 p.m.,*
in response to message #1 by John MacLean

You'll find opening instructions here:

http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/articles.cgi?read=5

Once you open the unit, inspect the twist tabs that hold the logic board to the calculator. I'll bet you'll find the bottom left and center tab bent over or not twisted fully to the center. This will result in a loose connection directly underneath the logic board were the keyboard connects. The bottom row of keys is the forth from the left contact on the keyboard, right in the middle between the two twist tabs I mentioned. Pop the logic board off, clean with isopropyl alcohol (don't rub too hard) and reassemble starting with the bottom right and left tabs first. That centers the logic board on the frame. That should do for you.

I've seen the same problem on Pioneers that have been sat on, it smashes the retainers and the keyboard looses contact, resulting in dead rows or columns.

Re: Repairing an hp 32sii
*Message #4 Posted by **John MacLean** on 10 Mar 2003, 2:25 p.m.,*
in response to message #1 by John MacLean

Thanks for your advice guys. That's exactly what I needed.

John MacLean

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Memory Upgrade
*Message #1 Posted by **George Rose** on 7 Mar 2003, 5:18 p.m.*

All the talk of memory upgrades has me wanting "more power" too. From what I have read, the 42s can be upgraded with a 32k chip. Does anyone know if either the 32s or 32sii can be given the same treatment?

Re: Memory Upgrade
*Message #2 Posted by **Tony Duell (UK)** on 7 Mar 2003, 6:20 p.m.,*
in response to message #1 by George Rose

I am almost sure the 32S and 32SII cannot be upgraded :-(. The standard 42S contains 2 chips -- the CPU/ROM/display drivers and the RAM chip. The RAM is a standard 8K part _and there are enough address lines brought out of the CPU package to enable the use of a 32K RAM (oh, and the software will recognise it too). The 32S and 32SII have everything (CPU, ROM, RAM, display driver) in one chip, and from what I could see there's no bus -- not a standard bus nor a Saturn bus -- brought out of the chip. Extra RAM would therefore ssem to be impossible. Incidentally, the 17BII is electrically very similar to the 42S (the real difference being the code in the ROM). However, while it is physically possible to fit a 32K RAM in this machine, from what I've heard (I've not tried it), the software will only use the first 8K of it. So there's no point in trying to upgrade that machine either.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

How to restore a faded Voyager logo?
*Message #1 Posted by **Patrick** on 7 Mar 2003, 4:35 p.m.*

I received a Voyager today -- HP-15C -- whose logo is worn -- mostly black now with very little silver.

I would like to restore it. I'm sure folks here have the perfect solution. Is there a particular type of paint (perhaps model paint of some sort?) that would do a good job of restoring the original lustre?

The rest of the unit is in excellent condition so I think it is worth putting in a little TLC.

Re: How to restore a faded Voyager logo?
*Message #2 Posted by **Emmanuel, Normandy** on 7 Mar 2003, 5:51 p.m.,*
in response to message #1 by Patrick

Paint: Humbrol #11 Technic: weathering

Re: How to restore a faded Voyager logo?
*Message #3 Posted by **Patrick** on 7 Mar 2003, 6:44 p.m.,*
in response to message #2 by Emmanuel, Normandy

Thanks for the response. Unfortunately, I am a newbie at this game and I don't understand your response. What type of store would stock Humbrol #11? Would this be a model paint?

Any details you could provide would be appreciated.

Re: How to restore a faded Voyager logo?
*Message #4 Posted by **Emmanuel, Normandy** on 8 Mar 2003, 1:28 a.m.,*
in response to message #3 by Patrick

```
Yes it's a model paint.
In fact you have to make a 'dry brush' on your logo.
```

Re: How to restore a faded Voyager logo?
*Message #5 Posted by **Spice_Man** on 8 Mar 2003, 2:39 p.m.,*
in response to message #4 by Emmanuel, Normandy

What does it mean to "make a 'dry brush' on your logo?"

Spicey

Re: How to restore a faded Voyager logo?
*Message #6 Posted by **Emmanuel, Normandy** on 8 Mar 2003, 2:54 p.m.,*
in response to message #5 by Spice_Man

"dry brushing", modeler slang 1-put the paintbrush into the paint 2-let it dry but notcompletely. 3-brush the surface with it

Re: How to restore a faded Voyager logo?
*Message #7 Posted by **Spice_Man** on 8 Mar 2003, 5:13 p.m.,*
in response to message #6 by Emmanuel, Normandy

What is the difference in outcome if one "dry brushes" rather than "wet brushes?"

Much obliged!

Spicey

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

42S display problem
*Message #1 Posted by **Jeff** on 7 Mar 2003, 4:11 p.m.*

Here is a good one: My 42S decided to scroll the display to the left. The x: and y: and the first digit of the number displayed are cut off, as if hidden under the left edge of the calculator. Instead of x:3.14159 I get .14159

I know the actual value is being processed correctly because the calculations work, its just that the left most digit is stripped off.

Any thoughts. Is this something that can be fixed?

Re: 42S display problem
*Message #2 Posted by **Paul Brogger** on 7 Mar 2003, 4:27 p.m.,*
in response to message #1 by Jeff

Has the entire display indeed scrolled left (weird!), or is it just that the leftmost character columns are blanked out (not unheard of)?

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

71b 4K->32K Ram module conversion
*Message #1 Posted by **andy** on 7 Mar 2003, 10:08 a.m.*

After hearing about increasing the memory in a 42s, I started thinking why not try it with a 71b 4K ram module.

Do any of the experts out there know if this is within reason? I've never opened up a 4K ram module but I have 4 of them. If I could swap out the 4K chip for a 32...or 64K chip I would be delighted!

Andy

Re: 71b 4K->32K Ram module conversion
*Message #2 Posted by **Ellis Easley** on 7 Mar 2003, 1:33 p.m.,*
in response to message #1 by andy

I've been reading the 71B hardware internal design specs on the new Museum CD's and I'll bet that the 4KB RAM module contains one of the four 4KB hybrids that are built in to the 71B. Each of these hybrids is in turn made of four 1KB RAM chips that are designed specifically for the 71B bus. Again, based on my understanding of the spec - not certain knowledge - the 1KB RAM chips are soft configured devices that are daisychained together on the hybrids and the 4KB hybrids are designed so that they can in turn be daisychained, as they are inside the 71B, to make 16KB of RAM which, along with 1.5KB from the display driver chips, adds up to the 17.5KB standard RAM of the 71B. So I think you could daisychain multiple 4KB RAM modules and plug the assembly into one 71B port - not just 4 modules, there should be no logical limit but the CPU's addressing range, although the capacitive loading of paralleled hybrids would set a pretty strict limit. But I don't think you would find a parallel bus with separate address and data and chip select signals to connect a standard memory chip to - in the HP 4K module. The third party memory modules from 32K on up probably do have standard memory chips inside them (again, I'm guessing) and it might be possible to upgrade them, if their designs provide the additional address lines or chip selects required.

Re: 71b 4K->32K Ram module conversion

*Message #3 Posted by **Tony Duell (UK)** on 7 Mar 2003, 6:30 p.m.,*

in response to message #2 by Ellis Easley

I beleive you're correct about the HP modules. Some 3rd party modules contain that HP Saturn Bus Interface chip (the 1LJ4 or whatever it's called). AFAIK, when addressing RAM, this chip can connect to 4 standard 8K SRAM chips, but nothing more (neither more chips nor larger chips). Which means these modules are pretty much limited to 32K. I assuem the front port 32K modules use some custom interface chip (there's not enough space in there for the 1LJ4 and 4 RAM chips), but again I think upgrading them is going to be impossible.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Plotter HP 7470A Option 003
*Message #1 Posted by **Jürgen (CH)** on 7 Mar 2003, 8:11 a.m.*

You constantly find HP 7470A plotters with RS232 interface, and occasionally also some with HP-IB interface, but the ones with HP-IL (Option 003) interface seem to be very rare. Has anyone an idea how/where to get one? Does someone have programs designed for this plotter?

Thanks, Jürgen

Re: Plotter HP 7470A Option 003
*Message #2 Posted by **Mike (Stgt)** on 7 Mar 2003, 9:10 a.m.,*
in response to message #1 by Jürgen (CH)

Yes, I did one program once (I was lying down sick one week, so I had some time <G>). Using the Advantage Module I defined flat faced 3D-objects, rotated them and plottet the view. I did a "poor man hidden line removal" as only one side of the planes was visible. Lot of matrix stuff but great fun with the Advantage.

Ciao.....Mike

Re: Plotter HP 7470A Option 003
*Message #3 Posted by **Emmanuel, Normandy** on 7 Mar 2003, 9:49 a.m.,*
in response to message #2 by Mike (Stgt)

```
I use some program that transform my 41 programs into bar codes on a 7470A v.3.
I wrote some HPGL routines in order to handle it from HP-41/-71/75 calcs, from HP-
48GX through RS232C/IL interface or from PC via HP82973A HP-IL/PC card.
Yours.
Emmanuel
```

Re: Plotter HP 7470A Option 003
*Message #4 Posted by **Tony Duell (UK)** on 7 Mar 2003, 6:34 p.m.,*
in response to message #1 by Jürgen (CH)

Yes, I believe the 7470 Opt 003 is somewhat rare (and no, mine is not for sale!). There was a plotter ROM for the HP41 (also somewhat hard to find) which contained m-code functions to send the appropriate HPGL commands to draw lines, etc, and a FOCAL program to plot a user-defined function (a bit like the PRPLOT program in the printer ROM). Oh, and othe stuff besides. If you have this ROM, it will automatically find and use the HPIL plotter.. It will not work at all with the RS232 plotter (it asks the plotter for things like the plotting limits, and the RS232 version doesn't handle this correctly). However, if you have an HPIB plotter (not necessarily a 7470 -- I've uses a 7440 Colorpro) and a 82169 HPIL-HPIB translator, then provided you use manual addressing and tell the HP41 where the plotter is (MANIO <HPIB address> SELECT , where <HPIB address> is a number giving the HPIB address of the plotter), then it all works perfectly. That's true plug-n-play :-)

Re: Plotter HP 7470A Option 003
*Message #5 Posted by **Christoph Klug** on 10 Mar 2003, 3:37 a.m.,*
in response to message #4 by Tony Duell (UK)

I use the IL-Plotter for plotting frequency response data. The belonging HP41 software is described in the I/O-Board manual and the IL2000 manual(hardware interfacing and measurement applications). I use some subroutines of the HP41 Plotter Moduel.

Best wishes from Germany - Christoph Klug

Re: Plotter HP 7470A Option 003
*Message #6 Posted by **Johnny Billquist** on 10 Mar 2003, 8:27 a.m.,*
in response to message #4 by Tony Duell (UK)

Tony, why do you insist in calling HP-41 user code programs FOCAL code? Do you want me to send you a FOCAL manual, so that you can compare it to the HP-41 code and see that it's not the same? Might as well call it FORTH. :-)

Re: Plotter HP 7470A Option 003
*Message #7 Posted by **Wayne Brown** on 10 Mar 2003, 8:38 a.m.,*
in response to message #6 by Johnny Billquist

FOCAL ("Forty-One CAlculator Language")is the "official" name of the the 41's keystroke programming language. I agree, it's confusing to choose the same name as another already-established and better-known language.

Re: Plotter HP 7470A Option 003
*Message #8 Posted by **Johnny Billquist** on 10 Mar 2003, 12:13 p.m.,*
in response to message #7 by Wayne Brown

Hmmm. I must admit I have never heard that name for the HP-41 language before. As for how official it is, I'll reserve judgement until someone can show me that HP used it. :-)

But it *is* confusing, since I'm somewhat familiar with FOCAL (the programming language that is).

Re: Plotter HP 7470A Option 003
*Message #9 Posted by **Emmanuel, Normandy** on 10 Mar 2003, 4:42 p.m.,*
in response to message #8 by Johnny Billquist

```
About FOCAL, something found in
'HP 41CV Emulator Application Card for the HP 48SX
HP82210A Owner's Manual', page 61:
 (picture unavailable)
Yours. Kind regards from France.
```

Re: Plotter HP 7470A Option 003
*Message #10 Posted by **Tony Duell (UK)** on 10 Mar 2003, 5:45 p.m.,*
in response to message #6 by Johnny Billquist

I know full well what the origial FOCAL is (DEC's FOrmula CALculator language). After all, there's a PDP8/e with PC04 paper tape, TU56 DECtape and RX01 floppies on my desk next to me (this is not a joke!). However, at one point there was a discussion (in the PPC journal I suspect) as to what the HP41 language should be called. And the name FOCAL (Forty One CAlculaotr Language) 'won'. I don't like it either, but the name seems to have stuck.

Re: Plotter HP 7470A Option 003
*Message #11 Posted by **Johnny Billquist** on 12 Mar 2003, 9:49 a.m.,*
in response to message #10 by Tony Duell (UK)

I thought I would remember *that* FOCAL, since I seem to remember exchanging mails with on pdp8 or pdp11 mailing lists. :-)

Well, it seems as if FOCAL do have two different meanings. Oh well... :-/

Thanks
*Message #12 Posted by **Jürgen (CH)** on 10 Mar 2003, 5:03 p.m.,*
in response to message #1 by Jürgen (CH)

Thanks, Tony, for the valuable information about the interface options, and thank you all for telling me about your interesting plotter applications. Made my mouth water, and I have to dig up such a plotter ;-)

Jürgen

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-41 Video Interface Applications

*Message #1 Posted by **Jürgen (CH)** on 7 Mar 2003, 8:10 a.m.*

What is/was the HP-41 video interface good for? One application I can imagine is displaying measuring results in lab environments. Any other suggestions? Does anyone out there have programs especially designed for the video interface?

Thanks, Jürgen

Re: HP-41 Video Interface Applications

*Message #2 Posted by **Emmanuel, Normandy** on 7 Mar 2003, 9:51 a.m.,*
in response to message #1 by Jürgen (CH)

I use(d) mines when studying MCode routines on HP-41, sparing thermal paper, etc ...

Re: HP-41 Video Interface Applications

*Message #3 Posted by **Christoph Klug** on 10 Mar 2003, 3:48 a.m.,*
in response to message #2 by Emmanuel, Normandy

I use the IL Videop Display for displaying measurement results and system messages. It is possible using modern LCD Displays with FBAS input ...

Best wishes from Germany - Christoph Klug

Re: HP-41 Video Interface Applications
*Message #4 Posted by **Jürgen (CH)** on 10 Mar 2003, 5:09 p.m.,*
in response to message #3 by Christoph Klug

Christoph,

I've used my old C64 monitor to test my video interface; but the LCD display seems to be an interesting alternative. Is it hard to find such displays, or are the available at electronic stores?

Regards from the Lake Constance, Jürgen

Re: HP-41 Video Interface Applications
*Message #5 Posted by **Christoph Klug** on 11 Mar 2003, 3:21 a.m.,*
in response to message #4 by Jürgen (CH)

LCD-Display for HP41 & IL-Video Interface

Some small size LCD-displays exist for automotive applications like navigation and (rear seat) entertainment. Two different input norms exist : RGB and FBAS. Last is directly compatible with the IL-Video interface. For RGB-displays you need an additional RGD to FBAS converter box.

Best wishes from Germany - Christoph Klug

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

solver
*Message #1 Posted by **mapet** on 7 Mar 2003, 5:57 a.m.*

Hi, Is there any other calc that has 17BII/19BII solver or similar thing?

MP

Re: solver
*Message #2 Posted by **Massimo Gnerucci (Italy)** on 7 Mar 2003, 6:48 a.m.,*
in response to message #1 by mapet

HP-100/200/700LX
Massimo

Re: solver
*Message #3 Posted by **Randy Sloyer** on 7 Mar 2003, 7:42 a.m.,*
in response to message #1 by mapet

LED: 34C The first

LCD: 15C,22S,27S,32S,42S,48*

All have solver built in. That's off the top of my head, it's just about everything made in the last 15 years. The 6S and 9S don't count, I'm not sure about the 30S.

Re: solver
*Message #4 Posted by **Christof** on 7 Mar 2003, 8:09 p.m.,*
in response to message #3 by Randy Sloyer

didn't the 10B? it had something in it.....

the 38/39/40 series machines should have it, too. and there is the 28.

as randy says, just about everything susbstantial.

Re: solver
*Message #5 Posted by **Glen Kilpatrick** on 8 Mar 2003, 1:27 p.m.,*
in response to message #4 by Christof

A peek at http://www.b-rasmussen.dk/johnny/hp/10b_s.htm (one of the few images anywhere on the web), you'll see that a 10B has no general solver, just the TVM one that all financials have. I owned one of these, gave it away when I kept expecting an algebraic hierarchy (it has *no* hiererarcy, you have to manually impose multiply before add with parentheses), and kept getting disappointed :).

Re: solver
*Message #6 Posted by **Fred Lusk (CA)** on 8 Mar 2003, 12:08 a.m.,*
in response to message #1 by mapet

Also the HP-41 + Advantage ROM

FEL

TVM solver (?)
*Message #7 Posted by **Vieira, Luiz C. (Brazil)** on 8 Mar 2003, 11:11 a.m.,*
in response to message #1 by mapet

Hi;

As nobody mentioned, there is also the HP12C with the Financial TVM Solver. This also leads us to the Finacials HP22 and HP27 (Woodstocks).

These calculators do not have a generic Solver, just the Financial TVM. I added this information because mapet asked for HP17BII/HP19BII solver, and both are Fiancial calcs. The HP18C, first version of the HP19B, had a Solver, too.

Cheers.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-49G, HP-48G+, 'college student' calculators
*Message #1 Posted by **Norm Hill** on 6 Mar 2003, 11:50 p.m.*

Hi, For those curious about the 'new' HP calculators here is a quite detailed link about the HP-49G

http://www.exrom.com/hp_49g_press_rel.htm

Apparently this unit replaces the 48G+ . Anybody got opinions? To me, it looks like 48G+ is so-so and 49G is worse. Neither is a thing I can just walk up to and get some quick trigonometry, or formulas evaluated with.

A CLOSE PARALLEL..... when they money-manager-types (seen in 'Dilbert') took over Heathkit, they didn't entirely bankrupt it..... they focused exclusively on academic products such as textbooks and learning aids (for community colleges). They still sell community college books & things to this day, even though they brutally threw out everything the standard customers wished to buy.

Looks like HP is doing the same thing? All I see in their article is "colleges, high schools, colleges, high schools, HP cirriculum for math class" etc etc. They figure a sucker is born every minute, and half of them will enroll into a math class ? Instant guaranteed market.

Kind of like what Heathkit did. For those who actually wanted a product to use, tough tomatoes they won't be too interested with your needs.

One possible problem with this scheme is that TI is already doing it, with the TI-89 . Considering how incompatible these different calculators are, you'd think maybe the professor would rather focus on the academic cirriculum, than on paying out loot for gimmicky new calculators ?

Re: HP-49G, HP-48G+, 'college student' calculators
*Message #2 Posted by **Spice_Man** on 7 Mar 2003, 12:13 a.m.,*
in response to message #1 by Norm Hill

That article is nearly 4 years old. The 49G has come and gone already.

Spicey

It's off production already...
*Message #3 Posted by **Vieira, Luiz C. (Brazil)** on 7 Mar 2003, 7:52 a.m.,*
in response to message #2 by Spice_Man

... as Spice_Man (Spicey?) mentioned.

The "new" flesh are the HP9S and HP9G, and I feel as mentioning someone else's place when typing these ID's. The so expected (good?) news are about to come, like mentionen in this thread.

I'm seriously considering the possibility of writing to HP Complaining Wall (?); wht do you think? Would they read a Latino's mail as seriously as they read yours?

My biggest question is: do these guys read our posts in here? Accepting the fact that they read, would they assume they read?

If so, what in the h... are they waiting for?

Just my thoughts.

Cheers.

Luiz C. Vieira - Brazil

What are they waiting for?

*Message #4 Posted by **Jeremy** on 7 Mar 2003, 8:09 a.m.,*

in response to message #3 by Vieira, Luiz C. (Brazil)

I'm sure some smart marketing or development people at HP are lurking in this forum.

The problem is, they probably don't think that we're a majority. HP calculators have always been kind of in the background. HP never put their full muscle behind them. When you go to a typical store to buy a scientific or graphing calculator, what do you see? What I see is TI, Casio, and maybe Sharp.

I think it is smart of HP to have the option of algebraic notation, but not in place of RPN. If HP could kind of ease people into the RPN, they would soon realize that it is less error-prone and really not all that hard. After that, people would discover that HP calculators are rugged and well-built. From there, the word would get around and people couldn't get enough of them. When I was in high school math classes, the TI-81 had just come out. The thing was magical to us. The teacher used one to teach with, and had an overhead projector to go with it. Soon, it was kind of suggested that our work in Algebra I would be much easier with this miracle machine. So everyone went out and bought one, except me. I bought a TI-85, which I still use today in my Electronics Engineering classes. However, it is getting to the point that the graphing part is no longer useful, only the scientific part.

Now, imagine what might have happened if HP were the one to woo schools into their clutches... HPs would be everywhere instead of TIs. Of course, they would have to make them more user friendly too. I love the RPN, but the rest of my 48GX was kind of a nightmare to figure out. Not intuitive at all, even for a senior-level engineering student. Don't believe me? Try to do symbolic integration on it. There is a (obscure) way to do it.

-Jeremy

Re: What are they waiting for?

*Message #5 Posted by **Vieira, Luiz C. (Brazil)** on 7 Mar 2003, 8:53 a.m.,*
in response to message #4 by Jeremy

Hi, Jeremy.

I'm an Electrical Engineer and, believe-me, at the time I learnt Symbolic Integration it was obscure even without a calculator... Imagine what should a tool be able to perform if it is designe to support obscure activities. It should be an "obscure" tool, indeed. I tried MthLab once, and Integration happens in a hidden form, if you accept this as so (I remember using an old version, not sure about which one). I heard about Mapple and never used it. I am trying to find Mathematica (is it correctly spelled?) and try it.

If you have a palm or a portable to run any of them, you still have to buy and install them. What amuses me is that you can perform a full Memory Clear in an HP48/49 and still have all resources available; not even a (beep), memory search, P.O.S.T., system load, graphic environmetn load, then you are ready to check if your Math tool is already there or, if it's a friend's computer, search for its existence.

I know palms do not restart everytime they are switched to ON, but I heard that the best math tools some of them have are the HP selected calculator emulator... Funny, isn't it?

I'm a portable-math-tool guy, I do not care if the tool is algebraic or RPN, it must be a good tool. Slide rules are neither RPN nor algebraic, they simply rule (wow!). I also program in C/C++, and it demands algebraic notation knowledge. No way out...

What I know is that whatever the HP48 has, it's written and described somewhere. I'm a bit lazy, but I remember doing some symbolic handling in the HP28S and found it a "must have" at the classroom (I was at the University at that time). Symbolic integration in the HP28S is only achieved by expanding the final expression as a Taylor equivalent to the symbolic result, final prcison expressed by the number of terms. Weird... but efficient. I learnt a lot with it.

Later the HP48SX enhanced integration process and allowed symbolic results. The HP49 is even better.

My first calculator was a TI57, and I'm sad not having it anymore: the case was destroyed. I still have the electronic "guts", say, teh PCB with the all-built-in IC and LED's display. I connected a 9VCC battery a few days ago end it worked

instantaneously! I just have no idea about the keyboard matrix connections, but I'll not work on it for now, maybe in the end of this year. This TI57 is algebraic (whatelse is new...), LED display, has 8 storage registers and 50 program steps, subroutines granted and merged codes (up to three keys per step). Something to be kept.

At the time I was given this calculator, symbolic integration was already obscure...

What expects us in the future?

Cheers.

Luiz C. Vieira - Brazil

Re: What are they waiting for?
*Message #6 Posted by **James Stephens** on 7 Mar 2003, 10:21 a.m.,*
in response to message #4 by Jeremy

"Now, imagine what might have happened if HP were the one to woo schools into their clutches... HPs would be everywhere instead of TIs. Of course, they would have to make them more user friendly too."

I was a grad student at Ga Tech in the '90's. As of 1998 or so, incoming freshmen were required to purchase an hp-48.

Re: HP-49G, HP-48G+, 'college student' calculators
*Message #7 Posted by **Ellis Easley** on 7 Mar 2003, 4:51 a.m.,*
in response to message #1 by Norm Hill

Maybe the calculator business is like car insurance (at least here in Texas) - way back when, teachers didn't want students to use calculators but now I think they are required (like car insurance) so there is a built-in market for anyone who's willing to compete.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

RPN on the 17BII and 19BII
*Message #1 Posted by **Scuba Diver** on 6 Mar 2003, 11:08 p.m.*

Hi everyone!

A few weeks ago, someone had posted an article regarding RPN on the 17BII and 19BII calculators.

The issue was; it didn't have a 4-level stack, it had a variable one.

Try this;

1 ENTER 2

If you rolled through the stack, you'd expect to see 1 0 0 2

Yet in the 17BII you see 1 2 1 2

I was looking through my 17BII manual and I was surprised to see this documented. Here's what it said (pg. 257, Appendix E "RPN: The Stack")

"Variable Stack Size. Clearing the stack by pressing CLEAR DATA reduces the stack to one register (X) with a zero in it. As you enter numbers, the stack builds up again. The roll down and roll up functions roll through as many registers as currently exist (one, two, three or four)."

So there we have it! Although this begs the question; why did they design it that way?

This is just one more reason why there should have been distinct algebraic and RPN versions of the business calculators. I flipped mine into RPN mode the day I purchased it and I have never looked back! :)

B.

Re: RPN on the 17BII and 19BII

*Message #2 Posted by **Christof** on 7 Mar 2003, 4:37 a.m.,*

in response to message #1 by Scuba Diver

look at some of the recent stack challenges and you might see some possible advantages to this. (I'd prefer the option to configure that, though)

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Received This From HP...
*Message #1 Posted by **J.C. Randerson** on 6 Mar 2003, 8:19 p.m.*

Received this email from HP, the question is whether it's honest or diplomatically worded bulls% $#@ ?

Dear Valued Customer > > We received your mail over the past few days. First of all , let me > extend a warm "thank you" for your very loyal and unwavering support for > HP calculators and in particular, our RPN technology. > Secondly, it is very important that we reassure you that HP will continue > to offer a full line of both RPN and Algebraic calculators. We have > currently, under development, an enhanced, new range of financial, > scientific and graphing calculators to replace the following: HP17BII, > HP32SII, HP19BII, HP38G, HP39G, HP40G, HP48G, HP48GX and the HP49G. Many > of you have expressed a strong preference for some of the above products > and it is important that you receive this reassurance. Please note, > however, that some of these products have been discontinued but will be > replaced over the next 6 -12 months, a few as soon as this summer and > fall. You should be also made aware that you might encounter difficulty > with buying products being replaced, depending on your geographic region. > > Our best selling financial calculators HP12C and HP10BII will continue as > important parts of our product offering, together with our HP30S > scientific model. More recently, we introduced two entry level algebraic > products --the 9s scientific and 9g graphing calculators. > We are putting your names and e-mail addresses on file and will keep you > on our customer mailing lists. As and and when we make announcements > regarding our new product launches and retail availability, we will keep > you informed. In the meantime, I welcome you to write to me directly if > you have any questions at all. > Thank you. > > Kind Regards > > > <<...OLE_Obj...>> > > > Lee-Khuan Goh > Worldwide Marketing Manager (Calculators) > Personal Systems Group > Hewlett Packard Company > Tel: 858 655 3903 > External E-mail: lee-khuan_goh@hp.com

It's a form letter (was Re: Received This From HP...)

*Message #2 Posted by **Tony David Potter** on 7 Mar 2003, 2:00 p.m.,*

in response to message #1 by J.C. Randerson

Dear Valued Customers,

First of all, let me extend a warm "thank you" for your very loyal and unwavering support for HP calculators and in particular, our RPN technology.

Secondly, it is very important that we reassure you that HP will continue to offer a full line of both RPN and Algebraic calculators. We have currently, under development, an enhanced, new range of financial, scientific and graphing calculators to replace the following: HP17BII, HP32SII, HP19BII, HP38G, HP39G, HP40G, HP48G, HP48GX and the HP49G. Many of you have expressed a strong preference for some of the above products and it is important that you receive this reassurance. Please note, however, that some of these products have been discontinued but will be replaced over the next 6 -12 months, a few as soon as this summer and fall. You should be also made aware that you might encounter difficulty with buying products being replaced, depending on your geographic region.

Our best selling financial calculators HP12C and HP10BII will continue as important parts of our product offering, together with our HP30S scientific model. More recently, we introduced two entry level algebraic products --the 9s scientific and 9g graphing calculators.

No other company has ever made RPN calculators.

It is important to us that we answer your question. If you need further assistance, please reply to this message, we will be happy to help you.

Sincerely, Kellie HP Consumer e-Support

--I particularly love the last statement. I own a Sinclair, a Commodore, and several Russian Elektronika calculators, all RPN.

Tony David Potter

Re: form letter - regarding non-HP RPN calcs...
*Message #3 Posted by **Bill Wiese** on 7 Mar 2003, 3:59 p.m.,*
in response to message #2 by Tony David Potter

"No other company has ever made RPN calculators." -- Kellie of HP support..

>>> I particularly love the last statement. I own a >>> Sinclair, a Commodore, and several Russian >>> Elektronika calculators, all RPN.

You betch. I believe Bowmar had one (?), I know Omron & APF had one too. (Didn't know about Commodore though). And of course National Semiconductor/Novus had a few RPN calcs with 3-level stacks, IIRC (Mathematcian, Scientist - though they had poor transcendatal func. accuracy). I think Nat'l/Novus even had an RPN sci. calc wristwatch in 1976-78 area before they got out of the biz; not sure how many made it into production.

Poor Kellie at HP - she must have an MBA to be that self-assured of her incompetence. Must have a direct link to Carly, and the people who thought it was good to sell off Agilent.

Bill Wiese San Jose, CA

Re: form letter - regarding non-HP RPN calcs...
*Message #4 Posted by **Robert Burnham** on 7 Mar 2003, 4:31 p.m.,*
in response to message #3 by Bill Wiese

Wang calculators -- admittedly not pocketable items! -- also used RPN.

In fact, I believe the HP 9100 machine was HP's first big jump into the field of electronic calculators, which at the time was essentially owned by Wang Laboratories. It was intended to steal as much of Wang's business as possible.

See "Riding the Runaway Horse" by Charles Kenney (1992) and "Lessons" by An Wang (1986).

Re: form letter - regarding non-HP RPN calcs...
*Message #5 Posted by **christof** on 7 Mar 2003, 8:23 p.m.,*
in response to message #3 by Bill Wiese

an RPN watch calc? any idea what model numbers are? I have to keep an eye out for one of those.

Re: form letter - regarding non-HP RPN calcs...
*Message #6 Posted by **Bill Wiese** on 8 Mar 2003, 12:37 a.m.,*
in response to message #5 by christof

Hi..

>> an RPN watch calc? any idea what model >> numbers are? I have to keep an eye out >> for one of those.

No, I can't remember. Can't remember if it was marked Novus or a Nat'l Semiconductor either.

It was an *LED* (!) watch in a black plastic case/band setup much like the Casio calc watches of the early 1980s. Fairly thick: I think it took 4 x larger watch batteries.

IIRC, there would be an ad for this in Scientific American, perhaps in 1977. Memory is fading, could be off by a year either direction (though I *do* recall they had a computers/microelectronics issue in Sept 1977 that had a pull-out 3-page full-color ad for TI-58/59 - this could be the issue with this calc watch in it too!

Bill Wiese San Jose, CA

Novus sci. calculator watch (*not* RPN)
*Message #7 Posted by **Bill Wiese** on 8 Mar 2003, 12:51 a.m.,*
in response to message #6 by Bill Wiese

Maybe I am wrong: this one was scientific but not RPN and had an LCD not LED, and was in metal case. See:

http://homepage.mac.com/utdesign/watch/watches/novus.html

I keep thinking they had an LED version in plastic though!!

Bill Wiese San Jose,CA

Re: It's a form letter (was Re: Received This From HP...)
*Message #8 Posted by **NOT HP** on 8 Mar 2003, 4:02 a.m.,*
in response to message #2 by Tony David Potter

Your comment about poor Kellie at HP- I can't speak to her pedigree, but one thing is for sure. All of the "form letters" people have seen from HP calculator support personnel are in fact from out-sourced help. Yes, the ugly truth is that all HP calculator support is out-sourced and they are not direct HP employees, only Carly sock puppets.

Just try to get calculator support without going through the main support phone number. You can't do it. Since they no longer have a calculator division, why should they have a support group? Don't believe me? If you have caller ID, just call the origin phone number should they ever call you back about a problem. I will not name the company here, other than to say it is not HP. Surprised? I'm not!

Re: It's a form letter (was Re: Received This From HP...)
*Message #9 Posted by **Vieira, Luiz C. (Brazil)** on 8 Mar 2003, 12:12 p.m.,*
in response to message #8 by NOT HP

Hi;

So, all answers related to a new RPN calculator are "endorsed" (if so) by HP but were not written by any HP employee!

What else, guys, what else...

Re: It's a form letter (was Re: Received This From HP...)
*Message #10 Posted by **James Stephens** on 8 Mar 2003, 5:34 p.m.,*
in response to message #9 by Vieira, Luiz C. (Brazil)

Why is this such an issue. If hp is using a form letter to respond to people who want quality, professional grade (and preferably RPN) calculators, it indicates that the company has received a lot of input about the subject and is responding to it. The fact that they've hired a consultant to draft the letter isn't out of the ordinary and isn't negative. Why should the support staff--at whatever its present level may be--spend a lot of time drafting individual replies for this type of thing when the form letter is adequate?

Re: It's a form letter (was Re: Received This From HP...)
*Message #11 Posted by **Vieira, Luiz C. (Brazil)** on 9 Mar 2003, 5:05 a.m.,*
in response to message #10 by James Stephens

Hi;

for me, I see the issue more in the same concerns exposed by Les Bell in his post. Calculators were never a third party business at Hewlett-Packrd.

But the fact is that I am talking yesterday, when an specific division at HP used to deal with calculators, and there was enough demand for that.

You're talking today. You're right.

Cheers.

Re: It's a form letter (was Re: Received This From HP...)
*Message #12 Posted by **Les Bell [Sydney]** on 8 Mar 2003, 5:31 p.m.,*
in response to message #8 by NOT HP

It strikes me that if any new range of calculators is to be designed and manufactured by a third party, supported by a third party, and distributed by third parties, then the only thing HP is bringing to the party is financing - which the original manufacturer probably wouldn't need - and some pretty shabby marketing which consists primarily of the HP brand value.

What HP needs to realize is that their target market is *completely unimpressed* with "brand value". The readers of this forum, especially, see beyond that and are looking for high quality design, documentation and manufacturing. Those are the things that established the Hewlett-Packard reputation (i.e. brand) and it was the loss of those things that led to the brand's decline.

If a new, high-quality RPN calculator becomes available from both HP and from an otherwise-unknown Asian OEM, I for one will buy the OEM product. I prefer my dollars to go directly to the company and people who actually do good work.

Best,

--- Les [http://www.lesbell.com.au]

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

It's official: RPN scientifics HPs are coming back!
*Message #1 Posted by **Jeremy** on 6 Mar 2003, 6:41 p.m.*

First of all, let me thank the guy here who's got the web page that starts out: "I've lost a friend this week..."

I read that whole page, and towards the bottom, there was a link to leave feedback. The reader was encouraged to let HP know that we are disappointed. So I did that. Below is the correspondence that HP and I have had so far on the matter:

On 05 Mar 2003, I wrote the following:

problem_description : It is terrible that HP gave up their high quality line of scientific RPN calculators. They were legendary for their ruggedness and good design. Now, HP is selling nothing but crap, just like everyone else. Whether the executives at HP know it or not, they have lost a LOT of respect for doing this.

On 06 Mar 2003, I got the following reply:

Hello Jeremy,

There will be a new RPN scientific calculator out by the end of this year. For more info, visit www.hp.com/support/calculators.

It is important to us that we answer your question. If you need further assistance, please reply to this message, we will be happy to help you.

Sincerely, Amanda HP Consumer e-Support

and today, I wrote the following reply:

Dear Amanda,

I really appreciate your reply. To be honest, I thought it would be lost in the shuffle and ignored.

It is great to hear that HP will have a new RPN scientific calculator by the end of the year. A couple of questions on that:

1. Will it have the hinged keys and rugged construction of the 32SII or will it be in the Casio/TI/Sharp style with cheap, junky keys?

2. Will it have the well thought-out layout and durable construction of the old HPs of yore?

3. Will it be comparable in features to the 32SII? If not, what level will it be at?

Last of all, a personal opinion/suggestion for HP: Bring back the HP 11C or something very similar. People loved that one. Just the right size for a big, geeky pocket, full-featured, and well laid out. If you don't believe that it would be a hit, have a look on eBay and see how much they are going for. It would be an absolute cash cow for HP if they were to supply it alongside all the junky TIs, Casios, etc. Be sure to advertise that it is much more rugged and high quality, because the average Joe doesn't know that. He only knows that it costs twice as much.

Thanks for taking the time, and keep up the good work!

Sincerely, Jeremy **********

So now that everyone knows this, we can stop driving up the prices on eBay and stop enabling that !@#$# Amazon.com to charge $240 for a 62SII. Personally, I would rather see them sell out of them at a normal price than to try and take advantage of people.

-Jeremy

Re: It's official: RPN scientifics HPs are coming back!
*Message #2 Posted by **hugh** on 6 Mar 2003, 7:56 p.m.,*
in response to message #1 by Jeremy

it would indeed be great to have quality units made again.

although i prefer rpn, i like the idea of it being selectable like on the 17bii. show most people a rpn unit and they'll say, "where's the equals button" right away. it would be mad to alienate that market.

for me, quality is the main issue. the pioneer design stands out as the most viable today. it looks like a calculator and it works. voyagers were nice but some people just dont like their calculators sideways.

programmability it another issue. todays trend is to store formula and solve rather than build loops. keystep programmable would fail to stick nowdays and i never could get the new fangled forth-a-like 28/48 to really cook - and it was too slow.

people dont want to pay anymore. of course, a few see the light, but in general over $50 and you're fighting uphill. your markets are school kids, who are happy with a $15 casio or sharp, or engineers who do most of their stuff on their pcs and really only need a pocket calculator as a pick up and use convenience.

there is another quality issue; the algorithms. hp has always been the strongest in this area against all competitors. i am still being impressed today by hp attention to detail in getting the right answer. the 48 appears to be the last generation containing all that cleverness. from what ive seen of the new stuff (eg 30s), the functions are newly implemented and rather untrustworthy.

one idea is to virtualise your ip. there is a definite market for this. sell a new range of virtual calculators for major PDAs. my palm pilot is now my calculator i have when out, otherwise i have to carry yet another gadget.

there's nothing quite like having real buttons though. here's what i would do. virtualise the ip. take a pioneer style case and put in a cheap but fast processor (arm or something). run the very same software kernel as you virtualise, but properly connected of course. i would buy and run both, also i get to sw upgrade as it comes out. maybe theres even a choice of physical cases.

Death of scientific calculators? Was: It's official: RPN scientifics HPs are coming back!
*Message #3 Posted by **Jonas Lööf** on 7 Mar 2003, 4:22 a.m.,*
in response to message #2 by hugh

Slightly oftopic, but...

You say that a keystroke programmable wouldn't sell today...

Well, perhaps not in the US.. ;)

Actualy Casio (of all companies) still market advanced programmable (non graphing) scientifics in areas other than the US (Among others the fx-4500PA), and they have even developed new models (fx-3950P)... I haven't used any of these, but they apear quite feature-packed (On par with a 32sii, feature-wise?).

Look at http://www.casio.co.jp/edu_e/ go to 'Product Information -> Select your area' and chose a region other than the US...

/Jonas

Re: Death of scientific calculators? Was: It's official: RPN scientifics HPs are coming back!
*Message #4 Posted by **Christof** on 7 Mar 2003, 4:49 a.m.,*
in response to message #3 by Jonas Lööf

interesting. i wonder how you can get them to the states...I'd like to play with the 4800P and 4500PA.

Re: Death of scientific calculators? Was: It's official: RPN scientifics HPs are coming back!
*Message #5 Posted by **hugh** on 7 Mar 2003, 11:37 a.m.,*
in response to message #3 by Jonas Lööf

looks like the fx4500PA has the strange formula style programmability of the fx4000p and fx7000g. this was a weird mix of formula and traditional steps. its not exactly keystroke programming as such. the fx3950p looks like its missing goto and label altogether. this is what happened to the fx5000f. visually similar to the fx4000p but no jumps. that made it much less/more fun to write for.

nevertheless the fx4500pa might be worth getting my hands on.

Why say 'keystroke programmable wouldn't sell'
*Message #6 Posted by **Norm Hill** on 9 Mar 2003, 1:51 a.m.,*
in response to message #3 by Jonas Lööf

Hi, Why do you guys presume keystroke programmable wouldn't sell. A calculator is a thing you push buttons on. You enter things to evaluate and get an answer. PUSH PUSH PUSH, you push the buttons. Now then, the classic PRGM/RUN modes of the HP calculator allow a fellow to automate those PUSH PUSH PUSH keystrokes.

Now then, we would agree that nobody is going to build an internet browser or a MATLAB program out of those push push push keystrokes, BUT, that's a higher level machine. A nice simple calculator absolutely SHOULD have natural PRGM/RUN modes to semi-automate those push-keystrokes.

I am not opposed to super-clever fancy graphing calculators where you type in pure algrebra and pure formulas and get it to graph and solve, BUT, that's a different animal. Just because somebody invents the chainsaw, doesn't mean there are no further uses for a handsaw.

HP stopped selling the handsaws, that is the problem, and not all situations are suitable for the more complex device. HP has betrayed their customers and I suggest you don't fall into their errant mental trap by saying that you don't need keystroke programmability.

Re: Why say 'keystroke programmable wouldn't sell'
*Message #7 Posted by **George** on 9 Mar 2003, 2:27 p.m.,*
in response to message #6 by Norm Hill

I agree. I would love to have a small programmable RPN. I used Casios when I started programming because they were faster and offered more memory for the dollar. But I love the feel of that old HP quality. I picked up a 42s but even its 7k memory isn't enough to hold all of my surveying routines. But it was built in the 1980's. HP should have no trouble installing even 1MB in a small RPN today.

Re: It's official: RPN scientifics HPs are coming back!
*Message #8 Posted by **lokhin** on 7 Mar 2003, 11:17 p.m.,*
in response to message #2 by hugh

keystroke programmables not selling well in the US? they are selling well here.

99% of us, hong kong high school students, use casio keystroke programmables. but I am the only one in my school who use a hp 20s, where there were around 1400 students here.

there are around 100000 candidates in open examination candidates every year here. could it be consider as a large market?

Re: It's official: RPN scientifics HPs are coming back!
*Message #9 Posted by **Steve** on 6 Mar 2003, 9:13 p.m.,*
in response to message #1 by Jeremy

Maybe I'm wrong, but if HP was going to continue to develop calculators why would they shutdown their ACO division? To me it's clear the future of HP calcs is Kinpo. Maybe HP can get them to build an RPN, but chances are it won't be of the same quality as the old HP designed models. I guess we'll know by the end of the year if this is just marketing hype or not. For now I'm sticking with my 42s and leaving the Kinpo 9S/G on the WalMart shelf where it belongs!

KINPO WALMART 9S 9G
*Message #10 Posted by **Norm** on 9 Mar 2003, 1:57 a.m.,*
in response to message #9 by Steve

Thanks for mentioning the name "Kinpo".

I learned something new. That is the chinese company that HP farmed out the cheap calculators to. So now HP will simply have them built for $3 each and sell them for $30 each and pocket the difference.

Only problem, calculator is a piece of junk. You said you wouldn't buy it, and it belongs on the WALMART SHELF ?????

WRONG! It belongs in the WALMART DUMPSTER. The big one out back, that has the built-in pressure jacks. RRRRRRRRRR!!!!!! scrunch those KINPO calculators. Put them in the landfill, make a parking lot on top of them.

A sad story.
*Message #11 Posted by **Vieira, Luiz C. (Brazil)** on 9 Mar 2003, 6:14 a.m.,*
in response to message #10 by Norm

Hi;

have you heard about the X-Pander?

About 2.000 of them were hamer-smashed at ACO's parking place, Australia.

Sad story... [=-(

Luiz.

Re: KINPO WALMART 9S 9G - no biz with WalMart for me!! - red Chinese Army!
*Message #12 Posted by **Bill Wiese** on 9 Mar 2003, 6:00 p.m.,*
in response to message #10 by Norm

Even if Walmart carried industrial-strength 42S and 41C replacements, I wouldn't buy from them.

Every time you spend a dollar to WalMart, a signficant fraction of that ends up in Red China, funding the Red Chinese military (much of Chinese heavy & low-tech consumer industry is run by military to make it self-funded). WalMart has, de-facto due to rampant imports of cheap goods, become the defacto fundraiser for the Chinese PLA.

I'm disgusted enough at Boeing and Loral for giving 'commercial' satellite technology to Red China which ends up for military uses.

I'll be damned if any $$ of mine end up funding those bastards; I'm not gonna pay for a missle to be lobbed at me, and my fellow Americans. We're selling to them in the vein of Lenin's "hanging them with the rope they sold us."

Bill Wiese San Jose, CA

Re: KINPO WALMART 9S 9G - no biz with WalMart for me!! - red Chinese Army!
Message #13 Posted by - on 10 Mar 2003, 2:59 a.m.,
in response to message #12 by Bill Wiese

Yeah, and significant fraction of other income ends up in charity and not in the US army which throws flower over the world.

Re: KINPO WALMART 9S 9G - no biz with WalMart for me!! - red Chinese Army!
*Message #14 Posted by **Bill Wiese** on 12 Mar 2003, 12:50 p.m.,*
in response to message #13 by -

>unknown author wrote: >Yeah, and significant fraction of other income ends >up in charity and not in the US army which throws >flower over the world

I notice you're not brave enough to sign your own name. And what you wrote simply is not true: the amount WalMart spends on charity is largely for advertising, and is a minute fraction in comparison with its overall purchases from Red China.

And your rather invidious comparison of the Red Chinese army (with documented cannibalism during the Cultural Revolution) against the US military is rather ludicrous. China's already making noises about getting more 'respect': who next wants to join its slave labor camps - Taiwan? Singapore?

I don't get the semantics of your reference "throws flower": do you mean "throws flowers" (the pretty plants?) or "throws flour" (the food product?). If the latter, yes, our military has expended tremendous effort in distributing food aid. If you mean the former as some type of (incorrect) symbolism of evil, yes, sometimes we get nasty with people that are trying to kill 3000 of our people and shake up the world economy.

From your writing style, it sounds like you're a European. You should be grateful we paid to keep your bottom free from Soviet domination for the past 50+ years. GULAGs aren't too pleasant and would certainly interfere with that European go-home-at-4:30pm way of life.

Bill Wiese San Jose, CA

Bill Wiese San Jose, CA

US Army vs. red Chinese Army
*Message #15 Posted by **Nenad Vulic (Croatia)** on 13 Mar 2003, 3:20 a.m.,*
in response to message #14 by Bill Wiese

To Mr. Bill Wiese and Mr. Unknown:

IMHO, I am just afraid that such discussions may turn this forum into a political discussion, which has nothing to do with the old HP calculators. Unfortunately, there are many such forums around the Internet, quite impolite, with a lot of flames, yelling, etc.

Personnaly, I just do not care about advantages or disadvantages of the US or Chinese political systems. If anybody cares about a (any) Croatian's opinion about present international political issues, it is rather simple: We will do everything to avoid any war, but, if we get involved into one again, we do know how to win it, within the Croatian borders.

BTW, here in Dalmatia (southern Croatia) to return home at 4:30pm after work (like most Europeans do) will be too late in the afternoon for anybody here (regardless of whatever others may think about it).

I just apply that we all respect anybody's points of view expressed here, no matter how different they may be, unless they are expressing incorrect technical details about HP calculators.

Now, let us go back to calculators. HP 9S and HP 9G are a generally a real disappointment. Hope the future will bring some new fresh winds.

Kindest regards from Split, Croatia

I support.
*Message #16 Posted by **Vieira, Luiz C. (Brazil)** on 13 Mar 2003, 3:42 a.m.,*
in response to message #15 by Nenad Vulic (Croatia)

Hi;

I'm 100% sure that our dearest friend and colaborator Bill Wiese will agree with Nenad and let this unknown and anonymous soul to follow his path to freedom.

And life goes on... for us all, who come and stay.

Best and kindest regards.

Luiz C. Vieira - Brazil

Re: US Army vs. red Chinese Army
*Message #17 Posted by **HrastProgrammer (Croatia)** on 13 Mar 2003, 4:24 a.m.,*
in response to message #15 by Nenad Vulic (Croatia)

I decided not to post to this forum anymore but now I simply cannot resist ...

I am fully supporting you, Nenad.

You see, both Nenad and I were in the war ... the REAL WAR just a few years ago. And we really don't want to repeat this 'experience' again. I must admit that I haven't seen Mr. Wiese here when we, perhaps, needed his help to 'keep our bottoms free'. If we have waited for his help, we would probably all be dead.

This is a HP calculator forum. If Mr. Wiese has been in the war and want to discuss it, he should find appropriate forum for this. If he hasn't been in the war then he knows nothing about the war and he shoudn't discuss about it at all.

The war is not a game.

To Nenad and Luiz - stay well ...

Re: It's official: RPN scientifics HPs are coming back!
*Message #18 Posted by **Tony David Potter** on 7 Mar 2003, 12:20 p.m.,*
in response to message #1 by Jeremy

Jeremy,

Thanks for your note on my page. It's amazing the responses I've gotten from that page, from across the world, for what was originally a hour-long rant on my website, http://www.texasmath.org.

In Texas, we actually have Calculator competitions, in which students perform math and science problems on a calculator. You can see some of these on my page http://www.texasmath.org/DL, and I've heard a lot of comments from current and former competitors on this forum. Since the inception of the test, it has been agreed upon that the top calculator for these problems is the RPN calculators that HP made. In fact, the past few years have had every student use the HP-32SII at the state meet. We essentially have a large group of students who are convinced of the superiority of RPN, and who have openly lamented the fact that their calculator is not available.

As a product of these contests in the late eighties (on the HP-11C) I find I can't use the standard Algebraic calculators. Thus (sadly) I am one of the numerous people inflating prices on E-Bay trying to get replacements for my calculators. My students are frustrated trying to get their own HP's (our 32SII's are a class set, 24 of them.) and in lieu of the 32SII's, I'm leading them to some of the older calculators such as the 28S (which I picked up for about $40 with manuals in a lesser-known auction a while back,) among others.

I know at my school, I have about thirty students who are looking for HP's, and are eager for replacements. I know other schools in our state, who compete at the same level, are looking for them in similar numbers.

What's frustrating for me is that for the "new" RPN's I've heard dates from April to December to early 2004. If HP can't even get their own dates straight, will this be another instance of "vaporware" like thier XPander.

What really piques my interest is their Constructive Reals Calculator. Something like this would be a boon if if were an actual handheld (rather than the Java Applet it currently is.) For those who haven't had a chance to see it, you can find it at http://www.hpl.hp.com/personal/Hans_Boehm/crcalc/. This algorithm, in a robust hand-held shirt-pocket-sized body is exactly what most of us are looking for, and wouldn't mind paying in the neighborhood of $100-120 for.

My two cents. Tony David Potter

Re: It's official: RPN scientifics HPs are coming back!
*Message #19 Posted by **Eddie Mabillard** on 8 Mar 2003, 7:27 a.m.,*
in response to message #18 by Tony David Potter

Hello, If a new HP RPN comes out during this year it is a great news, what I whish is a cheap model for kids at school to make them addict of RPN, then it is easy to sell higher models, the second model will have the capabilities and even more (because the technology permit) of the 42 and the design of the 15, pehaps a third graphic model easier to use than the 48, and perhaps some specialised one for example like finance, and all the models whith a documentation of the older models not something like the 49 had, not up to the image that we use to have of HP. Ed

Re: It's official: RPN scientifics HPs are coming back!
*Message #20 Posted by **John K. (US)** on 9 Mar 2003, 10:09 a.m.,*
in response to message #19 by Eddie Mabillard

Actually, I think that the 9G would be a pretty sweet HS-level machine, or for kicking around in the backpack -- if only it were RPN... :^/

Re: HPs coming back? (2 cents more . . .)
*Message #21 Posted by **Paul Brogger** on 13 Mar 2003, 9:57 a.m.,*
in response to message #18 by Tony David Potter

I'm not going to hold my breath for traditional HP quality and durability. The projected payoff does not apparently seem worth the investment. (I'm sure the spreadsheets reflect this "truth" unanimously, and in abundantly clear terms, given the formulas being used, and the values plugged therein.)

The best I hope for is that they: 1) don't screw up the RPN too badly, and 2) don't expect traditional prices for that RPN in a 30S/9S/9G package.

If we won't have the option of a 42s replacement for ~$120.00, maybe we can buy three "9R's" (or whatever) for $40.00 each . . . In that way, we might at least compensate for the inevitable lack of durability, if not for the lost overall "quality of feel".

Re: HPs coming back? (2 cents more . . .)
*Message #22 Posted by **Ron Ross** on 13 Mar 2003, 10:53 a.m.,*
in response to message #21 by Paul Brogger

But I do not want the agravation of bad keys or having to watch every keystroke. That, Plus RPN, made Hp calculators what they were. Now that Hp offers neither, well???

I wish they would re-release an Hp20s in RPN for less than $30 (algebraic/RPN selectable) and I would buy 3-4 instantly. I really would like a 42s with a serial I/O of the 48 (actually just give me a 48G+ in a 42s sized package with no graphics) and I would be happy (great super deluxe calc w/o graphics). I actually prefer the 42s for complex number crunching and straight forward stats but would give up for the other Hp48g goodies.

I don't beilieve either would cost to much in the way of R&D.

Re: 30S, etc. keystroke quality
*Message #23 Posted by **Paul Brogger** on 13 Mar 2003, 12:09 p.m.,*
in response to message #22 by Ron Ross

I agree re: rubber keyboards like those ALWAYS found on Casio and Sharp, and maybe even the HP-49G (I haven't ever used one).

But I've said before, the hard plastic keys of the HP-30S are not too shabby. (Nothing like the older HP's, to be sure, but not *nearly* as bad as is commonly found.) I assume the 9S and 9G are similar.

I'd consider it major progress in today's climate if a reasonably-priced bundle of something like 32s/sii or 42s RPN functionality were made available in a 30S package. (And I'd probably buy several!)

Last update of correspondence w/ hp
*Message #24 Posted by **Jeremy** on 7 Mar 2003, 7:29 p.m.,*
in response to message #1 by Jeremy

I'm tired of formatting all the >'s out, so I will just paste it in there this time. ;)

This is HPs response to my email of yesterday: (see the root of this thread)

07 Mar 2003

Hello Jeremy,

Unfortunately, we do not have any specific information on the calculators do this year. We have let the engineers know that the 32sii were a very popular calculator. We are hoping that the new calculators will be similar. If you want to keep up with the progress of new calculators, search the following site for "calculator".

http://www.hp.com/hpinfo/newsroom/index.html?mtxs=corp&mtxb=3&mtxl=4

It is important to us that we answer your question. If you need further assistance, please reply to this message, we will be happy to help you.

Sincerely, Alex HP Consumer e-Support

(OK, so I'm a softy. I formatted the junk out, though there were no >'s :) -JZ

It's important ...
*Message #25 Posted by **Ellis Easley** on 7 Mar 2003, 10:51 p.m.,*
in response to message #24 by Jeremy

... to wonder if they borrowed their new mantra from Radio Shack ("You've got questions - we've got answers.") I think it is interesting that in a recent RS advertising campaign - the one with both couples, and some other people, at a party, where slips of paper with the names of manufacturers are falling down from above, one of the names is Hewlett Packard. I don't remember RS ever selling HP stuff before. Of course, it is a sensitive issue for me, since I worked for their in-house computer manufacturing operation until they sold it to AST and then started selling computers from IBM and then Compaq --- I think I just answered my own question: since they have been Compaq dealers they are now HP dealers. On a slightly different topic, has anyone noticed a recent HP ad campaign where they associate the HP name with a number of important efforts around the world using the plus sign to link HP and its customers, then at the end of the ad there is a large equals sign. Does anyone else here feel that ad is an affront to RPN users?

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Unreasonable price for a HP-35?
Message #1 Posted by on 6 Mar 2003, 2:54 p.m.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3011035388

Isn't that just HP-35 version 3 in nice condition? Is there something special about that one?

Re: Unreasonable price for a HP-35?
*Message #2 Posted by **Victor** on 6 Mar 2003, 4:45 p.m.,*
in response to message #1 by

I think the reason it is getting such high bids is that the unit looks brand new. I very rarely see them in this good a condition.

Re: Unreasonable price for a HP-35?
*Message #3 Posted by **James M. Prange** on 6 Mar 2003, 7:04 p.m.,*
in response to message #1 by

Well, if anything, I might consider that starting price to be "unreasonably low". I'd have to assume that the bidders consider whatever they actually bid to be reasonable. I sometimes think that some bidders may have more money than common sense, but hey, it's their money; who are we to say that they shouldn't spend it as they please?

Regards,
James

Re: Unreasonable price for a HP-35?

*Message #4 Posted by **Ellis Easley** on 7 Mar 2003, 6:39 a.m.,*
in response to message #3 by James M. Prange

How about these completed Ebay auctions I stumbled on yesterday:

A pair of 1 meter RCA cables made with silver wire for $99, http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=14965&item=3008209821

10 ft of 24 gage silver wire for $16 to use for wiring inside audio equipment - seller recommends letting it "break in" for 100 hours to hear the improvement in the sound quality, http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=14965&item=3006912524

25 ft of 96% tin/4% silver rosin core solder .032 in diameter for $14, I need to figure out how this compares to normal prices which are stated per pound or per ounce, http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=14965&item=3008213768

A duplex AC wall outlet that has been cryogenically treated - cooled to below -315 F - which somehow allows it to contribute to the sound quality of your stereo system for $39, http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=3284&item=3002648461

Same again for $46, http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=3284&item=3006913469

A set of turntable tonearm wires - 4 wires 2 ft. long terminated at one end - made of silver, need 150 hours to "break in", for $71, http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=3284&item=1943237279

This guy has about 280 positive feedbacks and his specialty is this silver wire and 96/4 (tin/silver) solder, which I have learned recently has become fairly common, you can get it at Radio Shack or Home Depot, it's one of the new lead free alloys being popularized for common use. I give the seller credit that he provides some of the solder and teflon tubing with the silver wire "at no extra charge" and plus, I don't blame any seller of luxury items for the prices his customers are willing to pay. What gets me is the extravagant claims made for the power of silver wire to improve the "depth and breadth" of music by using it to connect low level signals. And how much impact can the AC wall outlet have on the quality of the sound coming out of the speakers? $39 worth? $46 worth? You know, wire wrap wire is silver plated. How many people would be able to tell silver plated copper wire from solid silver wire?

I was looking for information on soldering stainless steel and I came upon the Indium Corporation of America which makes many products from Indium including specialty solders, many without Indium. Now, for pure Indium wire (which has the amazing property that if it is cleaned properly it can be used to solder things together without any heat at all) they charge $180 for a minimum quantity of 3 feet of solid wire .03 inch in diameter. Well, maybe that's what Indium goes for - and this Indium is very pure - but they also sell 63/37 (tin/lead) solder, the "eutectic" alloy of tin and lead (a word whose definition I finally learned today, basically means it melts and solidifies at the same temperature) and a very commonly used alloy for electronic soldering, either it or 60/40 has been used for just about all electronic soldering for ages, it costs about $10 per pound - for the same 3 feet by .03 inch dia., the Indium Corporation charges $150!!! For a 1 pound bar - no, I misspeak, it's a 500 gram bar - they want $250. This might be very pure 63/37 solder, but they are selling it for use in a pot or a wave solder machine. I can only imagine that those prices are for unqualified customers. Or that there are some extremely critical applications that require whatever its properties are. While I didn't find what I was looking for (a formula for stainless steel flux), I did learn a lot about solder!

Re: Unreasonable price for a HP-35?

*Message #5 Posted by **Ernie Malaga (Miami)** on 7 Mar 2003, 9:31 a.m.,*
in response to message #4 by Ellis Easley

Ellis:

All I can comment is, "there's a sucker born every minute." Advertise special car paint (irradiated with cosmic or gamma rays), and some idiot will buy it believing your claim that the car will draw energy from sunlight and won't require gas anymore.

I guess that sick gullibility explains why the National Enquirer sells so much.

-EM (Feeling cynical today)

Cryogenically Treated 12C!
*Message #6 Posted by **Spice_Man** on 7 Mar 2003, 1:26 p.m.,*
in response to message #5 by Ernie Malaga (Miami)

Anybody want to buy my Cryogenically treated, pure "Gold" content, irradiated, chemically treated, masterfully broken-in, strategically scratched (for better performance) 12C?

First $200 takes this one-of-a-kind, one-and-only unit!

Batteries not included.

Spicey

Re: Cryogenically Treated 12C!
*Message #7 Posted by **David Smith** on 7 Mar 2003, 5:07 p.m.,*
in response to message #6 by Spice_Man

I have a friend with a genuine, actually crogenically treated HP25... he was holding it in his hand while removing the top from a big liquid nitrogen dewar... you can guess the rest. I think a couple of the electrolytic capacitors were destroyed along with the batteries.

Re: Cryogenically Treated 12C!
*Message #8 Posted by **Spice_Man** on 9 Mar 2003, 12:51 p.m.,*
in response to message #7 by David Smith

He should sell it on ebay. He'll make a fortune <G>.

Spicey

Re: Cryogenically Treated 12C!
*Message #9 Posted by **Bill Platt** on 14 Mar 2003, 5:31 p.m.,*
in response to message #6 by Spice_Man

Back in 10th grade, I was the only kid in the (huge) high school with a Hewlett-Packard (11c) and it certainly did attract more attention than most calculators.

Well, I had one of my classmates absolutely convinced that the calculator had a microphone built into the little HP emblem. I said that it "digitalized" the sounds and stored them in binary code etc etc.

The convincing part was that I could set the calculator on an unterminated program loop and the display would flash "running".....

I think my ploy finally dissolved when I was unable to "do" anything with the "digitalized" sounds!

AWESOME COMPUTER SOUNDS!
*Message #10 Posted by **Michael Meyer** on 14 Mar 2003, 9:56 p.m.,*
in response to message #9 by Bill Platt

Speaking of stupid pet calculator tricks:

Have you ever held your HP-25 (or others, but only had that in high school) up to an AM radio while calculating?

You can even write programs that make wonderful computer-sounding sound effects!

Give it a try!

Michael

Re: AWESOME COMPUTER SOUNDS!
*Message #11 Posted by **Les Bell [Sydney]** on 15 Mar 2003, 7:05 p.m., in response to message #10 by Michael Meyer*

Reminds me that the first program I got running on my 8080-based S-100 system back in 1977 or so was from an article by Steve Dompier in "Dr. Dobbs Journal of Tiny BASIC Computer Calisthenics and Orthodontia, or Running Light Without Over-Byte". The article, entitled "Music of a Sort", contained an octal listing of the program, plus two sets of data. By running the program and holding an AM radio nearby, one could hear the interference play "The Fool on the Hill", by The Beatles.

The second set of data was the music for - of course! - "Daisy, Daisy". All computers should be able to sing that!

Best,

--- Les [http://www.lesbell.com.au]

Re: AWESOME COMPUTER SOUNDS!
*Message #12 Posted by **Michael Meyer** on 16 Mar 2003, 10:45 p.m., in response to message #11 by Les Bell [Sydney]*

One of my favorite programs for the HP-71B combines NOISE.LEX and a basic program that allows keying in music.

Nothing's better than Bach, in two-part harmony, on a pair of HP-71's!!

The William Tell Overture is killer also.

Michael

Re: AWESOME COMPUTER SOUNDS!
*Message #13 Posted by **Johnny Billquist** on 17 Mar 2003, 12:51 p.m.,*
in response to message #11 by Les Bell [Sydney]

Well, the PDP-8 have this program that uses this "feature" to generate music in four part harmonies on the AM-band.

Quite impressive to hear Beethoven's fifth symphony that way.

The program is also rather nice since it actually takes a text file as input, containing the music score, and generates the noise from that.

So anyone can write more music quite easily.

Re: Unreasonable price for a HP-35?
*Message #14 Posted by **Dave Shaffer** on 7 Mar 2003, 1:01 p.m.,*
in response to message #4 by Ellis Easley

These are the same folks who buy "Monster Cables" for their speakers. I use the cheapest 18 gauge power cord I can find (at pennies per foot), and it sounds just as good. Just use Ohm's law to compare any loss, and then turn up the volume 0.05 dB! (I'm pretty fussy about my music - no MP3s, and I get really turned off at the HVAC noise in the typical concert hall where you've paid $50 to listen to the orchestra.)

Can you imagine the sound if you both freeze your AC socket and expose the rest of the wires to X-rays!

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP42S
*Message #1 Posted by **Ken Shuey** on 6 Mar 2003, 12:23 p.m.*

I wondered if anyone has had any experience with the keyboard on an HP42S becoming unreliable. I have a few keys that require multiple presses to activate. Is it possible to disassemble the unit and clean the keyboard or does this indicate another issue. The unit has not been dropped nor had any liquid spilled on it.

{moderator transplant from HP Articles Forum}

Pioneer keyboards
*Message #2 Posted by **Randy Sloyer** on 6 Mar 2003, 8:08 p.m.,*
in response to message #1 by Ken Shuey

The short answer is that it is not practical to open the unit to repair or clean the keyboard. It is held together with at least 43 permanently heat fused plastic rivets. Cleaning can only be done with external methods.

The longer answer is that chances are your 42S keyboard is at end of life. They just don't last forever 'ya know? But honestly, if they are commonly used keys on the numeric pad or the basic four (+-x/), the thick film printed circuit that forms the contacts and the actuator just plain wear out after a bazillion cycles and there is nothing you can do but replace it.

This is especially true if you look in around the keys and can see a teal color. See linked photo here for example. The original keyboard circuit sheets used in the USA and early Singapore models used what I think was a silver bearing compound for the domed actuator sheet. Over time, the silver begins to flake off due to stress fractures and sooner or later the conductivity is gone and the key becomes flaky, requiring a harder than normal key press to make contact. The worst case is when the material from the snap dome deposits itself on the two switch contacts of the lower sheet creating a permanent short. When that happens, the unit is dead and will not power up. They changed the materials in later production models to a more carbon based material that is still subject to wear out, but it does not migrate or flake off like the original materials.

I have used a common electronic cleaner that is primarily isohexane to clean particularly dirty keys by squirting it in around the keytop with a needle-point dispenser bottle, it works for some keys, but not all. Denatured alcohol would do about the same, just don't use too much and keep it away from the LCD lens if it is a double window type. Just allow it to puddle around the key, let it wick into the key area, press a few times to drive it out of the dome area and let dry well. You can repeat at least two times. Oops, take the batteries out first before doing this.

If you have access to an ultrasonic cleaner, this may work as well, use at least two passes with distilled water (again, sans batteries) for about fifteen minutes each cycle with clean water each time and let dry for at least a day after shaking all the water out.

Try the solvent based method first, as it seems to work most of the time if the unit is going to heal itself. I save the ultrasonic method for the last ditch try before the junk box.

In my experience, you've got about a fifty-fifty shot to restore normal sensitivity.

Re: Pioneer keyboards
*Message #3 Posted by **db(martinez,california)** on 6 Mar 2003, 10:16 p.m.,*
in response to message #2 by Randy Sloyer

thanks randy. i saved that post

Re: Pioneer keyboards
*Message #4 Posted by **Ken Shuey** on 7 Mar 2003, 6:55 a.m.,*
in response to message #2 by Randy Sloyer

Randy: Thanks for the help. It doesn't sound good since it does take more force to activate keys and the keys are commonly used ones. I appreciate the insight, though, and I'll give cleaning a try.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

TI-59 RPN Simulator Module
*Message #1 Posted by **Emmanuel, Normandy** on 6 Mar 2003, 12:14 p.m.*

```
Hi there,
I bought one on ebay and would like to try it.
But there's no user's manual.
Who can help me?
Thansk for assistance.
```

Re: TI-59 RPN Simulator Module
*Message #2 Posted by **Gene Wright** on 6 Mar 2003, 3:50 p.m.,*
in response to message #1 by Emmanuel, Normandy

This is found here:

http://www.rskey.org/gene/calcgene/59mods.htm

Module #13, RPN Simulator. Although I have one, I have never used it. This module was a very strange one for TI to make. Apparently, they were getting tired of people claiming HP's were better calculators so TI decided to make this module as its answer to HP and RPN. (Or they may have realized that there was a lot of software programs out there for HP's and wanted to give their users access to it). It's an entire module with one executable program on it. You run the program and key in HP-97 program KEY CODES. You could take a printed program listing for the HP-97 (this would NOT work for HP-67 key codes, only the HP-97) and key in the program steps keycode by keycode. When finished, the program would go off and compute and eventually (and this took a while) print out a TI-59 equivalent program. This then had to be KEYED back into the TI-59 to run. The usefulness of this module is somewhat suspect. First, only keycodes from a HP-97 listing can be used. Second, not all instructions from the HP-97 can be interpreted or emulated by this module. The manual (woefully concise) provides a list of these functions. Also, the resulting program often doesn't run very well at all speedwise. TI did give a very good effort, however. Their timing was terrible, as this module came out only a few months before HP introduced their HP-41. This module did NOT work except to translate programs.

Re: TI-59 RPN Simulator Module
*Message #3 Posted by **Emmanuel, Normandy** on 7 Mar 2003, 12:45 a.m.,*
in response to message #2 by Gene Wright

```
Thanks, Gene. I yet read that.
In fact there's some 65 programs in the ROM!
I need a copy of, a scan of, or an original user's manual to test and taste it.
Thanks again for assistance. Kind regards from Evreux.
Emmanuel
```

HP Forum Archive 11

[Return to Index | Top of Index]

what should a new RPN machine contain?
*Message #1 Posted by **Robert Burnham** on 6 Mar 2003, 10:42 a.m.*

(This question was spurred by the thread below about contacting HP and urging them not to abandon RPN.)

So -- what should a new RPN (scientific) machine contain in the way of functions?

My own preference actually would be for a simpler function set rather than a more inclusive one. I have a 48G+, and it sits unused most of the time because it's just too @#$%! complicated for routine calculations. Yeah, it's a marvel, but... (I'm a science writer in the fields of astronomy and geology.)

I still have the 35 I bought 30 years ago last month, and it works perfectly. For 95% or more of the calculations I do, its function set is totally adequate. It's biggest drawback -- maybe the only one -- is the rapid battery drain from the LEDs.

At this point, most of the intensive number crunching I used to do on the 35 (and its successors, a 25, a 67, and a 32sII) is now done by software running on my computer. What I need these days is a CALCULATOR, not a calc that's trying to be a handheld computer. I don't know how typical this is, however.

As for me, I'd be happy with a "new HP-35" that has a long, long battery life -- my 32sII is 9 years old and has its original batteries running. Second, I'd like a minimum of prefix keys; I like single-function keys.

I bought my 32sII and have used it extensively. It's a wonderful machine. But, jeez, nearly every key has FOUR functions...!?! Ack!

All those for simplicity, please raise your hand....

Re: what should a new RPN machine contain?
*Message #2 Posted by **Richard Garner** on 6 Mar 2003, 1:02 p.m.,*
in response to message #1 by Robert Burnham

I am like you. I have 2 48GX calcs, one I carry with me everywhere and one sit on my desk. If it wasn't for the unit conversion they might not get used at all. I am a drafter and CAD user for a city planning office and contantly need to change all sorts of units from one to another depending on how the plat information is listed. I I started out with a 41CX 22 years ago and own or have owned(2)41CX, 15C, 20S, 28S, (2)42S, and (2)48GX. By far the units that I use the most have been the 41CX and then the 42S. If only the 42S had the unit conversions, the read/write IR, and the memory of the 48GX, I wouldn't need any other calculator. The 48 is too complicated to be really usefull. The 42 is almost the perfect calculator.

Re: what should a new RPN machine contain?
*Message #3 Posted by **John Smith** on 6 Mar 2003, 1:16 p.m.,*
in response to message #1 by Robert Burnham

Unfortunately, the best machine for your needs seems to be the Voyager series' HP-10C !!

Why ? Let's see:

- very small and lightweight, ultra-easily pocketable, one of the smallest HP calcs.

- clear, contrasty segmented LCD display, very easy to read in almost all light conditions this side of utter darkness

- excellent, classic keyboard, molded keys that won't wear off, ever

- incredibly low battery consumption: even using it heavily each and every day, you won't have to change batteries in at least 4 or 5 years, up to 15 years on record !

- only a single prefix key: keyboard totally uncluttered, many keys have just one function, none more than two

- fully adequate instruction set, including all typical scientific functions, plus linear regression, statistics, factorial, hms conversions, etc.

- classical, 4-stack + lastx RPN, and simple keystroke programmability, for when you need it. Also, memory automatically repartitions between up to 70 program steps, or 10 storage registers (with STO+,STO-,STOx,STO/ storage arithmetic), or any combination in between.

The caveat ? Incredibly hard to find, and then usually at outrageous prices ... but it certainly *is* what you want, so if you can afford one, don't hesitate !

Re: what should a new RPN machine contain?
*Message #4 Posted by **Robert Burnham** on 6 Mar 2003, 3:02 p.m.,*
in response to message #3 by John Smith

I'd sort of converged on that conclusion myself!

But I'm actually not simply strolling down memory lane here -- I'm trying to see if a consensus exists for some advice to give HP regarding one or two RPN machines to introduce, or reintroduce.

I realize that trying to move the company this way is likely to prove, um, difficult and probably frustrating from our point of view. Any ideas, though?

Re: what should a new RPN machine contain?
*Message #5 Posted by **Vieira, Luiz C. (Brazil)** on 6 Mar 2003, 6:43 p.m.,*
in response to message #3 by John Smith

Hi;

I second you in a wilder consideration: Voyagers at once.

Each of them, any of them. I'd rather go for an 11C or a 15C because the 10C is, as mentioned, too hard to find (the HP10C has been redefined as a collectible, no longer a calculator). And boh have a bunch of other features that do not clutter the keyboard and are helpfull.

If I'm asked about, I'd rework the Voyagers and launch them again. No changes, with the optional '+' series, say: HP10C+ HP11C+, HP12C+, HP15C+ and HP16C+. or why not having an HP10X? I have my idea about what to add, but I'll allow others have their own.

And let's face it: Voyagers have a fancy design. They resamble the HP71B that is also a "handsome" handheld.

Cheers.

Re: what should a new RPN machine contain?
*Message #6 Posted by **Paul Brogger** on 6 Mar 2003, 3:22 p.m.,*
in response to message #1 by Robert Burnham

I've consistently recommended the HP-32S as the antidote for those annoyed by HP-32Sii keyboard clutter.

It has a single shift key, with most of the lesser-used functions made available as menu selections.

The alpha register designations don't terribly crowd the keyboard, but do enable a *wonderfully* straightforward and semi-mnemonic register naming and program labeling scheme.

The character-dot-matrix (not graphic) display (like that of the 32Sii, but slightly smaller) is a nice compromise between seven-segment readability and the requirements for alpha (as well as numeric) presentation. (And *the* feature I use most is hexadecimal/decimal conversion . . .)

Like the 32Sii, it has the four-level RPN stack, a nice programming paradigm, tremendous portability and essentially infinite battery life.

My **only** gripe with either has been their limited memory, but I don't program the calculator regularly, so that doesn't matter too much anyway.

If you're put off by the busy-ness of the 32Sii keyboard, by all means, take a good look at the HP-32S!

(And may I note that, in reference to your hopes, "consensus" is going to be hard to come by!)

Re: what should a new RPN machine contain?
*Message #7 Posted by **Erik Ehrling (Sweden)** on 6 Mar 2003, 3:55 p.m.,*
in response to message #1 by Robert Burnham

Local variable scope for RPN programming...

/Erik

Re: what should a new RPN machine contain?
*Message #8 Posted by **James M. Prange** on 6 Mar 2003, 8:10 p.m.,*
in response to message #7 by Erik Ehrling (Sweden)

Local variable scope for RPN programming...

Like in an RPL calculator?

Regards,
James

Re: what should a new RPN machine contain?
*Message #9 Posted by **Erik Ehrling (Sweden)** on 7 Mar 2003, 11:51 a.m.,*
in response to message #8 by James M. Prange

Nope.

Like having a new fresh set of local numbered registers for each function so that you could do whatever operation you like on the numbered registers without being afraid of ruining the numbered registers of the calling function...

Running "MAIN" below would return leave Y:2 X:1 on the stack

Get the concept? Would be really powerful! (Almost worthy to be called the next generation of RPN programming...)

/Erik

LBL "ADDONE" 1 STO +00 RTN 00 --> pushes R00 on the stack in calling function END "FNC2"

LBL "MAIN" 1 STO 00 CALL "ADDONE" (ST X) --> parameters goes into R00, R01... RCL 00 END "FNC1"

Re: what should a new RPN machine contain?
*Message #10 Posted by **James Stephens** on 6 Mar 2003, 6:32 p.m.,*
in response to message #1 by Robert Burnham

Hello Robert,

If you're interested in that Voyager series, try looking for an 11c: the 10c is the rarest of the breed. I'm still kicking myself for having given away my old 15c after I started using a 32s (which I still have). I got a 32sii eventually, which I've used a few years, and was disappointed to see it go out of production. The idea of a new hp-35 is nice, and you know, if they had made the lowly hp-6s in an RPN version, that would have been a nice, rugged little day-to-day scientific.

Re: what should a new RPN machine contain?
*Message #11 Posted by **David Schooley** on 6 Mar 2003, 7:59 p.m.,*
in response to message #1 by Robert Burnham

I have a 41CV, 42S, 48G, and a new 48GX. The ultimate RPN machine would combine the best of these.

Form factor like the 42S, put perhaps with a 3 or 4 line display.

Keypad layout like the 41CV with the arithmetic keys on the left. After barely touching my 41CV for almost 10 years, my fingers still know where the plus key is.

Complex number handling like the 48's.

Native olynomial root finder. This is one of the things I miss from the 48's when using my 42s. My 41CV has it with the math pac. The solver in the 42S is ok otherwise. 99.99% of the time if I want roots, I want all of them, and I have a polynomial.

Something for HP to consider would be to make the calculator switchable between RPN and algebraic entry. When I was teaching, I always had a few students bring in two calculators. The 48G(X) was to handle the complex numbers, and they used whatever other calculator they had for everything else. You would see them do calculations using the algebraic calculator, type results into their 48G, do some complex math, and then copy those results back to the algebraic. RPN is the Way, but it does take some getting used to.

Re: what should a new RPN machine contain?
*Message #12 Posted by **James M. Prange** on 6 Mar 2003, 8:21 p.m.,*
in response to message #11 by David Schooley

Something for HP to consider would be to make the calculator switchable between RPN and algebraic entry.

Well, it did just that in the 49G. Unfortunately, it did a lot of other things in the 49G that many of us aren't pleased with.

When I was teaching, I always had a few students bring in two calculators. The 48G(X) was to handle the complex numbers, and they used whatever other calculator they had for everything else. You would see them do calculations using the algebraic calculator, type results into their 48G, do some complex math, and then copy those results back to the algebraic. RPN is the Way, but it does take some getting used to.

I guess that those students just didn't understand that the RPL calculators can handle algebraic objects just fine. RPN is indeed the way, but when you already have an algebraic expression from a handbook or textbook, it may well be easier to simply type it in as an algebraic object.

Regards,
James

Re: what should a new RPN machine contain?
*Message #13 Posted by **James M. Prange** on 6 Mar 2003, 8:02 p.m.,*
in response to message #1 by Robert Burnham

I have a 48G+, and it sits unused most of the time because it's just too @#$%! complicated for routine calculations. Yeah, it's a marvel, but... (I'm a science writer in the fields of astronomy and geology.)

Too complicated??? Maybe it's because my first HP was a 28S, but I find the RPL calculators quite simple and easy to use. To be sure, you can choose to use complicated methods to achieve what you want, but you can also use simple methods, at least for "routine calculations". Usually, it's a trade-off amongst ease of understanding, number of keystrokes, speed of execution, the amount of memory needed for execution, and, for programs, program size. It does often give the user many different ways to accomplish a given task, and it has many commands that I just don't have the mathematical knowledge to make use of, but complaining about these things would seem much like a prospective groom complaining that his intended bride is too beautiful. Probably what I find worst about the 48 series is that a 48 is simply to big

for my shirt pockets.

The only calculator I have that might be considered "Classic RPN" is the 16C that I inherited from my brother, and I really haven't used it much. Interesting, and it has some useful "binary" commands that aren't built-in to the RPL calculators. But I strongly suspect that many things that I find easy on a 48 series would be somewhere between difficult and impossible on a "Classic RPN" calculator.

One of the things that I would very much like to see is a very basic RPN "4-banger" with just +, -, *, an / operations. Maybe square root as well. Something very low-cost that an elementary school student would use when just learning to use a calculator, before they're indoctrinated into putting the operator between the arguments.

Regards,
James

Re: what should a new RPN machine contain?
*Message #14 Posted by **Les Bell [Sydney]** on 6 Mar 2003, 9:32 p.m.,*
in response to message #1 by Robert Burnham

Another vote for simplicty. Not simple simplicity. Not simple-minded simplicity. But elegant simplicity - the kind that was evident throughout the Classics and culminated in the 41CX.

However, what might be even *more* important than what is in the calculator itself is what comes in the box *with* the calculator. Last week, I finished the novel I was reading, and looking for something to relax with before going to sleep, I pulled the 41CV "Owner's Handbook and Programming Guide" off the shelf.

It reminded me again of why I always bought Hewlett-Packard calculators - and, in fact, why I made my career in technical writing and journalism: clear explanations and examples, use of colour to clarify functions, keys, etc., elegant (and even witty) use of illustrations at the facing page of each chapter. Spiral binding so the book will lie flat while in use.

I'd quite often pass through Singapore Airport, where the duty-free stores had HP calculators, and the sales people were always surprised when I'd ask to see, not the calculators in their display cabinets, but the *manuals*. You could never form an impression of the power of the HP-41CX from a two-minute session of uninformed key-prodding.

So, I'd say to HP: something like the 41 would be the sweet spot for me, and, I'd say, most of us. But regardless of the actual functionality: bring back good manuals! The 'thing' that accompanied the 48GX reminded me of a 1920's high school mathematics textbook in layout and typography, and had about as much character. And as for the 21-page travesty that

accompanied my son's HP-6s . . . Well, it was about as good as that calculator deserved.

Best,

--- Les [http://www.lesbell.com.au]

Could someone tell me why not including manuals is now "hip"?
*Message #15 Posted by **Scuba Diver** on 6 Mar 2003, 10:05 p.m.,*
in response to message #14 by Les Bell [Sydney]

Here's another one of my rants, brought on by my two recent HP purchases.

When I buy products, I want to find a manual inside that will explain every function the product has. It doesn't have to be pretty, just robust and comprehensive.

I have recently been disappointed by the quality of the "manuals" included in two recent HP purchases.

My new HP deskjet printer didn't come with a manual, it came with a "placemat" that provided instructions (well, actually it provided pictures) on how to get started. I had a couple of questions regarding the buttons and lights on my printer, so what was I forced to do? DOWNLOAD a .pdf of the manual from HP!

In another instance, my friend needed a calculator for a finance class; I offered to lend him one of my 12Cs, but his ability to learn RPN is comparable to Michael Jackson's ability to fake sanity, so I went with him to buy a 10BII. When we finally got the blister pack open, what fell out was not a manual, but a fold-out instruction "sheet"; it resembled something that came with a $5 Timex watch!

Now, I often said that I'd no longer be "cool" when I hit 30, and I guess it's true. It must now be hip to NOT include manuals with products, and the new HP obviously personifies hip!

B. P.S. Since I'm putting this in a thread on what a new RPN HP should include, I should probably throw my 2 cents in...I love Voyagers, but I also think that the Pioneers had an early death. In my opinion, there were many more years left in that range! I'd love to take the 17BII, add more memory and make it a dedicated RPN machine; the '=' key always throws me off!

I know that this may not be a popular position, but I prefer the menus over a cluttered keyboard. Something with two shift keys and all those colours...that's too confusing for us finance types :)

Re: Could someone tell me why not including manuals is now "hip"?
*Message #16 Posted by **James M. Prange** on 7 Mar 2003, 12:32 a.m.,*
in response to message #15 by Scuba Diver

One of my pet peeves is that it seems that as products become more complex, the documentation that comes with them becomes thinner, and even at that contains more errors about how the products actually work, so it becomes harder and harder to use the products to their full potential.

Maybe it's the fear (probably well-founded) that a manual as thick as the Bible would frighten off many potential purchasers. Or maybe they reason that the vast majority of purchasers would never get around to reading the manual anyway. Perhaps providing only a thin "Getting started" pamphlet makes it look as if using the product is so intuitive that comprehensive documentation isn't needed?

Of course some software products come with built-in "Help", but more often than not I find the "Help" to be somewhat less than helpful.

Oops! I almost forgot. As part of their environmental policy, they minimise the use of paper products. So the purchasers (well, those who want hard-copy documentation) have to download the documentation and print it out on their own paper.

Of course with the 49G, there's the issue of having the OS in flash memory. When a new "ROM" revision is released, should HP be required to print and send a new manual to everyone who already owns a 49G? I don't think it would be feasible to do that, but they could at least make a well-written downloadable and printable "e-manual" of some sort (presumably PDF), updated to the current OS revision and with known errors corrected, available.

Note that HP is not alone in this regard.

Regards,
James

Re: Could someone tell me why not including manuals is now "hip"?
*Message #17 Posted by **Ernie Malaga (Miami)** on 7 Mar 2003, 9:49 a.m.,*
in response to message #16 by James M. Prange

>Note that HP is not alone in this regard.

Of course not. I think Microsoft started the trend when it stopped including manuals for its Windows and Office products.

Now *there's* a complicated product, and you have to read Help text to understand it.

I wish I could say that Apple Computer is better, but it ain't. OS X comes without a manual. You pull down the Help menu and chances are that the help text you need to read must be downloaded from Apple's web site.

-EM

Re: Could someone tell me why not including manuals is now "hip"?
*Message #18 Posted by **christof** on 7 Mar 2003, 4:36 a.m.,*
in response to message #15 by Scuba Diver

Pioneer case- easier to "thumb" in the field, IMO.

slightly bigger display (I think a modern machine could squeeze it in_ to show 4 stack levels or 3 stack levels + softmenu

configurable stack (modes menu. 4 level, 7 level [xyz, alpha beta theta, and T], and 48 style object stack.)

one shift key, good menus, but *absolutely* an alpha key. (I can deal with 2 shift keys fine in the old colors. I'd prefer it, but I understand people not liking it)

modal switching to give the ability to code in both an improved RPL and a keystroke model similar to the 41/42

real I/O via infrared.

128k minimum memory- 512K would be better (with that level, you could compete with the mig educationals, as well. with I/o, you get fulluse of the popularity boiost of an internet connected developer community)

MANUALS! Real, multi volume, *pocket sized* manuals. I'll cary 1000 pages of docco around if it fits in my wasitpack field bag or m65.

(and the finance, matrix, and stats data has to be able to translate into csv ascii.)

sound like a lot- it's 10% of what a palm can do, so it's not impossible.

Re: Could someone tell me why not including manuals is now "hip"?
*Message #19 Posted by **Ernie Malaga (Miami)** on 7 Mar 2003, 9:44 a.m.,*
in response to message #15 by Scuba Diver

The current trend not to include manuals is dangerous. Forcing users to download documents is presumptuous -- not every user will have internet access!

Like you, I also think that manuals should be complete (explaining everything), clear, and well-written. Like an HP-67 manual, or 41C. But even the 48GX has incomplete manuals and as for the 49G... well, forget it.

-EM

Re: Could someone tell me why not including manuals is now "hip"?
*Message #20 Posted by **Frank Wales** on 7 Mar 2003, 11:08 a.m.,*
in response to message #19 by Ernie Malaga (Miami)

Forcing users to download documents is presumptuous -- not every user will have internet access!

It's worse than that. My experience of corporate web sites is that content comes and goes over time, often unexpectedly. So there is no guarantee that the person, to whom you want to sell an item with a downloadable manual in a year or two, will even be able to download the manual, since it might be gone from the site.

Already, HP's official URL for calculators, printed on the back of recent products, bounces you out of the HP corporate site into the HP shopping site. Who's to say that the people running this site will still make available documentation and support materials for discontinued calculators in a year or two? And who's to say it would be wrong for an online store front to stop providing such materials anyway, once the product's been made obsolete?

Yet this leaves future buyers of these machines in a difficult position. At least when printed manuals are shipped with a machine, a buyer can expect to get some documentation with it, or negotiate a lower price because of the missing item. But when documentation becomes downloadable, whose responsibility is it to provide it for future buyers and owners, once the vendor stops shipping the product? Maybe this site will take on that mantle as a natural extension of the CD/DVD collection, but I find it disappointing that it would need to.

Re: Could someone tell me why not including manuals is now "hip"?
*Message #21 Posted by **Ellis Easley** on 7 Mar 2003, 2:06 p.m.,*
in response to message #20 by Frank Wales

This is one area where TI is in the lead. The URL on their calculators takes you to a useful place and they have a reasonable amount of documentation available including for some discontinued calculators. Of course, their calculators don't need so much documentation! (I had to get a dig in - the most advanced TI I have is the 83+SE, their bigger models probably need lots more documentation)

Re: Could someone tell me why not including manuals is now "hip"?
*Message #22 Posted by **John K. (US)** on 9 Mar 2003, 10:42 a.m.,*
in response to message #19 by Ernie Malaga (Miami)

The current trend not to include manuals is dangerous. Forcing users to download documents is presumptuous -- not every user will have internet access!

Funny you should mention that. The most egregious example of said "danger" was the brand new DSL modem a friend of mine bought from a well-known company-who-shall-remain-nameless-but-really-should-know-better. His ISP wasn't using DHCP to assign IP addresses, so we needed to override the default NAT settings in order to establish a connection to the outside world. Unfortunately, the annoyingly limited "management tool" that it shipped with didn't have the ability to modify the NAT settings, referring us instead to the CLI reference manual -- which was no longer shipped in hard-copy form, but was available "in convenient electronic form, downloadable from [their] website."

Imagine our thrill at this added "convenience."

Re: what should a new RPN machine contain?

*Message #23 Posted by **Ernie Malaga (Miami)** on 7 Mar 2003, 11:09 p.m.,*

in response to message #1 by Robert Burnham

>All those for simplicity, please raise your hand....

I second the motion. A good RPN calculator should be a _calculator_, not a mainframe wannabe. It should have whatever features are truly necessary -- and no more.

Even programmability should be an option. I'm convinced that many HP customers out there have never written a single line of code, and wouldn't know what to do with it if they wrote it.

Graphing should be optional too. This, to me at least, is an important issue. I have no need whatever for graphing, plotting, and the like. Why should I pay a higher price for a calculator full of graphing features I'll never use?

I believe there's room for two _simple_ RPN calculators. A non-programmable, and a non-graphing one. And include a decent manual, please. Maybe HP should rehire the people who wrote the 41C/CV/CX manuals!

-EM

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

hp 20s
*Message #1 Posted by **hugh** on 6 Mar 2003, 8:40 a.m.*

is there any difference betweem the hp20s that came in the cardboard box packaging (red and white) and the newer blue plastic see-through wrapped ones?

Re: hp 20s
*Message #2 Posted by **Randy Sloyer** on 6 Mar 2003, 8:18 p.m.,*
in response to message #1 by hugh

The units in red boxes are brown bezels with orange and blue shift keys.

Most blue clamshell packages are black bezel units with the 48 color series teal and purple shift keys.

IMO, the brown have better contrasting shift keys than the black, that's part of the reason the older brown 32Sii's fetch more money than the blacks, the 20S is just the algebraic version.

Purely cosmetic and a matter of taste.

Re: hp 20s
*Message #3 Posted by **JaSon** on 7 Mar 2003, 12:39 a.m.,*
in response to message #2 by Randy Sloyer

The newer black models also have the numbers printed on the keys so It is possible for the numbers to wear off after many years.

General 20S ranting
*Message #4 Posted by **Randy Sloyer** on 7 Mar 2003, 8:05 a.m.,*
in response to message #3 by JaSon

The only 20S's that had double molded keys (read: never wears off) were the originals made in USA and maybe the very early Singapore production. All Indonesian 20S's (AFAICR from about 1997 on) are printed key top keyboards, that includes all the "Red Boxes" as well.

Personally, I think the shift in production to Indonesia marked the beginning of the slide in quality of the Pioneer product line. I think they must have changed suppliers of the keyboard parts or relaxed the specification on the raw sheet used. I have two early USA 20S's my wife uses around the house, they have the best keyboard feel of any Pioneer I own.

I see all the hyperbole about the "new" products coming out, I just hope new HP remembers what made the old HP so good. IMO, three words, in no order:

Quality Performance Usability

Re: hp 20s
*Message #5 Posted by **Christof** on 7 Mar 2003, 5:02 a.m.,*
in response to message #2 by Randy Sloyer

I believe that there was even a '10bii' style 20S towards the end with the same ubercrappy new design features.

I am occasionally still amazed that the power and price of the 20s. if only it had been rpn. I think I could talk high schoolers into that for $30 after showign off a few program tricks.

Re: hp 20s
*Message #6 Posted by **hugh** on 7 Mar 2003, 11:58 a.m.,*
in response to message #5 by Christof

yes, i agree. i've been using one for a while and its not that bad. less clutter than the 32sii and clearer display (segmented)... and still available for £30! my one was in a red box (about 1998), but it has a black bezel not brown. altogether it feels somewhat less well built that the 32sii but still acceptable. i was wondering if the more recent packaged ones were any worse. if so they could be borderline.

Re: hp 20s

*Message #7 Posted by **Bill Platt** on 14 Mar 2003, 5:54 p.m.,*

in response to message #6 by hugh

I just bought 4 20s's from a store recently, and when I showed them to a co-worker, he immediately bought one! Nice (for an Algebraic)!

Being an RPL fanatic, I did some little toy program writing and found that indeed, the keystroke difference between the 32sii (or any RPN) and the 20s is significant in almost all cases. Typically it seems to be at least 10% more lines, and sometimes double (try converting feet,inches,eights to decimal feet): RPN: Load stack: z feet y inches x eighths

LBL A 8 / + 12 / + RTN

ALgebraic----a lot longer!! (I leave it to the imagination--a challenge to see if anyone can equal or beat that with the algebraic....

But, the Algebraic can nest deeper than a 4 level stack (but why would you want to--always better to solve from "inside out" anyway!!)

I will put that grain out again here----TIME for a NEW RPN MAKER!

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

How people react on different models...
*Message #1 Posted by **Holger Weihe** on 6 Mar 2003, 8:26 a.m.*

Currently I'm working in a big office with several engineers around me. Just for fun I put a different HP-calculators on my desktop nearly every day. It's interesting (frustrating), how people react on them:

HP-32E: No reaction at all

HP-41C: No reaction at all

HP-28S: No reaction...

HP-48GX: No reaction...

various combinations of the above: still nothing...

HP-32E AND HP-48GX: "For what do you need two calculators?" - "I collect them. This one is 20 years old" - "Uh hmm, ok"

HP-100LX: "Are you a technic freak? Making notes in such a funny thing? What do you do if the batteries are out?"

HP-49G: 3 (Three!) people notice it. "BOOAH! COOL! What monster calculator is that? can it fly? Is it a remote control?... "

a Palm IIIe: "Oh cool, you've got a PALM!!"

So maybe HP's newer marketing decisions about design aren't that bad. Somehow frustrating...

What are your experiences?

Holger

PS: Tomorrow I'll try an 11C...

Re: How people react on different models...
*Message #2 Posted by **Ernie Malaga (Miami)** on 6 Mar 2003, 8:51 a.m.,*
in response to message #1 by Holger Weihe

Holger:

And the day after tomorrow, try an HP-65 or -67. Make it a point to have several magnetic cards lying around. Maybe that will elicit some response.

-EM

Re: How people react on different models...
*Message #3 Posted by **John Smith** on 6 Mar 2003, 9:20 a.m.,*
in response to message #1 by Holger Weihe

Nice idea !

I'll try the same next week, with an assortment of Voyagers, and Pioneers, plus the odd HP-25 and HP-71B, just to see the outcome.

In my past, non-deliberate experience, people barely react to any HP calculator, except the HP-71B, because it looks classy and pricey and has a wonderfully-looking keyboard, the HP-12C because it's so well known, and among non-HP models, the awesome Sharp EL-5101 advanced calculator, because of its sheer beauty.

Re: How people react on different models...
*Message #4 Posted by **Renato** on 6 Mar 2003, 10:11 a.m.,*
in response to message #3 by John Smith

I had at least one much better reaction.

41CV on my desk, on a out-of-office event: "Wow, my dad had a lot of those. I will bring them to you tomorrow." So I got a 21, a 32e and a 11c.

I guess that showing a HP to the Nintendo generation is useless - unless you want to look *very old*.

Otherwise, I got some nice conversation with 40+ years old - HP brings back good

memories to many people that were in University in the 70s and 80s.

Re: How people react on different models...
*Message #5 Posted by **David Smith** on 6 Mar 2003, 12:14 p.m.,*
in response to message #1 by Holger Weihe

An HP9100 or two on the desktop should get a response... also leave a few mag cards for them lounging around.

Re: How people react on different models...
*Message #6 Posted by **Ed** on 6 Mar 2003, 12:42 p.m.,*
in response to message #5 by David Smith

I brought in my 67 a few times. Students were fascinated. One thought that the magnetic cards were a great idea. A couple asked if various office supply chains carried them, or if they could be ordered on line from HP! Many commented on the robust construction and feel of the calculator, and many just liked the look of it.

Re: How people react on different models...
*Message #7 Posted by **Christoph Giesselink** on 6 Mar 2003, 2:06 p.m.,*
in response to message #1 by Holger Weihe

Hello Holger,

I think you made something wrong. That's not crasy enough. ;-)

I have the ultimate desktop background picture for your PC here (full size). Using this, everybody will think you're nut.

A little help, there are 12 different calculators. The HP38/39/40/48/49 aren't among them. Happy searching.

Cheers

Christoph

Re: How people react on different models...
*Message #8 Posted by **Gray Wilson** on 6 Mar 2003, 10:01 p.m.,*
in response to message #7 by Christoph Giesselink

Christoph You are you working on PC emulators of these 12 machines aren't you? Wonderful.

Re: How people react on different models...
*Message #9 Posted by **Holger Weihe** on 7 Mar 2003, 1:34 a.m.,*
in response to message #7 by Christoph Giesselink

Hehe, that could work. :-) But I still don't give up with real hardware calculators.

Yesterday a sound-box of my workstation felt from the table. Someone asked me, if it had been a HP-calculator... :-)

Holger

Re: How people react on different models...
*Message #10 Posted by **Mike Rivera** on 6 Mar 2003, 2:59 p.m.,*
in response to message #1 by Holger Weihe

A few weeks ago my HP-48 stopped working and before I could locate a 41-CX to replace it, I brought in my HP-25C (still in perfect condition)to use for a few days or weeks.

Well, it got noticed! I'm the owner of the company and none of us are engineers, teachers, mathmaticians, etc. We sell tradeshow displays and when my assistant saw the 25C she started laughing!

She asked what the heck was on my desk? I explained the situation and she took my caluclator and proceeded to show it to the rest of my employees, most of which made wise-cracks all day long. Most hadn't seen an LED calcualtor since they were children. When I showed the programming capabilities, some were impressed, but not enough to actually own one.

Anyway, it was fun to give the old 25C a good shakedown for a few weeks and she perfomed as well as she did when I received her for Christmas from my parents in 1976

- Mike

Re: How people react on different models...

*Message #11 Posted by **Pyerre** on 6 Mar 2003, 3:08 p.m.,*

in response to message #1 by Holger Weihe

Depending the category of the community you're in...

According to the presentation of my humble calculator's collection held at our local museum last month,... here's some observations :

- Young kids love TI's (datamath)

- Teanagers love TI's(models 83,83+,...)

- Adults love TI-59, TI-58C and have lot of funs with them.

- Scientific people loves HP RPN...

Woodstock --> highly interested (all models)

Peanut --> very impressed (HP41C & accessories)

Spice --> not really (all models, even the HP34C has no more attentions than it should be)

Voyager --> highly interested (specially the HP16C)

Champion --> Not at all

Pionneer --> greatly interested (the HP42S, HP-27S) and the surprising HP-20S (even not RPN, lot of students love this one)

The HP48 series --> So so, ...too much complicate to operate, but people loves their bell & whistle "Xmas tree" keyboard.

- Technical people love nixie tubes display, (in particular the model Sperry Remington 661-D and the Casio Mini CM-601) & the 14 single digit modules display on TI-50...

Just my 2c worth, Pyerre

Re: How people react on different models...

*Message #12 Posted by **Pyerre** on 6 Mar 2003, 3:37 p.m.,*

in response to message #11 by Pyerre

Corrections : I've to rectify that I just own few and don't have all of those models, most of them came from other fellows's collections at the same presentation. Just few observations about all of them in general. Pyerre

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[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

17BII solver
*Message #1 Posted by **mapet** on 6 Mar 2003, 5:15 a.m.*

Hi, I have read that the HP 17BII solver is THE SAME as that installed in 19BII. I wonder if I can use trig functions in 17BII solver?

Reagards, MP

Re: 17BII solver
*Message #2 Posted by **hugh** on 6 Mar 2003, 8:37 a.m.,*
in response to message #1 by mapet

tricky. the 17bii doesnt have any trig functions, only logs.

Re: 17BII solver
*Message #3 Posted by **mapet** on 6 Mar 2003, 8:44 a.m.,*
in response to message #2 by hugh

I know that 17BII has no trig functions, but as the solver application is the same as that in 19BII trig functions should work. I heard that even not documented functions work in the same way as described in the 19BII manual.

Has anybody checked it?

Re: 17BII solver
*Message #4 Posted by **Renato** on 6 Mar 2003, 10:03 a.m.,*
in response to message #3 by mapet

I just checked: A=SIN(B) gets error message: "INVALID EQUATION".

Re: 17BII solver
*Message #5 Posted by **W. Bruce Maguire II** on 6 Mar 2003, 12:42 p.m.,*
in response to message #1 by mapet

Hi, I have read that the HP 17BII solver is THE SAME as that installed in 19BII. I wonder if I can use trig functions in 17BII solver?
Reagards, MP

MP:

Not that I'm aware. If you find a way, please let me know!

In the meantime, if you need TRIG functionality on your 17BII---and you can wait a few seconds for your answer---please look here:
[shameless plug ;-)]

http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/articles.cgi?read=222

Bruce.

Re: 17BII solver
*Message #6 Posted by **Gray Wilson** on 6 Mar 2003, 9:46 p.m.,*
in response to message #1 by mapet

This quote comes from Craig Finseth's HPDATAbase http://www.finseth.com/~fin/hpdata/hp17bii.html

"...The solver in this machine [17bii] is exactly the same as that of the 19bii and includes all 19bii functions even if not documented."

I think this statement is incorrect. The list of 19bii solver functions is also on Craig's site. I've tried access trig and other functions in solver equations on the 17bii, but the 17bii sovler refuses to verify such equations.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-71X Progress
*Message #1 Posted by **HrastProgrammer** on 6 Mar 2003, 3:45 a.m.*

I see that HP-71B popularity in this forum has been increased during the last few weeks which is very nice because it is very powerful machine (the first one with Saturn CPU & the last one programmed 100% in assembler = the only one programmed 100% in Saturn assembler).

Now I can proudly announce that the development of HP-71X MicroCode Emulator for HP-48GX/49G has been finished. There are some images on my homepage in case somebody is interested.

Just a note about 'MicroCode': I know it is wrong to use it in this context (as it has been discussed here few weeks ago) but I just like the term. HP used it to describe machine code programming on all calculators before HP-71B. Although it was called 'assembler programming' and not 'microcode programming' on HP-71B, programmers still used the term 'microcode' throughout the 'Software Internal Design Specification' volumes. So, I guess it is not so 'wrong' to use this term.

Beside other things, I have been testing HP-71X with all kinds of RS-232 printers (this includes my old HP-IIIP LaserJet) and it worked perfectly. I was especially satisfied with the new Star TSP-600 Thermal Printer (which I bought for a POS system). This type of printer reminds me a lot of the old HP-82143 and HP-82240 thermal printers.

Regards. HrastProgrammer

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Where are the HP 17BIIs & 19BIIs?
*Message #1 Posted by **JY** on 5 Mar 2003, 7:42 p.m.*

Hi,

I just enrolled in some finance classes which require having either a HP 17Bii or the 19Bii. Unfortunately, I'm having a really hard time finding one to buy.

Does anyone know if these have been discontinued?

I looked on the HP website (www.hpshopping.com) and neither of these calculators are listed.

Any information would be helpful.

Thanks so much!

Re: Where are the HP 17BIIs & 19BIIs?
*Message #2 Posted by **Spice_Man** on 6 Mar 2003, 2:07 a.m.,*
in response to message #1 by JY

They have been discontinued. You can still pick them up on ebay. Here's a couple of links for a batch of 17BII's:

New 17BII

MINT 17BII

I suggest you tell the instructor to change the required calculator for the class to something which is more readily available...perhaps a 12C or 10BII.

Spicey

Re: Where are the HP 17BIIs & 19BIIs?
*Message #3 Posted by **Classic Calculators** on 6 Mar 2003, 2:41 a.m.,*
in response to message #1 by JY

NEW boxed 19Bii in stock now and New boxed 17Bii coming in about 2 weeks at www.classiccalculators.com We are based in the UK but ship worldwide.

Laurence Carr

Re: Where are the HP 17BIIs & 19BIIs?
*Message #4 Posted by **John Smith** on 6 Mar 2003, 10:24 a.m.,*
in response to message #1 by JY

You might also want to try this link:

New-In-Box Hp-17bII For Sale

I know the seller, he's USA-based, and it's perfectly reliable.

Re: Where are the HP 17BIIs & 19BIIs?
*Message #5 Posted by **Kris** on 6 Mar 2003, 11:52 a.m.,*
in response to message #1 by JY

Check various college bookstores. Many have unsold inventory. Two local stores have small selection of 17's, 19's and 12c's.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Which scientific HP should I get?
*Message #1 Posted by **Jeremy** on 5 Mar 2003, 7:30 p.m.*

Hi all, This is my first post here. I'm an electronics engineering student, and I think it is time to give HP another chance. My first one was a 48GX, but it was so damn hard to get anything done, I finally gave up. I spent too many valuable test minutes fussing. I DID like the RPN notation for arithmetic though, and I kind of miss it. So no I'm back to using my TI 85. At this level in my career, I'm not really doing graphing any more. That was much more helpful in High School Algebra than it is now. So I'm looking for a model with all the basic scientific features, the durable construction with hinged keys, (not the new crap they're putting out now...) and hopefully RPN. I was just over at Amazon and saw what seemed to be the perfect calc, the 32SII, but the damn thing is $240! Way too rich for my blood. I also took a look at the 20s and it seems that it may have been discontinued... Also, it is algebraic notation, and I already have enough calcs w/ Algebraic notation. Am I out of luck? eBay seems like it's mostly for collectors, as anything I'm interested in is selling for too much.

Any comments/suggestions/links are appreciated.

Re: Which scientific HP should I get?
*Message #2 Posted by **James Stephens** on 5 Mar 2003, 10:40 p.m.,*
in response to message #1 by Jeremy

Hi,

You're correct that the hp-20s (which is algebraic) has been discontinued. The hp-32s has also, whickh is why the ones you saw were so expensive. The only scientific RPN calculator that hp offers at the moment is the hp-48gx. The only other RPN model hp offers these days is the venerable hp-12 financial model. The rumor mill says that hp intends to introduce an RPN model some time this year. Good luck.

Thanks guys.

*Message #3 Posted by **Jeremy** on 6 Mar 2003, 12:56 p.m.,*

in response to message #2 by James Stephens

I will give some thought to the pawn shop idea too, and maybe garage sales.

In the meantime, I'm just going to set aside a bit of money every paycheck and save up.

Just for the heck of it, I put in a bid on a 32S on eBay, but seeing the prices that they're selling for, I don't think I will win it. My thought was that if the 32SII is being snatched up at such high prices, I just might be able to score the previous generation model or maybe an 11C for a reasonable price.

Maybe people on the internet are just too savvy with this type of thing, and I should find some sucker in the physical world who doesn't know what he has his hands... Hehehe

I DID have a 48GX, and as a basic scientific calculator, it was great. Once I started to try to figure out numeric integration and such on it, it seemed like only the programmers would be able to figure out how to do it. It was a real clunker though, and it cost me too much time on tests, so I sold it on eBay a couple years ago.

So to wrap up, I'm just looking for a durable, affordable, HP, RPN scientific calculator. I will look at some other models to see what's what.

-Jeremy

PS - My gut feeling though, is that I should just save up some money and grab my ankles. But I would feel like a boob if HP DID come out with another RPN calculator after I paid a boatload of money for a used one...

Re: Which scientific HP should I get?
*Message #4 Posted by **Joe Edwards** on 5 Mar 2003, 10:55 p.m.,*
in response to message #1 by Jeremy

Speaking from a similar point of view, go ahead and eat Ramen for a month or two and buy HP such as a 15c, 32s, 32sii, 42s.

OR, get a 48gx and get Hrastprogrammers emulators. They include a 41c, 42s, and 71b.

OR you can get a pocket pc and get a 41c emulator and the 15c emulator from www.lygea.com

All are workable solutions, but nothing feels quite a nice a the real thing. For what it is worth, these things will last you decades if you take care of them.

I finally decided on a HP 71b with a 41c ROM.

Good luck.

Joe

Re: Which scientific HP should I get?
*Message #5 Posted by **Randy Smith** on 6 Mar 2003, 2:07 a.m.,*
in response to message #4 by Joe Edwards

One other route to look for an HP is pawn shops. I have found a 15c with manual for $20 and a 42s without manual for $20. Even got an 82240 IR Printer for $35. It is a bit of leg work but it could be worth your while.

Re: Which scientific HP should I get?
*Message #6 Posted by **George Rose** on 6 Mar 2003, 8:52 p.m.,*
in response to message #4 by Joe Edwards

Where or how do I actually get a 42s emulator for the HP48?

Re: Which scientific HP should I get?
*Message #7 Posted by **Massimo Gnerucci (Italy)** on 7 Mar 2003, 2:03 a.m.,*
in response to message #6 by George Rose

Have a look here... http://hrastprogrammer.tripod.com/

Greetings,
Massimo

Re: Which scientific HP should I get?
*Message #8 Posted by **George Rose** on 7 Mar 2003, 4:57 p.m.,*
in response to message #7 by Massimo Gnerucci (Italy)

Thank you for the link. But it looks like I found out about this emulator too late, thanks to a few idiots.

Re: Which scientific HP should I get?
*Message #9 Posted by **Ron Ross** on 6 Mar 2003, 8:57 a.m.,*
in response to message #1 by Jeremy

Well, you might consider an Hp28s or an Hp19Bii. Both are probably the cheapest RPN's available off ebay aside from the 48G series which you already have.

The 48G series is actually an okay calculator aside from its bulk (size). The 28 and 19 are smaller, but not really as small and portable as the 32 you did mention. Still, their prices are in the $50-75 range and will fit in some pockets. The 28 and 19 are not durable and tough since the clamshell case hinge and the battery door (esp the door) are weak points with these machines.

Since the 32 has escalated to such a high value, a better value for that kind of $$$$ is a 42s, esp for an EE.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-80 Versions: How many were there?
*Message #1 Posted by **Spice_Man** on 5 Mar 2003, 2:41 p.m.*

I just saw an ad for an HP-80 Version 2 on EBay:

HP-80 v2 EBay Ad

How many versions of the HP-80 were there, and how were they different from each other?

Much obliged!

Spicey

Re: HP-80 Versions: How many were there?
Message #2 Posted by on 5 Mar 2003, 2:49 p.m.,
in response to message #1 by Spice_Man

http://www.hpmuseum.org/collect.htm#variations

Re: HP-80 Versions: How many were there?
*Message #3 Posted by **David Smith** on 5 Mar 2003, 3:32 p.m.,*
in response to message #2 by

There are two main types of HP80. The front label on the earliest versions just says "Hewlett Packard". This version is actually rarer than the HP35 red dot. Genuine ones will have a serial number in the 10000-13000 range. Later versions add the "80" to the front label.

You can also find a couple of minor variations in the lettering around the on/off switch. On some it is painted on the keyboard. Others have raised lettering molded in the case. Some have raised lettering that is painted white.

Finally, later production units have painted silver trim above the switch... the earlier ones have a metal trim bar.

correction
*Message #4 Posted by **case** on 5 Mar 2003, 4:04 p.m.,*
in response to message #3 by David Smith

Actually, I have a legitimate v2 with a serial number of 1247A092xx, and a legitimate v1 with a serial number of 1247A169xx

Re: correction
*Message #5 Posted by **David Smith** on 5 Mar 2003, 7:22 p.m.,*
in response to message #4 by case

I think that the machines without the "80" were just an early manufacturing convenience. If HP did not have any "80" labels, they just grabbed some left over early HP35 labels that did not have the "35".

All of the machines (both of them) that I have seen them on were in the 10000-13000 range (well actually around 12500). I have records of around 30 machines from 13000-18000 and none had the earlier label, but no doubt that they could be out there... or they may have been stuck on after the fact after being removed from a '35.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

To 15c users: About the solver
*Message #1 Posted by **R Lion** on 5 Mar 2003, 10:37 a.m.*

In this MoHPC, you can read the next in the 32S page:

The HP-32S featured to the first RPN solver. The HP-34C had introduced the first built-in root-finder which could solve for f(x) = 0 expressed as an RPN program. To use the root finder the user wrote a function that accepted x, and left f(x) in the X register. The RPN Solver on the HP-32S allowed the user to enter a program which accepted multiple variables and computed f(a, b, c, ...) = 0. After entering a single program, the user could solve for any variable.

So, solve for ANY variable, is "the new" of the 32S/32SII/42S solver when comparing to the 34/15C solver.

I don't know if this is well known for the 15C users, but I'm amazed: take a look at this post of Karl Schneider (5 Mar 2003, 12:45 a.m.):

http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/forum.cgi?read=29015

This trick let us to use the "old solver" like the "new solver".

I've tried it with two simple ecuations: ideal gas and mechanic energy. It works the same than in the 42S!!

Thanks again, Karl.

Raul

Re: To 15c users: About the solver
*Message #2 Posted by **R Lion** on 6 Mar 2003, 2:33 p.m.,*
in response to message #1 by R Lion

...nobody seems as amazaed as I was :-(

Raul

Re: To 15c users: About the solver
*Message #3 Posted by **Vieira, Luiz C. (Brazil)** on 6 Mar 2003, 3:11 p.m.,*
in response to message #2 by R Lion

Hola, Lion;

Don't worry! Sin embargo, creo que muchos han leído.

I myself used to acknowledge many posts I read, but I see that this not so usual. For now, I read many and acknowledge just the ones I want to add something else or call for something new. If each post had nis own visitors count...

I based my feelings on the first thread about the HP15C praise. And it's mentioned many times in here.

Also, the subject you picked and Karl's cleve answer are something to be read and mentioned.

Best regards, my friend.

Luiz C. Vieira - Brazil

Re: To 15c users: About the solver
*Message #4 Posted by **hugh** on 6 Mar 2003, 6:20 p.m.,*
in response to message #2 by R Lion

i was! it looks so simple, but had never occurred to me over all these years.

It deserves an article
*Message #5 Posted by **Renato** on 6 Mar 2003, 10:32 p.m.,*
in response to message #4 by hugh

Dont´t you agree ?

Re: It deserves an article
*Message #6 Posted by **R Lion** on 7 Mar 2003, 2:53 a.m.,*
in response to message #5 by Renato

Of course I agree.

How contact with Karl Schneider for asking him that write it?

Raul

Re: It deserves an article
*Message #7 Posted by **Karl Schneider** on 7 Mar 2003, 8:48 p.m.,*
in response to message #6 by R Lion

Guys,

Well, I'm certainly honored that you consider my modest idea worthy of an Article for MoHPC, but I'm not sure that my suggestion for the 15C (and 34C and 41C* with Advantage) was all that profound.

If I can become more knowledgeable about the RPL models (I have 28C, 48G, 49G), I think a more general, comprehensive discussion would be more informative. Techniques, algorithms, and procedures for symbolic and numerical integration for the various models could be covered.

I'll review what is presently available in the Articles, and give it a shot. I have all the HP models and enough theoretical background (except the nitty-gritty numerical methods). Don't expect real quick results, though... ;-)

Re: It deserves an article
*Message #8 Posted by **Renato** on 7 Mar 2003, 10:56 p.m.,*
in response to message #7 by Karl Schneider

Karl, IMO the idea is clever and useful. Just saving your post as an article would be enough and I am quite sure people will benefit from it. Having said that, I guess being concise would count as a plus - investing time on writing a deeper article would not add too much to the original idea. Congratulations for the elegant and useful solution.

Renato

Re: It deserves an article
*Message #9 Posted by **Karl Schneider** on 9 Mar 2003, 5:17 a.m.,*
in response to message #8 by Renato

Renato and Raul --

You are correct in that a full-blown discussion of solve/integrate for RPN and RPL units is probably over-reaching and is not really needed. However, I still feel that a worthy article ought to have more substance than my Forum post contained.

I could "flesh out" the post a little into a temporary article that will be replaced by a better one. The title and scope will be, "15C/34C/41C: Using Solve/Integrate with multi-variable functions".

I have all the essentials for preparing this contribution, and have cooked up a realistic and illustrative example.

Re: It deserves an article
*Message #10 Posted by **R Lion** on 9 Mar 2003, 10:47 a.m.,*
in response to message #9 by Karl Schneider

The title and scope will be, "15C/34C/41C: Using Solve/Integrate with multi-variable functions"

That is!

Re: It deserves an article

*Message #11 Posted by **RL Lion** on 8 Mar 2003, 4:37 a.m.,*
in response to message #7 by Karl Schneider

"... you consider my modest idea worthy ..."

Modest? The "great novelty" of the 1988 solver was hidden in the 1979 solver!

Regards

Raul

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP67 display
*Message #1 Posted by **Richard Parfitt** on 5 Mar 2003, 5:14 a.m.*

I have a HP67 which I am sure is working OK! because it runs the diagnostic properly and accepts input and does simple arithmetic. The big problem is the display or lack of it!!. I only get the middle segment correctly lit all the others are dull but with a magnifying glass I can tell that they are illuminated, but not bright enough. Everthing is clean inside, and batteries are good (taken from a HP35/HP45 series). I am suspecting it's the driver chips maybe just below the row of the LED displays, now one of these is a HP product and the other is an RCA chip. Does anybody out there know what my problem might be or how I can fix it, doing small delicate soldering jobs is OK! so if I can replace a chip that is no problem. Can I use the HP chip say from a HP25, HP29?? as according to the HP museum pages the technology in these series of machines is similar and the numbers on the HP chips are the same, (certainly the first number anyway). Thanks in advance for any help, Regards Richard.

Re: HP67 display
*Message #2 Posted by **David Smith** on 5 Mar 2003, 3:43 p.m.,*
in response to message #1 by Richard Parfitt

The HP67 has weird drive circuitry. The middle segment is driven independently of the others... it has to do with handling of the minus sign.

The RCA chip is a transistor array used to drive the segments. It is available off the shelf... I think it may ba a CA3082 or CA3080, but can't remember for sure. NTE also has it in their replacement parts line. It could very well be the cause of your problem.

The HP chip is a custom shift register used to scan the digits. It would need to be salvaged from another machine. If the part number matches, it is the same chip. There is also a two transistor current sink on the CPU card used in the display drive system.

Finally the "ROM0" chip on the CPU card also contains the segment drive logic. It is located on the left side of the CPU card (I don't remember the part number) This chip is powered through a low valued resistor (like 47 ohms or so). This resistor sets the drive level of the display

segments (except the center segments). Your problem could also be with this chip or resistor... it is unique to the HP67.

Re: HP67 display
*Message #3 Posted by **Richard Parfitt** on 7 Mar 2003, 7:24 a.m.,*
in response to message #2 by David Smith

Thanks for the info, I will pursue all channels and post a solution when I find one.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Memory upgrade for 42s
*Message #1 Posted by **John Cadick** on 5 Mar 2003, 12:07 a.m.*

I just saw a posting on Ebay for a 42s with an optional upgrade to 32K being offered.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3011470971&category=11713

I had not heard of this type of upgrade before, but it seems like it might be kind of useful. What is the story and what is involved?

John

Re: Memory upgrade for 42s
*Message #2 Posted by **Christof** on 5 Mar 2003, 12:50 a.m.,*
in response to message #1 by John Cadick

Our very own Randy Sloyer does this (has done both of mine) quite well. lookin the articles and contacts areas of the museum.

It's a straight desolder/solder operation, but I have say that randy does a very sweet job of it and I'd send mine off to him (again) in a hearbeat.

now.... to get my 48SX machines upgraded....

Re: Memory upgrade for 42s
*Message #3 Posted by **John Cadick** on 5 Mar 2003, 11:49 a.m.,*
in response to message #2 by Christof

What is Randy's email address. I can't seem to find it.

Re: Memory upgrade for 42s
*Message #4 Posted by **Spicey** on 5 Mar 2003, 2:04 p.m.,*
in response to message #2 by Christof

How much does it cost to have this procedure done?

Much obliged!

Spicey

Re: Memory upgrade for 42s
*Message #5 Posted by **Dave Hicks** on 5 Mar 2003, 12:51 a.m.,*
in response to message #1 by John Cadick

Paul has described the procedure here.

Re: Memory upgrade for 42s
*Message #6 Posted by **Vieira, Luiz C. (Brazil)** on 5 Mar 2003, 1:02 a.m.,*
in response to message #1 by John Cadick

Hi;

I have two HP42S and I upgraded one of them to 32KRAM. The goal is to replace the internal 8KRAM chip for a compatible 32KRAM. As expected, the 32KRAM is 4 X the 8KRAM and needs at least two new terminals to encode the other "three" banks (just a figure). The replacement I found had four extra pins, just for keeping package standards.

The HP42S all-board already has the pin layout ready to accept the new 32KRAM chip. There are just twou "jumppers" that must be changed: open the closed one, and close the openend one. If you are willing to do it, let the guys here guide you.

I must (as always) mention that Randy Sloyer guided me in the replacement procedures, but others in here (please, forgive-me; I don't remember who discussed the replacements with me some mnths ago. I'd liek to be fair in my credits...) ar also aware of the changes.

AFAIK, the best/safest replacement, when available, is the HP48G's 32KRAM chip (the GX/G + is 128 and will not fit in place). I take this as a reference, but for sure there are other compatible RAM chips. I just don't know them.

The worst part (because it's a bit risky) is openning the calculator. There are four (or six?) heat-

shaped rivets that lock the keyboard (lower part) and they are somewhat hard to "crack". The four ones under the IR lens/battery door are easy to "open/remove".

others will post, for sure. This is my US$0.05 contribution.

Best regards.

Luiz C. Vieira _ Brazil

Re: Memory upgrade for 42s
*Message #7 Posted by **Randy Sloyer** on 5 Mar 2003, 7:50 p.m.,*
in response to message #6 by Vieira, Luiz C. (Brazil)

Hey gang, thanks for the praise, but it should go to others. I was just last man in.

The real credit for all the work goes to Paul Brogger for taking the time to explain how to open a Pioneer and solving the original 32K puzzle. Tony Duell helped out with some surface mount rework info.

It is all in the archives, I just read 'em and followed their paint by number instructions. A real no-brainer if you're handy with a soldering iron. They made it sound easy, because they did all the hard work to make it that way.

Fair credits...
*Message #8 Posted by **Vieira, Luiz C. (Brazil)** on 6 Mar 2003, 12:19 a.m.,*
in response to message #6 by Vieira, Luiz C. (Brazil)

Hi, Randy;

once again, thank you for reminding me.

At the time I read about the HP42S' 32KRAM expansion I remember contacting Paul Brogger and asking him about compatible IC's for the expansion procedure. He made a research and returned me some info about the 32KRAM chip used in the HP48G. I had some "hard" (not hardware) problems and my e-Po.Box was stuck with many old e-mails. I had to make a deep cleanup and I did it based in time "slices". Many, many good information was lost, except for almost all attachments. Golden information and very important reference were definitely lost, and I remember having Paul Brogger's mail dated a bit far from now. I have probably lost it.

Well, what else to do? Now I can access Internet and I was not able to do it a few days ago.

So, please, I hope Paul forgive me for being not polite. There are so many good, expert professionals contributing here at this forum that we sometimes loose track.

Cheers.

Luiz C. Vieira - Brazil

Re: Tony Duell deserves "highest billing"
*Message #9 Posted by **Paul Brogger** on 6 Mar 2003, 9:13 a.m.,*
in response to message #6 by Vieira, Luiz C. (Brazil)

For my part, thanks to you all.

Actually, Tony Duell happened to mention the possibility of an upgrade once, and as I'd already been "inside" my 42S, I followed up on it. Tony provided *all* of the essential details.

So, without Tony's knowlege and experience, the story may never have been told . . . As to my part, I must say I was (and am) just having fun!

Relating to another recent string of posts ("LOUD APPLAUSE"), it is *marvelous* that this site is available for the gathering of the scattered few who share an inordinate interest in a quirky corner of late-20th-Century technology. And I'm glad to have been able to make a small contribution.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP67 button and card reader help

*Message #1 Posted by **Malcolm Brooks** on 4 Mar 2003, 6:22 p.m.*

To the help desk,

I bought a 67 with a gummy wheel card reader. I replaced the gummy wheel with fuel tubing off the same section of which I repaired two 97's. The 97's worked perfectly with over 50 cards without error but the 67 does not work well at all. The problem is even with the cam adjusted to max grip the card is slipping. Its not the clutch. On the 97's the cam was adjusted about 1/2 way and with the calc off its firm to insert a card, with the 67 its quite soft and the card can be pushed in easily.

Any Ideas - it seems like the 67 reader is a different beast.

Second problem is the "A" and "B" and "E" keys only work when you push the key towards the top left of the calc.

Is this a cold solder joint or just a clean?

When measuring continuity with a digital volt meter is there any danger with the cmos circuitry or is this a no no. (I haven't tried measuring as yet)

Any help appreciated.

Thanks Malcolm

Re: HP67 button and card reader help
*Message #2 Posted by **Michael Meyer** on 4 Mar 2003, 9:06 p.m.,*
in response to message #1 by Malcolm Brooks

Hi.

I've had this happen frequently. Simply cut a shim of "Scotch" adhesive tape and wrap it around the gear shaft for about two layers. Trim flush, and try the tubing again.

It sounds like the keyboard just needs cleaning. It's been described here: take a piece of fine sandpaper or "crocus cloth", cut a thin strip, and while pushing down on the flexible metal to make contact with the circuit board, pull the sandpaper out. Turn it over and repeat. Use a VERY fine sandpaper, and repeat a few times on each key. Should clean the contacts right up.

Let us know if these don't do the trick, and if they do!

Michael

Re: HP67 button and card reader help
*Message #3 Posted by **David Smith** on 5 Mar 2003, 3:49 p.m.,*
in response to message #1 by Malcolm Brooks

Are you SURE it is not the clutch? The HP67 and HP97 reader drive components are the same. If it worked on the 97, it should work fine on the 67. I have seen numerous readers that worked for a few times after being reassembled, but then the shaft coupling between the motor and worm gear (what a lot of people call the clutch) started slipping. Take it apart again and give the worm gear a little tug... I bet it comes off really easily.

I have also noticed that at least one manufacturer of fuel line has recently increased the internal diameter of the line. What used to work very well is now too big for HP repairs.

HP67 Repair Success
*Message #4 Posted by **Malcolm Brooks** on 5 Mar 2003, 4:15 p.m.,*
in response to message #3 by David Smith

Thanks Michael and David,

I did the sandpaper thing UUUGGGHHH I hated that, but it worked. I used stuff that was finer than 1200.

I think it might have been the clutch but I also replaced the tubing with a slightly larger piece. I have found around 6.2mm is good 6.1 is too small. I fixed both and now it reads / writes fine.

I'm a happy camper again.

Thanks Malcolm

Re: HP67 Repair Success
*Message #5 Posted by **Michael Meyer** on 5 Mar 2003, 11:25 p.m.,*
in response to message #4 by Malcolm Brooks

The world is a better, more complete place!

Each newly working HP calculator enhances the entire universe.... by just a little bit.... not that I'm biased, or anything....

Congratulations, and

(H)appy (P)rogramming!

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

French Manuals on HPMuseum's CDs
*Message #1 Posted by **GE (France)** on 4 Mar 2003, 4:28 p.m.*

Is it true (it is according to the documents list) that the two HP41CX Owner's Manuals **in French** are not present on the CDs ? Thanks for a small clarification.

Re: French Manuals on HPMuseum's CDs
*Message #2 Posted by **Dave Hicks** on 5 Mar 2003, 1:06 a.m.,*
in response to message #1 by GE (France)

To the best of my knowledge, the list is accurate. Corrections and manual scans are always appreciated.

Re: French Manuals on HPMuseum's CDs
*Message #3 Posted by **Emmanuel, Normandy** on 7 Mar 2003, 3:48 p.m.,*
in response to message #2 by Dave Hicks

```
Hi Dave, hi Gérard,
I'm scanning HP-41C, HP-41CV and HP-41CX manuals in French.
Be patient, they will be available soon.
Happy Programming on HP-41 and others ...
```

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Ziplock bags considered harmful?
*Message #1 Posted by **Patrick** on 4 Mar 2003, 1:36 a.m.*

Thanks to the wonderful DVD produced by the curator here (thanks much, David), I was taking a happy trip down memory lane tonight reading all the nerdy calculator stuff I had "in the flesh" in my younger days.

Then I happened upon a small note in the Feb 78 version of HP Key Notes wherein HP recommended against using "plastic film" (a.k.a. Saran Wrap) to cover calculator keyboards in dusty environments. Something about the new types of plastics reacting with the plastics in the keyboard.

While they suggested to use one of the "seam lock" bags (a.k.a. Ziplocks), they made sure to mention that the calculator should be removed from the bag once you left the dusty environment.

So, what's the experience here? I have a couple of Voyagers sitting in Ziplocks here. Am I asking for trouble?

Re: Ziplock bags considered harmful?
*Message #2 Posted by **Randy Sloyer** on 4 Mar 2003, 4:37 a.m.,*
in response to message #1 by Patrick

Ziplocks are made of polyethylene and it’s pretty inert stuff. Back in the day (1978), there were all sorts of weird stretch films. A lot of these products used PVC as the base for the film and the plasticizers used in these products could and would leech out and attack the styrenic materials used in the calculator. They reacted rather badly to heat as well, accelerating the migration.

Most stretch films today are based on LLDPE (linear low density polyethylene), but there still some PVC and PVDC (Saran) films out there, so it is still good advice to stay away from wrapping your calculator in stretch wrap.

Don’t leave calculators for extended periods in sealed bags when they are exposed to fluctuating temperatures. Desiccant packs are a good idea to prevent condensation in those situations.

The fastest way I know of to kill a calculator is this formula:

Water + Batteries = Calculator Death

Electrolysis has claimed many a Voyager and Pioneer with their tight pc traces and ESD shielding. Of course, being run over by cars doesn't help either. Ask me how I know...

Re: Ziplock bags considered harmful?
*Message #3 Posted by **Frank** on 4 Mar 2003, 9:18 a.m.,*
in response to message #2 by Randy Sloyer

"Run over by cars" makes a fun test for robustness of solder mask on a pcb, though!

Re: Ziplock bags considered harmful?
*Message #4 Posted by **Larry Corrado** on 4 Mar 2003, 3:36 p.m.,*
in response to message #1 by Patrick

"Ziplock bags considered harmful?"?

Patrick, you forgot the "with apologies to Edsger Dijkstra." :-;

Larry

Re: Ziplock bags considered harmful?
*Message #5 Posted by **Patrick** on 4 Mar 2003, 4:04 p.m.,*
in response to message #4 by Larry Corrado

Neat.

I was wondering if I was being too subtle. Obviously not for this crowd!

Re: Ziplock bags considered harmful?
*Message #6 Posted by **Michael Meyer** on 4 Mar 2003, 9:13 p.m.,*
in response to message #5 by Patrick

Edsger Dijkstra? I missed the reference.... I looked up this famous professor, but missed any reference to the Ziplock....

Michael

Re: Ziplock bags considered harmful?
*Message #7 Posted by **db** on 4 Mar 2003, 10:04 p.m.,*
in response to message #6 by Michael Meyer

if dr. mike didn't get either then i guess i'm in good company.

about bags: i've kept my 41 in various types of sandwich bags for years and have had no ill efects from it. dust, on the other hand is pretty serious in an irreplaceable keyboard. that dessicant idea sounds good - and if it is usless it is at least harmless. i am going to do it next time i re-bag.

Re: Ziplock bags considered harmful?
*Message #8 Posted by **Katie** on 4 Mar 2003, 10:31 p.m.,*
in response to message #6 by Michael Meyer

Mike,

Dijkstra was considered to be "the" philosopher of computer science. He suggested many of the great ideas that ended up being the mainstay of the profession, usually in very short but extremely insightful papers. One of them (in 1968) was titled "Go To Statement Considered Harmful" and was the impetus for structured programming to take hold. Of course it took HP a while longer to get there (until the 28C) with its handheld calculators.

-Katie

Re: Ziplock bags considered harmful?
*Message #9 Posted by **Larry Corrado** on 4 Mar 2003, 11:32 p.m.,*
in response to message #8 by Katie

In 1987, while I was taking a course in programming languages, some of us students decided to see if we could get Dykstra to autograph a copy of the letter ("GoTo Statements Considered Harmful" was actually a letter to the editor) to give to our instructor at the end of the semester. I made a nice enlarged photocopy of the letter, and sent it to Dykstra at the University of Texas requesting that he autograph it for our instructor, who was a big fan of structured programming. About two weeks later, the copy was returned, with the name "EDSGER DIJKSTRA" neatly printed at the top in block letters. To this day I don't know if that was his actual signature, or if he printed his name so as to not have an actual signature, or if he just had a secretary do it.

If anyone would like the exact reference, drop me an e-note. I have the letter in my files at work.

Larry

Re: Ziplock bags considered harmful?
*Message #10 Posted by **Michael Meyer** on 4 Mar 2003, 11:33 p.m.,*
in response to message #8 by Katie

Thanks, Katie! A very important individual whose name I'd not heard (that I remember... I don't even know exactly how to pronounce it!).

No wonder he kept things so "short and simple".... it probably started in grade school when the teachers couldn't spell his name....

Amazing, though, what he contributed: lots of terms (STACK), etc.; structured programming (getting rid of GO TO), etc. I guess his many papers are even available on the net!

Michael

Re: Ziplock bags considered harmful?
*Message #11 Posted by **Andre' Wilhelmus** on 6 Mar 2003, 3:46 a.m.,*
in response to message #10 by Michael Meyer

The manuscripts of Edsger W. Dijkstra can be found at http://www.cs.utexas.edu/users/EWD/

Re: Ziplock bags considered harmful?
*Message #12 Posted by **Patrick** on 5 Mar 2003, 2:32 a.m.,*
in response to message #8 by Katie

Amazing what great conversation a tiny note in a small, quarter century old HP calculator magazine will generate...

I'm not positive of this, but I believe someone quite recently (last 5 years?) has published an article in the computer science journals with a title along the lines of "Case Statement Considered Harmful". Of course, they were paying homage to Dr. Dijkstra in titling their article this way, but also clearly trying to piggyback on the notoriety of the "Go To" article/letter to the editor.

The gist of this new article was that the typical case statement (or "switch" in C/C++) is anathema to modern object oriented ideas. When a new "type" is introduced into a program, each and every legacy case/switch statement that pertains to switching on types needs to be revisited and a new case appended. In contrast, uses of virtual functions in an OO environment completely gets around the need to go back and modify legacy code.

While this argument has substantial merit, personal experience from building large (multi-million line) systems tells me that you can't totally avoid this problem. If, for example, an object that is part of a large type tree saves it's state in an ASCII or binary file, when you go to read that object back into memory there is an inevitable case/switch statement needed to distinguish which type of object to instantiate based on certain discriminators embedded in the file.

My advice to programmers at my company is to limit case/switch statements as much as possible, but don't think you are going to eliminate them altogether.

On the other hand, they better not write even a SINGLE "Go To" in their code ... or ... I ... get .... very .... very .... Muh ... Muh .... MAAADDDD!

Re: Ziplock bags considered harmful?
*Message #13 Posted by **GE (France)** on 5 Mar 2003, 9:53 a.m.,*
in response to message #12 by Patrick

We're quite far from HP stuff here, but let's say I play the role of the baddy here, advocating a reasonable use of GOTO !! After taking the journey to OOP and back, I'd say the G*** word was very very useful in circumstances like error trapping such as :

(create big packet of objects - call it A) (is there an Error ? -> Goto "A") (lots of processing) (create big packet of objects - call it B) (is there an Error ? -> Goto "B") (lots of processing) (create big packet of objects - call it C) (lots of processing) (cleanup objects in C) "B" : (cleanup objects in B) "A" : (cleanup objects in A)

Note : objets in packet A, B and C are not related to each other and include global OS entities.

I'm sure there is a politically correct way to OOP-ize it, but simplicity is of the essence to create bulletproof code. Objects should correspond to concepts, not artifacts to make the compiler do the right thing.

Re: Ziplock bags considered harmful?
*Message #14 Posted by **Patrick** on 5 Mar 2003, 2:28 p.m.,*
in response to message #13 by GE (France)

Yes, we are getting way off HP land here ... mea culpa.

My last word on this is that you have hit the nail on the head, GE. Our coding standards allow for a single use of goto in our code, and that is to jump down to the bottom of a function to a label with the specific name "cleanup:". The intent is that the code you find there releases any transient resources amassed by the function and that you would jump there only in case of error conditions.

And... as a weak attempt to justify this extra entry to the thread ... let me just say that my Voyagers are back in their ziplock bags, thanks to the comforting feedback I've received from all of you.

Re: Ziplock bags considered harmful?

*Message #15 Posted by **Frank Wales** on 5 Mar 2003, 4:37 p.m.,*
in response to message #13 by GE (France)

I tend to favour gotos when I'm defining something like a state machine, where I think if() or switch() statements and state variables might cloud what's going on. I'll also use them for performance where I need it.

So, I'm perfectly happy to use gotos where they're appropriate, but I don't see that this is an example of that. Is this not equivalent to the example you cite?

```
doAstuff...;
if (!error) {
  doBstuff...;
  if (!error) {
    doCstuff...;
    cleanUpC...;
  }
  cleanUpB...;
}
cleanUpA...;
```

Most OOP languages support exception handling, which is specifically intended to let the programmer deal with run-time errors and other unusual conditions in a controllable way, and to allow them to use special syntax to indicate that that's what they're doing. So, you might have something like:

```
try {
  doAStuff...;
  try {
    doBStuff...;
    try {
      doCStuff...;
    }
    finally {
      cleanUpC...;
    }
  }
  finally {
    cleanUpB;
```

```
    }
  }
  catch (error) {
     ...handle the error, if you like...
  }
  finally {
    cleanUpA;
  }
```

Just to be different, I've thrown in some actual error handling, although that's not necessary.

Ultimately, the two problems with goto that give some people in the software realm apoplexy are:

- it increases the chances that control will jump to a piece of code that's not ready to take over, because (for example) variables are uninitialised or out of scope, or the stack is in an untidy condition;

- it clouds the reason why program control is being transferred elsewhere, which can be made more obvious by the use of all the other keywords that are either 'restricted goto' (such as a switch statement) or 'goto with knobs on' (such as subroutine calling).

This second point is especially important, because it increases the comprehensibility of a piece of code, and ultimately most programs are coded for human readability first, and machine readability second. It also makes it easier to analyse the code for flaws, and makes refactoring tools more useful.

Note also that the Dijkstra's proscription of goto originated in the 1960s, when uncontrolled gotos just had to be used a lot, because commonplace programming languages didn't have a lot of other options for transferring control. In part, we now have many features in our programming languages, such as lexical scope, switch statements, continuations, exception handling, and type-based method dispatch, because of the discussion he started.

Re: Ziplock bags considered harmful?
*Message #16 Posted by **David Smith** on 5 Mar 2003, 7:13 p.m.,*
in response to message #15 by Frank Wales

A GOTO to an error exit can be a wonderful thing. Often times it is MUCH clearer than any other way of breaking out of a bunch of contorted, nested, structured gobbledegook.

Re: Ziplock bags considered harmful?
*Message #17 Posted by **Paul Brogger** on 5 Mar 2003, 5:06 p.m.,*
in response to message #1 by Patrick

Well . . . sure!

That's why there's a warning like

"This is not a toy! Keep out of reach of children!"

on all plastic bags . . .

;^)

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

I heard from HP Executives re: complaint
*Message #1 Posted by **Norm** on 4 Mar 2003, 12:52 a.m.*

I heard back from an HP Executive relations person.

It really is just as bad and awful as any scientist or engineer would fear. Their words to soothe our fears? That they proudly introduce "9G" and "9S" (Walmart junk) for our needs, as well as "hp30s" (more junk). However financial people will continue to get their HP12C.

I have the e-mail address for this . It's a good shortcut to write direct (not thru the HP webpage). I encourage anybody else who cares to pepper him loud & strong. Strength only thru numbers.

If anybody wants to complain to HP, like I did, you may e-mail ME and I will forward you the communications that took place. If you e-mail me a request, do that at analogee@gte.net and I'll forward you 3 e-mails I did to these guys. The middle one has the executive's e-mail address which is your shortcut.

Stick a megaphone in their ear, and yell loudly.

Re: We may not want to yell TOO loudly, just yet . . .
*Message #2 Posted by **Paul Brogger** on 4 Mar 2003, 8:03 p.m.,*
in response to message #1 by Norm

Folks:

By all means, contact HP, and tell 'em what you think.

But I think we should keep it calm and well-reasoned. If we're to have *any* influence on the course of events, it will be because some folks in places of responsibility actually open up to a change in course. That won't come about if we start going after them with both guns blazing. (Of course, it probably won't come about *anyway*, but we can only do our best.)

So I'd advise a flood of calm, well-reasoned, arguments for the benefits of true RPN

functionality, shirt-pocket portability, and solid construction. We should use our best grammar and spelling, and no profanity or name-calling.

I doubt there's any hope of "the new HP" following the advice of a fringe group of rabid RPN acolytes. But maybe they'll take into account the wishes of some caring, experienced professionals? (We can always hope, can't we?)

Again, if we've any influence at all, we'll not want to do anything to upset the apple cart just as a long-overdue RPN model (however WalMart-junkish may be its construction) is apparently to be introduced! Let's encourage 'em and see what comes before complaining too bitterly.

(And we might also consider evaluating the upcoming offering as a baby-step back toward the right direction, and not over-zealously compare it directly to the HP-15C/41/42S or whatever we think is the best of what the company somehow *used* to be capable . . .)

-- Paul B.

Re: We may not want to yell TOO loudly, just yet . . .
*Message #3 Posted by **Patrick** on 5 Mar 2003, 2:45 a.m.,*
in response to message #2 by Paul Brogger

A fringe group of rabid RPN acolytes?

Man, I'm there! That sounds like too much fun! ;-)

Actually, Paul your words are well taken.

As I've mentioned in other threads here, I've recently purchased the DVD from this site and have been happily wandering down memory lane, re-reading today in pixels what I read on glossy paper so many years ago. It struck me when I read this note of yours that the best "calm, well-reasoned arguments" could very well be embedded in these very documents. HP itself trumpets in their old literature all of the attributes that we now lament in their passing. RPN. Solid, worry-free construction. Keystroke programmability. Value.

The best argument might be to hold HP's own statements up to them and ask them if they really meant it.

my view on complaining

*Message #4 Posted by **Norm** on 5 Mar 2003, 4:32 a.m.,*

in response to message #3 by Patrick

My view on complaining, is partly to tell them to STOP redesigning it all the time.

If you start out selling hammers, and then you expand to saws, well, do you redesign the hammers? No, keep selling hammers. If somebody comes out with a nail-gun and an auto-repeating staple gun, do you stop making hammers?

You can come up with new things, you can start selling nail guns but don't stop making the hammers.

Straightforward calculators that DIDN'T sport 800 functions and WON'T require 3 years continuous study to master, that's what's missing. They should do less re-design, not more. I want them to start making HP-34C's again. If they won't, well, I'm still trying to start my collection. Again if anybody wants a good e-mail to complain to, contact me at analogee@gte.net

I heard from quite a few folks; lots of them said that the guy I've got is indeed the focus point for executive relations on HP. He didn't respond to some people earlier, I was loud enough that he responded to me. I think we should all hit this PR person, politely yes, but with conviction. We would NOT be a fringe group, we are people who know how to do mathematics and programming and know what are some good tools to do it with, and we know what we want.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

APPLAUSE, LOUD LOUD APPLAUSE, for DAVID G. HICKS
*Message #1 Posted by **Norm Hill** on 4 Mar 2003, 12:10 a.m.*

David G. Hicks, apparently, is the man who put together this "HP Museum" website. Just found it 2 weeks ago. This is a real, real, real cool website. And its put together right too. It's organized, its simple, its clear, its crisp. It runs without a 2 Gig CPU and DSL . All the buttons are where they should be. It's thorough. And the pictures are impressive and clear too.

Mr. Hicks website has got all the right categories (forum, classifieds, etc) and everything is nicely presented, logical, makes sense. It is a remarkable achievement, apparently, for just one person.

Other than feeling a little odd about my favorite calculators from 1979 and 1989 being in a "museum", this website is perfect.

It's brilliant. It's like..... AN HP CALCULATOR! It all makes perfect sense (HP-34C my favorite).

Thank you Mr. Hicks. APPLAUSE:)(*&)^_&(^&%&^@#(&_#&(&%)*&_#_&)(&*_@*&$@## (sound of applause))^&&^$$(&^$#_*_^%#$#@)&(*$) *&&%$##% (sound of applause) (*&%&^$$%)*&@*&64!@#%#^$@^@#$(@$*(@#%#%$@%^%#^

Welcome to the gang!
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 4 Mar 2003, 1:10 a.m.,*
in response to message #1 by Norm Hill

;-)

Re: APPLAUSE, LOUD LOUD APPLAUSE, for DAVID G. HICKS
*Message #3 Posted by **Michael Meyer** on 4 Mar 2003, 11:45 p.m.,*
in response to message #1 by Norm Hill

DITTO!! BRAVO!!! APPLAUSE!!

Dave has provided for me (us) a most wonderful "home". I've met my HP siblings (and parents-- mentors) here, shared with them, cried and laughed with them, and mostly learned from them. We've celebrated the, "thrill of victory" (when with the group's help a calculator has been brought back to life); and we've shared the, "agony of defeat" when they've died.

I've said it before: The people who make up this community are awesome, the best I've ever "met", and I (we) have Dave to thank for making this possible.

To paraphrase the Firesign Theatre:

"I'd like to thank Dave Hicks, for without his site, none of this would have been necessary."

Thank you, Dave, for everything. I'll bet the "ball-o-twine" collectors don't have anything like this!!

Thanks everyone!
*Message #4 Posted by **Dave Hicks** on 5 Mar 2003, 12:36 a.m.,*
in response to message #1 by Norm Hill

"Other than feeling a little odd about my favorite calculators from 1979 and 1989 being in a "museum", this website is perfect."

On the other hand, others are asking why it's taking "so long" to get the 32SII in here. Haven't been able to buy one of those in weeks ;-)

Re: APPLAUSE, LOUD LOUD APPLAUSE, for DAVID G. HICKS
*Message #5 Posted by **Christof** on 5 Mar 2003, 12:58 a.m.,*
in response to message #1 by Norm Hill

You know, I never thought about metntioning it before, but it's true

this site is navigable comfortably on my jornada 720, my sun ultra10, even in lynx on my VT220!

really elegant design overall.

Believe it or not
*Message #6 Posted by **Dave Hicks** on 5 Mar 2003, 1:14 a.m.,*
in response to message #5 by Christof

I actually tested the site with lynx back in the early days. I have occasionally claimed/joked/threatened that I will someday write/port an HTML browser for my Altair 8800* and it would be a shame if there were any problems viewing my own site ;-)

* The Altair 8800 is a 1975 hobbyist computer based on an Intel 8080.

Off topic...
*Message #7 Posted by **Vieira, Luiz C. (Brazil)** on 5 Mar 2003, 1:41 a.m.,*
in response to message #6 by Dave Hicks

Just to mention: I beleive most of what we have today is due to Ed Roberts.

Do you have an Altair, Dave?

Just a credit.

Re: Off topic...
*Message #8 Posted by **Dave Hicks** on 5 Mar 2003, 2:17 a.m.,*
in response to message #7 by Vieira, Luiz C. (Brazil)

This is the view when I turn around:

I spent 2 months building the basic box so I don't think I'll ever be able to part with it.

The computer I'm typing on now isn't nearly as pretty.

Congratulations!
*Message #9 Posted by **Vieira, Luiz C. (Brazil)** on 5 Mar 2003, 2:46 a.m.,*
in response to message #8 by Dave Hicks

Hi, Dave.

It's a wonderfull part of the Computer History that you have there.

I'm amazed!

In time: I second all references and good wishes for you and for your place you gently share with us all.

Thank you, my friend.

The best regards ever.

Luiz C. Vieira - Brazil

(I know many of us think the same everytime they open this page in their browsers, but mentioning our appreciation and admiration all the time may exhaust the fact itself; so, every chance to express these feelings is a must-be-there for many of us)

Re: Congratulations!
*Message #10 Posted by **Dave Hicks** on 5 Mar 2003, 3:40 a.m.,*
in response to message #9 by Vieira, Luiz C. (Brazil)

Thank you Luiz!

Re: Congratulations!
*Message #11 Posted by **Norm Hill** on 5 Mar 2003, 4:26 a.m.,*
in response to message #10 by Dave Hicks

One of many things that impresses me is the "geometrical" layout of the forum.

The geometry almost forms 'index cards' yet does it without a bunch of overcomplicated software (java) that crashes, etc.

It groups each major subject very well, allows many different 'conversations' to occur simultaneously, does it simply, and just makes good sense.

The geometrical 'thread' layout is just one of many features that is very very practical for Mr. Hicks' site.

I was wondering..... could the threads get stored away automatically by software, say if there's 4 posts about a memory card for a 41CV then why not put that in a "master database" for 41CV (a thread database by calculator) rather than let the material be dumped off at the end.

Have you visited the archives?
*Message #12 Posted by **Dave Hicks** on 5 Mar 2003, 5:35 p.m.,*
in response to message #11 by Norm Hill

A couple of volunteers are trying to come up with some sort of FAQ or summary of all those articles.

Re: APPLAUSE, LOUD LOUD APPLAUSE, for DAVID G. HICKS
*Message #13 Posted by **Wayne Brown** on 5 Mar 2003, 8:53 a.m.,*
in response to message #5 by Christof

I'd like to add one thing: Not only is the website itself great, but the Forum is the best Web-based message board I've seen *anywhere* on the Net. Over the last several years I've used (and abandoned) web boards at a lot of different sites; they're all very clunky and inconvenient compared to this one. Dave's Forum is fast, easy-to-navigate, and attractively presented. Best of all is the "Daily view" feature, which I use all the time and which I haven't seen anywhere else. Unless I'm mistaken, I think Dave wrote his own Forum software, which would explain why it's so much better than anyone else's. (Dave, if that's so, you ought to market it!)

Re: APPLAUSE, LOUD LOUD APPLAUSE, for DAVID G. HICKS
*Message #14 Posted by **Christof** on 5 Mar 2003, 11:49 p.m.,*
in response to message #13 by Wayne Brown

open sourcing it might be nice as well. (I can think of several hobbyist and not-profit-based groups that could make excellent use of this, but would never be able to generate cash for a license fee.))

I'm sur epushing it public would require a bit of tuning and management interface tweaking, but this really is the best I've used.

Re: APPLAUSE, LOUD LOUD APPLAUSE, for DAVID G. HICKS
*Message #15 Posted by **Richard Parfitt** on 5 Mar 2003, 9:05 a.m.,*
in response to message #1 by Norm Hill

MoHP is brilliant. I have just started using it again after visiting some time ago. I am now adding to my collection of "Classic Machines" and the site has proved very informative. It is in the same league as the HP35 was when introduced all those years ago. I will be getting a DVD sometime soon, I still have a set of original HP journals covering the HP35, HP80, HP25 and HP41. Great WORK!!!!!..... Regards Richard. PS. do I understand correctly that RPN is to disappear??.

HP Forum Archive 11

[Return to Index | Top of Index]

HP-32S Anniversary Version (50th)
*Message #1 Posted by **Norm Hill** on 3 Mar 2003, 11:54 p.m.*

Can somebody tell me the years about "50th Anniversary" was it 1940 - 1990 ? Or a little different from that ?)

An HP-32S just got snatched up from eBay:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=11712&item=3011302048&rd=1

It was a clean looking HP-32S with the "50th Anniversary" labelling.

The guy stuck in a "buy it now" for $150 . That seems a little low..... guess that's why it got sold as 'buy it now'. Of course, maybe this particular specimen is busted.

Market pricing seems to be climbing as word of "Carly" spreads around the scientific and engineering communities.

Re: HP-32S Anniversary Version (50th)
*Message #2 Posted by **Spice_Man** on 4 Mar 2003, 9:56 p.m.,*
in response to message #1 by Norm Hill

1939-1989.

Spicey

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP17BII Emulator

*Message #1 Posted by **Johan Verwey** on 3 Mar 2003, 11:27 p.m.*

Hi I need Windows PC emulator of an HP 17BII I will need it for educational purposes, ie instructing students to use the calculator using a LCD projector A link to an HP12C emulator will also be a nice to have Thanks Johan

Re: HP17BII Emulator

*Message #2 Posted by **Christoph Giesselink** on 4 Mar 2003, 1:51 p.m.,*
in response to message #1 by Johan Verwey

Hello,

the emulator isn't the real problem, you need a ROM image from your real HP17BII I. All ROM's are copyrighted by HP. Some images can be downloaded and can be used freely for non commercial purpose, but most aren't. The HP17BII ROM are belonging to the 2nd category. So don't ask for a place where such an image can be dowloaded, you have to make an image by yourself.

Jean-Francois Garnier wrote an article at

http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/articles.cgi?read=266

how to do this with a HP42S. In opposite to the HP42S a HP17BII International has 96KB of ROM, so end of ROM isn't at 1ffffh, it's at 2ffffh.

When you managed to do a correct image of the ROM you can use the HP42S alpha state emulator sources mentioned in

http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/archv009.cgi?read=23690

The program was written to emulate a HP42S, but will also work with a HP17BII ROM image. You have to make a HP17BII skin for yourself.

Regards

Christoph

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

41CV doesn't turn on
*Message #1 Posted by **David Schooley** on 3 Mar 2003, 10:59 p.m.*

My 41CV will occasionally refuse to turn on. The problem started about 10 years ago and about 10 years after I got the calculator. At the time, that was sufficient reason for me to get a 48G. I decided several weeks ago to see if I could resurrect the 41CV. New batteries and a few resets brought it back to life. It did fine for a few weeks, but is now starting to get flaky again.

Based on some of the messages here, I will attempt to see if the problem is with the connections to the display, but I am curious to know if it might be something else.

Any ideas?

Re: 41CV doesn't turn on
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 3 Mar 2003, 11:50 p.m.,*
in response to message #1 by David Schooley

Hi;

just to check for primary information: is your CV a fullnut or a halfnut?

(picture unavailable)

The bad contact the usually causes this sort of problem is more likely to happen in the fullnut type.

Cheers.

Luiz C. Vieira - Brazil

Re: 41CV doesn't turn on
*Message #3 Posted by **David Schooley** on 4 Mar 2003, 12:54 a.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

It's a fullnut.

Re: 41CV doesn't turn on
*Message #4 Posted by **Vieira, Luiz C. (Brazil)** on 4 Mar 2003, 1:28 a.m.,*
in response to message #3 by David Schooley

O.K..

I'm sending you an e-mail with the link for a PDF file that shows how do a fullnut look inside. It's primary target is to show how to remove a fullnut's LCD assy, but you can see one very important thing right in the first page: the "zebra" connector between the separate mainboard and the keyboard PCB. If the hear screws are loose OR the zebra connector shows a bad connection, changes are that opening and cleanning the contacts will be enough.

Let us know if you need more advice.

Best regards.

Luiz C. Vieira - Brazil

Typo...
*Message #5 Posted by **Vieira, Luiz C. (Brazil)** on 4 Mar 2003, 6:37 p.m.,*
in response to message #4 by Vieira, Luiz C. (Brazil)

Ahn... I wrote a word wrongly.

When reading:

> If the hear screws are loose

please read:

*> If the **rear** screws are loose*

I know you understood, I just want to put it right...

Cheers.

e-address failled!
*Message #6 Posted by **Vieira, Luiz C. (Brazil)** on 4 Mar 2003, 6:32 p.m.,*
in response to message #3 by David Schooley

Hi, David;

I sent you an e-mail and received this message:

```
    **********************************************
    **      THIS IS A WARNING MESSAGE ONLY      **
    **  YOU DO NOT NEED TO RESEND YOUR MESSAGE  **
    **********************************************


The original message was received at Tue, 4 Mar 2003 02:29:10 -0300
from [200.202.212.103]


   ----- The following addresses had transient non-fatal errors -----
<dcschooley@ieee.org>


   ----- Transcript of session follows -----
451 <dcschooley@ieee.org>... reply: read error from orion.ieee.org.
<dcschooley@ieee.org>... Deferred: Connection reset by orion.ieee.org.
Warning: message still undelivered after 4 hours
Will keep trying until message is 5 days old
```

I'm posting my e-mail so you can contact me and I'll send you the e-address so you can download the PDF with mentined images.

Best regards.

Luiz C. Vieira - Brazil

Re: 41CV doesn't turn on
*Message #7 Posted by **Spice_Man** on 4 Mar 2003, 1:40 a.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

Hello Vieira!

How do you embed a jpeg in your post? I haven't been able to do that here.

Much obliged!

Spicey

Re: 41CV doesn't turn on
*Message #8 Posted by **Vieira, Luiz C. (Brazil)** on 4 Mar 2003, 1:57 a.m.,*
in response to message #7 by Spice_Man

Hi;

first of all, the image must be available in the www. Then you do this:

[img:*www address*]

In my case:

[img:http://www.logeng.com.br/images/full_halfnut.jpg]

O.K.?

There is more here.

Best regards.

Luiz C. Vieira - Brazil

Re: 41CV doesn't turn on
*Message #9 Posted by **Randy Sloyer** on 4 Mar 2003, 4:53 a.m.,*
in response to message #8 by Vieira, Luiz C. (Brazil)

Luiz is correct, that bad connections are the main problem makers. Here's my list in order of most common problems:

1. Broken posts or case bosses resulting in poor logic board or battery connections.
2. Corrosion on battery terminals or battery holder.
3. A dirty ON switch contact.
4. And, as a last resort, broken solder connections to the LCD. A good visual check can be done with a 5X loupe to see if any soldering is suspect.

(OT) Heh Luiz, is that your font used in the photos? It looks like the 42S pixel ratio?

Yes, it is a pre-test.
*Message #10 Posted by **Vieira, Luiz C. (Brazil)** on 4 Mar 2003, 5:06 a.m.,*
in response to message #9 by Randy Sloyer

Hi, Randy;

I'm doing a general cleanup on my stuff so I'll allow others to download some TTF I built. So far, I have the HP41 LCD character set, 82143 printing, Voyager LCD, general keyset (almost all HP calculators) and the HP42S is under development. I have it as ordinary, character font, but it must be a symbol font (I have to redraw everything) to work better under some Windows aplications.

Did I send you the TTF files already? I sent them to so many contributors I don't remember. Please, forgive-me if I forgot this fact.

As soon as it is ready to be used I'm posting the news.

Best regards.

Luiz C. Vieira - Brazil

Just a reminder...
*Message #11 Posted by **Vieira, Luiz C. (Brazil)** on 4 Mar 2003, 5:19 a.m.,*
in response to message #9 by Randy Sloyer

Hi, all.

The full_halfnut.jpg image shows a mutilated image of the actual TTF characters mentioned previously. This is due to reduction in final image, after adding the TTF characters. Actual characters are exactly the same seen in the calculator's LCD.

Also, some TTF are ready to download from here.

I thought I should post this.

Thank you.

Luiz C. Vieira - Brazil

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

buttons on HP-25
*Message #1 Posted by **Stan MFarland** on 3 Mar 2003, 9:29 p.m.*

Hi,

I've recently uncovered my HP-25 from the attic, where it's been since undergrad days. Rebuilt the battery pack, and everything seems to be perfect, except for a couple of keys. The "4" and "2" key have the same tactile feel as the other keys, but I have to REALLY PRESS HARD ;) on the keys for them to close the circuit. I took the calculator apart and cleaned the exposed circuit board with contact cleaner, but it didn't help. I'm afraid to try and separate the circuit board from the keyboard - it looks like they're molded together.

Any suggestions?

Thanks,

-stan

Re: buttons on HP-25
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 3 Mar 2003, 10:39 p.m.,*
in response to message #1 by Stan MFarland

Hi;

please, check if there is a small, golden-coated hole in the printed circuit board under the very middle of each key. There is a type of keyboard assy that does not have these holes; if yours have, you may clean the contact.

As you do it, I'll try to find the thread where the cleanning procedure is detailed. Anyway, if you want to try, use a brush with long, thick bristles. You can even separate a couple of them as a bundle, soak them with the contact cleanner, and gently insert them in the mentioned holes. Move the blisters in and out, rotate them, remove them and try again.

If the keyboard's PCB does not have holes, it seems your keyboard is the one with plastic bubbles under each key. This assy has copper trails in the inner side of the bubbles, and these copper trails tend to crack. I am trying to find a better solution for this kind of problem. It seems that self-adherent cooper foil is a possible solution, but fixing it in a permanent, steady state is another issue.

I know it does not help that much, but maybe you can use this info as a guidance for your own skills.

Cheers.

Luiz C. Vieira - Brazil

Re: buttons on HP-25
*Message #3 Posted by **Howard** on 4 Mar 2003, 1:17 a.m.,*
in response to message #1 by Stan MFarland

I have the same problem with my HP45. I also had the same problem with my HP32SII and solved it by washing it in water several times. Does anybody know if I can try this proceedure with the HP45? I am a bit worried about the different display. Thank you.

Re: buttons on HP-25
*Message #4 Posted by **Vieira, Luiz C. (Brazil)** on 4 Mar 2003, 1:47 a.m.,*
in response to message #3 by Howard

Hi;

some HP calculators, like all Spices (series 30), Topcats (HP9X), Woodstocks (series 20) and Stings (HP29C and HP19C) have a particular LED's display assy: it may be opened. Classic models, HP45 included, have a sealed LED assy, in general it's a set of three five-digits packs. Your HP45 has this sort of sealed assy, and the HP32SII has a sealed LCD display.

One should not wash units from the series mentioned above without removing (when possible) their displays.

About keyboard bad contacts: there are some different approaches for cleaning, mostly when the cause is already known. I do not wash the keyboard PCB unless it's necessary, otherwise I prefer cleaning by other means.

Using water is not harmfull, but it must be free of dissolved ions (neutral PH, if possible). I

am not sure if distilled water is better or worst, I would like to read from the others.

What do you think, guys?

Best regards.

Luzi C. Vieira - Brazil

Re: buttons on HP-25
*Message #5 Posted by **Ellis Easley** on 7 Mar 2003, 11:29 p.m.,*
in response to message #4 by Vieira, Luiz C. (Brazil)

The 45 can be completely disassembled, you can wash the keys and clean the keyboard switches. The Classics have flat strips with a bow in them rather than a dome for the bistable mechanism and I have read that they would break more often than the domes, but since they can be completely disassembled, it might be possible to replace the strips if they break.

Re: buttons on HP-25
*Message #6 Posted by **Vieira, Luiz C. (Brazil)** on 8 Mar 2003, 4:47 a.m.,*
in response to message #4 by Vieira, Luiz C. (Brazil)

Hi, Ellis;

you're right. I did not make a correct reference (that's what happens when you're almost tired-out and writing...). The correct sentence should be:

*One should not wash units from the series mentioned above **that have the LED assy that can be opened** without removing (when possible) their displays.*

Thank you for posting a correction.

Cheers.

Luiz C. Vieira - Brazil

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

A "creative license" challenge

*Message #1 Posted by **Michael Meyer** on 3 Mar 2003, 7:13 p.m.*

Hi. I've seen lots of specific programming challenges here, but I thought this would also be fun....

Of course, to share my pride in my HP hobby, I'm thinking of getting a personalized car license plate, here in Nebraska, USA.

I'm allowed 8 characters, 7 alpha-numeric and one space.

My ideas so far:

RPN PGMR

HP RPN

RPN LVR (lover)

I thought that just "RPN" would be confused for someone's initials. Any other suggestions?

Re: A "creative license" challenge

*Message #2 Posted by **Mark** on 3 Mar 2003, 7:45 p.m.,*
in response to message #1 by Michael Meyer

1) HP FREAK

2) RPN CALC

3) EBAY SUX

4) XEQ RPN

5) GTO RPN

Re: A "creative license" challenge
*Message #3 Posted by **Vieira, Luiz C. (Brazil)** on 3 Mar 2003, 8:53 p.m.,*
in response to message #1 by Michael Meyer

1) MORE RPN

2) I-DO RPN

3) RPN NOW

4) RPN DOES

5) HP HACKS

6) HP SHRNK (that's for you only, Doc!)

Re: A "creative license" challenge
*Message #4 Posted by **Mike - Kansas USA** on 3 Mar 2003, 9:34 p.m.,*
in response to message #1 by Michael Meyer

1. NOTI (can be construed with multiple meanings)

2. NOT TI

3. VIN HP

4. NO CARLY

5. ENTER

6. HP 4EVER

Re: A "creative license" challenge
*Message #5 Posted by **Mike - Kansas USA** on 3 Mar 2003, 11:11 p.m.,*
in response to message #4 by Mike - Kansas USA

Forgot a good one -

NO EQUAL

Re: A "creative license" challenge
*Message #6 Posted by **Paul Brogger** on 3 Mar 2003, 10:55 p.m.,*
in response to message #1 by Michael Meyer

1) ENTGTEQ

2) HALF NUT

3) VOYAGER

4) PIONEER

5) WUD STCK

6) LAST X

7) RCL PLUS

8) ROLL DN

9) XYZT

10) SWAP XY

Collecting is *quirky* -- displaying is *eccentric* -- but a calculatorized plate is **over the top!** ;^)

Re: A "creative license" challenge
*Message #7 Posted by **Michael Meyer** on 3 Mar 2003, 11:20 p.m.,*
in response to message #6 by Paul Brogger

GREAT!!!

I don't know why, but I really like, "LAST X". Very "inside" expression! "RPN CALC" is great also! I like them all!

I did think of:

RPN RULZ

RPN 4EVR

RPN 4ME

etc. "NO EQUAL" is TOO good.... really TOO "inside"

Great fun.

This is tough.... which to choose? I even do have the perfect plate for a psychiatrist. (A colleague uses PSYCHE)

How about: " HMMM ". Great, huh?!

Re: A "creative license" challenge
*Message #8 Posted by **Wayne Brown** on 4 Mar 2003, 8:16 a.m.,*
in response to message #7 by Michael Meyer

I've thought about getting this one, which would be meaningful for HP-41 synthetic programming fans:

EG0BEEP

(Too bad license plates are uppercase-only, because it really should be eG0BEEP to be authentic.)

Re: A "creative license" challenge
*Message #9 Posted by **Les Bell [Sydney]** on 4 Mar 2003, 8:04 p.m.,*
in response to message #7 by Michael Meyer

Heh. Reminds me of the one I was told of a few days ago - a Volkswagen Beetle, with a plate that reads "FEATURE".

A buddy of mine is *convinced* the owner must work for Microsoft.

Best,

--- Les [http://www.lesbell.com.au]

Re: A "creative license" challenge
*Message #10 Posted by **Michael Meyer** on 4 Mar 2003, 9:30 p.m.,*
in response to message #9 by Les Bell [Sydney]

They're all so good...

The more I think about it, the more I like Luiz's:

I DO RPN

WAIT! Another!

RTN2RPN

More of a request, I'd say..... I like it.

I want more!

Michael

Re: A "creative license" challenge
*Message #11 Posted by **Michael Meyer** on 4 Mar 2003, 9:34 p.m.,*
in response to message #10 by Michael Meyer

My wife really likes that last one, too!

Re: A "creative license" challenge
*Message #12 Posted by **Michael F. Coyle** on 5 Mar 2003, 1:28 p.m.,*
in response to message #11 by Michael Meyer

When you do get your plates, make sure to post a picture!

Re: A "creative license" challenge
*Message #13 Posted by **Michael Meyer** on 5 Mar 2003, 11:35 p.m.,*
in response to message #12 by Michael F. Coyle

I will!

I think I'll get the one I thought of last, though I'm sure I wouldn't have thought of it without seeing all the great suggestions. I like "RTN2RPN" as it encompasses so much: the love of HP calcs, the use of a key-programmable command that is still easily read by people who don't know this lingo (I've shown it to people, who could read it without confusion, even if they don't know what it means... some others have too many other meanings. "LAST X" could refer to too many other things, etc.), and best of all, the nostalgic aspect of my collecting. "Return to..." has that nice aspect of nostalgia.

I'll wait a bit longer, in case anyone else has some others. They are all so good, it's hard to choose....

Re: A "creative license" challenge
*Message #14 Posted by **Katie** on 6 Mar 2003, 12:28 a.m.,*
in response to message #13 by Michael Meyer

I like RTN2RPN too, but maybe you can work something of your profession in along with HP calculators by using MEM. Some suggestions:

CLR MEM

RCLI MEM

RND MEM

CMPLXMEM (oops, too big)

I think what you really need is one of those 007 Aston Martin DB5 revolving license plates so you don't have to pick just one.

Re: Making choices . . .
*Message #15 Posted by **Paul Brogger** on 6 Mar 2003, 9:22 a.m.,*
in response to message #14 by Katie

Nice idea, Katie!

Or, how 'bout a different Sports Car for each day of the week?

Or a color LCD license plate? Maybe one could mount a laptop on the bumper and run a slide show . . .

{8^)

Re: Making choices . . .
*Message #16 Posted by **Michael Meyer** on 6 Mar 2003, 10:20 p.m.,*
in response to message #15 by Paul Brogger

Paul,

I've always wanted to mount a display in the back window of my car to display various messages.

But then my car would need to be bulletproof.

Michael

Re: A "creative license" challenge
*Message #17 Posted by **Meyer Michael** on 6 Mar 2003, 10:15 p. m.,*
in response to message #14 by Katie

Katie,

You wouldn't happen to have an extra Aston Martin DB5? I'll trade you an HP-67. Or even an HP-19C. I'll even throw in a box of TI's: I love the story of Tom Drewski using TI's as "packing material" for an HP calc!

"LAST X" could mean, "Last time", etc.

I think one of the most common complaints I hear is that people "can't remember" things well. (We're learning that stress increases cortisol, which is toxic to the hippocampus, which impairs short term memory in addition to lowering immunity, etc.)

How about: "MEM LOST"?

Re: A "creative license" challenge
*Message #18 Posted by **Michael Meyer** on 6 Mar 2003, 10:18 p. m.,*
in response to message #14 by Katie

BTW,

They say that memory is the second thing to go. (I can't remember the first).

;]

Re: A "creative license" challenge
*Message #19 Posted by **Michael F. Coyle** on 5 Mar 2003, 1:27 p.m.,*
in response to message #7 by Michael Meyer

LAST X is my favorite so far. I like XYZT too, for some reason.

I think NO EQUAL is a little too obscure -- even a fellow HP fan might think you're talking about something else altogether.

Your DMV probably has rules against derogatory or obscene messages, so EBAY SUX is probably out.

For the psychiatrist, how about their favorite phrase: YRTMISUP.

Re: A "creative license" challenge
*Message #20 Posted by **Michael Meyer** on 6 Mar 2003, 10:09 p.m.,*
in response to message #19 by Michael F. Coyle

I like that. My biggest problem daily without exception: I don't like kicking people out when "time is up" if there's still important things to talk about.

So, I almost always run late. It's a new version of the old Murphy's Law:

"The time needed is almost always more than the time allotted."

And, Murphy was an optimist.

Re: A "creative license" challenge
*Message #21 Posted by **John Nelson** on 9 Mar 2003, 9:20 p.m.,*
in response to message #20 by Michael Meyer

How about: RPN 4EVR

Re: A "creative license" challenge
*Message #22 Posted by **Michael Meyer** on 9 Mar 2003, 11:53 p.m.,*
in response to message #21 by John Nelson

John,

I did think of that and it's in one of my previous posts. Funny you mention it, though, as I've been considering it more.

Michael

Re: A "creative license" challenge
*Message #23 Posted by **John Nelson** on 11 Mar 2003, 9:56 p.m.,*
in response to message #22 by Michael Meyer

Sorry, Mike - I looked through these quickly, but I didn't see it - I must have missed it. I was surprised that no one had thought of it. Now I know why -- THEY DID! :-)

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP 67 Card reader Troubleshooting

*Message #1 Posted by **Gene DiResta** on 3 Mar 2003, 3:53 p.m.*

I have an HP67 that reads cards well but generates an ERROR message in the display when I try to record a program. Please email me any information that would help repair/troubleshoot this problem. Thank you

Re: HP 67 Card reader Troubleshooting

*Message #2 Posted by **David Smith** on 3 Mar 2003, 5:58 p.m.,*
in response to message #1 by Gene DiResta

Your problem lies in the write protect leaf switch in the card reader. When you disasseble the reader you will see the gold colored comb of witch contacts. When you insert a card, little nylon balls are pressed against the leaf switch contacts causing them to touch pads on the back of they keyboard circuit board. On each leaf switch contact is a tiny screw that adjusts the contacts. It sounds like the write protect switch is permanently closed. I don't rememebr which one it is, but you can trace the pads on the keyboard to the contacts along the bottom edge of the circuit board. There are three contacts (motor, head enable, and write protect) that should close and open in sequence as a card is inserted and read. The switch adjustments can be very finicky and they can also interact with each other.

Re: HP 67 Card reader Troubleshooting

*Message #3 Posted by **Tony Duell (UK)** on 3 Mar 2003, 6:47 p.m.,*
in response to message #2 by David Smith

I agree the problem is most likely to be with the leaf contact -- although it could also be the Card Reader Chip on the logic board (the largest chip on the board). However, if the write protect contact is permanently closed, then the calculator will think all cards are write-enabled, and will not give an error on writing. I believe HP modified some calculators (maybe only 97s) for in-house use by connecting a toggle switch in parallel with the write protect swtich. When it was closed, the machine would write on 'clipped' cards. This was sometimes used to re-write Program Pac cards, for example. How it seems to work is that the calculator looks at the state of the write protect switch when the card-at-head swtich

closes. If the write protect switch is closed at that time, then the machine assumes the card is not clipped, and will write to it. Anyway, for the 67 we're troubleshooting here, I'd start by cleaning (_carefully_) the leaf contacts and the pads on the keyboard PCB that it touches. If that doesn't help, try _slgihtly_ screwing in the adjusting screw for the write-protect contact, which IIRC, is the one nearest the display end of the machine.

Re: HP 67 Card reader Troubleshooting
*Message #4 Posted by **David Smith** on 4 Mar 2003, 4:07 p.m.,*
in response to message #3 by Tony Duell (UK)

No, the HP logic wants seems to want to see a change of state on this pin. If it is stuck closed or open, you can see the ERROR message (just fixed one of these last week... don't remember what state it was stuck in though). I think the write protect bypass was achieved by a switch that connected write protect to motor start.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

In praise of the HP-41
*Message #1 Posted by **Mark** on 3 Mar 2003, 12:05 p.m.*

In a time when real computers were beyond the financial reach of mere college students, the HP-41CX came to the rescue and made a difficult degree program manageable. I think if I were to be entering college today, I'd want nothing less than a geniune HP-41 hanging from my belt.

Do engineering students still walk around campus with calculators hanging from their belts?

I see many, many HP48...
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 3 Mar 2003, 12:23 p.m.,*
in response to message #1 by Mark

... in their hands OR over the table, but I never saw any of them in custom bags so they can be hanged in the belt. I wouldn't, because they are easily stolen (nowadays? Be worried! There are students killing with rifles...). This is today.

I agree with all the rest. I knew about a dozen students at the campus that had free access to computers (three had one at home) but I was one of the many that had one HP41 amongst Sharp, TI and a few others. This is 1982.

Luiz C. Vieira - Brazil

1982
*Message #3 Posted by **R Lion** on 3 Mar 2003, 12:35 p.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

In 1982...I was 16. Although I have learnt RPN with a 34c in 1981, I didn´t liked it. So I had a Casio fx2700P with 38 prg steps.

I can´t believe it now! Raul

Re: 1982
*Message #4 Posted by **hugh** on 3 Mar 2003, 12:51 p.m.,*
in response to message #3 by R Lion

ha! you lucky fellow. i am still trying to get my hands on a 34c :-)

is the 2700p for sale? :-) x 2

Re: 1982
*Message #5 Posted by **Vieira, Luiz C. (Brazil)** on 3 Mar 2003, 12:51 p.m.,*
in response to message #3 by R Lion

Hi, Raul;

I was 21 in 1982. In 1979 I was given a TI57: 50 program steps and 7 storage registers. This was when I got in the University. In 1982 I bought an HP41C with one Memory Module. It took me the vacations to learn how to use it, but I read the manual from cover to back-cover, tested all possibilities and tried to master myself in the new RPN-fashion use and program. Man, it was a brain stretching activity...

Was your Casio an alphanumeric calculator? If I am not wrong, all of them were LCD, right? Still have it?

Cheers. (I added something to your HP15C's praise thread..)

Casio fx 2700P
*Message #6 Posted by **R Lion** on 3 Mar 2003, 1:02 p.m.,*
in response to message #5 by Vieira, Luiz C. (Brazil)

No. I have not the 2700P. I give it to a friend in the University when I recieved the fx200p as a gift, with 135 steps and four prgs. http://www.rskey.org/fx200p.htm

I tried to recover the 2700p one year ago, but she had lost it in one of her five moves. It must be really difficult to find one: I tried it mailing to Casio.. All I got is a scan of the Service Manual cover :-(

Raul

Re: Casio fx 2700P
*Message #7 Posted by **R Lion** on 3 Mar 2003, 1:06 p.m.,*
in response to message #6 by R Lion

Sorry Luiz, I forgot: the 2700P is 8+2 LCD digits. I got it in 1982. Sure you remember these folder Casios's...

Raul

Re: 1982
*Message #8 Posted by **Karl Schneider** on 4 Mar 2003, 4:11 a.m.,*
in response to message #3 by R Lion

Raul wrote:

"In 1982...I was 16. Although I have learnt RPN with a 34c in 1981, I didn´t liked it. So I had a Casio fx2700P with 38 prg steps."

In September 1981, I was 17, already knew about RPN by having experimented with the HP-41C. I would learn of the 34C later that year, after my mother bought me the calc I picked out -- a Casio fx-3600P with 38 programming lines, which saw me through the first two years of college.

I still have the Casio, but the key contacts are not very good. It had some impressive features for the day, like integration (Simpson's Rule, like the 41C Math Pac), hyperbolics (not on the base 34C or 41C), and fractions (introduced with the 32Sii?)

In 1983, I compared the 34C and 15C, and bought the latter.

Perhaps Raul is my Doppelgaenger!

Re: 1982
*Message #9 Posted by **R Lion** on 4 Mar 2003, 4:21 a.m.,*
in response to message #8 by Karl Schneider

...perhaps my brother is: he had the 3600P! :-D

Raul

Re: 1982
*Message #10 Posted by **R Lion** on 4 Mar 2003, 4:08 p.m.,*
in response to message #9 by R Lion

And more seriously... many of us lived the 80's being old enough, when the best programmable calculators have been made: so we all lived things, sometimes very similar. And also the Spectrum (I had one), Commodore64, etc,etc. As Luiz said in other thread: "What a time, what a time..."

Raul

1980...
*Message #11 Posted by **Raymond Del Tondo (Germany)** on 3 Mar 2003, 4:23 p.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

I was 17 back then. A friend who studied computer science in Cologne, handed me a 33E for a few days. After those few days, I didn't want to return it, but of course I did. The HP cancer got me! It must have been beginning 1981, when the 11C came out. I immediately bought one, just to see that I wanted more, and so I bought my first new 41C with Quad Memory, soon followed by some extension modules.

We were three in our electronics class who had an HP-41, and our math teacher had an 41CV.

That was funny when our math teacher set an exercise, I solved it by a small HP-41 program, and the teacher was very impressed, because he nearly never programmed his HP-41...

Man, those were happy times.

Raymond

Re: In praise of the HP-41

*Message #12 Posted by **Ernie Malaga (Miami)** on 3 Mar 2003, 3:02 p.m.,*
in response to message #1 by Mark

Mark:

I went to college between 1973 and 1978 in my native Lima, Peru. Many calculators then hanging from belts or being carried along with books. Also many slide rules!

At first I was one of the slide-rule-bound ones. Then I got a Rockwell scientific calculator, then a SR-51A, then an HP-25, and finally an HP-67. That's when I left college. After moving to Los Angeles, CA, I switched to the 41C in 1979.

Although I've had many calculators (many models, several brands), I have never found one that combines power and ease of use as the 41: the keyboard is simple and uncluttered; XEQ + function name isn't a bad compromise. At least, in my opinion, it beats the menu madness that has been prevalent in later machines, including the HP-32S.

Two years ago I was using a HP-49G (I no longer had my 41CX), with which I was never happy. I traded the monster for a 41CX, no money either way, and have had no regrets whatsoever.

-Ernie

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

In praise of hp 15c :-)
*Message #1 Posted by **R Lion** on 3 Mar 2003, 11:40 a.m.*

I really love the 15c: layout, keyboard feeling and colors. But with the 32/42 solver

Raul

Re: In praise of hp 15c :-)
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 3 Mar 2003, 12:01 p.m.,*
in response to message #1 by R Lion

I second you, Lion.

What's wrong with the 15C's solver? Lack of ALPHA messages? Speed? I just want to know what bothers you, my friend! >8-D

If you want more precision, you need more internal digits, and the HP15C does not have them. Unfortunately that's what could be done at that time. With the number of digits the HP15C shows the answer minus the least significant digit, I think in very fewer cases it will be different of those found by the HP32/42 solver. And I think the exceptions are so specific that almost need to be created to check the resulting error.

Best regards.

Luiz C. Vieira - Brazil

Re: In praise of hp 15c :-)
*Message #3 Posted by **R Lion** on 3 Mar 2003, 12:21 p.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

No Luiz: it is neither alpha msgs, nor precission, nor speed..

What I like of the 32/42 solver is that I can program an equation with several variables and solve the one I want. In the 15c, an specific prg is needed for each variable.

Raul

You're right...
*Message #4 Posted by **Vieira, Luiz C. (Brazil)** on 3 Mar 2003, 12:43 p.m.,*
in response to message #3 by R Lion

...I forgot that! :-(

Also, I used the wrong charface in my post: instead of a laughing >8-D , please see a smiling, friendly >:-).

Thank you.

Re: In praise of hp 15c :-)
*Message #5 Posted by **Joan Cardenas** on 3 Mar 2003, 3:46 p.m.,*
in response to message #3 by R Lion

Then is better to have some 11c and some 42s instead of one single 15c or not ?

Re: In praise of hp 15c :-)
*Message #6 Posted by **Vieira, Luiz C. (Brazil)** on 3 Mar 2003, 4:46 p.m.,*
in response to message #5 by Joan Cardenas

Hi, Joan;

I believe the HP11C is the pre-15C, although many HP11C owners do not agree with. The HP15C has everything the HP11C has plus matrices, complex math, numerical solve and integrate. To handle most of these features, it has 448 bytes RAM user memory, that allow the user to compute the inverse of an 8X8 real matrix or a 4X4 complex matrix in one key: [1/x] (after input all data, of course). And the eight conditional tests were expanded to ten but had their key inscriptions reduced to

three, leaving five places for the new features.

The HP42S ia a lot more than this. I have two HP15C and two HP42S (one of them I upgraded to 32KRAM, thanks to Randy's final guidance... I'll always mention it) and I also have an HP11C. All of them have their applicability and there are things that the HP11C can do and I use it. If I am interested in tdevelopiong a program and I want to know if it fits in an HP11C I do not need to make post considerations after loading it in an HP15C to be sure if it fits or not. I simply load it in the HP11C and run it.

What for? Sometimes for fun, sometimes as a request. I have done a lot of programming when I was at the university, in a time Voyagers, Spices, HP41 and TI58/59 used to share the space with Sharp and Casio pocket computers.

What a time, what a time...

Now we have 16's and 17's crackers breaking NASA and CIA net passwords... for fun.

What a time, what a time...

Cheers.

Luiz C. Vieira - Brazil

Re: In praise of hp 15c :-)
*Message #7 Posted by **Karl Schneider** on 5 Mar 2003, 12:45 a.m.,*
in response to message #3 by R Lion

Raul wrote:

"hat I like of the 32/42 solver is that I can program an equation with several variables and solve the one I want. In the 15c, an specific prg is needed for each variable."

True, the 15C does not support explicit "choice of variables" for solve and integrate. However, there's an easy workaround: Use the I register in a general program. For example, to solve or integrate a function with variables x, y, and z:

(x) STO 1; (y) STO 2; (z) STO 3

001 LBL "A"

002 STO (i)

(use RCL 1, RCL 2, and RCL 3 each time a variable is used)

nnn RTN

Key in n STO I (n = 1,2 or 3) and STO each of the parameters (fixed variables) as above prior to executing SOLVE or INTEGRATE on the program "A".

Any numbered registers may be used; the 15C won't use your choices for its own purposes.

That having been said, the 32Sii and 42S *are* much faster number-crunchers. While the 32Sii allows equations to be solved and integrated, RPN programs run faster.

Re: In praise of hp 15c :-)
*Message #8 Posted by **R Lion** on 5 Mar 2003, 1:46 a.m.,*
in response to message #7 by Karl Schneider

Guau! I'll try...

Thanks. Raul.

Re: In praise of hp 15c :-)
*Message #9 Posted by **R Lion** on 5 Mar 2003, 5:31 a.m.,*
in response to message #8 by R Lion

Karl...thanks!. It's great!

Raul (the Doppelgaenger ;-)

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Short & Sweet Math Challenges #6
*Message #1 Posted by **Ex-PPC member** on 3 Mar 2003, 7:11 a.m.*

Just to light up a little this week, here's a new Short & Sweet Math Challenge (tm), for you to try on your favorite HP calc [NOT-NOT-NOT on your PC and/or Mac, that's NOT the point :-)]

The Challenge

Find a 10-digit integer number ABCDEFGHIJ where all its digits A,B,...,J must be different, such that A is divisible by 1, AB is divisible by 2, ABC is divisible by 3, and so on.

For instance, 1234567890 isn't a solution, because 1 is divisible by 1, 12 is divisible by 2, and 123 is divisible by 3, but 1234 is *not* divisible by 4.

Requirements

You may try it in any HP programmable calculator; the shortest and more elegant the program (within the selected model's capabilities, of course), the better.

Solutions and Generalization

Next week I'll provide a short program for the HP-71B that solves this challenge, as well as another program to solve the more generalized challenge of finding all numbers N, from 1-digit numbers onwards, allowing for repeated digits, that have the property that their first M-digits (from the left) form a number divisible by M (for instance, 123 would be such a solution for M=3, but 1234 wouldn't for M=4).

If you would like to tackle this generalized challenge, try to write a short program which will find and optionally print out solutions, and see if you can stablish whether there are a finite or infinite number of solutions, and in the former case what's the maximum value for M, and how many solutions are there having 1,2,..., M digits.

Re: Short & Sweet Math Challenges #6
*Message #2 Posted by **Patrick** on 4 Mar 2003, 2:34 p.m.,*
in response to message #1 by Ex-PPC member

Here is my "first" solution. I've tried to use only features common to a bunch of HP programmables (e.g., didn't use MOD function, no recall arithmetic). This works almost verbatim on my HP-12C for example, which has one of the simpler programming models.

I haven't thought about it too hard yet, but I think this program produces the smallest number having the desired properties: 1,020,005,640.

BTW, the innocent looking subtraction in step 010 is, I think, critical to this algorithm working for all ten digits. Otherwise, it works only up to 9 digits.

Change the number in step 2 to one less than the number of digits to produce. In this version, I used 9 to produce a 10 digit result. Alternatively, have the number of digits you want in the X register when the program starts and replace the first two steps by the three steps 1, -, 10^x.

001 EEX 002 9 003 ENTER 004 1 005 STO 0 006 10 007 * 008 1 009 STO + 0 010 - 011 RCL 0 012 + 013 LAST X 014 / 015 INT 016 RCL 0 017 * 018 x<=y? (can substitute x<y? here if you like) 019 GTO 006 020 RTN

Re: Short & Sweet Math Challenges #6
*Message #3 Posted by **Patrick** on 4 Mar 2003, 2:35 p.m.,*
in response to message #2 by Patrick

Apologies for how the program listing turned out... I had them all on separate lines before I posted but they all got glued together onto one line. You can make it out with line numbers 001, 002, ... etc.

Re: Short & Sweet Math Challenges #6
*Message #4 Posted by **Ex-PPC member** on 4 Mar 2003, 2:44 p.m.,*
in response to message #2 by Patrick

Thanks for your very interesting program, Patrick, and yes, your result is correct, except for the fact that the original challenge stated:

"Find a 10-digit integer number ABCDEFGHIJ ***where all its digits A,B,...,J must be different***, such that A is divisible by 1, AB is divisible by 2, ABC is divisible by 3, and so on."

i.e.: the solution must have ten digits and all of them must be unique, no repeated digits. So, each digit 0,1,2,...,9, must appear ***once and only once*** in the number.

See if you can solve it subject to that restriction :-)

Re: Short & Sweet Math Challenges #6
*Message #5 Posted by **Patrick** on 4 Mar 2003, 3:26 p.m.,*
in response to message #4 by Ex-PPC member

Oops.

I'm on it.

Re: Short & Sweet Math Challenges #6
*Message #6 Posted by **Frédéric** on 5 Mar 2003, 4:29 a.m.,*
in response to message #4 by Ex-PPC member

What we can say ....

For ABCDEFGHIJ to be divisible by 10 => J must be equal to 0

So the problem is now for ABCDEFGHI.

For ABCDE to be divisible by 5 => E must be equal to 5

Now for the reason of odd and even numbers :

A,C,G,I are in {1,3,7,9} ....and

B,D,F,H are in {2,4,6,8}

So we must have 4!*4! combinations : 576 possibilities

This is my very little contribution.....

PS : I really like these S&SMCs ... but my old brain is really tired.

Re: Short & Sweet Math Challenges #6
*Message #7 Posted by **Michael F. Coyle** on 11 Mar 2003, 5:18 p.m.,*
in response to message #1 by Ex-PPC member

I know it's kind of late in the game, but I do have a solution to this problem, written for the 48GX. I have to leave in a few minutes so I don't have time to post the code but I will send it to anyone interested. A brief description follows.

It solves the more general problem of finding all of the 1, 2, 3, ..., 10 digit numbers with the required properties (first N digits divisible by N, no repeated digits). It starts with a list of all the valid one-digit answers (1..9). For each of these, it forms trial 2-digit numbers by tacking on each of the digits 0..9 and seeing if the resulting 2-digit number meets the criteria; if so, it is added to a list of 2-digit solutions.

This is then repeated with the 2-digit numbers to get 3-digit solutions, and so on. This is all done in a big

loop, of course. (CS fans will recognize this as a "breadth-first search.")

The program takes about 25 minutes to run and produces a list of 10 lists, giving all the solutions.

The number of solutions for each size number starts at 9 for one digit and increases to 220 for 5-digit numbers and then decreases down to just one 10-digit answer. (I will not include it here in case anyone else is still working on it.) I manually verified that the 10-digit answer and its smaller prefixes met both criteria.

Hopefully this will still be of interest to someone. For me, the fun was just getting a working program.

S&SMC#6: An HP-71B solution
*Message #8 Posted by **Ex-PPC member** on 13 Mar 2003, 6:37 a.m.,*
in response to message #7 by Michael F. Coyle

Michael wrote:

I know it's kind of late in the game, but I do have a solution to this problem, written for the 48GX [...] Hopefully this will still be of interest to someone. For me, the fun was just getting a working program.

Thanks for your interest in my challenge, perhaps it was a little more difficult than the usual "do this simple thing in the least possible number of programming steps", but it certainly offered an opportunity to show off one's favorite HP calc and some advanced programming techniques, right ?

As promised, here's a solution to both the original and the extended challenge, for the HP-71B. As usual, it's far from optimal, but it can be written very easily and gets the job done quickly:

This short (164 bytes) program recursively finds all numbers that have the property that the number consisting in the first N leftmost digits is divisible by N, for N ranging from 2 to 9 digits. Repeated digits are allowed for this version.

```
10 DESTROY ALL @ OPTION BASE 0 @ DELAY 0,0 @ STD
20 FOR I=1 TO 9 @ CALL TST((I),2,9) @ NEXT I @ DISP "DONE!" @ END
30 SUB TST(N,D,M) @ N=10*N @ FOR I=0 TO 9 @ X=N+I @ IF MOD(X,D) THEN 50
40 DISP D;X @ IF D#M THEN CALL TST(X,D+1,M)
50 NEXT I @ END SUB
```

It simply starts from 1-digit numbers and calls a subprogram that adds a new digit, testing all 10 possibilities for divisibility. When a suitable candidate appears, the subprogram calls itself, to add yet another digit, and so on till the number is 9 digits long and all possibilities have been tested. Brief comments:

- Line 10 simply sets up some initial conditions; you may want to change the DELAY to slow down the display, but the STD is important to keep the presentation tidy.

- Line 20 is the "main program": it just stablishes a loop to find solutions from 2 to 9 digits long, and calls the subprogram to do the actual work. That's it. You could search for numbers up to 12 digits long just by changing the 9 to 12 !

- Line 30 is the subprogram: it tests all 10 possibilities by adding a new digit to the already existing ones, and if the divisibility condition is met, it simply calls itself to add yet another digit

- Notice how the recursive call CALL TST(X,D+1,M) at line 40 depends on a condition, else the recursion would go ever deeper.

If you RUN this program, you'll get an output like this:

2 10 -> 3 102 -> 4 -> 1020 -> 5 -> 10200 -> 6 102000 -> 7 1020005 -> 8 10200056 -> 9 -> 102000564 -> 6 102006, etc

To find a 10-digit solution with no repeated digits, as the original challenged asked for, first we notice that for a 10-digit number to be divisible by 10, it must end in 0. So we just need to find 9-digits solutions, 0 excluded, then add a final 0 to all of them.

We just need a very few changes to the program above, like this 200+ byte version:

```
10 DESTROY ALL @ OPTION BASE 0 @ DELAY 0,0 @ STD
20 FOR I=1 TO 9 @ CALL TST((I),2,9) @ NEXT I @ DISP "DONE!" @ END
30 SUB TST(N,D,M) @ N=10*N @ FOR I=1 TO 9 @ X=N+I @ IF MOD(X,D) THEN 50
32 A$=STR$(X) @ FOR J=1 TO LEN(A$) @ IF POS(A$[J+1],A$[J,J]) THEN 50
34 NEXT J
40 DISP D;X @ IF D#M THEN CALL TST(X,D+1,M)
50 NEXT I @ END SUB
```

- As before, line 10 sets things up, but STD is even more mandatory, for the STR$ conversion below.

- The loop at line 30 in the subprogram begins at 1 instead of 0, as 0 must be the final, 10th digit.

- Lines 32 and 34 simply check for repeated digits, by converting the candidate number (which already meets the divisibility requirement) to a string, then using the POS function to find if any character occurs more than once. It's a simple, non-optimal idea that works.

The rest of the program is just the same. When RUN, it outputs:

2 12 -> 3 123 -> ... -> 9 381654729

and so, the one and only 10-digit solution is 3816547290.

That's all, hope you enjoyed it, and see how recursion makes an easy job of apparently complex tasks.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Re: Building Double X-Memory
*Message #1 Posted by **Christoph Klug** on 3 Mar 2003, 6:09 a.m.*

Follow the link in HP-Museum articles froum item 329 "Creating HP41 Double X-Memory Modules". There you get the detailed descriptions about building your own Double X-Memory....

Best wishes from Germany - Christoph

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Wow! $166 for a trashed 11C!
*Message #1 Posted by **Kal Schneider** on 3 Mar 2003, 4:09 a.m.*

Here's the eBay link:

trashed HP-11C

I don't get it. A more-capable 15C in much-better condition would be available for less. No knowledgeable user or serious collector would pay that much.

The seller, "Samonator" (an occasional contributor here) was certainly honest about the condition.

Re: Wow! $166 for a trashed 11C!
*Message #2 Posted by **hugh** on 3 Mar 2003, 6:18 a.m.,*
in response to message #1 by Kal Schneider

i'd expect to pay easily over $100 for one in average condition, more with the manuals.

the metal faceplate can get like that from use (rather than abuse). my 15c is halfway like that now and i haven't been scraping it against the wall either. its like some kind of oxidation with age or the abrasion of being slid in and out of its cover many many times.

Re: Wow! $166 for a trashed 11C!
*Message #3 Posted by **John Smith** on 3 Mar 2003, 6:43 a.m.,*
in response to message #2 by hugh

"its like some kind of oxidation with age or the abrasion of being slid in and out of its cover many many times"

It must depend on some other environmental conditions as well. I have a 1981 USA-made HP-11C, one of the earliest models, it's been taken in and out of its cover tens of thousands of times, and it's still as new, no changes at all to the aluminum bezel. In fact, it looks newer than any other HP-11C I've come across, including two other more recent models I also own.

No wear on the keys or key action as well, and it has needed just 2 changes of batteries in 22 years, even with heavy daily use. It amazes me no end !

Re: Wow! $166 for a trashed 11C!
*Message #4 Posted by **Vieira, Luiz C. (Brazil)** on 3 Mar 2003, 12:14 p.m.,*
in response to message #3 by John Smith

Hi;

I have an HP11C with a keyplate that's a lot worst than Sambonator's picture. It was used under "severe" environment (a farm, believe me, but former -farmer?- owner told me it never fell over horse s...) and I believe there is no way to resist to such "environment attacks". If there is a series of unprinted faceplates with previous contamination (HP did not produce them; if I know it well, they were delivered already printed form thirdy parts), printing/stamping process would not remove "skin" contamination. After a few years...

Just more data.

Luiz C. Vieira - Brazil

Re: Wow! $166 for a trashed 11C!
*Message #5 Posted by **Raymond Del Tondo (Germany)** on 3 Mar 2003, 7:32 a.m.,*
in response to message #1 by Kal Schneider

That calc reminds me of an 11C I bought years ago from someone from Spain. He said the calc was in excellent condition. However, the 11C he sent me looked as ugly as that model from Sambonator, and AFAIR the manual looked worse.

Believe it or not, the price was $100

A while later, I got another, pristine 11C for less.

Raymond

Re: Wow! $166 for a trashed 11C!
*Message #6 Posted by **Frédéric** on 3 Mar 2003, 9:25 a.m.,*
in response to message #1 by Kal Schneider

Maybe ..... but what a beautiful cat !!!!!

Re: Wow! $166 for a trashed 11C!
*Message #7 Posted by **Sambonator** on 4 Mar 2003, 8:09 a.m.,*
in response to message #6 by Frédéric

Yes...my cat Tigger works wonders :-).

Sam

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-41CV bad I/O ports

*Message #1 Posted by **W. Bruce Maguire II** on 2 Mar 2003, 4:47 p.m.*

Hello all:

I bought a bare-calc. 41CV (full-nut) off eBay a while ago, and it has worked fine ... until I went to plug in my new Time module! >:-P The Time module locked the machine up, and a memory-clear reset with the module in did not help. I *think* the Time module is good. Unfortunately, I can't test the Time module, because my only other 41 is a CX.

I then tried a known-good "Stat1" module, and it was at least *recognized* by the 41CV (Catalog 2), but *only* in ports 2 or 4. In ports 1 and 3, the 41CV did not "see" the module at all.

Lastly, I tried plugging in my 82143 printer---which works fine from my CX---and the printer would *only* print lines of diamonds, *regardless* of the port!

So, I appear to have a 41CV with *very* flakey I/O. *Looking* in the four ports, the connectors look perfect: all nice and shiny. Also, I tried repeated insertions/removals with *no* change in behavior for *any* of the tests. This makes me very much doubt that it is a connector issue.

Unfortunately, I have no repair experiance with *any* HP, much less a 41-CV (full-nut). I *am* an electrical engineer ... *but* ... let's just say that it has been a while since I've played with hardware! ;-) Can any of you hardware gurus (Tony?) tell me if there is any *chance* that this is repairable *without* SMD-soldering skills? I *do* have a cheapo soldering iron, power supply, DVM, and a small scope (*GREAT*, **inexpensive**, single-channel, 5 MHz, Velleman HPS5 handheld; note the ironic model number!).

Thanks in advance!
Bruce.

Re: HP-41CV bad I/O ports

*Message #2 Posted by **Tony Duell (UK)** on 2 Mar 2003, 6:58 p.m.,*
in response to message #1 by W. Bruce Maguire II

Firstly the good news. There are _no_ SMD parts in a fullnut 41. Well, OK, the display contacts are soldered on the surface, but they're at the normal 0.1" pitch. And all the chips are DIL pin-through-hole devices. Now the even better news. There's a good chance you can fix this without any soldering. It sounds like you have bad connections to the I/O assembly -- the flexible PCB that forms the I/O port connectors and the battery contacts. One thing you may not know is that there are separate connections for ports 1/3 and 2/4 which are connected together on the keyboard PCB. So bad contacts can cause half the ports to stop working. Take the machine apart (screws under the feet), lift off the CPU board and its connector (take anti-static precautions -- this is delicate CMOS logic). Clean the contacts on the CPU board, the CPU board connector assembly, the contacts on the keyboard PCB (for the CPU board and the I/O assembly) and the contacts on the I/O assembly with propan-2-ol (isopropyl alcohol). Then squeeze the foam strip under the flexible PCB at the top of the I/O assembly to increase the contact pressure here. Put the machine back together (don't overtighten the screws or you will have many more contact problems!) and try it again. Incidentally, I also have one of those Velleman 'scopes, but being a cheapskate and handy with a soldering iron, I build the kit version. Took me an evening... It's a useful instrument for checking PSU ripple, etc, but for logic troubleshooting I much prefer the logicdart...

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Re: For US$78 : buy both, or as many as they have
*Message #1 Posted by **JOSH WOZNIAK** on 2 Mar 2003, 1:19 p.m.*

Please I need to purchase an HP 42S! Please contact me if you know where I can get one!

jw

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-41CX Compiled GTO's and XEQ's

*Message #1 Posted by **Jeff** on 2 Mar 2003, 11:46 a.m.*

Recently while thumbing through the PPC Journal, I have come accross several programs to compile these GTO's and XEQ's. Once they are compiled what is the best method to get them from X to the specific location in program memory? "Synthetic Programming Made Easy' has the program 'LBX' but I think that once you delete all of the '+' in the program it will uncompile the GTO correct? Please assist me if you can.

Re: HP-41CX Compiled GTO's and XEQ's

*Message #2 Posted by **Mike (Stgt)** on 3 Mar 2003, 10:23 a.m.,*
in response to message #1 by Jeff

You must have your program ready and tested that for sure you will not need to do any changes in future. Next print it out and delete all local labels you do not need for manual start of a routine. Pack it. Calculate the new distances for GTO and XEQ. Take care of 2- or 3-byte GTOs according to the distance. Due to the deletion of labels there may be some GTOs that change from long form to the short form, others may need to be the long (3 byte) form. Now "compile" all GTO and XEQ manualy. Take meassures that your program will never be decompiled (make it PRIVATE).

Now re-think the process: How long will this procedure take? How often was your program de-compiled and how long did it take the HP-41 compiled all GTO and XEQ? Now compare the time spent and the time gained (but don't forgett the "fun-factor" for the time you'll spend)

Ciao.....Mike ;-)

and dont forget the GTO [.][.]

*Message #3 Posted by **Vieira, Luiz C. (Brazil)** on 3 Mar 2003, 11:54 a.m.,*
in response to message #2 by Mike (Stgt)

Hi, Mike;

I read Jeff's post and wondered about it. I read yours and I think I did not understand the doubt.

Is there a way to "compile" a program, i.e., to compute and record the distances from GTO's and XEQ's to their respective LBL's and keep this information? I know taht if you execute a [GTO][.][.] and the program is packed as a consequence of it, all of this information is erased. If the program already has an END as the last instruction (say, if you put it there manualy with a [XEQ][ALPHA] END [ALPHA] instead of a [GTO][.][.]) and you execute it, all EXECUTED GTO's and LBL's are compiled. But if you pack memory for any reason, this information is lost.

My doubt goes further when I think of those GTO's or XEQ's that are executed only in certain conditions and these conditions are not reached when running the program. Two questions:
- it seems that 'LBX' program mentioned by Jeff will compile thess not-executed jumps, what is an important fact, indeed
- manualy positioning the calculator on each not-executed GTO or XEQ and executing a single [SST] in RUN mode would also compile that specific GTO or XEQ? I think it will, but I'd like to know if it is a fact or a simple guess.

I would like to know more about the fact a PRIVATE program is not decompiled. Even if it is read form a card or X-Memory? I was not aware about that... Interesting!

All of the compilation process is lost when a program is changed or recorded somewhere and brought back to main memory, say, if it stays in main memory and it's unchanged, the compilation data is kept untouched. Or if it is recorded in ROM'what demands the compilation of all GTO's and XEQ's, isn't it?

Best regards.

Luiz C. Vieira - Brazil

Re: and dont forget the GTO [.][.]
*Message #4 Posted by **Jeff** on 3 Mar 2003, 6:54 p.m.,*
in response to message #3 by Vieira, Luiz C. (Brazil)

Gentleman, Thank you for your responses. I have been trying to figure out the programs "EN", "XQ", "G3", "G2" from the PPC Journal V14N2. When these programs are executed, they need the required # of bytes for the jump, negative if reverse direction, and the suffix to the label, ie.. 1 for 01 etc.. What is returned to the X register is the actual bytes needed to make the compiled GTO, XEQ or END. But how do I get those bytes to the program efficiently in order to avoid decompiling the previous GTO I just inserted. I tried using the "LBX" but I think that this would not work so well as the deletion of the "+", XEQ LBX and LBL "++" will decompile the just compiled GTO. Is this thinking correct? I also tried using the STO Q and Q-Load option and this again just entered jibberish. Am I using these programs above wrong? Is there another program that can be used to transfer the bytes from the X register to the specific location in Program memory? Is "CODE" the program that will do this for me?

compile/de-compile
*Message #5 Posted by **Mike (Stgt)** on 5 Mar 2003, 5:27 a.m.,*
in response to message #4 by Jeff

First: I write here by heart, so it may be wrong. There is a flag in the END of a program to show if it was changed and if it needs "de-compiling". Early HP-41 had an bug (no. ?) where you could avoid that by going OFF when still in PRGM-mode, when going ON your _out_ of PRGM mode and run your routine with wrong distances in GTO and XEQ.

But your question is how to alter a program without decompiling: Just combine a whole register (7 byte) of your routine as an "Not Normalized Number" (NNN) and store it at the proper location. But never do a RCL on that location, it will alter (normalize) the contents to what typicaly looks like a number.

Which program to use for that? It depends. On a bare HP-41C read "Synthetic Programming" by Wickes and try his suggestions. With a PPC-ROM and it's manual you have all you need. I prefere the ZEN-ROM for such stuff as it's RAMED is so comfortable.

Ciao.....Mike

Re: compile/de-compile
*Message #6 Posted by **jeff** on 5 Mar 2003, 1:12 p.m.,*
in response to message #5 by Mike (Stgt)

Is there some way to get the "Ramed" program from the ZenRom and have it put onto mag cards or a cassete tape? I used to use the ZenRom to do these tasks but sold it years ago and reget it now.

Re: compile/de-compile
*Message #7 Posted by **Raymond Del Tondo (Germany)** on 5 Mar 2003, 3:24 p.m.,*
in response to message #6 by jeff

Definitly NO. RAMED, and other ML programs, have to reside in 10-bit word wide RAM or ROM. For the HP-41, only ROM simulators or ROM's provide that format.

Raymond

Re: and dont forget the GTO [.][.]
*Message #8 Posted by **Mike (Stgt)** on 5 Mar 2003, 8:07 a.m.,*
in response to message #3 by Vieira, Luiz C. (Brazil)

Hi Luiz! :-)

You are correct, my answer was much too short to cover all aspects of the matter. I only wanted to point to the fact that you will loose lot of time you'll never gain it again.

Yes, correct, not only changing a program, PACK too causes de-compiling - irrespective if the program is PRIVATE or not. But PACK de-compiles only once, a second PACK will _not_. When I adviced to make a program PRIVATE I had synthetic means in mind - w/o card reader, just to avoid accidentally changing the program.

If you write a compiled prgm to card (or bar code) and read it back to the HP-41, the first PACK will decompile it. Doing GTO.. adds an END - what is a change that triggers decompiling. There is a way to PACK w/o decompiling: Just destroy the "global chain" in the permanent .END. and XEQ "PACK".

There are some ROMs with routines to compile user programs (in Skwids Bar Code ROM for example) but AFAIK they all need local labels to know where to jump.

BTW, if you have GTOs and XEQs in your code that is never reached, just re-think your routine.

Anyway, you will spend hours to speed up your program some mili seconds.

Ciao.....Mike

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

41CV Aviation custom?
*Message #1 Posted by **Mike Rivera** on 2 Mar 2003, 10:20 a.m.*

What is this?

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3009936943&category=11713

Did HP make special edition 41's for use in aviation?

Or did somebody else customise this?

- Mike

Re: 41CV Aviation custom?
*Message #2 Posted by **Arnold Steekelenburg** on 2 Mar 2003, 11:03 a.m.,*
in response to message #1 by Mike Rivera

Hi Mike,

It seems to be a custom made rom. The P3B/C is a navy airplane named Lockheed 'Orion'.
Looks like this module is used to navigate and to compute airplane parameters.

I don't have a clue if it can be used in general aviation.

Regards, Arnold

Re: 41CV Aviation custom?

*Message #3 Posted by **Christof** on 3 Mar 2003, 1:19 p.m.,*

in response to message #2 by Arnold Steekelenburg

The p3 is an amzing aircraft :)

I recall seeing a 41 in the hands of one of the PCs in VP24 back in the early 90s, but I think it was his personal machine, not USN hardware.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Re: Expensive Dual X-Memory
*Message #1 Posted by **Guy François** on 2 Mar 2003, 7:41 a.m.*

I bought two X-memory modules and a math pack for only 5 USD (I bought about everything three shops in Antwerp - Belgium had still in stock relating to the HP-41CX), but I did pay $400 for a brand new stock 41CX at classiccalculators.com (which is in absolutely new condition, manuals, etc. included and was delivered as promised and just a week after I ordered it and paid for). It's the first time I post here and I am impressed with Mr. Hicks work. I'm a long term HP-calculator user and prefer the size and ergonomy of the 41 over more recent models. Best regards to you all!

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Question about HP 35 versions.
*Message #1 Posted by **James Kelly** on 2 Mar 2003, 7:26 a.m.*

I have been looking at the HP-35 beacuase I am interested in getting one as a collectors item. I noticed that there are 4 versions. However, I could not find any obvious difference between the HP-35 V-1 and the HP-35 V-2 early model. What is the difference between these models?

Thank, Jim Kelly

Re: Question about HP 35 versions.
*Message #2 Posted by **Spice_Man** on 2 Mar 2003, 8:39 a.m.,*
in response to message #1 by James Kelly

V1 has the "Red Dot" on the ON side of the ON-OFF switch. It also has the serial number between the two rubber feet at the bottom instead of inside the battery compartment.

Spicey

Re: Question about HP 35 versions.
*Message #3 Posted by **David Smith** on 3 Mar 2003, 6:07 p.m.,*
in response to message #2 by Spice_Man

he V1 "red dot" version also has the multi-piece "backbone." You can see a gap in the backbone inside the battery compartment.

Re: Question about HP 35 versions.
*Message #4 Posted by **Spice_Man** on 4 Mar 2003, 1:35 a.m.,*
in response to message #3 by David Smith

David: Do you have any pics of the backbone gaps visible in the battery compartment? Much obliged!

Spicey

Re: Question about HP 35 versions.
*Message #5 Posted by **David Smith** on 4 Mar 2003, 4:09 p.m.,*
in response to message #4 by Spice_Man

My digital camera died a while back, hope to get a new system and camera after the tax man taketh.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

battery life on 10bii
*Message #1 Posted by **JaSon** on 2 Mar 2003, 3:13 a.m.*

Third post today, guess I full of questions! I have a 10bii that I've bought 11 months ago, It has sat in my drawer for all but about 30 minutes of use and I am getting a low battery sign. Is this normal? I can see that they switched from the old 357 batteries to 2 cr2032 batteries, but that can't be it. Is there a known drainage problem with some 10biis or did I maybe just get bad batteries?

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Trade Hp32sii for HP 42s?
*Message #1 Posted by **JaSon** on 2 Mar 2003, 3:04 a.m.*

I recently found a new in box brown bezel 32sii in a pawn shop, but I already have one. Is it worth while trying to find someone who would trade for a presumeably used 42s. I like the 32sii a lot but have never had a chance to use a 42s. Is it more usefull for engineering math? (my planned major). Any opinions would be usefull.

Re: Trade Hp32sii for HP 42s?
*Message #2 Posted by **David Smith** on 2 Mar 2003, 3:20 p.m.,*
in response to message #1 by JaSon

If you can find somebody who would trade a Yugo (32Sii) for a Mercedes (42S), then do it...

Re: Trade Hp32sii for HP 42s?
*Message #3 Posted by **R Lion** on 2 Mar 2003, 4:10 p.m.,*
in response to message #2 by David Smith

I found it last month: a collector wanted a new in box 32sII I found for 78 euros (sorry, really the last one). He wanted complete his collection with the silver version...not at ebay prices. And he offered a very good condition 42S of 1992. So I got the 42s for 100 euros with shipping costs

Last year I got a perfect working condition 15c from him, exchanging for a 1985 programable Casio.

For a collector things have different value than for simply user like me.

Regards

Raul

HP Forum Archive 11

[Return to Index | Top of Index]

Combinations and permutation limits on Calculators
*Message #1 Posted by **JaSon** on 2 Mar 2003, 2:57 a.m.*

I've noticed that old Hp calculators and Kinpo(recent HP and TIs) can calculate combinations to the full range the calculator can display ie. any combination with an answer less than 9e100 or 9e499 (depending on the calc), But all Casio and Sharp calculators (even a graphing casio)cannot calculate any combination larger than 104C52 which eguals 1.583065848e30, I get an error message trying to calculate 106C53. I can however calculate 114C51=8.27e32, 124C50=1.49e35, 134C49=1.16e37... and so on increasing the number of objects by 10 and decreasing the number taken by 1. I don't see where there would be a similar limit in the calculation n!/((n-r)!*r!) for all these combinations. Any Ideas?

Re: Combinations and permutation limits on Calculators
*Message #2 Posted by **R Lion** on 2 Mar 2003, 6:29 a.m.,*
in response to message #1 by JaSon

I had noticed it some time ago, playing with a Casio fx400P and the 15C... I suppose the algorithms are different and so the Casio gives the overflow error, but can't give you a sure answer.

Raul

Re: Combinations and permutation limits on Calculators
*Message #3 Posted by **R Lion** on 2 Mar 2003, 6:30 a.m.,*
in response to message #2 by R Lion

I mean fx4000p

Re: Combinations and permutation limits on Calculators
*Message #4 Posted by **hugh** on 2 Mar 2003, 10:26 a.m.,*
in response to message #1 by JaSon

i've just tried out a bunch of casio machines and none can perform 106C53, presumably because the intermediate 106!/53! is too large when calculated as 106*105*...*54, is about 1e100. naturally, all the 1e499 hps, like 20s, 32sii, 48g work. the 15c also does and also 134C49 too which is excellent. looking at older hps, they dont seem to have it! i cant find "COMB" on the 41c nor 28c. is this missing or have i missed it, anyone? older still, are there any with combinations on keyboard, 30's and 20's dont (is there one, i dont have all). can someone try the 42s. which ti's cope? the 89 simply printed out the whole integer which damn cool.

Re: Combinations and permutation limits on Calculators
*Message #5 Posted by **Paul Brogger** on 3 Mar 2003, 4:55 p.m.,*
in response to message #4 by hugh

The 42s appears to have the same capabilities as the 32S/Sii in this respect. Either handles the examples mentioned, and up to 500C240 (7.83E148), which is as far as I've got time to go, right now.

Re: Combinations and permutation limits on Calculators
*Message #6 Posted by **R Lion** on 4 Mar 2003, 3:14 a.m.,*
in response to message #4 by hugh

The 32/42/48/49 can calculate: 5e6C97...

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Discontinuing HP-12C Financial ?
*Message #1 Posted by **Norm Hill** on 1 Mar 2003, 9:23 p.m.*

Hi,

I was wondering, is HP going to discontinue the HP-12C Financial calculator also ?

Reply to this forum, or to analogee@gte.net

Re: Discontinuing HP-12C Financial ?
*Message #2 Posted by **Spice_Man** on 1 Mar 2003, 11:48 p.m.,*
in response to message #1 by Norm Hill

I don't see that happening anytime soon. That's probably the longest running product in HP history...in fact I can't think of another high-tech gadget product from any other company still producing the same model of anything for 22 years straight. The 12C will probably stay in production long after even the new 9G becomes obsolete.

Spicey

Re: Discontinuing HP-12C Financial ?
*Message #3 Posted by **James Kelly** on 2 Mar 2003, 7:38 a.m.,*
in response to message #2 by Spice_Man

I recently bought a brand new HP-12C and am quite pleased with it. I noticed however that HP recently updated the design. While I was shopping for it, I found that there were two distinct versions of it. The difference was the batteries that it used. The one that I bought had 3 Panasonic LR44 1.5v lithium batteries. However there seems to be a newer version that uses only two 1.5V batteries (I do not remember the designation on the batteries). I had to search four different stores to find one that still used three batteries (I am a collector and am primarily interested in the older varieties). Anyone else have any input to this?

Re: Discontinuing HP-12C Financial ?
*Message #4 Posted by **Vieira, Luiz C. (Brazil)** on 2 Mar 2003, 10:57 a.m.,*
in response to message #3 by James Kelly

Hi;

the HP12C has four major types, being three of them already out of production (all of them with three LR44-type 1.5V cells) and the updated one with one 3V lithium cell.

The two "first-of-the-kind" used the same chipset in two different internal architecture, the same used in all voyagers: one keyboard and a flex circuit assy with all chips and LCD in earlier models and an updated internal design with one single, all built-in PCB. The HP12C kept this design, but reduced the chipset to a single one, based on the fact all other Voyagers were out of production and there was no need for a separate, all-Voyagers compatible keyboard scanner. This model kept the three batteries.

The last and fourth model was adapted to a single 3V lithium cell and uses an Agilent chip.

Hope this helps.

About continuity... maybe, just maybe God knows what HP intends to do.

Cheers.

Luiz C. Vieira - Brazil

HP-12C vs HP-15C Discontinuing
*Message #5 Posted by **Norm Hill** on 2 Mar 2003, 4:50 p.m.,*
in response to message #4 by Vieira, Luiz C. (Brazil)

What makes me laugh about HP-12C and about Carly

(the CEO of HP, and you can write complaint mail at the HP website http://thenew.hp.com/country/us/eng/contact/email_3.html

and her "Carlyized" calculator division is that they discontinued the classic HP-15C and HP-32Sii which is for ENGINEERS and SCIENTISTS but they keep HP-12C which is for stockbrokers and money manipulators.

There is an obvious bias there, indifference for the needs of the scientific/technical community but continuing product shipment for the business and money people , regardless of whether the calculator has 2 batteries or 3, you can still buy an HP-12C financial calculator.

Just a minute, there buddy. :-)
*Message #6 Posted by **Gene** on 2 Mar 2003, 4:55 p.m.,*
in response to message #5 by Norm Hill

The 12c is still being sold because the demand for it continues to run incredibly high! People continue to buy this calculator.

HP tried to kill off the HP-12C several times. They raised the price hoping people would move to the 17B and 19B. Instead, people thought "higher price = more valuable" and bought more 12c calculators.

Unfortunately, as a business person who ALSO likes scientifics, somewhere the cost-volume-profit analysis didn't make sense (and I use that term loosely) in the 15c and 32sii case.

There has to be sufficient volume to do things. The 12c has that volume and then some. Other HP calculators? Probably not. After all, do you really think there are lots of 49G calculators being sold or were sold in 2002?

:-(

Gene

...and...
*Message #7 Posted by **Vieira, Luiz C. (Brazil)** on 2 Mar 2003, 7:06 p.m.,*
in response to message #5 by Norm Hill

... as Gene himself will probably support my words (or not?), computational demands for financial market have not changed that much in the last 40 years (maybe more); even computer programs have changed their face with a common core.

What about sciece? An HP15C is O.K. for the major hardwork, but there are moments where an HP48 IS the math tool (or other graph/algebraic calcualtor).

Replacing the HP15C for a more powerfull calculator to achieve new perspectives is one thing. Replacing the HP12C for another that does the same with clock, calendar and agenda (plus memory) is a different story. That's what we have for the HP17BII: it's already off-production. And the HP12C prevails.

In this particular subject, HP staff did not mess up... so far.

Best regards.

Luiz C. Vieira - Brazil

Re: ...and...
*Message #8 Posted by **Gene** on 2 Mar 2003, 8:56 p.m.,*
in response to message #7 by Vieira, Luiz C. (Brazil)

I agree. I have trouble thinking of new functions that a financial calculator really needs to have. PDAs don't count.

Gene

And also...
*Message #9 Posted by **Vieira, Luiz C. (Brazil)** on 2 Mar 2003, 11:24 p.m.,*
in response to message #7 by Vieira, Luiz C. (Brazil)

In an opposite direction to Gene's, I'm more to science than to finance, and it's just a matter of taste, I guess. Let's face one thing: in today's society, cientists and researchers are those who need funds to do what they are supposed to do. The financial benefits of researching are felt longer after the research team starts the play. And there is no way to "schedule" their "discoveries", what lets the money guys p...ed off. And this is a fact.

What Gene mentions is completely understantable: how many HP49G's were sold last year? Whom of us here gave or was given an HP49G? But all of us know many, many people gifted with an HP12C as for being the best salesperson, or for the most profitable account mannagement... Different words, and Carly belongs to... guess which?

Far away from Dave and Bill's first "dream", HP must be profitable and reliable in todays' market to survive. It doesn't mean it has to forget calculator's division. And I wonder if HP staff is not changing it because of both

- it seems to be fancy for business if we have the same calculators others are building AND
- new investors must see new, fresh products, and scientific calculators resemble the ones many people were not able to use (RPN is hard... if you do not think math).

Making a mistake is human. Accepting and taking measures to correct it is more than human. But this works only in a "humanized" world (if this word exists)

Comments?

I surrender

*Message #10 Posted by **Norm Hill** on 3 Mar 2003, 2:03 a.m.,*
in response to message #9 by Vieira, Luiz C. (Brazil)

I surrender, I'm waving the white flag.

We've got 2 models long-since designed, "classics" that are superior to the new junk, the owner's manuals long-since written, the circuits and algorithms long since figured out. The investment into creating them was long since made.

Either of these two calculators 12c and 15c are built and supported on identical production lines by the same staff.

Under those conditions, it makes perfect sense that Carly-types would drop the 15C for the engineers and keep the 12C. After all, financial/ management/money people need calculators, and engineer/scientists don't. And maybe the engineer/scientists werent buying as many units, so why keep a stack of parts for either unit, thereby boosting total units sold and total business profitability.

So financial people should have calculators that work, and engineers shouldn't. I should have seen that from square one, and it is appreciated that a businessperson took time to correct me.

You got the picture...
*Message #11 Posted by **Vieira, Luiz C. (Brazil)** on 3 Mar 2003, 2:52 a.m.,*
in response to message #10 by Norm Hill

... unfortunately.

I know you're talking about Gene when you mention: *it is appreciated that a businessperson took time to correct me.*

I'm not a financial guy, I know. I'm an Electrical Engineer and I teach classes (telecomm and electronics) at the local university. But we must have the feeling for profitability in our own "business". See?

Best regards.

And don't get me wrong!
*Message #12 Posted by **Gene** on 3 Mar 2003, 7:23 a.m.,*
in response to message #11 by Vieira, Luiz C. (Brazil)

I like HP scientific calculators as much as the next guy. :-)

I also think HP has been very short-sighted in many respects. But, I do know the 12c is fairly untouchable and sells like hotcakes.

If only there were an HP-12C+ :-)

Gene

Re: And also...
*Message #13 Posted by **Christof** on 3 Mar 2003, 12:51 p.m.,*
in response to message #9 by Vieira, Luiz C. (Brazil)

I can think of something that the 12C doesn't have that is very highly useful to someone in business---- *if* they put the time and effort into learning how to use it (which the vast majority won't if they don't get tauight in college/tech/etc schools)

The solver of the 17/19 is really amazing.

If one had produced a 12CS (12C with solver) in the same format, with the same basic key layout, you might have sold it to people to a point whereit could have replaced the 12.... maybe.

For science/industry- the "techie calculator"- I do disagree with Luiz a bit: "Far away from Dave and Bill's first "dream", HP must be profitable and reliable in today's market to survive."

While this is true to some extent, there are other issues at stake. I findthe modern corporate approach to be a bit off putting. pure profit this quarter for the shareholder isn't really what the top goal is supposed to be.

HP *could* restart the pioneer series with improved versions of the 17, 42, 32, 20, 27, and 18. HP *could* make money doing so. Even more to the point- HP *could* rebuild the famous brand loyalty of the past with calculators. While not the item you save for 2 semesters to afford anymore, calculators are still very widely used and puchased. They also last long enough that it is reasonable to assume (look at us) that some loyalty can be built based on the calculators.

you don't need scratchy plastic lcd covers. you don't need colored faceplates and flush keys that only a 2 year old cna comfortably press. you need quality of design, inside and out- software and hardware- and you need to market the quality. (you think parents wo't shell out an extra $20 for a high school calculator that really works better? -- with the right marketing?)

-Christof

Re: And also...
*Message #14 Posted by **Vieira, Luiz C. (Brazil)** on 3 Mar 2003, 1:04 p.m.,*
in response to message #13 by Christof

Hi, Christof! Good post!

You wrote:

>While this is true to some extent, there are other issues at stake. I findthe modern corporate approach to be a bit off putting. pure profit this quarter for the shareholder isn't really what the top goal is supposed to be.

I agree with you 100%, but do the "beasts" (giants) see this fact? I think of them as a "big mass of immense conceptual innertia", and we know from physics laws that *the bigger the mass, the bigger is the effort to change it's innertia*. I think it will take some time till we can see the resulting changes we are completely sure that must be made in today's economy, so we have the perfect (or close to) environment for a new concept, like the one you precisely mentioned.

Best regards.

Luiz C. Vieira - Brazil

Re: Discontinuing HP-12C Financial ?
*Message #15 Posted by **John K. (US)** on 10 Mar 2003, 4:26 a.m.,*
in response to message #4 by Vieira, Luiz C. (Brazil)

The last and fourth model was adapted to a single 3V lithium cell and uses an Agilent chip.

One other thing I noticed about the new 12C is that the bottom half (which, on previous generations, was plastic with a label attached) now seems to made of metal with a plastic surround for the feet and battery compartment cover frame. The back label info is now printed directly on this new metal "shell".

If any of the intrepid internals folk ever open one of these up, I'd be very interested in knowing how these new Chinese units are arranged.

Re: Discontinuing HP-12C Financial ?
*Message #16 Posted by **Vieira, Luiz C. (Brazil)** on 10 Mar 2003, 5:50 a.m.,*
in response to message #15 by John K. (US)

Hi;

yes, I have. Look below.

(picture unavailable)

This is the third internals version, Indonesia origin: it still has the three butoon compartment but already has the one-chip design.

(picture unavailable)

This is the newer version. You see that Agilent was elected to produce the almighty chip. The batteries terminals were so market because they are not so explicltly found.

Hope this helps. As you can see, these are partial views. I have the complete scanned image (it's not a picture; it's a scanned image), if you want, with the rest of the keyboard.

Best regards.

Luiz C. Vieira - Brazil

Re: Discontinuing HP-12C Financial ?
*Message #17 Posted by **John K. (US)** on 10 Mar 2003, 6:08 a.m.,*
in response to message #16 by Vieira, Luiz C. (Brazil)

Thanks for the look inside! :^)

Is the metal (aluminum?) bottom panel actually the bottom half of the calculator case on the Chinese version? Do you have any images of the disassembled unit?

Re: Discontinuing HP-12C Financial ?
*Message #18 Posted by **Vieira, Luiz C. (Brazil)** on 10 Mar 2003, 6:22 a.m.,*
in response to message #17 by John K. (US)

Hi, John;

my Chinese units (I have two of them) still have the classical plastic halves with aluminun bezel only, as the classical cases.

The one you mention has a bottom half completely built in aluminum? I have not seen anyone like this so far. Is it cheaper?

Best regards.

Luiz C. Vieira - Brazil

Re: Discontinuing HP-12C Financial ?

*Message #19 Posted by **John K. (US)** on 11 Mar 2003, 3:36 a.m.,*
in response to message #18 by Vieira, Luiz C. (Brazil)

> The one you mention has a bottom half completely built in aluminum?

Not entirely, but pretty close to it. The bottom seems to be aluminum (or some such) with a plastic surround that has the molded frames for the rubber feet and the battery compartment door (which is also plastic). I didn't notice the difference until I looked closely at it (the info on the back is in fairly small print) and noticed that the "label" seemed to continue under the plastic near the feet.

> Is it cheaper?

Depends on what you mean by "cheaper"... :^)

If you mean "is it less expensive," well, I paid retail for it (US$70) this past weekend, so the price on it hasn't changed.

If you mean "is it of lower quality," then I'd have to say the jury is still out. The weight and solidity remind me of the older Singapore versions, but it has painted keys (well-registered printing, though) and the soft, somewhat vague keyboard feel others have complained about on the newer machines. Using the "hold the thing upside down and shake it" test doesn't result in any noticable rattling from the keyboard, so that's probably a good sign.

I'll see if I can borrow my friend's digital camera (mine doesn't have a macro setting) and take some pictures of the back.

Re: Discontinuing HP-12C Financial ?

*Message #20 Posted by **Ellis Easley** on 11 Mar 2003, 1:54 p.m., in response to message #19 by John K. (US)*

I just got a 3 volt unit (sorry, John, I paid $25 clearance price for an unopened unit at WalMart!) And while I haven't opened the case yet, I did notice that the back looks different (in addition to the different battery door). The original Voyagers had a quite thick metal plate (with the instructions printed on) glued to a recess in the plastic back with the only opening in the plastic under the metal being where the ESD protection spring goes through to make contact. On my new unit, the metal seems to be thinner, judging by the fact that the edge of the metal curves back toward the case MOST of the way around. I've seen this on other items and it seems to be done to give more stiffness to thin metal. I say most of the way around because there are two spots where the edge of the metal is flat. One is just below the top left (from an "in use" perspective) rubber foot and the other is along the left calculator edge just above the bottom left foot. Unless those spots are just omissions from the tool that forms the metal, it looks like something structural is going on under them.

One other note on quality: a while back I got a Chinese 3 button unit (also at Walmart, also clearance priced) with S/N CN0 vs CN2 on the 3 volt unit. I didn't notice till I got home that it was a 3 button unit - I had heard the Chinese units discussed here and I thought they were all 3 volt. This unit looks like earlier Voyagers in the plastic molding (other than the color) and the metal plate on the back. Around the opening in the case back for the battery door, the surface texture continues perfectly along a narrow strip of plastic. The 3 volt unit has a larger battery door and the strip of plastic surrounding it is narrower, but it is not textured and a very unattractive effort was made to transition from the textured to the smooth surface. It's a small thing and probably based on practical considerations but it is an additional degree of cheapness. I'm afraid to open the unit for fear of seeing ugly unfinished surfaces on the inside! I know it doesn't matter but it seems to me that the appearance of the inside of molded pieces is a reflection of the care that the manufacturer has taken in the whole process.

My Chinese 3 button and 3 volt units look pretty much identical on the top side. The printed keys are the same, even the "enter"

keys with the letters appearing to be crooked or tilted or sliding off the key!

I just remembered something that I saw when I first got the Chinese 3 button unit, which has been propagated to the 3 volt unit: I was comparing every inch of the 3 button unit to my earlier 12C (the one I found in the street in pieces on election day, 1988 while waiting for a bus) when I noticed that in the instructions on the back, they had changed the years in the dates used for examples. I guess they did it to keep the machine from looking out of date - the original years were around the 80's and they were changed to the late 90's and the new millennium. The book says the calender functions are good till 4046, so I don't think it was a Y2K change, just a cosmetic one - something like a botox injection! But on the second line of the first example, they enter the date in D.MY mode incorrectly - 31/5/98 is entered as "31.51998" when it should be "31.051998". This same error is on the redesigned metal plate on the 3 volt unit. The examples portion of the graphics is shorter (to make room for the URL) and wider. It could just be a photographic alteration but some details make me think the text was re-set: the relative size of the triangle vs. the letters in "[delta] DYS" and the vertical centering of the characters in the boxes representing the "X<>Y" and "roll down" buttons.

BTW, regarding the fact that WalMart seems to keep closing out the 12C, I don't think that reflects the idea that HP will discontinue it. The recent letters from HP that have been posted here say HP means to keep it and the fact that they have made efforts to cost-reduce it, while we might not like the changes, suggests that they want to keep making it. There are certain things that WalMart sells at clearance periodically and then later re-stocks. It is my belief that a lot of WalMart's success has to do with creating the impression of freshness. Things are frequently moved to new locations and I think they do this to clean out the dust and create a newly stocked appearance. Whenever I go there in the middle of the night I'm amazed at the amount of activity.

The continuing popularity of the 12C has hatched a conspiracy theory in my mind. Apparently, accountants and business administrators like the 12C (judging by the fact that it keeps selling). They used to be in charge of the computers, back in the old days, and when personal computers and networks became

available, I understand they put up a certain amount of resistance to the free distribution of the data they had previously controlled. My point being that the bean counters like having control over things. Bean counters also have a lot of influence over the selection of products to be manufactured and sold. MAYBE THE BEAN COUNTERS WANT RPN FOR THEMSELVES!

Re: Discontinuing HP-12C Financial ?
*Message #21 Posted by **John K. (US)** on 13 Mar 2003, 2:05 a.m.,*
in response to message #20 by Ellis Easley

I paid $25 clearance price for an unopened unit at WalMart!

Honestly, it never really occurred to me to check for **HP** calculators at WalMart. I usually associate that name with cheap junk and kitsch-- Oh, wait a second... :^)

Actually, this new Chinese 12C seems to be pretty well made. In fact, other than the printed keys, it feels a lot like my US-made (vintage 1984) HP 16C. Of course, we'll have to wait for a while to find out how well it's held up after nearly 20 years of use.

Re: Discontinuing HP-12C Financial ?
*Message #22 Posted by **Ellis Easley** on 14 Mar 2003, 4:29 p.m.,*
in response to message #21 by John K. (US)

I never saw HP calculators in normal stock at WalMart but I found the two 12C's and a 10B on clearance tables! I hadn't actually looked at their normal calculator display before then.

Re: Discontinuing HP-12C Financial ?
*Message #23 Posted by **John K. (US)** on 16 Mar 2003, 7:06 a.m.,*
in response to message #22 by Ellis Easley

I did a little poking around to day at the local WalMart, but they don't seem to carry HP calcs in their retail stores. They do sell the 9S, 9G, and 12C through their web site at about US$5 less than full retail. It looks like they normally sell the 30S as well, but they seem to be out of stock at the moment. I guess Fortuna was smiling upon you that day. :^)

I also noticed a rather interesting eBay auction as well. I'm not sure I'd pay US$1550 for them though...

Re: Discontinuing HP-12C Financial ?
*Message #24 Posted by **John K. (US)** on 13 Mar 2003, 1:32 a.m.,*
in response to message #19 by John K. (US)

Okay, here are the pictures of the back of my *Fabrique en Chine* (ain't French cool?) HP 12C. Hopefully, this all works as advertised...

First up, the back of the unit.

(picture unavailable)

Next, a close-ups of a couple of corners.

(picture unavailable)

(picture unavailable)

Next, a close-up of the right side of the battery compartment.

(picture unavailable)

Sorry if they're too big. :^(

HP Forum Archive 11

[Return to Index | Top of Index]

Re: Yet another 41CX Display Problem...
*Message #1 Posted by **David Smith** on 1 Mar 2003, 4:38 p.m.*

You are probably right... halfnuts are more reliable than fullnuts, but they are much less repairable. One thing you might try is to turn off the system timeout timer, light up all the segments that you can (if you have a PPC ROM, run "DT"), and leave the machine on for a few days. I have seen some LCD modules that seem to get lazy when they have not been used for a long time. But this usually affects the whole display or random parts of it. If the problem affects a well defined part of the display (like a top/bottom or left/right half) it is most likely another problem.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Re: eBay Leaves A Lot to be Desired
*Message #1 Posted by **Pocketcom Mania** on 1 Mar 2003, 2:00 p.m.*

You may raise a complaint to eBay. However, they might ask you to file such complaint regarding non-delivery, misrepresentation or other problems with the item to the card issuer. I can tell you that this is true. In fact, you've to talk to your card issuer first rather than eBay any problem with the item. At least, you need not pay for that disputed item until a resolution is made. This is my experience.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Drive belt for HP-41C printer 82162A
*Message #1 Posted by **Dave Mabry** on 1 Mar 2003, 9:34 a.m.*

I'm working on an 82162A printer (HP-IL for HP-41C) but this probably is the same internally as the 82143. There is a very thin round belt, looks like an o-ring, that runs from the motor to the platen drive worm gear. It is about .75" diameter and about .04" in width. This is a tough one to find. Diameter is not a problem, but the width is about half what most places seem to carry.

My question is this. Does anyone know how I could go about obtaining some? I need one for a printer I'm working on now because the existing one has dry rotted and will break soon, but I would expect that my other two printers will need this part soon.

I've looked several places that carry o-rings, but this width is just too thin. .07" seems to be the standard.

Thanks.

Re: Drive belt for HP-41C printer 82162A
*Message #2 Posted by **David Smith** on 1 Mar 2003, 4:21 p.m.,*
in response to message #1 by Dave Mabry

Projector-Recorder Belt Company (www.russellind.com) part number SCX-2.4 works well for me. The belt material is square, but it works fine.

Re: Drive belt for HP-41C printer 82162A
*Message #3 Posted by **Dave Mabry** on 4 Mar 2003, 8:12 p.m.,*
in response to message #2 by David Smith

Dave, You don't happen to have one or two that you'd sell would you? They don't list that belt on their web site for online ordering and they haven't replied to an e-mail. I can call them, certainly, but I thought if you happen to have bought a quantity and would sell one or two...

Either way, thanks.

Re: Drive belt for HP-41C printer 82162A
*Message #4 Posted by **Davis Smith** on 5 Mar 2003, 4:01 p.m.,*
in response to message #3 by Dave Mabry

I will check and see if I have any left, but I am pretty sure I used my last one a while back. I went looking for some last month. One of the local stores here in Dallas quit carrying the product line and the other does not have any in stock. Also, I just noticed that Fry's sells some of their belts but did not have that one. You might also check the SCY-2.3 (if I remember correctly). It looked like it would also work.

BTW, the PRB part number for HP-9100A and 9100B card reader rollers is ST-1.014 You can also probably use the ST-1.016 but it is a bit narrower that the ST-1.014. You need to slice a 0.45 inch long slice off the outer diameter for the card insertion clearance. You should also tack it down with a good glue. I use IC-2000 tire cement... a rubberized super glue used by radio controlled car people.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

what is this?
*Message #1 Posted by **Christof** on 1 Mar 2003, 3:36 a.m.*

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3403375066&category=1247

It has RUP and RDN keys, other fun bits (clear display points to a certian era, as does the range of speed setting on the modem control), but I'm not recognizing anything else about it.

Re: what is this?
*Message #2 Posted by **Emmanuel, Normandy** on 1 Mar 2003, 6:02 a.m.,*
in response to message #1 by Christof

```
Hi Christof,
May be a keyboard from a station?!
Really curious indeed.
Yours.
```

Re: what is this?
*Message #3 Posted by **Gordon Dyer** on 1 Mar 2003, 6:55 a.m.,*
in response to message #1 by Christof

A 1977 date code?
The key style is identical to the HP9836 computer I used to use, but that didnt have the modem controls and I think the 9836 was released in about 1982?
If anyone has an old HP catalog they could look for this keyboard.

Re: what is this?
*Message #4 Posted by **Gordon Dyer** on 1 Mar 2003, 6:57 a.m.,*
in response to message #3 by Gordon Dyer

On second thoughts it must be 1987 to have a 9600 baud modem....

Re: what is this?
*Message #5 Posted by **Wayne Brown** on 1 Mar 2003, 7:52 a.m.,*
in response to message #4 by Gordon Dyer

It's from an HP 2645 terminal, which was used with HP 3000 series minicomputers. This was an intelligent terminal (it had an 8080 microprocessor built in) and could run programs; some models had a built-in cartidge tape drive (hence the tape controls on the keyboard). HP used to distribute tapes with games, like Pong, that could be loaded and run on these terminals. A company called AICS Research used these terminals to build a word processing system that they called "The System 2000 Word Processing Terminal." You can go to http://www.aics-research.com/emulate.html to see a picture of one of these.

The date code should be 1977; the baud rate settings are not for a modem, but for a direct connection to an HP 3000 computer. The "Roll Up" and "Roll Down" keys are for scrolling the screen display up and down.

Re: what is this?
*Message #6 Posted by **Vieira, Luiz C. (Brazil)** on 1 Mar 2003, 7:57 a.m.,*
in response to message #1 by Christof

Hi;

I have a 1978 Measurement/Computation Catalogue and in page 588 we can find information about the 264x Interactive Display Terminal Family. The keyboard is detacheable, customizeable and it has many types: 2640C (Cyrilic), N (Danish/Norwegean) ,S and 2645A/S/R (Arabic). The one in the photo seems to be the basic but it is, indeed, this family's kbd.

Cheers.

Wayne beated me...

*Message #7 Posted by **Vieira, Luiz C. (Brazil)** on 1 Mar 2003, 7:58 a.m.,*
in response to message #6 by Vieira, Luiz C. (Brazil)

...while I was researching.

Cheers.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

CALCULATOR WATCH !

*Message #1 Posted by **Norm Hill** on 1 Mar 2003, 2:46 a.m.*

Hi Guys,

Now, don't slam me for getting commercial, but I found a calculator watch I really believe in. I'm the same guy who promotes HP-34C a couple of threads down, so that's why I'm really here. I don't know the seller at all, but I know all about this Casio calculator watch and I love it...

Click on this link: http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=15712&item=2815724004&rd=1

You will see a really nice picture for an eBay sale, for a Casio Calculator watch. Again, an older design has really nice fit & finish compared to the latest hunk o' junks from Casio (with built in 500 number phone directory or whatever). You just want a basic 4-function on your wrist? There it is. Would I like RPN? Sure but you can't find anything like that. I like the basic functionality, the size of it, the size of the keys, the styling. ALL GOOD !

There is even a black plastic of same design, for as little as $19 in local stores. But the nice Casio is Chrome, and that's darn hard to find lately, but there it is. I was pleased to see the guy in Hong Kong selling those and for a fact, he's got more, because I asked him.

I put one on my wrist about 3 years ago, to the laughter of all my friends. I stayed the course and find I use it DAILY. It is very nice to have a basic 4-function calc with you at all times.

This thing would've sold for $2000 back in 1979 (our nostalgia focus period) but now people laugh at you if you get one for $20 or $30. How societal values keep changing. Highly recommended for your basic wristwatch and calculator needs every day.

I'm passing it along because I believe in it not because I'm trying to make a buck.

HP Forum Archive 11

[Return to Index | Top of Index]

Re: eBay Leaves A Lot to be Desired
*Message #1 Posted by **db(martinez,california)** on 1 Mar 2003, 12:02 a.m.*

ok; so what i mentioned is the SECOND biggest problem about ebay.

the following is from a current ebay auction: "This HP 33c, serial No. 2138s30827 is in awesome shape except 2 big flaws. One the battery - power comection area has corrosion as pictured, and two it will not power up. OH there is a hair line crack next to the power hook-up I think visable in the close up." i am glad that he has the presence of mind to auction off this irreplaceable bunch of parts but this dork's and my definition of "awesome shape" do differ somewhat. at least he is honest.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Re: 7 card star trek for 67/97
*Message #1 Posted by **Masao Kinoshita** on 28 Feb 2003, 11:51 p.m.*

The "Star Trek, Advanced" program by Larry G. Schneider in the HP 67/97 Users' Library is #00369D. This program was listed as the most popular HP 67/97 program twice in _Key_Notes_ (V2#3(Aug 1978) page 6 and V6#2(May 1982) page 4). IIRC, this was the 7 mag card one. I used to play it and remember thinking #00369D was that one when I read the popularity listings in _Key_Notes_. (After a loooong while, I finally got access to Clemson University's (USA) IBM 3081K mainframe, which had Star Trek on it. It's not a secret since there's a picture in one of the Taps (the school yearbook) of a terminal with Star Trek right on the display. This was during the 1980's. Actually, I wouldn't even have had to get a 41CV, if I had known I would get access to the mainframe right after getting the 41. I ended up using the mainframe's plotters and never bought the HP-IL module nor the HPGL plotter with an HP-IL board. I was using my HP 67 for mathematical modeling; but without a plotter, I was hand graphing the prediction plots. ...)

As for the HP 67/97 Users' Library, the last I heard of it was that HP had given it to PPC.

And this is one I have a listing for!
*Message #2 Posted by **Gene** on 1 Mar 2003, 9:13 a.m.,*
in response to message #1 by Masao Kinoshita

We hope to get many/all of these programs converted into PDF form so others can use/enjoy them.

Re: And this is one I have a listing for!
*Message #3 Posted by **Malcolm** on 2 Mar 2003, 4:41 p.m.,*
in response to message #2 by Gene

To Gene,

YOU HAVE IT.

PLEASE PLEASE

can I have a copy

Thanks Malcolm

Re: And this is one I have a listing for!
*Message #4 Posted by **gene** on 2 Mar 2003, 4:59 p.m.,*
in response to message #3 by Malcolm

Here's my email:

genewright143@hotmail.com

I'll find the cards and make copies. Drop me your mailing address in an email. I HOPE that we'll be getting these programs I have posted to the site scanned into PDF. People could always key them in and record them at home or we could find a way to make card copies.

By the way, I had previously posted notes about HP67 words/phrase cards that were available. If there is interest in these, search the archives.

I found another word/phrase card the other day. Was "R" rated, and I laughed out loud. Someone had way too much time on their hands coming up with an R rated word card for the HP-67. :-)

Gene

HP Forum Archive 11

[Return to Index | Top of Index]

Re: Decapitated "eight"
*Message #1 Posted by **db(martinez,california)** on 28 Feb 2003, 10:13 p.m.*

l - you are right; there is an interupted trace. is there such a thing as conductive paint? if not i will use a low temp solder. this won't solve the other problems but it is a start. thanks - d

Re: Decapitated "eight"
*Message #2 Posted by **Vieira, Luiz C. (Brazil)** on 28 Feb 2003, 11:11 p.m.,*
in response to message #1 by db(martinez,california)

Hi, D.B.;

I'm glad you found the problem. About the conductive ink: yes, and the electronic components' suppliers usually have them. You'll find silver- and golden-foil conductive ink. I preffer the silver ones, but golden foil is told to be better. As I always tried them in small, low-current repair, I can only say the golden-foil (the one I have) does the job.

Just be carefull when "painting" the faulty trail; do not allow the ink to spread around, because you'll create new conductive path, and this is not what you want, right?

There is also the self-adherent cooper foil, mentioned a couple of times in here. It has a conductive ink and may be the best solution instead of the conductive ink. I was given a fairly piece for using in my calculators, and if I am no wrong, at www.chomerics.com you can contact them and ask for a sample, say, for teaching purposes.

Success, my friend. And best regards.

Luiz C. Vieira - Brazil

rub-a-dub-dub, hp in a tub
*Message #3 Posted by **db(martinez,california)** on 1 Mar 2003, 12:14 a.m.,*
in response to message #2 by Vieira, Luiz C. (Brazil)

luiz; i'll try radio shack and if they don't have it there is a zac-kit near two of my favorite junk stores. if that fails i'll try begging or buying some of that copper foil. i have high hopes for this first fix but not much for the other two. i'll also try soaking it again in vinigar and blowing out the underside of thoes chips with compressed air. thanks again. - d

Copper Foil (was: rub-a-dub-dub, hp in a tub... whatever it means. A song?)
*Message #4 Posted by **Vieira, Luiz C. (Brazil)** on 1 Mar 2003, 12:49 a.m.,*
in response to message #3 by db(martinez,california)

Hi, D.B.;

I hope you find anything close to you. Anyway, if you're not so fortunate and do not find anything, send me an e-mail (as you have my e-mail address) with your actual address and I'll send you a cut of the copper foil I have. Mine is a 25mm X 95 mm (about 1' X 3¾); it's enough for repairs and for rebuilding some HP41 battery contacts. I'll share a cut if you need so.

Best regards and good luck.

Luiz C. Vieira

Re: Copper Foil (was: rub-a-dub-dub, hp in a tub... whatever it means. A song?)
*Message #5 Posted by **Renato** on 1 Mar 2003, 7:41 a.m.,*
in response to message #4 by Vieira, Luiz C. (Brazil)

I was also given some chomerics copper adhesive laminate, by a nice person at this forum - Thank you, A.D. - it was more than I needed, so I sent some to other nice people.

I also sent a sample request to chomerics, by using a form in their web site. They shipped express international, a roll of many meters. Unfortunately I asked for a double sided adhesive - If you ask for a sample, don´t do the same mistake.

The address is www.chomerics.com, and the laminate is used for RF shielding. For keyboard repair purposes, I guess you´d better ask for the minimum cross-section copper laminate.

Re: Decapitated "eight"
*Message #6 Posted by **David Smith** on 1 Mar 2003, 4:34 p.m.,*
in response to message #1 by db(martinez,california)

I do not like the adhesive coppers or conductive paints for making etch repairs. They tend to be very unreliable over time. I would recommend using solder.

Just a hunch.
*Message #7 Posted by **Vieira, Luiz C. (Brazil)** on 1 Mar 2003, 5:28 p.m.,*
in response to message #6 by David Smith

Hi, David;

I read your post and I want to know your opinion about something.

Self-adherent copper foil tend to be unreliable in time, I can "see the picture". Can it be soldered in place? I thought about soldering the edges and make it a permanent fix. I kniow a piece of wire would do it, but it's hard to keep small pieces of wire while soldering them.

I was wondering about it: a small piece of self-adherent copper foil and a brief soldering on its edges. Would the adhesive cause problems? Or help? Say, if it melts and spreads around, that would be a problem.

Have you tried something like this?

Just a hunch. Any comments?

Luiz C. Vieira - Brazil

Re: Just a hunch.
*Message #8 Posted by **David Smith** on 2 Mar 2003, 3:32 p.m.,*
in response to message #7 by Vieira, Luiz C. (Brazil)

I would think soldering the self adhesive foil would be OK. I tend to put a blob of solder on each end of the gap in a bad trace. If it is a small gap, you can drag a solder bridge between them. For bigger gaps, I then take a piece of stripped wire wrap wire, tin the end with solder, and tack it to one end of the gap. Then run it to the other end of the gap, trim it to length, hold it down with a screw driver tip, and then mash it down into the solder blob with a soldering iron.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Reproduction of HPmuseum information (for "Anonymous")
*Message #1 Posted by **Dave Hicks** on 28 Feb 2003, 9:37 p.m.*

About 10 days ago, "Anonymous" posted a link to a dealer using HP Museum web pages within their site. It took some time to get a response but it arrived today:

"Dear Dave,

We were testing our new content management system. We have remove all non related contents from our site. All associated images were also purged from the site.

Sorry about that."

A belated thank you to Anonymous.

Dave

Re: Reproduction of HPmuseum information (for "Anonymous")
*Message #2 Posted by **Anonymous** on 28 Feb 2003, 10:11 p.m.,*
in response to message #1 by Dave Hicks

Dave,

You are welcome. Thank you for your good work.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Favorite calculator game(s)?
*Message #1 Posted by **Gene** on 28 Feb 2003, 8:21 p.m.*

Depends on the machine, of course, but some of mine are shown below and they are all on my web page. What are some of your favorite games?

Pinball Wizard - HP67 and HP41 Yahtzee - HP41 (partial to it because I wrote it) :-) Skunk - HP41 (again, I wrote it) High Rollers - HP41 Dungeon of Doom - HP41 Wickes' synthetic Hangman - HP41 Synthetic display Star Trek - HP41

which is your favorite? Mine is probably still the Pinball Wizard games.

Re: Favorite calculator game(s)?
*Message #2 Posted by **Tony Duell (UK)** on 1 Mar 2003, 6:20 p.m.,*
in response to message #1 by Gene

HP41 Mini-Chess, definitely. it's one of the best HP41 programs I've seen. To fit that into a 41C + 3 memory modules is amazing!

Re: Favorite calculator game(s)?
*Message #3 Posted by **Raymond Del Tondo (Germany)** on 2 Mar 2003, 7:09 a.m.,*
in response to message #2 by Tony Duell (UK)

You mean the version on copy protected mag cards, with precompiled GTO's ?

Raymond

Re: Favorite calculator game(s)?
*Message #4 Posted by **Tony Duell (UK)** on 2 Mar 2003, 7:01 p.m.,*
in response to message #3 by Raymond Del Tondo (Germany)

No, the version that's in the HP41 Games 2 Solution Book. It's all standard user code, and I scanned in the barcodes which were not 'private'. You can get it from this site AFAIK.

Re: Favorite calculator game(s)?
*Message #5 Posted by **Raymond Del Tondo (Germany)** on 3 Mar 2003, 8:38 p.m.,*
in response to message #4 by Tony Duell (UK)

Hmm,

that's a different program.

The one I was thinking of was a real 8x8 chess program with 4 skill levels. I bought the mag cards set for about DM 50 back then, and it really worked. The only flaw I found in that program: You could move from bottom or top row, even when there were knights in the next row...

Regards,

Raymond

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Re: 71b CMT EPROMS
*Message #1 Posted by **Gordon Dyer** on 28 Feb 2003, 6:33 p.m.*

I have a 32K EPROM and would like to know the pinout and signals...

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Re: eBay Leaves A Lot to be Desired
*Message #1 Posted by **David Smith** on 28 Feb 2003, 5:59 p.m.*

One should always remember that these can be 30+ year old consumer items that were originally intended to only last for a few years before being replaced. Unless you are buying from somebody that you know to be knowlegeable about old calculators then dents, scratches, etc are to be expected. Most people who come across an old machine at a garage sale and then turn it around on Ebay do not know what they have, what it should look like, or how to operate it. And they would never think to mention something like a name written in the books (if it has them). Always expect the worst, and you might be pleased with what comes your way... bid accordingly.

Re: eBay Leaves A Lot to be Desired
*Message #2 Posted by **George Rose** on 28 Feb 2003, 8:39 p.m.,*
in response to message #1 by David Smith

If you feel that you were taken advantage of or the item was misrepresented, I think Ebay offers rebates up to $200. Go to the bottom of the "my ebay" page and go through the help links.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Re: 7 card star trek for 67/97
*Message #1 Posted by **Malcolm Brooks** on 28 Feb 2003, 5:50 p.m.*

To Gene,

Ordered them 5 mins ago.

I have the museum cd's of course.

Thanks Malcolm

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Degradation of old Fluorescent Displays?

*Message #1 Posted by **Paul Brogger** on 28 Feb 2003, 3:50 p.m.*

I just found a "UniCom 1216" calculator for $1.50 . It's a bit larger than an HP-97, no printer, and basic four-banger business adding machine functionality. (Everything seems to work fine.)

The display is an orange fluorescent (I think) 12-digit unit. I notice that the higher-order digits all look nice and crisp, with each segment clearly dilineated with razor-sharp borders.

As I look toward the digits to the right, they get progressively less well-formed. Most the lower five digits' segments each have a "blob" of orange hanging off of one side or end -- it's as if something has "bled" out of its original confinement.

The problem seems to be worse on the most-used segments (keyed digits enter from the right). Also, some of the segments on the rightmost two digits are dimmed.

Is this a common problem with fluorescent displays, and is it, in fact, related to frequency and/or total duration of use?

I don't expect anything can be done about it -- I'm just curious.

Re: Degradation of old Fluorescent Displays?

*Message #2 Posted by **Alex Knight** on 28 Feb 2003, 4:42 p.m.,*
in response to message #1 by Paul Brogger

The display you describe is likely a Burroughs PanaPlex-II, which is a neon display. The problem you describe is fairly common on older PanaPlex displays that have seen a lot of usage. I'm not sure the exact cause, but I've seen a lot of them and believe it is just due to time of use. The best example is one of the Garrett combo calculator/clock displays I've seen, where the clock digits stayed on all the time and are worn out, but the other digits are still fine. There is no fix I'm aware of other than to replace with a newer PanaPlex display. Alex Knight www.calcmuseum.com

Re: Degradation of old Fluorescent Displays?
*Message #3 Posted by **db(martinez,california)** on 28 Feb 2003, 10:01 p.m.,*
in response to message #1 by Paul Brogger

i had an orange screened ti calc that was also a clock and the digits that displayed the time had bled into the surrounding area while the others remained crisp.

Re: Degradation of old Fluorescent Displays?
*Message #4 Posted by **Joerg Woerner** on 1 Mar 2003, 10:28 a.m.,*
in response to message #3 by db(martinez,california)

Dennis,

You are right - you had...

In the meantime this TI-3510 arrived and I took some pictures of the display. It really faded away.

View it yourself here: http://www.datamath.org/Desktop/ti-3510.htm

Click on the small thumbnails and you get a huge picture of the Panaplex II didgits.

Enjoy, Joerg

Re: Degradation of old Fluorescent Displays?
*Message #5 Posted by **db(martinez,california)** on 1 Mar 2003, 10:48 p.m.,*
in response to message #4 by Joerg Woerner

J - it's better off at your house than mine; i never used it. the enter key was missing. - d

Re: Degradation of old Fluorescent Displays?
*Message #6 Posted by **Dave Shaffer** on 1 Mar 2003, 5:23 p.m.,*
in response to message #1 by Paul Brogger

I wonder if the voltage that the display is fed is critical? Or whether it's AC or DC?

I have a Heathkit digital clock which I built in the mid-60's (!) and the display looks very similar to those in the reference given by Joerg Woerner. However, my display is still nearly perfect after almost 40 years of continuous use.

At the moment, the clock is at another location, so I can't go look at it to figure out exactly what the display is made from. I think it is miniature neon tubes of some sort (but definitely not nixies). Is that different from what's being discussed here? (Neon lights are not "fluorescent.") What voltage did these calculators/clocks run from? 110 VAC wall power or low voltage batteries? Joerg's unit labels it 120 volts - like the Heathkit.

Re: Deterioration of old Fluorescent/Neon Displays?
*Message #7 Posted by **Paul Brogger** on 3 Mar 2003, 9:36 a.m.,*
in response to message #1 by Paul Brogger

This site suggests they're called "Vacuum Fluorescent Displays" (VFD) and are still used, generally in AC- (line) powered devices. The module in the UniCom 1216 appears to be what the site's author calls a "third-generation VFD" -- with a digit assembly sandwiched between two pieces of glass.

Certainly the orange glow looks like that in the little "neon" lamps that are often used for indicating "power on" in coffee makers and ranges.

. . . and, other than being orange rather than red, the deterioration in the most-used digits looks exactly as that pictured at Joerg Woerner's link (above).

Thanks for the responses . . .

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Re: Nice DVD, Dave!
*Message #1 Posted by **Dave Hicks** on 28 Feb 2003, 3:14 p.m.*

Thank you Dave!

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Re: 41->71 Translator and the FTH41ROM LEX file
*Message #1 Posted by **Kim Holm** on 28 Feb 2003, 3:09 p.m.*

I have been browsing the FTP site and did not find the file you mention. Do you remember where it was?

Kim

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

hp71 Card Reader Pinout (and CMT multi case connections)
*Message #1 Posted by **andy** on 28 Feb 2003, 2:42 p.m.*

I am looking for the hp71 card reader pinout. I know the following:

Pin 1: GND Pin 8: transmit data Pin 9: receive data

I have one of the CMT ruggedized cases and it has several connectors which clearly plug into the card reader pins. I'm trying to figure out which wires go to which pins.

Thanks,

Andy

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Re: HP-67 (soft) display trouble
*Message #1 Posted by **Daniel Conde** on 28 Feb 2003, 2:23 p.m.*

Eeehhhh ... no. The battery pack is new, and the trouble persists with full charge batteries and with the line-charger connected also. Graphically, the " light shadow" happens like following segment-decimal_point digit display: "_.". Anyway, thanks.

Re: HP-67 (soft) display trouble
*Message #2 Posted by **Spice_Man** on 28 Feb 2003, 9:45 p.m.,*
in response to message #1 by Daniel Conde

Have you tried jiggling the on-off switch? Or sliding it on and off multiple times? Does this make any difference in the brightness of the "dots?"

Spicey

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Clean HP41C display
*Message #1 Posted by **Lgomez** on 28 Feb 2003, 1:02 p.m.*

I have a HP41C. Trere's a lot of dust into display. I've tried open the calculator and remove the board to access to the display. I can remove the first board, but i don't know how can i remove the board with keys and display. I need help. Do i need cut plastic sticks? Thanks

Re: Clean HP41C display
*Message #2 Posted by **Vieira. Luiz C. (Brazil)** on 28 Feb 2003, 2:32 p.m.,*
in response to message #1 by Lgomez

Hi;

there is an easy way to clean the space between the LCD assy and the plastic shield (window) in front if it. In the upper side of the LCD assy there is a plastic "holder" that is intended to line the LCD and avoid dust. This holder is a single plastic piece (black) and is easily removable.

Putting it appart you can gently lift the LCD enough to allow cleanning procedures.

I suggest readind this and this previous threads. There are lots of suggestions and you'll find the best solution for your particular situation.

Success and best regards.

Luiz C. Vieira - Brazil

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Re: RAM cards for the 48gx
*Message #1 Posted by **Steve** on 28 Feb 2003, 12:07 p.m.*

I've had good luck with Oliver (Klotz). On the other hand, I had 2 out of 3 cards DOA from Cynox. They replaced the cards, but it took a month for the round trip.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

In all fairness..
*Message #1 Posted by **Steve** on 28 Feb 2003, 12:02 p.m.*

What a collector considers as a flaw is very different from what a dealer considers as a flaw. Make sure you know which type of seller you are dealing with. Ask for hi-res photos. Ask for the history of the unit. Even then, you can still get burned, that's the chance you take.

Re: In all fairness..
*Message #2 Posted by **Spice_Man** on 28 Feb 2003, 1:50 p.m.,*
in response to message #1 by Steve

Yes I agree, and we have both types of sellers here in the classifieds section of MoHPC. Its "buyer beware" no matter what forum you utilize to initiate your purchases and trades.

Spicey

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Re: 71b Finally
*Message #1 Posted by **Steve** on 28 Feb 2003, 11:47 a.m.*

I'm sure this is the last time you'll pull a stunt like this, right Joe???

Re: 71b Finally
*Message #2 Posted by **Joe Edwards** on 28 Feb 2003, 1:02 p.m.,*
in response to message #1 by Steve

Yes sir, you are correct.

Joe

Re: 71b Finally
*Message #3 Posted by **Sean** on 1 Mar 2003, 12:22 a.m.,*
in response to message #2 by Joe Edwards

Here's one on ebay for $36 !!! (jeesh, I paid a LOT more for mine!) http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3010113107&category=11713

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Re: Extending the Command Stack
*Message #1 Posted by **Kim Holm** on 28 Feb 2003, 11:22 a.m.*

I low this place, so many enthusiasts with so much preparednes to help. Thank you!

Kim

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Re: 71b i/o through card reader pins
*Message #1 Posted by **andy** on 28 Feb 2003, 10:19 a.m.*

I remember reading once about someone who used a few of the pins in the card reader port to transfer files with a PC through the serial port. This seems like an excellent way to get 71b's interfaced for the masses (since hpil/isa cards and 9114's are so rare).

When you eventually obtain a 71b, we can look into this more if you're interested.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

The JPC ROM for the hp71b

*Message #1 Posted by **Andy** on 28 Feb 2003, 9:58 a.m.*

Over the last couple of weeks, Gene Wright, Vassilis Prevelakis and I have been working on archiving a previously unreleased, extensively debugged version X of the famous JPC ROM for the 71b. Gene owns this rev X version and its manual that he received from Joe Horn some years ago! He mailed me a copy of the ROM on cassette tape and a copy of the manual. Then I used LINK+ to create a LIF image of the ROM and a scanner to create a pdf of the 230 page manual and quick reference guide.

If you would like to download the LIF image of the JPC ROM, manual, and quick reference, please go to http://home.attbi.com/~andy.delano/jpc71b.htm.

You'll need at least 26K of spare memory on your 71b. If you need help getting the files to your 71b, please let me know. I am willing to copy the ROM to a cassette mailed to me. I would even be willing to copy it to cards, but it will require at least 14 cards! If others who want the ROM would be willing to help make copies in the future, that will increase its availability.

If you are wondering what the JPC ROM is, take a look below at an excerpt from the manual (or download the quick reference guide).

Enjoy!

Andy

Exerpt from the JPC manual:

"JPC Rom combines over 100 keywords into a single 25K Lex file. This brings together some of the most useful hp-71 enhancements and improves the overall performance of the machine. The source material was contributed by members of the international community, ost of whom are members of PPC Paris.

All contributions have been made in the same spirit of benevolent, cooperative, mutual assistance."

Re: The JPC ROM for the hp71b
*Message #2 Posted by **Alain (Canada)** on 28 Feb 2003, 10:43 a.m.,*
in response to message #1 by Andy

Nice ! I really like the documentation that comes with it !

Thanks !

Alain

Re: The JPC ROM for the hp71b
*Message #3 Posted by **andy** on 28 Feb 2003, 3:01 p.m.,*
in response to message #2 by Alain (Canada)

If you have trouble accessing the website, here are the links for downloading the three files:

http://home.attbi.com/~andy.delano/jpcrom_lif.ZIP

http://home.attbi.com/~andy.delano/jpc_quickref.pdf

http://home.attbi.com/~andy.delano/jpc_manual.pdf

Re: The JPC ROM for the hp71b
*Message #4 Posted by **Christof** on 1 Mar 2003, 1:32 a.m.,*
in response to message #3 by andy

awesome! now I need to find a 64k module ;)

thanks a lot!

Re: The JPC ROM for the hp71b
*Message #5 Posted by **Gordon Dyer** on 28 Feb 2003, 6:25 p.m.,*
in response to message #1 by Andy

Thanks, thats a great contribution to 71B owners.

Re: The JPC ROM for the hp71b
*Message #6 Posted by **Daniel Diggelmann** on 1 Mar 2003, 3:08 a.m.,*
in response to message #1 by Andy

Hi Andy,

Many thanks to your contribution. The HP-71B is worth more discussions on this forum. Now I definitely need to try LINK+ on my OmniBook 800CT with the HPIL card installed :)

Re: The JPC ROM for the hp71b
*Message #7 Posted by **J-F Garnier** on 2 Mar 2003, 3:10 p.m.,*
in response to message #1 by Andy

For Emu71 users, I just put a ROM image of the 'Ex' version on my Emu71 page at: http://membres.lycos.fr/jeffcalc/emu71.html

Thanks to Andy for providing this version.

J-F

Re: The JPC ROM for the hp71b
*Message #8 Posted by **HrastProgrammer** on 4 Mar 2003, 7:00 a.m.,*
in response to message #7 by J-F Garnier

I got error 404 when I tried to download it :-(

Re: The JPC ROM for the hp71b
*Message #9 Posted by **andy** on 4 Mar 2003, 10:05 a.m.,*
in response to message #8 by HrastProgrammer

Try again...I've updated the website.

http://home.attbi.com/~andy.delano/jpc71b.htm

If you still have trouble, email me directly

Think he was referring to JF's link, not yours Andy
*Message #10 Posted by **Gene** on 4 Mar 2003, 10:55 a.m.,*
in response to message #9 by andy

?

Hope everyone can enjoy the rom!

Gene

Re: Think he was referring to JF's link, not yours Andy
*Message #11 Posted by **HrastProgrammer** on 4 Mar 2003, 2:12 p.m.,*
in response to message #10 by Gene

> Think he was referring to JF's link, not yours Andy.

Right ...

Re: The JPC ROM for the hp71b
*Message #12 Posted by **J-F Garnier** on 5 Mar 2003, 7:02 a.m.,*
in response to message #8 by HrastProgrammer

I will fix it, sorry.

J-F

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Compile LEX with HPTOOLS

*Message #1 Posted by **Alain (Canada)** on 28 Feb 2003, 9:22 a.m.*

In an earlier thread in this forum, someone mentioned the existence of a possibly very interesting LEX called “RPNLEX”. So I searched my hard disk an found only the source file: “No problem, I have HPTOOLS, I will just compile it – piece of cake!” I told myself. Well, after a little bit of experimentation, I found three possible problems :

1) HPTOOLS doesn’t recognise the “LEX “ opcode, although in the source file, there is a constant called “LEX”. ; 2) If I get to the point of being able to compile the source, I get a object code. Is there an additional step to make it look like a LEX or is the object code a LEX file ? 3) Once I have the LEX on my hard disk, how do I send it to my HP9114 floppy drive not knowing the correct FILE IMPLEMENTATION. Is there . Is there program that calculate the file implementation ?

I’m sure this is all newbie stuff… oh well…

BTW I found a compiled verion of RPNLEX but I still want to know.

Alain

Re: Compile LEX with HPTOOLS

*Message #2 Posted by **EX-PPC member** on 28 Feb 2003, 9:39 a.m.,*
in response to message #1 by Alain (Canada)

Alain wrote:

"1) HPTOOLS doesn’t recognise the “LEX “ opcode, although in the source file, there is a constant called “LEX”."

I think I can shed some line on this point. "LEX" isn't a valid CPU opcode, it's a pseudo-opcode only recognized by the Assembler program in the FORTH/Assembler ROM. The Assembler recognizes this pseudo-opcode and emits the actual opcodes needed to create a LEX file. Other

pseudo-opcodes which would be equally problematic are "FORTH" (to create primitive FORTH words in assembly) and "BIN" (to create binary BASIC subprograms). Those pseudo-opcodes are included as a very convenient feature to save the user from having to insert the real opcodes by hand.

You would need to consult documentation in order to see what the Assembler program does with the "LEX" pseudo-opcode, i.e.: how does it process it and what opcode stream does it emit to the object code file. I guess it probably creates a properly filled header for the resulting LEX file, as well as a number of data structures/tables needed to interface the native operating system to the LEX file (keywords, polls, error messages, etc), and pointers to them.

Re: Compile LEX with HPTOOLS
*Message #3 Posted by **Raymond Del Tondo (Germany)** on 28 Feb 2003, 10:03 a.m.,*
in response to message #2 by EX-PPC member

Another thing to notice:

If you use the HPTools for creating HP-71 binary files, be sure to use level 0 instructions only.

For more info: SASM.DOC

Raymond

Re: Compile LEX with HPTOOLS
*Message #4 Posted by **Alain (Canada)** on 28 Feb 2003, 1:26 p.m.,*
in response to message #2 by EX-PPC member

Regarding the support of the 'LEX' pseudo opcode, the Forth/Assembler Rom manual says :

LEX 'name'

Assemble a new LEX file called 'name'. This pseudo-op must be the first line in the source file. The LEX file will have the correct header. The initial data for this file is defined by the ID, MSG, and POLL pseudo-ops, wich must be present in that order.

It seems that the LEX pseudo-op does two actions, 1) gives the generated file the 'name'

name. 2) Generate proper 'header' for that file.

I will have a look a the IDS manual to see if it gives more details.

Alain

Re: Compile LEX with HPTOOLS
*Message #5 Posted by **Alain (Canada)** on 28 Feb 2003, 5:26 p.m.,*
in response to message #4 by Alain (Canada)

After a check in the IDS vol. 1, a possible description of what does the 'LEX' pseudo-ops is to construct the following structure as a file header :

RDSYMB SB%RAM * ?? RDSYMB TI%EQU * Equal sign for before the title ?? NIBASC \'name'\ * Then lex file name CON(4) =lLEX * The lex file type NIBHEX 00 * Flags ?? NIBHEX xxxx * Time (File attribute ??) NIBHEX xxxxxx * Date (File attribute ??) REL(5) EOF (label)* File Length

Anybody can confirm or comment ??

Alain

Re: Compile LEX with HPTOOLS
*Message #6 Posted by **Raymond Del Tondo (Germany)** on 28 Feb 2003, 7:00 p.m.,*
in response to message #5 by Alain (Canada)

I'm not sure, but weren't the file formats of (LEX, BIN, FTH) documented in the Assembler ROM manual? I have one, but it's packed away very deep, so no chance to look yet...

Raymond

Re: Compile LEX with HPTOOLS

*Message #7 Posted by **Alain (Canada)** on 28 Feb 2003, 8:20 p.m.,*

in response to message #6 by Raymond Del Tondo (Germany)

I finally compiled the RPNLEX with AREUH compiler wich support the 'LEX' pseudo-ops. The object file is a lex file. I'm still missing the tool to get the 'File Implementation' information from the object file. Any idea ?

p.s. The LEX file header is described in the IDS volume 1.

Alain

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Re: 71b Finally
*Message #1 Posted by **Joe Edwards** on 28 Feb 2003, 9:03 a.m.*

Very, very true. A life lesson in the works. :) Perhaps things will work out. Thank you for the advice.

Joe

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

In praise of the HP-34C
*Message #1 Posted by **Ex-PPC member** on 28 Feb 2003, 6:53 a.m.*

Norm Hill posted:

"Hi guys, Well guess I'm the only guy in town who thinks the 34C was the coolest unit."

For what it's worth, I also think the HP-34C is a great machine, and I'm not the only one to think so, several of my HP-fan friends do agree as well.

I was absolutely delighted to get one when it was released, and I liked very much its advanced features, Solve and Integrate, which were so incredibly well described in that legendary HP Journal issue from 1980 (IIRC) by their "father", Mr. Kahan. The fact that Solve could use Integrate and vice versa seemed to me incredibly powerful as well. The Owner's Handbook was also extremely well written, as went far above and beyond the call of duty to help the user make the most from this wonderful machine.

It also had a lot of good 'physical' points. For once, it seemed solid, the keys had a very nice, positive action, and the LED display was marveously clear, and of course, you could do what you couldn't with any of the later models: to use it in complete darkness !! I was very young at the time of its release, and I was enthralled to use it at night, while in bed, without turning the lights on and without disturbing anyone. The LEDs were bright enough to easily see the keyboard legends in full darkness. Try that with a 32S, 41C, 71B, ... !

Another good point is that it had a lot of memory for the time, and combined with the advanced programming capabilities, you could write quite complex programs, which wouldn't fit in a basic 41C, specially if they also made use of Solve/Integrate. Matter of fact, many of those programs wouldn't fit in a 32S/SII as well, because the Solve/Integrate functions in these models take a lot of the already small memory, leaving very, very little for your program/variables, also using more RAM per step (from 1.5 bytes upwards).

So the HP-34C was much admired, and sold very well. I still have a large number of advanced mathematical programs for it, and still remember how much I enjoyed writing them and seeing how

easy it was and how well they fit in such a tiny but powerful calculator.

Finally, the HP-34C had its "synthetics" too !! There were a number of very interesting articles published in the state-of-the-art Australian PPC Technical Notes, dealing with ways to access different parts of the RAM, the Solve/Integrate registers, the decoding of the full intruction set hex table, etc, etc. It was awesome what people could and would do with this small marvel.

Definitely, you're not alone in your praise of it. Long live the HP-34C !

Re: In praise of the HP-34C
*Message #2 Posted by **Steve** on 28 Feb 2003, 12:04 p.m.,*
in response to message #1 by Ex-PPC member

Is it possible to still get the Aussy PPC Notes? Are they on the MoHPC DVD or Jake's DVD? Thanks!

What's a "Jake's DVD?"
*Message #3 Posted by **Spice_Man** on 28 Feb 2003, 1:47 p.m.,*
in response to message #2 by Steve

What is a "Jake's DVD?" What is on it? Much obliged!

Spicey

Jake Schwartz has a set of CDs with great stuff on them!
*Message #4 Posted by **Gene** on 28 Feb 2003, 3:43 p.m.,*
in response to message #3 by Spice_Man

http://www.magpage.com/~jakes/ppccdrom.htm

Well worth having!

Re: In praise of the HP-34C
*Message #5 Posted by **Luis** on 28 Feb 2003, 1:51 p.m.,*
in response to message #1 by Ex-PPC member

I agree 110% with you, as a 34C fan too but, I'm not sure there is chances in accessing the RAM in this machine. Could you tell us more how you can do it or even put some article available in this forum?

Cheers and Thanks!

Luis

Re: In praise of the HP-34C
*Message #6 Posted by **Ex-PPC member** on 1 Mar 2003, 7:52 p.m.,*
in response to message #5 by Luis

Luiz wrote:

"Could you tell us more how you can do it or even put some article available in this forum?"

Unless someone makes available scanned PDFs of the Australian PPC Technical Notes issues, I think the exact articles and details will be unlikely to be seen again. Seems that PPC TN issues are either completely lost or have never been scanned, as far as I know.

Regrettably, it's been long since I read those articles about accessing internal registers in the HP-34C, and I don't remember the specifics, but I feel it had something to do with interrupting the self-test at specific points, probably by turning off the machine while the test was in progress.

That would leave the program pointer at some internal registers, and then you would simply turn it on again, switch to program, and you would find instructions there, corresponding to the information stored in said internal registers. I have the vaguest idea that this could be used to create non-normalized displays, long-time decrementing counters and things like that, but not sure at all, sorry.

Re: In praise of the HP-34C
*Message #7 Posted by **Pyerre** on 28 Feb 2003, 2:54 p.m.,*
in response to message #1 by Ex-PPC member

Right!right!right!

Got one too...mib & perfect working order. A little bit behinh the lovely HP25, this HP34C still one of my favorites.

Pyerre

Re: In praise of the HP-34C
*Message #8 Posted by **Fred Lusk (CA)** on 28 Feb 2003, 9:43 p.m.,*
in response to message #1 by Ex-PPC member

I agree that the 34C is marvelous. I bought one my senior year of college about the first week it came out. The SOLVE function alone was worth the price of admission.

My best "trick" with the 34C was during my civil engineering hydraulics final. One of the problems required a lengthy iteration. Rather than work out the problem like everyone else HAD to, I wrote a program on the fly that included a SOLVE routine. My written solution consisted of writing down the equations, the data, the program listing with simple annotations and instructions, two guesses, and the result. I figured this method would be acceptable because my professor used an HP-45. I finished the two hour final in about an hour; the next fastest was about 1:45. I ended up with the highest score on the test, and (after a slow start) the highest grade in the class.

FEL

HP-34C Thanks Guys !
*Message #9 Posted by **Norm Hill** on 1 Mar 2003, 2:36 a.m.,*
in response to message #8 by Fred Lusk (CA)

Thanks Guys, for sticking up for the HP-34C. A museum picture-link down lower, you won't be disappointed .....

I thought I was gonna be the only one who saw the underlying beauty of the HP-34C.

It bridges the gap between really early units like HP-25C (those had some serious battery charging problems and inferior cosmetic appearances) but the HP-34C comes before the LCD units, which I don't enjoy viewing like the red-super-blaster LED displays. So its an in-

between units with good capabilities but dynamite styling and bright-red led digits.

It has no "soft-keys" nor "menu" keys, each key is what-you-see-is-what-you-get YES!

NO, it's not the most powerful unit. But you can have one automobile design at 90 horsepower that is a real sweetheart of a car, durable, valuable, yet have another at 300 horsepower that costs too much, doesn't look right and doesn't handle right. You have to look at the whole package to see whether something was put together right or not. SO! LOOK AT THE WHOLE PACKAGE AT THIS LINK: http://www.hpmuseum.org/3qs/34c3q.jpg

I DARE YOU, pull up that picture and give it a stare for a minute, and you are halfway to seeing the very face of God :o) That is so nicely prepared, by clever and dedicated people. Just look at the coloring of the keys, imagine those bright red digits, See how nicely it is sculpted and styled. YES it is a real sweetheart and I meant what I said, they should make them NEW just the same, to this day. WHAT WE GOT NOW? (hp-32s) BROWN ??????? LCD ??????? ORANGE 2nd functions on BROWN ????? What is it, designed on Halloween? Is it a pumpkin in a patch ?

The HP-32S (or HP-41C) is more powerful than 34C yes, prettier no. Which is more fun to learn & use for easier problems? I'd take the HP-34C !

Re: HP-34C Thanks Guys !
*Message #10 Posted by **Patrick** on 3 Mar 2003, 10:32 p.m.,*
in response to message #9 by Norm Hill

Hate to spoil a great party, but...

I was always a Woodstock fan. I had a wonderful HP-25 for years and thought its form factor to be next to perfection.

When the HP-30 series came out my first impression was that HP had cut back on quality in order to reduce the price. It just didn't feel as solid or well made sitting in my hand. It will come as no surprise to you that I never did buy a calculator from that series. I went from 25 to 41.

Has history proven me wrong? Has this series held up quality-wise to the same degree as the Woodstock or Voyager series?

Reliability HP-25 vs HP-34C

*Message #11 Posted by **Norm Hill** on 4 Mar 2003, 12:00 a.m.,*

in response to message #10 by Patrick

If you check the page for HP-34C, you will see that there was an early version of the circuit board that used pressure to hold connections together and that the earlier HP-34C was unreliable.

After they fixed that, I don't know exactly how reliable they are. Probably OK. The HP-25 has got a serious problem that the charger module puts out high voltage, and its the battery that's clamping down the voltage and limiting it. If you pull the battery pack with the charger plugged into the calculator the voltage shoots up and you are very close to blowing all the IC's, or maybe you actually will.

Pretty darn amateur, but it was a new era and they figured you wouldn't do that. Don't know if the HP-34C has the same weakness. Better not pull your battery pack with the charger on.

A clever fellow could add a couple of 3.3V zener diodes in series and create some protection against overvoltage (clamp it around 7V).

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Re: Preliminary list of my user library programs available
*Message #1 Posted by **Malcolm** on 28 Feb 2003, 6:16 a.m.*

To Gene,

DDrrrrrrrrrrrraaaaaaaaaaaawwwwwwwwwwwlllllllllllll.

What can I say - memories.

Thanks Malcolm

More programs
*Message #2 Posted by **Gene** on 28 Feb 2003, 7:32 a.m.,*
in response to message #1 by Malcolm

These are the User Library programs in my "Misc" notebook. There are many more that the former owner xeroxed out of PPC Journals and put into tabs in these notebooks. There are tons of TI-59 programs too, not that anyone here cares overmuch. :-)

```
00226D  HP67    Algebraic Notation      turn your HP into a TI
00648D  HP67    Arithmetic Progressions
00761D  HP67    Complete Calendar Julian Date Function
00063D  HP67    Factors and Primes
04338D  HP67    Fast Combinations, Permutations and Factorials
03994D  HP67    Fast Factorial Factor Finder
01602D  HP67    Fast Factor Finder with Automatic Answer Accumulation
03859D  HP67    Graeco-Latin Square     Allows 3-way control of experimental units
03055D  HP67    Is it Prime?    Finds factors
00653D  HP67    25 digit x 25 digit multiplication
00239D  HP67    Random Integers
03837D  HP67    Random Numbers
00440D  HP67    Sequences
03037D  HP67    Unsymmetrical Vertical Curves
Calendar Solutions book HP67
```

Re: More programs
*Message #3 Posted by **Malcolm Brooks** on 28 Feb 2003, 5:47 p.m.,*
in response to message #2 by Gene

STOP IT

You are torturing me.

You cruel man.

Malcolm

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Complain to "the new HP" at this link
*Message #1 Posted by **Norm Hill** on 28 Feb 2003, 4:48 a.m.*

HP's behavior to drop RPN is a total slap in the face to all educated people in this country. Just more Enron thuggery from the boardroom.

Want to tell the right people? click on http://thenew.hp.com/country/us/eng/contact/email_3.html Look for "Contact Carly the CEO" (for HP) and send Carly an e-mail about their bizarre behavior in substituting a "9G" for a favorite classic like _____ (fill in your favorite)

Did you see the HP 9G ?? It's a finest quality Walmart item http://www.walmart.com/catalog/product.gsp?cat=3951&dept=3944&product_id=2129288&path=0%3A3944%3A3951%3A4488

But they should have used more of the 'melted plastic' look than they did, like they could have put the display on crooked, and it should have popup advertisements for Coca-Cola and Yahoo .... After all, gotta replace the RPN with SOMETHING .....

Used 9G on Ebay already
*Message #2 Posted by **Ty Rogers** on 28 Feb 2003, 4:08 p.m.,*
in response to message #1 by Norm Hill

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3010004152&category=20335

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Re: HP21 bacteries
*Message #1 Posted by **Gray Wilson** on 28 Feb 2003, 4:42 a.m.*

Thanks David, I never knew that. Next time it's time to replace the NiCds in my 29C I'll switch to NiMH. Easier too on the environment, I bet.

Re: HP21 bacteries
*Message #2 Posted by **David Smith** on 28 Feb 2003, 6:11 p.m.,*
in response to message #1 by Gray Wilson

Yes, they do not contain the heavy metal cadmium. Also they are much less prone to "memory effect" that requires you to fully discharge the cells before recharging them.

On the HP29C, you should NEVER charge the batteries in these machine. It is probably the most fragile of the woodstock machines when it comes to potential damage from high voltages caused by a bad battery or connection. It is GREATLY recommened that you use an external charger or another (preferably dead) woodstock machine. The same warning should also be followed with any of the woodstock machines.

If you must charge the battery in a woodstock machine, turn on the power before connecting the charger. If you have enough juice in the battery enter 888888888 in the display. The load caused by the LED display helps to keep the voltage lower... but still not low enough.

I have a pile of over 25 dead ACT chips removed from woodstock machines. I have never had to replace an ACT in an HP67 or HP97... they have a real regulated power system that does not cause the Voltage of Death.

Re: HP21 bacteries
*Message #3 Posted by **Gray Wilson** on 2 Mar 2003, 1:17 a.m.,*
in response to message #2 by David Smith

David

Eeek! You've made me very nervous. I've been using my HP29 off and on since 1979, with replacement NiCd's in self-rebuilt battery packs. I've always used the charger to recharge the battery in the machine.

Should I forget about using NiMHs in the calculator and stick with tried and trusted NiCds? I can use an external charger for either type, but one that accepts the individual cells only, not the pack. But I don't want to keep rebuilding the battery pack every time it's time to recharge the cells. Do you have any suggestions, short of me trying to find one of those pack-only HP rechargers.

Thanks.

Re: HP21 bacteries
*Message #4 Posted by **Gray Wilson** on 2 Mar 2003, 1:27 a.m.,*
in response to message #2 by David Smith

Just a thought. Could the type of HP charger have anything to do with the "Voltage of Death" you mention? I use the 220V HP charger that came with the machine? Could it regulate voltage differently to the US 110 charger?

Re: HP21 bacteries
*Message #5 Posted by **David Smith** on 2 Mar 2003, 3:28 p.m.,*
in response to message #4 by Gray Wilson

The type of battery or charger does not matter. The machine uses the battery pack as a voltage regulator/power filter. If the battery is not good and/or making good contact the full unregulated voltage of the charger gets put on the circuit board. This voltage can easily be enough to zap a chip... especially a 30 year old CMOS chip.

On the 25C and 29C machines, the RAM chip is always powered up, so you can zap a machine even if it is turned off... actually especially if it IS turned off. The load produced by the LED display helps hold down the voltage somewhat.

If your battery has enough juice to light up the machine and you have something showing in the LED's, it is making good contact and it is probably OK to charge it in the

machine... but just to be safe I always use an external charger for the 25C and 29C.

Re: HP21 bacteries

*Message #6 Posted by **Robert Burnham** on 2 Mar 2003, 4:41 p.m.,*
in response to message #5 by David Smith

Could you suggest some possibilities for an external charger?

I realize there are chargers for AA cell batteries, but those require the batteries to be outside the plastic battery pack that Woodstock models use.

Is there any present-day (aftermarket) item that could recharge the batteries _inside_ the battery pack?

Best,

Robert

Re: HP21 bacteries

*Message #7 Posted by **David Smith** on 3 Mar 2003, 6:12 p.m.,*
in response to message #6 by Robert Burnham

You could probably adapt just about any battery charger with using a pair of clip leads. Even better you could build some kind of clamp/battery contact assembly out of wood and screws. Best of all would be to get a real HP extranal charger or a cheap (ugly, even dead) HP21 or other woodstock series machine (try the classifieds here or Ebay). With a little luck you can bag one for under $30... very cheap insurance for protecting a $250+ 29C.

I have converted many a fried/carved/corroded HP21/25 carcass into chargers. I like to install an LED/resistor in series with the big charging resistor so that you can tell when juice is flowing into the battery pack.

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

Good sign? Not that 9G it's trash

*Message #1 Posted by **Norm Hill** on 28 Feb 2003, 4:41 a.m.*

Thanks for the link on the 9G, that latest HP offering (at Wal Mart) is just so much trash.

RPN exists for a reason. Suppose you wish to evaluate A*sin(x^2)/C

for A=0.35 X=0.5 and C=10

You can do that rapidly with an RPN calculator and that is why they were built. You CANNOT do it readily with non-RPN junk.

HP's behavior to drop RPN is a total slap in the face to all educated people in this country. Just more Enron thuggery from the boardroom.

Want to tell the right people? click on http://thenew.hp.com/country/us/eng/contact/email_3.html Look for "Contact Carly the CEO" (for HP) and send Carly an e-mail about their bizarre behavior in substituting a "9G" for a favorite classic like _____ (fill in your favorite)

Re: Good sign? Not that 9G it's trash

*Message #2 Posted by **Ex-PPC member** on 28 Feb 2003, 6:38 a.m.,*
in response to message #1 by Norm Hill

For what it's worth, I also think the HP-34C is a great machine, and I'm not the only one to think so, several of my HP-fan friends do agree as well.

I was delighted to get one when it was released, and I liked very much its advanced features, Solve and Integrate, which were so incredibly well described in that legendary HP Journal issue from 1980 (IIRC) by their "father", Mr. Kahan. The fact that Solve could use Integrate and vice versa seemed to me incredibly powerful as well.

It also had a lot of good 'physical' points. For once, it seemed solid, the keys had a very nice, positive action, and the LED display was marveously clear, and of course, you could do what

you couldn't with any of the later models: to use it in complete darkness !! I was very young at the time of its release, and I was enthralled to use it at night, while in bed, without turning the lights on and without disturbing anyone. The LEDs were bright enough to easily see the keyboard legends in full darkness. Try that with a 32S, 41C, 71B, ... !

Another good point is that it had a lot of memory for the time, and combined with the advanced programming capabilities, you could write quite complex programs, which wouldn't fit in a basic 41C, specially if they also made use of Solve/Integrate. Matter of fact, many of those programs wouldn't fit in a 32S/SII as well, because the Solve/Integrate functions in these models take a lot of the already small memory, leaving very, very little for your program/ variables, also using more RAM per step (from 1.5 bytes upwards).

So the HP-34C was much admired, and sold very well. I still have a large number of advanced mathematical programs for it, and still remember how much I enjoyed writing them and seeing how easy it was and how well they fit in such a tiny but powerful calculator.

Finally, the HP-34C had its synthetics too !! There were a number of very interesting articles published in the state-of-the-art Australian PPC Technical Notes, dealing with ways to access different parts of the RAM, the Solve/Integrate registers, the decoding of the full hex table, etc, etc. It was awesome what people could do with this small marvel.

Definitely, you're not alone in your praise of it. Long live the HP-34C !

Disregard previous - Wrong Thread
*Message #3 Posted by **Ex-PPC member** on 28 Feb 2003, 6:42 a.m.,*
in response to message #2 by Ex-PPC member

My previous message was posted to the wrong thread, sorry.

Not that hard on an algebraic...?
*Message #4 Posted by **Gene** on 28 Feb 2003, 11:13 a.m.,*
in response to message #1 by Norm Hill

RPN exists for a reason. Suppose you wish to evaluate

A*sin(x^2)/C

for A=0.35 X=0.5 and C=10

Gene: Well, I would type:

0.35 x 0.5 X^2 SIN / 10 =

and I have the answer.

?

Don't get me wrong, I prefer RPN, but I don't see this calculation being the problem. Now, the calculation for MACH number is another story. :-)

[Return to Index | Top of Index]

HP Forum Archive 11

[Return to Index | Top of Index]

HP-34C best and I'm stickin' to my guns
*Message #1 Posted by **Norm Hill** on 28 Feb 2003, 4:26 a.m.*

Hi guys, Well guess I'm the only guy in town who thinks the 34C was the coolest unit. Good, then I'll be the only bidder.

If you are comparing 15C to 34C, and think you like the LCD, then you would jump to the 32S unit because that is the most modern version..... you'll get a foggy, dust-filled, blurry LCD display, you'll get smooshy mooshy keys that you aren't even sure if you pressed, you'll get 800 functions all in a bunch of miserable soft-menu's that fog the mind,

INSTEAD of a well-thought-out cool practical tool like the 34C. Look I can't quarrel with the problem with the battery-charges why do you think I "lost" my 34C years ago, I got tired of battery charges and went to 32S. But nowadays you could easily use Lithium rechargeable cells and do fine.

The buttons pushed right, it's nice looking, you should be able to 'remember' whether its in Degrees or Radians if you are actually solving a problem, and if you want a more powerful unit buy a more powerful unit, but be careful about choosing a shoulder launched missile for swatting flies.

HP-34C is clearly underappreciated for the nicely thought out treasure that it is. It's a sweetheart. If they didn't build them right inside, apparently that was just the earlier units.

All the best, - Norm

[Return to Index | Top of Index]

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