

NEW HP-41C

the first flexible, expandable, portable calculating system

The exciting new HP-41C is the first hand-held programmable calculator with a keyboard that can be re-defined to suit the user's personal needs. And it is the first that doubles as the heart of a personal, portable calculating system with its ability to accept peripheral devices as the owner's needs grow and diversify.

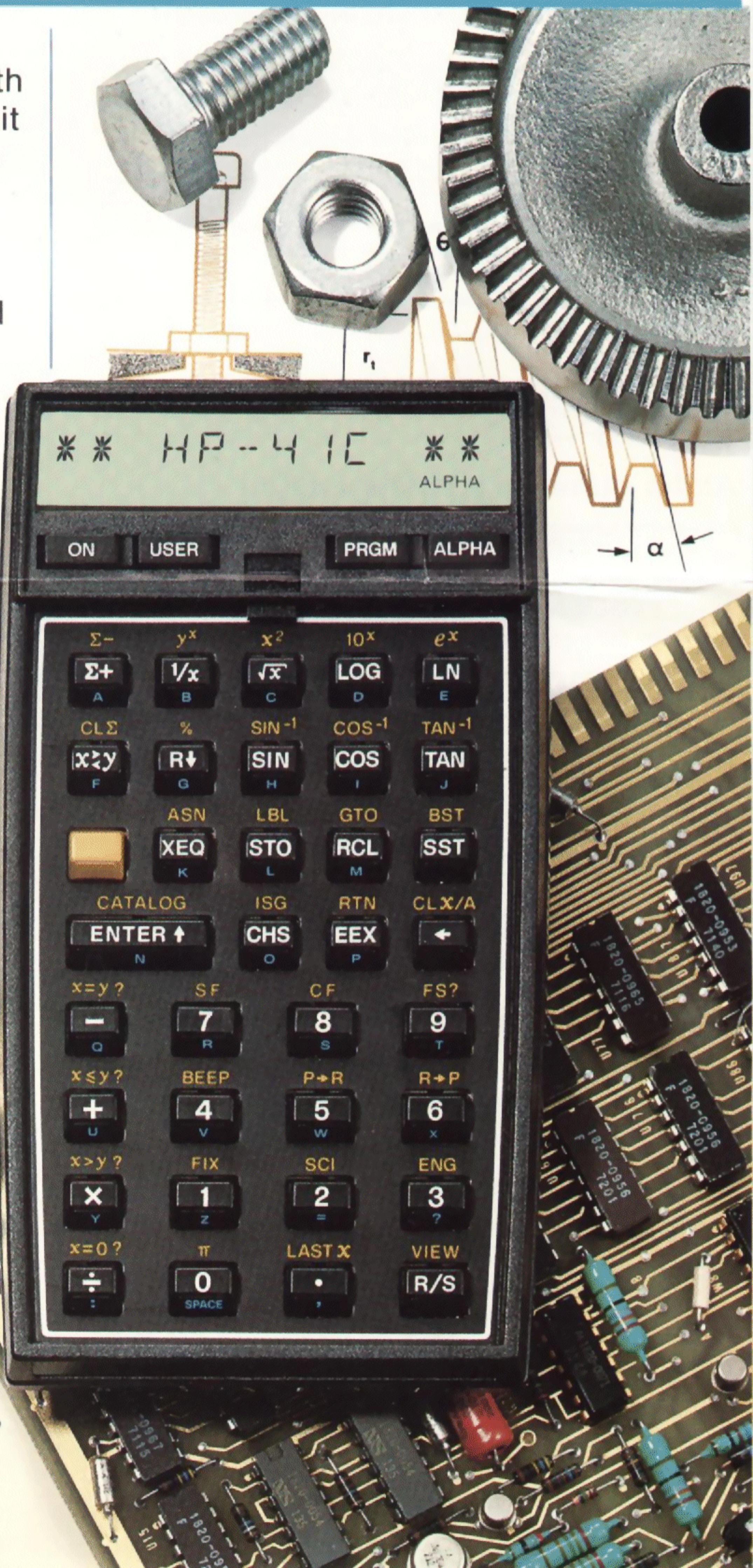
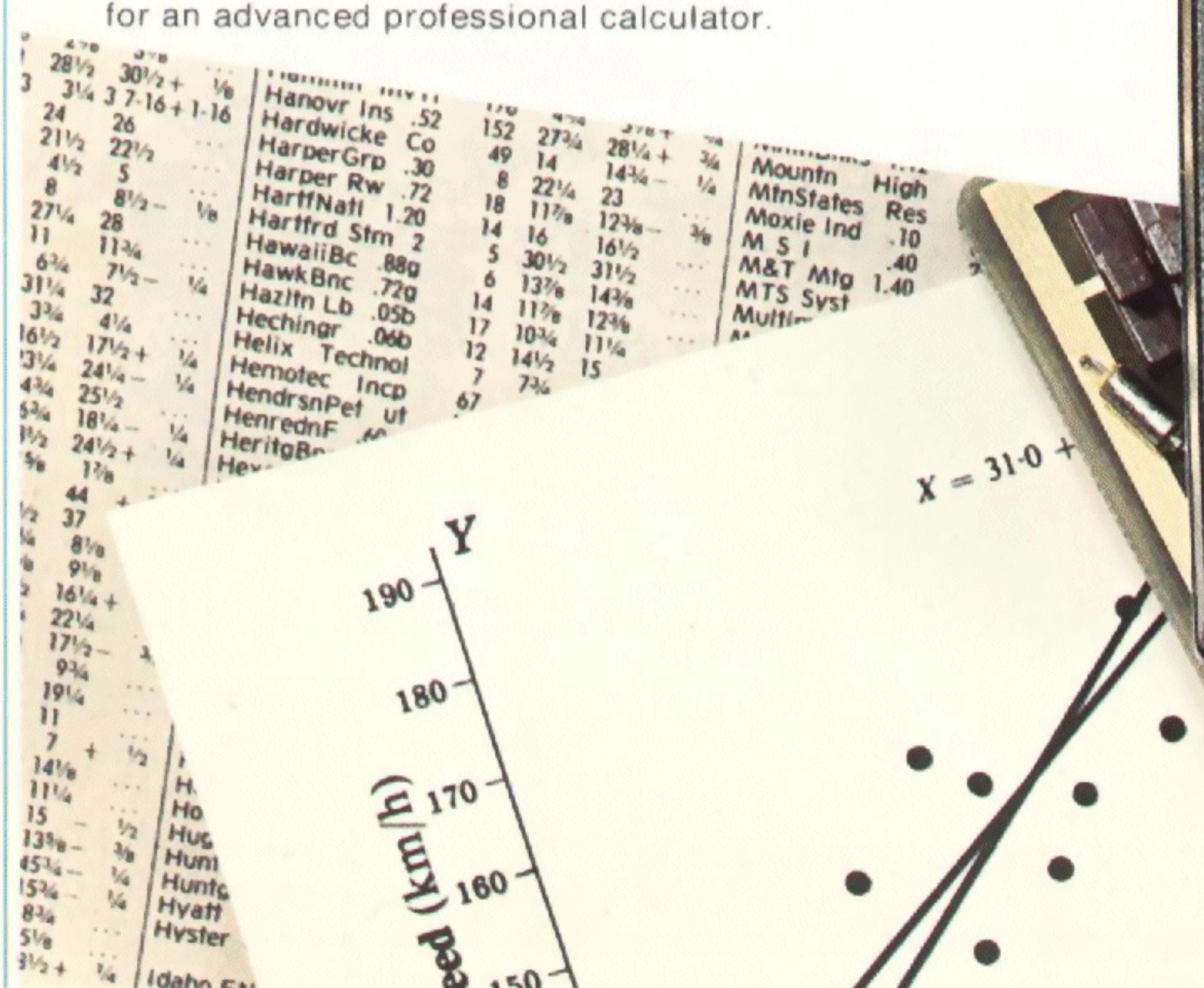
A blend of the best in advanced calculator technology

As a stand-alone programmable calculator, the HP-41C provides 448 bytes of program memory or 63 data storage registers. Then you can select the optimum blend between program memory and data storage to suit the needs of the moment. Further, this overall memory capacity can be augmented five-fold through the addition of optional plug-in memory modules.

This basic flexibility is backed by the latest in calculator technology

to provide you with all the features and functions you need, whatever your area of interest.

- *communications features* enable you to maintain a functional dialogue with your HP-41C (input and output) alphabetically and numerically.
- *personalisation* allows you to tailor the keyboard to suit your own specialised applications.
- *Continuous Memory* saves your programs and data for later use, even when the calculator is switched off.
- *programming features* give you more power, more flexibility, and make programming easy... even for beginners.
- *Computer Logic* from Hewlett-Packard simplifies complex problem solving. It is the natural, efficient, consistent system for an advanced professional calculator.



The calculator that grows with your needs

You can go a lot further with the HP-41C. It is the heart of a modular add-on calculating system that adapts to your personal growth in computational requirements:

- optional *plug-in memory modules* enable you to expand programming memory up to 2240 bytes (equivalent to between 1500 and 2000 program lines depending on the type of program) or data storage capacity up to 319 registers.
- a wide choice of *plug-in application modules* give you pre-programmed solutions to hundreds of complex problems across a wide range of disciplines.
- with the *intelligent card reader* you can store your own personal program library, accumulated data, calculator status or keyboard assignments on magnetic cards. You can use them with your own system or through any similar card reader. An extra bonus: HP-67/97 magnetic cards are translated by the HP-41C card reader.
- an *alpha-numeric plotting printer* has three optional modes for documenting calculations, program listings, hard-copy or graphic outputs.
- an *optical reader* lets you load programs rapidly by lifting them directly from printed bar-codes and transferring them into the HP-41C.

These plug-in peripherals augment the power and usefulness of the HP-41C without compromising portability. And because you have complete freedom in the options you choose, you can select the combination that suits your needs now, and extend them in the future.

You can communicate with your HP-41C

Alpha-numeric communication

Unlike other advanced calculators, the HP-41C communicates with more than numbers.

When you place the HP-41C in ALPHA mode, a special alpha-numeric keyboard becomes active. The complete alphabet is at your disposal so that you can carry on a functional dialogue with your calculator.

You can use this capability to name your programs as you wish, then call them subsequently for execution by keying the name into your HP-41C. Or you can assign names to any key you wish.

VALUE = 30%

ALPHA

Tighter calculator control

A system of status annunciators, shown in part of the display, keeps you in firm control of the calculator. It tells you whether the next key pressed will be executed or remembered as a program instruction.

REG 45

BAT USER GRAD SHIFT 01234 PRGM ALPHA

You can see whether you are keying in numerals or alphabetic characters. And you can determine the conditions of program flags, trigonometric modes and battery life at a glance.

Error avoidance and detection

To help you feel more at ease with the HP-41C, the display will spell out a variety of messages that prevent or pinpoint errors. And, to remove doubt, the display indicates whether the shift key has been pressed.

BAT ERROR

When you hold a function key down, the name of the function appears in the display as a preview of the operation to be performed.

On releasing the key, the displayed function is executed. If you hold the key down until the word "NULL" appears in the display, the function is cancelled.

Multi-function, highly visible display

With the HP-41C, you can display numbers in fixed, scientific or engineering notation. And you may choose to break up large numbers automatically by inserting commas or decimal points, or leave them unseparated.

The display also acts as a catalogue to help you monitor current calculator capabilities. There are three catalogues: 1) Displays all standard functions contained in the HP-41C (there are 130, including those not shown on the keyboard); 2) Displays the names of all the programs you have written; and 3) Displays all the functions contained in the peripherals and modules connected via the HP-41C input/output ports.

To make all this information easy to view, the HP-41C is equipped with a high resolution liquid crystal display (LCD) that is as legible in bright sunlight as it is in the office.

Ten-tone audio signal

A tone generator provides audible feedback with ten different tones that allow you to signal the end of a program or data-entry point without monitoring the display.

Change the keyboard to fit your OWN particular problems

56 of the most habitually used functions are pre-assigned to the HP-41C keyboard. If they are the functions you need most, you can use them by operating in the Normal mode.

But if you look further, there are actually 130 separate functions in the HP-41C alone, plus hundreds of others in the application modules or peripherals, which you can call up through the keyboard.

You can assign any of these functions, or programs that you devise, to any key (irrespective of its pre-assigned label). With a few keystrokes, you can convert the keyboard to one that is "tailor-made" to solve your personal set of problems. To activate your "personal" keyboard, just switch to User mode. You can also record all your personal key assignments on magnetic cards for future use.

Identification is easy, too. Each HP-41C comes with keyboard overlays and a set of user labels. After customising your keyboard, you mark your assigned functions for each key in the appropriate position on the overlay. Thereafter, you can bring the magnetic card and overlay into action at any time to change the keyboard to handle your current problem.

Save your time and energy with "Continuous Memory"

The HP-41C's Continuous Memory preserves all stored data, programs and user-defined assignments, even while the calculator is turned off.

This means that you need to program those frequently needed calculations only once. They remain in the calculator even when switched off, for days or months... until you decide to change or erase them.

In the same way, data gathered in the field remains in the calculator while it is switched off, ready for use when you return to the office.

Programming that's easy to perform, sophisticated in scope

There's absolutely nothing mysterious about programming the HP-41C. Yet it has the capacity, flexibility and sophistication of a much larger machine.

You can maintain more programs, and lengthier programs, than you would think possible in a hand-held calculator. Each program is autonomous. You can call it up by name, run it, edit, even wipe it out, without affecting any other programs stored in the calculator.

Programming is a simple matter, even for beginners. Switch the HP-41C to Program mode, give your program a name (any easy-to-remember alphabetic label), then press the keys in the same order that you would use to solve an individual problem. That's all.

Your HP-41C will remember that keystroke sequence as a program and execute it for you whenever you have the need.

The display aids programming

Back in Normal mode, you can summon up your program by name. The entire keystroke sequence will be executed at your command, using the variables you choose to put in. You never have to bother with complicated programming languages. You don't have to remember elaborate start-up procedures.

When you want to write a fresh program, you switch again to Program mode. Your LCD display tells you immediately how much unused program capacity remains free.

02 RCL 33
PRGM

Besides providing status and program information, the display yields answers. You can halt or pause a program while it is running to produce intermediate numerical answers, alpha-numeric strings, even labelled data and results.

Advanced programming features make life easier

Programming is less of a chore with the HP-41C. It is equipped with advanced programming features that make writing, editing or managing programs as painless as possible.

Local and global labels

Each autonomous program is delimited by global label and an END statement, and may contain up to 99 local (numeric) labels between these points. However, autonomous programs are fully interactive and subroutine calls up to six levels deep may be established between them.

Fast and easy editing

The HP-41C possesses several editing features for altering or correcting programs.

You can go to any program without execution, or to any local line number within a program. In the same way, you can single-step or back-step through any program and examine it line by line, again without execution.

As another alternative, you can execute any program step-by-step with the single-step function. And you can insert or delete single program lines or a specific number of program lines, at any point.



Your HP-41C will make decisions for you

Conditional tests and flags

Ten conditional tests give the HP-41C decision making power. Programs can compare numerical data, constants or results—then alter program execution depending on the outcome—all automatically. Two alphabetic strings can be compared for equality or inequality.

Flags are also decision makers. Flags can be tested during a program and will alter execution based on the outcome. Your HP-41C contains 56 flags to give you exceptional control and response to conditions in your programs and in the calculator itself.

Specific loop control

Using the ISG (Increment, Skip if Greater) or DSE (Decrement, Skip if Equal) instructions, you can easily control looping in your programs. You can specify the number of passes through a loop as well as the interval for incrementing or decrementing.

Flexible indirect addressing

There are 25 separate operations in the HP-41C which, in addition to their normal functions, can also be controlled indirectly. This allows you to make conditional alterations while a program is running, just as you can with sophisticated computers.

These operations include data storage and recall, storage register arithmetic, flag status, display formatting, loop control, and many others. You can indirectly address entire programs, sub-routines, any register in the automatic memory stack, and more. You can use any storage register as the indirect control register.

A calculator that grows into a personalised system

You can expand with your HP-41C wherever your career leads

By itself, the HP-41C offers an ideal balance between power, flexibility and original features that creates a new benchmark in



sophisticated hand-held calculators. What places it even further apart from its rivals is its ability to expand into a powerful personal calculating system.

A series of optional plug-in peripherals and modules can expand the capabilities of the HP-41C to grow along with any increase or change in your computational needs.

Your HP-41C can take up to four of these peripherals, in any combination you choose, at any one time. Each peripheral is self-contained, having its own set of functions that complements the HP-41C's pre-programmed or assigned functions. And they are all as portable as the calculator itself.

Add-on Memory Modules

Low-cost route to expand your computational capacity

Your HP-41C can receive up to four plug-in Memory Modules to quintuple data storage and program memory capacity.

A single module contains 64 data storage registers, or 448 bytes of program memory, or any combination of the two that you require for the job in hand. And, like the calculator itself, the Memory Modules are equipped with Continuous Memory to retain everything while they remain plugged into the calculator ports, even when the calculator is switched off.

So, when you feel the need to expand your computational capacity, HP-41C Memory Modules are the economical way to meet application changes and give more muscle to your flowering programming expertise.

Application Modules

Basic software for all disciplines

Each specialised Application Module provides pre-programmed solutions to the most commonly encountered problems in your area of interest. Whether you are an engineer, technician, scientist or student, business person or professional, you'll probably find an Application Module covering the basics of your discipline.

Each Application Module comes with a comprehensive manual and a keyboard overlay. You simply install the module and the overlay and you're ready to tackle the laborious calculation problems you meet every day.

In addition, Hewlett-Packard will make your programs into Custom Application Modules on a minimum volume/special order basis to meet specific needs.

The Card Reader

How to build your personal, and secure, program library

The HP-41C Card Reader is a valuable option that allows you to save programs, alphabetic and numeric data, keyboard customisation and overall status indications on magnetic cards. You can build your own personal library of data and program cards to avoid keying in the lengthy sequences you require most frequently.

Pass a card through the plug-in reader and all the stored information is transferred to the calculator, ready for immediate use.

Your HP-41C Card Reader gives the system extra intelligence. It will read magnetic cards under your control or under program control. It keeps track of the cards it reads and will even prompt you to enter the next card. And, if you wish, you can maintain "program privacy" by ensuring that steps cannot be reviewed even though the program itself can be executed.

If you're up-grading from an HP-67 or HP-97, you'll be happy to know your existing magnetic cards are HP-41C compatible. You just pass them through the HP-41C Card Reader and the programs are automatically translated into HP-41C code. In the same manner, the HP-41C Card Reader gives you access to the vast resources of the time-proven HP-67/HP-97 Application Pacs and the 2000-plus programs in the HP Users' Library, covering just about every aspect of human activity.

The Printer

Hard copy and plotting capability when you need it

You may need a permanent record of data and results on paper but have no time to write it out in longhand. Or you may wish to see a plot as soon as derivative data is produced.

For these requirements, the HP-41C quiet Printer can be connected to the calculator. The Printer is powered by its own rechargeable batteries or the mains supply. It gives you numeric, upper and lower-case alpha, double-width characters, function plotting and an intensity control for optimum contrast and readability. It even allows you to build your own special characters in a seven-by-seven dot matrix format.

The HP-41C quiet Printer is an invaluable tool for listing and editing programs or long, complex calculations. TRACE mode follows program execution step-by-step to help you debug your programs painlessly. Above all, you can clearly see and retain, everything produced by the calculator in hard-copy.

HP-41C Solution Books: an economical source of general software

Hewlett-Packard Solution Books are collections of programs that provide answers to both general and specialised problems. They offer, at minimal cost the best of programs submitted to Hewlett-Packard by users. A diverse selection of program material, covering a broad spectrum of application areas, has been selected from more than 9,000 user-submitted programs.

Much of this software is unique, previously unpublished for handheld calculators. Each book contains up to 15 programs covering a specific application area to complement the remainder of Hewlett-Packard's Software Support for users.

HP Users' Program Library Europe

The Hewlett-Packard Users' Program Library is a customer service offered to owners of HP fully-programmable personal calculators.

At nominal cost, it offers programs contributed by other users. Over 2,000 application programs, from all imaginable fields of science and professional activity, are available. Launched in 1974 as the HP-65 Users' Library, it was later extended to the HP-67 and HP-97 and, now, to the HP-41C. The library is multilingual and has grown into a huge success with over 10,000 members at present. While the Users' Library is administered by Hewlett-Packard its aim is to provide application assistance by users for users.

See your phone book for full details of Hewlett-Packard appointed dealers.

Aberdeen Tyseal Typewriter Services. **Belfast** Cardiac Services; Erskine Mayne. **Birmingham** John Mabon Associates; Taylor Wilson. **Bournemouth** South Coast Business Machines. **Brighton** Office Machinery Engineering. **Bristol** Decimal Business Machines; Reid's Office Equipment; Wilding Office Equipment. **Bromley** Wilding Office Equipment. **Cambridge** W. Heffer & Sons. **Canterbury** R. E. Typewriters. **Cardiff** Sigma Systems (Calculators). **Carlisle** Thos. Hill Group. **Chelmsford** Automatic & Electronic Calculators. **Colchester** Wilding Office Equipment. **Croydon** Landau Calculators; Wilding Office Equipment. **Derby** Derby Office Machines. **Dundee** Tayside Office Equipment. **Edinburgh** Business & Electronic Machines; Holdene. **Folkestone** R. E. Harding. **Glasgow** Holdene; A. H. Hall & Brothers. **Gloucester** Wilding Office Equipment. **Grimsby** Teesdale Office Equipment. **High Wycombe** A. C. Barratt. **Iford** Wilding Office Equipment. **Ipswich** Anglia Business Machines; Wilding Office Equipment. **Kingston-Upon-Thames** Wilding Office Equipment. **Leeds** Holdene. **Leicester** A. C. Barratt; Sumlock Services. **Liverpool** Rockliff Brothers. **Livingstone** A. H. Hall & Brothers. **London** Automated & Electronic Calculators; City Business Machines - 57 Houndsditch, Bethnal Green Road; Dixons Photographic - 64 New Bond Street; Euro-Calc - 224 Tottenham Court Road, 55 High Holborn; Kafetz Cameras; Landau Calculators - Bourne's Ltd, Oxford Street, 9, 48 and 227 Tottenham Court Road; McDonald Stores; Metyclean - 137 The Strand, 92 Victoria Street; Reid's Office Equipment; Ryman - 107 Jermyn Street, 6 Great Portland Street, 106 New Bond Street, 56 Brompton Road, 85-86 London Wall, 19 High Holborn; Sumlock-Bondain - 15 Clerkenwell Close, Unit 2 Cannon Street Station; Wallace-Heaton; Wilding Office Equipment - 7 The Arcade, Hoe Street, 21 Thomas Street, 120 The Broadway, Wimbledon. **Luton** Wilding Office Equipment. **Maidstone** Wilding Office Equipment. **Manchester** Holdene; Automated Business Equipment. **Matlock** Derby Office Machines. **Middlesbrough** Thos. Hill Group. **Mold** Clwyd Business Machines. **Newcastle** Thos. Hill Group. **Northampton** A. C. Barratt. **Norwich** Leamons Office Machines. **Nottingham** Bennett's (Typewriters & Office Supplies); Trent Office Equipment. **Ossett** A. H. Hall & Brothers. **Oxford** Reid's Office Equipment; Science Studio. **Plymouth** JAD Integrated Services. **Reading** Central Southern Calculators; Reid's Office Equipment. **Romford** Ryman; Wilding Office Equipment. **Rugby** A. H. Hall & Brothers. **Sheffield** Butlers Office Equipment. **Slough** Wilding Office Equipment. **Southampton** South Coast Business Machines. **Southend** Wilding Office Equipment. **Sunderland** Thos. Hill Group. **Sutton** Landau Calculators. **Swindon** Wilding Office Equipment. **Thetford** A. H. Hall & Brothers. **Waltham Cross** Wilding Office Equipment. **Watford** Automatic & Electronic Calculators; A. H. Hall & Brothers; Wilding Office Equipment. **Worthing** Office Machinery Engineering. **Yeovil** Lyndall Fox.

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