

EduCALC

Your Guide to Professional Computing #41

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PACKARD**
HP-28S**Over 1500 Functions!****\$175.95**

(see page 46)

**Save
\$59**
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Hewlett-Packard**

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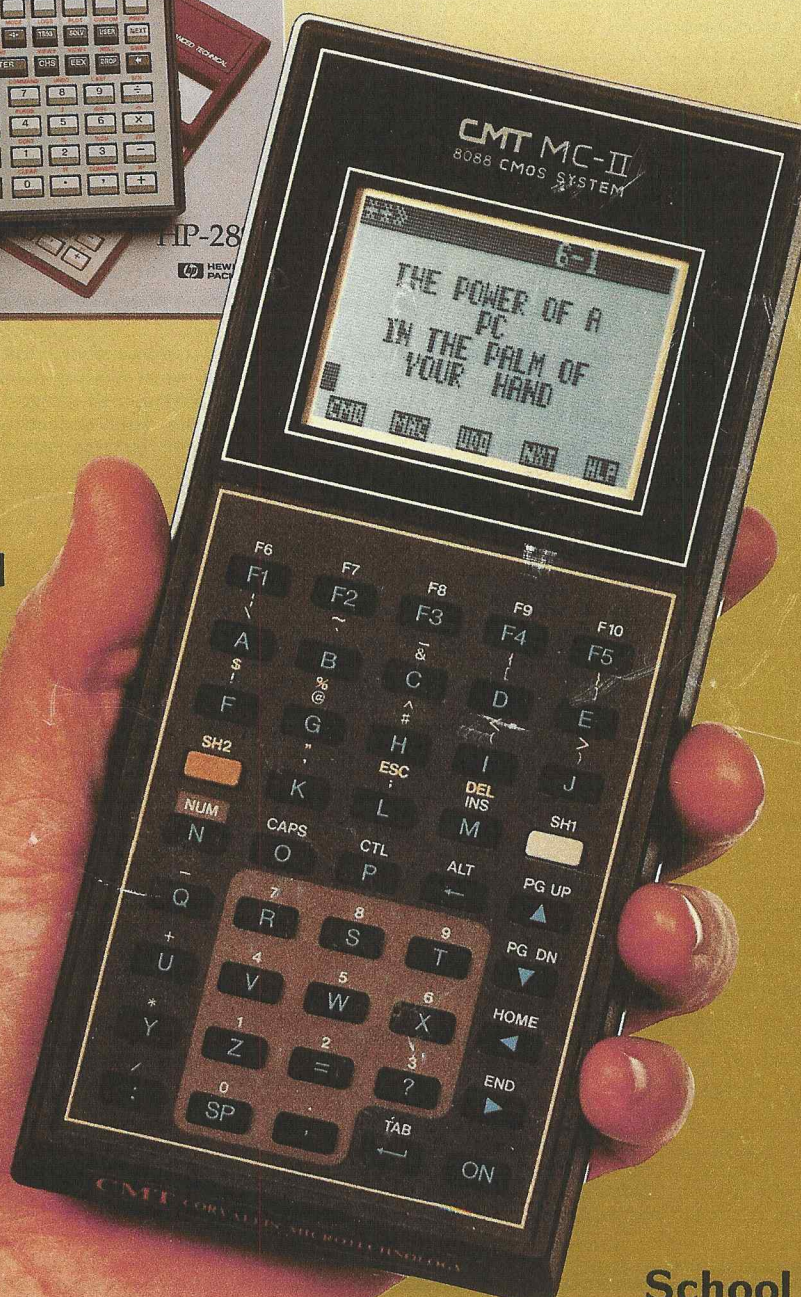
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Giant Memory**
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**Save
\$159**

School Calculators!

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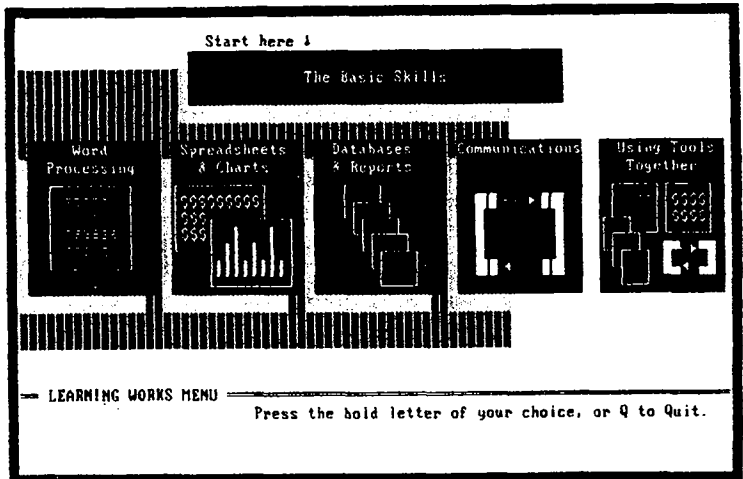
WORKS

Easy-to-use, Integrated Software
Simple, for First Time Users

All-in-One, the WORKS for under \$200



Brand New

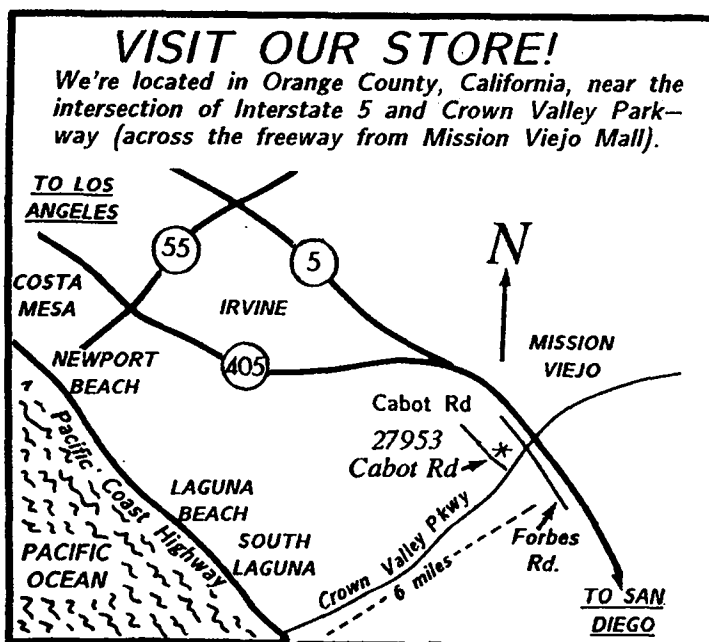


- **Word Processor**—to compose your letters, dash off memos, write reports. Built-in 100,000 word spelling checker, headers and footers, dynamic on-screen pagination, mail-merge.
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- **Macros**—record your frequently used keystroke sequences so they can be replayed later by pressing a single key.
- **Integration**—learn how to use ONE program's commands and you have mastered them ALL. All modules of WORKS have a common command structure, and you can easily swap info from one module to another (so you can have a pie chart right in your letter, for example).
- **Lots of HELP**—get yourself started with on-disc tutorial and Computer-Based Training (CBT) that really deliver the WORKS. Then you'll have 3 levels of HELP at your fingertips—automatic explanations and even tutorials that show you what you can do right where you are in your work.

Requires PC/Compatible with 384K memory, DOS 2.0 or higher, two 360K disc drives or one 720K disc drive or a hard disc drive. For charting you'll need CGA, EGA, VGA or Hercules graphics adapter card. Mouse and modem are optional.

Stock #1-985 (MS WORKS, 5¼") List \$195..... \$129.95

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at the rear of this catalog (it folds up to be
its own envelope with printed address)*



EduCALC

27953 CABOT RD.
LAGUNA HIGUEL, CA 92657

Dear Reader,

I'm back at work after attending the International Conference in Corvallis last month. I was excited to rub elbows with my favorite author and have coffee with the designers of the state-of-the-art MC-II and HP-28C.

I went there to make sure that the EduCALC catalog has every new book, program and machine for you, now, and to get you new savings.

You can buy from me with confidence--it's the latest, it's the best, and it's at a great price.

I'll get it to you quickly, too--I ship 2 out of 3 orders the same day I get them.

It will be what you wanted. If not, I'll correct it--it's that simple.

Sincerely,



Jim Carter,
Manager



P. S. Look for the coupon I've hidden in this issue--so you can enter our drawing for a FREE calculator.

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Effective

September 7, 1988



Kaycee,
EduCALC's official greeter

Here's who
you'll talk to
at EduCALC



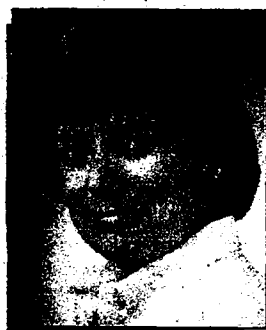
Jim



Nadine



Christy



Edie



Marta



Shirley



Richard



Mike

Diversions

Mathematics

- People
- Problems
- Results

edited by Cambell/Higgins

Do you know why math exists? Why we care, why we spend so much effort to teach it in grade school? Why we invent ever-new results and theories?

No matter how much math you've forgotten, you can read and understand these 90 little essays—each one is a superb example of writing for a general audience by an eminent author. Put this by your bed, listen to these voices, and form your own opinions.

Stock #M-360, Math People, 3 vol set, 871p softbound..... \$32.95

for all Practical Purposes

by COMAP

Dispels the mystique from questions like, "Just what is math used for?" and "What do mathematicians do, practice or believe in?"

Brings the excitement of contemporary mathematical thinking to the nonspecialist—helps him or her develop the capacity to engage in logical thinking and to read critically the technical information in which our society abounds.

This book stands on its own, too. Written in concert with a 26 x 1/4-hour TV course, main topics are the minimum for Jefferson's 'enlightened citizenry': management science, statistics, social choice, the geometry of size and shape, and math for computer science. Selected by many experts and written by many scientists, this is what a high school graduate needs in his economic, political and personal life. It's fun, too.

Stock #M-599, for all Practical Purposes, 450p hrdbnd.... \$28.95

The Beauty of Fractals

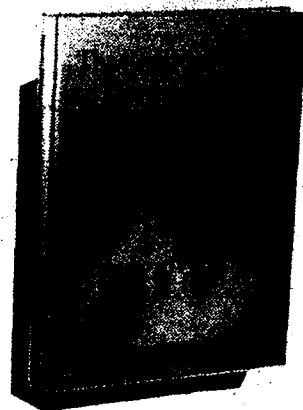
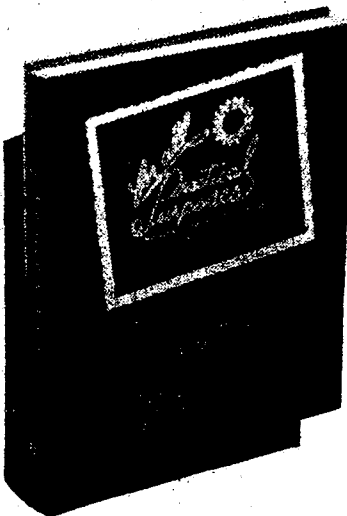
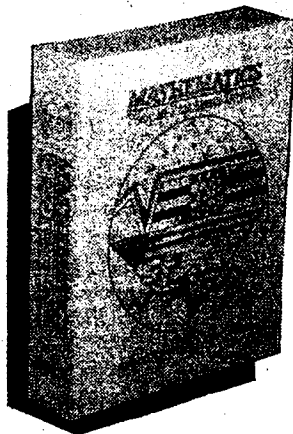
by Peitgen/Richter

Astounding pictures invite you to share in a new mathematical experience. 88 full-color pictures, plus many more black-and-whites, evoke strong reactions from your mathematical soul. This reflects a major challenge to our prevailing scientific conception.

It is an unusual attempt to publicize the field of Complex Dynamics, an exciting mathematical discipline of respectable tradition that has sprung to new life under the impact of modern computer graphics.

When you can put this down, put it down on your coffee table—you'll be first to entice your friends with the esthetic charms of critical points, Mandelbrot sets, Verhulst dynamics and Newton's method.

Stock #M-444, Beauty of Fractals, 199p hardbound..... \$38.95



FractalMagic

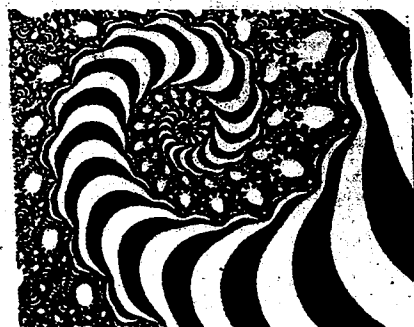
Sintar Software

"It's glorious! I can't imagine a better way to waste an afternoon or two. No color PCompatible is complete without a copy of this; get one and see what I mean," said Jerry Pournelle in *BYTE Magazine*.

Comes with 8 data files, each a different, completed pre-calculated fractal picture ready for instant display. Then you can use the program menus to change the display or to select your own fractal regions and calculate endless new displays (each one will represent perhaps 700 million calculations by your PC).

Comes with 2 programs—one for use with 8087/287 and one for use without—and descriptive manual. EGA or CGA required; no printing or plotting routines included.

Stock #S-882 (FractalMagic, 5 1/4")..... \$33.95



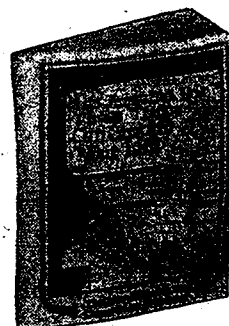
It's Amazing how these things can Simplify your Life

by Levine/Kramarz

New

This 'Harold Guide to Computer Literacy' is a pretty good computer-cartoon book.

Stock #A-921, It's Amazing, 104p softbound..... \$4.95



Bridges to Infinity

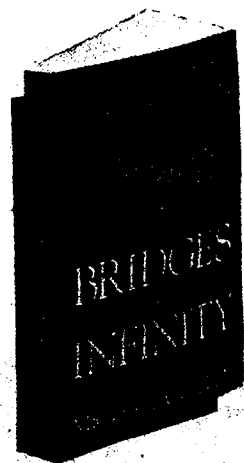
by Michael Guillen

'Math for Poets.' Guillen lures you behind the Blackboard Barrier to a hidden dimension of math thought and discovery.

Here are new ways of thinking about space, time and reality that will change forever your understanding of everyday events.

Nontechnical language reveals to you the intricacies of finite sets, rational numbers, plane geometry, topology and antimatter, pseudospheres, combinatorics, and cosmic symmetries—even the new catastrophe theory.

Stock #M-375, Bridges to Infinity, 204p softbound..... \$6.95



*We appreciate your business—
your choice of EduCALC as your
source—and we endeavor to earn it.*

Mathematics: Queen and Servant of Science

by Eric Bell

Brand New

You'll feel you are a fortunate student spending time with a charming and gifted teacher. Not a history of math, but a wide-ranging, popular selection of enticing topics, from Euclid to recent developments in mathematical physics. Fascinating!

Stock #A-934, Math-Queen of Science, 437p softbound.....\$18.50



The Mathematical Experience

by Davis/Hersh

Not a mathematics book, but a book about the entire, rich, diverse world of mathematics—history, philosophy, esthetics. Read about its personalities in biographical sketches interwoven with accessible yet authoritative discussions of their work.

"A true gem, one of the masterpieces of our age."—*The American Mathematical Monthly*.

Stock #M-168, Mathematical Experience, 440p softbnd.....\$12.65



Riddles of the Sphinx

by Martin Gardner

Brand New

Gardner charmed, puzzled and delighted readers of *Isaac Asimov's Science Fiction Magazine* with these riddles—now you can find in them mathematics stranger than fiction (even science fiction).

Many of the problems lead into nontrivial regions of math and science. Plus, some of the illustrations are about as close as you can come to mathematical cartoons.

Stock #A-933, Riddle of the Sphinx, 164p softbound.....\$14.50



Mastering Real Estate Mathematics 4th edition

by Ventolo/Allaway/Irby

Learn to be at home with figures—sharpen your skills! Self-instruction works—if you do the exercises here you'll get immediate feedback in easy steps to real achievement.

Completely worked-out answers check your progress. All examples are given for calculators that use algebraic logic (such as TI's instruments and the new HP machines).

All topics are wrapped up with sample multiple-choice questions patterned after state license examinations. At the end there are two sample Final Examinations.

Stock #TI-463, RE Math, 359p softbound.....\$22.50



Personal Banker Calculator

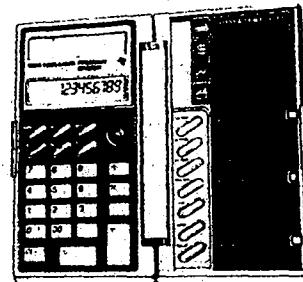
TEXAS
INSTRUMENTS

Now—the financial calculator for every man and woman. Gives simple answers to time-and-money questions like:

- "What will my investment be worth?"
- "What will my loan payment be?"
- "How much do I need to save every month to reach my goal?"

Has 4 built-in Help Cards that guide you using the special financial keys. Also operates as 4-function calculator with memory. Solar cell power works even in dim light.

Stock #TI-PB [Personal Banker] List \$50.....\$39.95

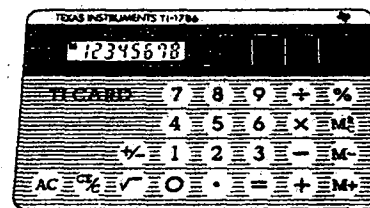


Card Calculator

TEXAS
INSTRUMENTS

Take it with you everywhere—it's 0.1" thick, solar powered, and has 3-key memory with percent and square root keys.

Stock #TI-1786 [Card Calculator] List \$8.....\$6.50



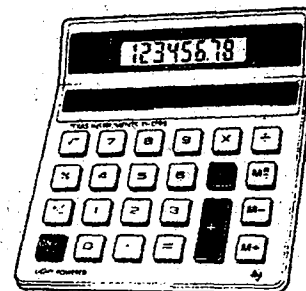
Big Little Solar Desktop

TEXAS
INSTRUMENTS

We're not usually excited by a new 7-function calculator, but this one is a fine engineering compromise.

It has surprisingly BIG keys with BIG spaces between them yet it's LITTLE overall, measuring 4.2 x 4.8 x 1.1 inches. Three-key memory, percent, square root. And SOLAR means it's reliable for occasional use—so you never turn it off and it never runs down.

Stock #TI-1795 [Solar Calculator] List \$12.....\$9.95



Pop-Up PC-12C

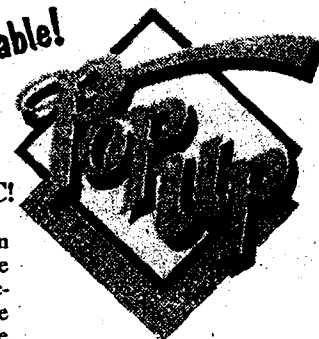
Popular
Programs

**Now
Programmable!**

A Financial Calculator on your PC—just type Alt-C!

Looks just like your HP-12C on your screen, right down to the blue and gold display of functions accessed by the prefix keys. Complete emulation of 12C functions. Has tape display you can make notes on, save to disk or print, plus the ability to feed your results to your spreadsheet or other program. On-screen help; requires PC or MS DOS, 64K RAM.

Stock #S-776 (PC-12C, 5 1/4") List \$70.....\$64.95



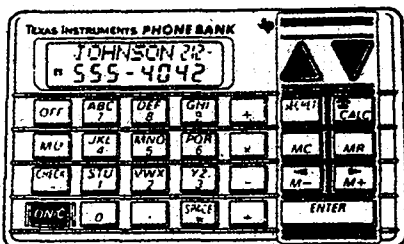
Personal Calculators & Dialers & Diaries

Not sure? Go ahead and order! You may return it to us within two weeks for a full refund.

TI-2400 Phone Bank

You'll have 150 essential names and numbers right in the palm of your hand—phone numbers, birthdays, bank account and social security numbers, lock combinations, personal access codes, or whatever.

You can protect some items with password. Find entries alphabetically or by scrolling. Includes 4-key memory calculator. Auto power-down. Stock #TI-2400 [Phone Bank] List \$30.....\$23.95



Paperless Printer Calculator

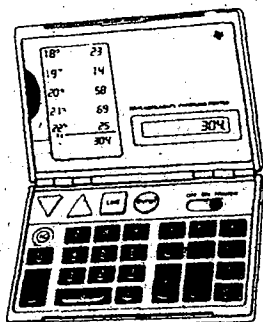
TEXAS
INSTRUMENTS

NEW—
Makes life easier

Surprisingly useful—all the convenience of a printing calculator, to review and verify and adjust your work, yet it's a lightweight portable that folds to fit in your pocket!

A special 6-line display scrolls through up to 100 entries and totals, along with an audit trail that shows the operations performed on each entry. It lets you review and revise, and remembers the whole problem even when turned off. Batteries included.

Stock #TI-PP [Paperless Printer] List \$65.....\$49.95



IF-8000 Screen-Write Digital Diary 'Successor to the Pencil'

Amaze your friends
with this

Casio

New



You write and draw right on this screen—diagrams, charts, handwriting, doodles... even large maps or illustrations can be stored with expand-function that gives a 8 1/2 x 6 inch virtual screen!

Telephone directory shows 8 names at a time—touch a name on the screen to see that person's phone number—up to 630 can be stored (16K memory).

Full-month calendar pops up when you enter a date before 2099—touch for last or next month.

Your schedule is symbolized on the calendar—touch a week or a day to see its items—touch an item to access your detailed notes for it. Personal data can be secret.

Memos for currency rates, formulas, price lists, airplane schedules, anniversaries, street maps, logos, conversion tables...

There's never been anything like this—and it's a 7-function calculator, too!

Stock #IF-8000 [Screen-Write Diary] List \$180.....\$159.95

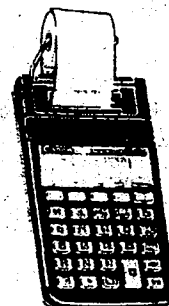
Palm Printer Calculator

Canon

Prints on 1 1/4" plain paper tape, yet small enough to hold in your hand and drop in your briefcase. Eight digit, percent, square-root and memory (all in less than 1/4 lb).

Includes roll of paper and 3 AA batteries.

Stock #CN-PZ-D [Palm Printer] List \$23.....\$19.95



Digital Diary

Casio

New

A pocket secretary—make your hectic business day more organized. This is our most powerful (32K) and most complete ready-reference tool.

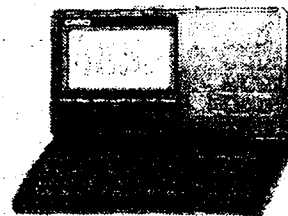
It has a 200 year calendar built in and a complete schedule can be easily constructed by simply specifying the date, month and year.

It's the perfect take-along telephone directory for all your personal and business numbers, addresses and other referrals.

The memo function may be used for all important items—timetables, rates, and data. It's easy to enter and recall information or simply use it as a calculator! Invent a password for your secret info.

Features an Auto-Off and it comes in a strong compact case for easy portability. Folds to be only one-half inch thick, so it fits easily into your pocket.

Stock #SF-4000-A [Digital Diary] List \$115.....\$89.95



Telememo Wrist Dialer

Casio

Watch your friends
watch you
dial with your watch

The world's first tone-dialing watch! It remembers up to 50 numbers of 9 letters and 14 digits, plus password if desired.

Reminds you of your schedule (birthdays, appointments, ...) and beeps you. Tells you the time anywhere in the world (24 cities). Has daily alarm clock with beeper. Countdown alarm (eggs, parking meters, dynamite fuses, ...). Stopwatch splits first and second finishes.

It will even tell you what time it is. Stainless band.

Stock #A-918 [Telememo Wrist].....\$56.95



Brand New

Calculator Alarm Chronograph

Casio

Brand New

You'll never wish you had this calculator with you—because it will be there! 4-function with constant.

You'll have a daily alarm, too, with a beeper. And a second time display to set when you fly across time zones. And a hundredth-second stop-watch that splits for first and second finishes.

Plus time and calendar, with a 5-year battery; stainless band.

Stock #A-919 [Calculator Chronograph].....\$22.95



Desk Calculators

The Calling Card

International
Telesis

150 friends in your pocket—here's a credit-card sized calculator with 2K memory! Flexible memo/message/number length for telephone numbers, appointments, addresses, birthdays, etc.

Simply type in your information—fast forward/reverse makes readout simple. Step-by-step instructions appear on the screen to guide you at first. Security code for confidential entries.

3-year battery life; no memory loss. 24 character display, 2.8 mm thin, auto OFF.

Optional buttersoft leather case carries Card with magnet in ready-to-use position, holds business cards too.

Stock #IT-852 [Calling Card] List \$35.....\$29.95

Stock #IT-852C [Custom Pocket Case] List \$10.....\$8.95

Dial Master

Electronic Memory Calculator/Dialer

Sharp

Your computerized little black telephone book, memo pad, calculator, and autodialer (4 instruments in 1). Auto or manual tone dialing with 1 touch for last-number redial.

Store over 400 two-line names and numbers and it will search among them by name or by company. Secret function with password for your private friends. Calls can be charged to your credit-card number, and you can use Dialmaster to authorize access to your computer.

80-character entries for numbers or memos. Handy CALCulator mode for quick arithmetic. Backup battery holds memory even if main battery is low. All this in a thin 2 1/4 x 5 inch package that will be unnoticeable in any pocket.

Wallet, manual, quick-reference guide.

Stock #EL-6250H [Dial Master] List \$90.....\$69.95

Construction Master Feet-Inch Calculator

Calculated
Industries

Figures with fractions! Just punch in dimensions—including fractions—and get accurate results immediately.

Accurate! Solve building problems directly in feet, inches and fractions up to 1/64". Enter dimensions right off the tape—or off plans, diagrams and prints.

Save valuable time. Solve complicated calculations such as rise, run, slope, and pitch problems in seconds! Built-in program solve right angle problems with 100% accuracy.

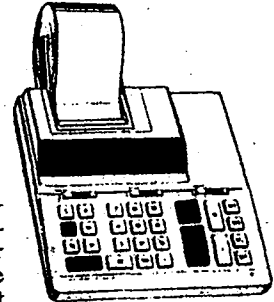
Eliminate costly errors caused by inaccurate decimal conversions. Instantly converts between all dimension formats: feet-inch-fraction, decimal, yards, and meters—and determines square and cubic dimensions.

Make fast, accurate lumber estimates in board feet and dollars—for individual boards, multiple pieces or the entire project.

Stock #C-904 [Construction Master] List \$100.....\$69.95

TI-5035 Printer/Display Calculator

Plug-in/portable,
prints credits in red



Sleek workhorse, AC/DC portable—uses the standard 2 1/4" paper and has easy-to-read 12-digit display. Portable power from 4 AA batteries (not included) or use plug-in AC adapter (included). 12-digit printout with punctuation and audit trail, 4-key memory and independent add register that acts like a second memory, automatic constant and percent, item counter, decimal select switch, dust cover.

Stock #TI-5035 [Printer/Display Calculator] List \$70.....\$48.95

Stock #AA [Battery].....each \$.85

TI Business Edge

TEXAS
INSTRUMENTS

Solar, with Power Touch Display!

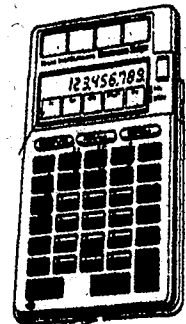
New

Each touch-sensitive key can be operated in 2 modes, Finance or Statistics. Each mode has 2 panels with 5 functions on each panel. Just touch the screen to enter and store data or compute results.

Time Value of Money—ordinary annuities and annuities due, amortization, accumulated interest and principal between periods, and APR/EFF conversions.

1 and 2-Variable Statistics—including regression, correlation, slope/intercept, predicted Y, standard deviation. Factorials, %, backspace.

Stock #TI-BE [Business Edge] List \$60.....\$43.95



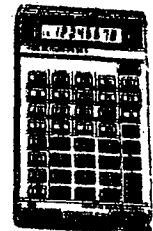
TI Business Analyst-II TI's Best-Selling Financial Calculator

TEXAS
INSTRUMENTS

Built-in formulas give you a new ease in the world of business and finance. Standard math functions such as square root are provided in addition to statistical functions such as mean, standard deviation and linear regression.

Business functions include lease/buy options, loan amortizations, sales/earning forecasts, and real estate mortgages, all without going through manual table look-ups. With the Executive Calculator Guide-book (included) you'll find over 200 easy-to-follow business and personal situations described.

Stock #TI-BA II [Business Analyst] List \$45.....\$39.95



The Only Easy Owner's Guide to the Business Analyst-II

by Rick Fournier

Impress your client (or your boss) with instant 'what-if' calculations and precise bottom lines. Seminar leader Fournier takes you on a friendly, no-nonsense tour of ALL the BA-II's features.

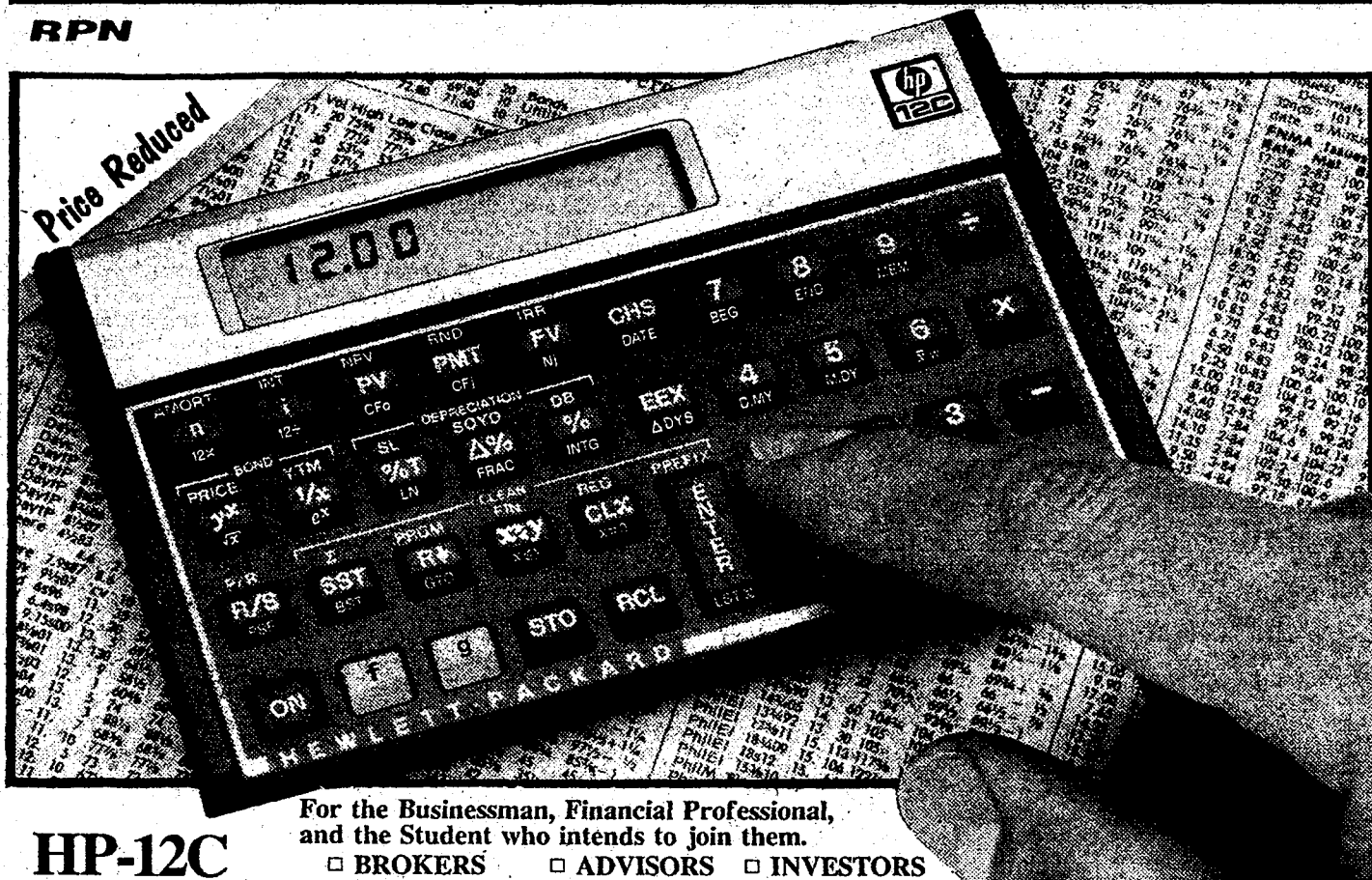
He sets up practical problems you'll understand, then works them out completely as examples. He explains the background with a nuts-and-bolts approach you can learn from, then shows you the keystrokes and even lists the display readouts you'll see along the way.

Stock #TI-668, BA-II Guide, 43p combbound.....\$10.95



HP-12C Business Calculator

RPN



For the Businessman, Financial Professional,
and the Student who intends to join them.

- ☐ BROKERS ☐ ADVISORS ☐ INVESTORS
- ☐ LESSORS ☐ BANKERS ☐ CONSULTANTS

HP-12C

Imagine Yourself ... Calculating what-if answers with ease—right on the spot!!! Answering your client's questions instantly without tables. Being first with IRR and NPV figures, to the penny! Freeing yourself from arithmetic, so you can do the real thinking.

YOU CAN—get yourself an HP-12C calculator and buy the book or tape 'SELF SEMINAR' listed below that fits your needs. Then invest a couple of hours study time. You'll be delighted with your own quick new power and ease.

FINANCE/BUSINESS: Solves for Number of Periods (n), Compound Interest Rate (i), Present Value (PV), Payment (PMT), and Future Value (FV); Amortization with Accumulated Interest and Remaining Balance; Net Present Value (NPV); Internal Rate of Return (IRR); Bond Yield and Price; Depreciation by Straight-Line, Declining-Balance, Sum-of-Digits (SOD); Odd-day's Interest; Simple Interest;

Percent, Percent Change and Percent of Total; Calendar Functions Beginning- or End-of-Period selection; 5 Financial Registers.

STATISTICS: Summations; 2-Variable Statistics with Means, Standard Deviations, Linear Regression, and Correlation Coefficient; Factorial.

PROGRAMMING: Up to 99 Steps; Program Review; Unconditional Branching; 2 Conditional Tests; Pause.

Yet it's **FRIENDLY**—a first-time calculator user can expect to solve amortization and cash-flow problems with the five top-row keys in just a matter of minutes!

Stock #HP-12C, List \$80 (Battery included)..... \$61.95

Stock #A-76BP [Replacement Battery, HP-12C] needs 3...ea \$8.99

Stock #H-718, HP-12C extra Owner's Handbook..... \$10.00

For Leather Cases, Desktop Stands, etc., see following pages.

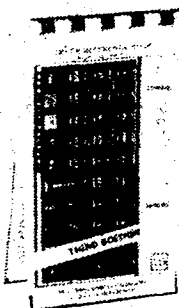
Quick Reference Guide for the HP-12C

by Evan Gost

This booklet is no bargain by the ounce—that's because it's been boiled down so it fits in your shirt pocket (even with cigarettes there), or in the 12C case. It is a training guide and ready reference which supplements your Owner's Handbook. The author also gives seminars on the use of the 12C, so he knows what you need.

Believe it or not, this little book contains methods and examples covering every function of the calculator—plus more examples to steer you through problems complex enough to require two-stage solutions. It's concise, complete and useful.

Stock #12-243, 12C Quick Ref, 36p softbound..... \$4.50



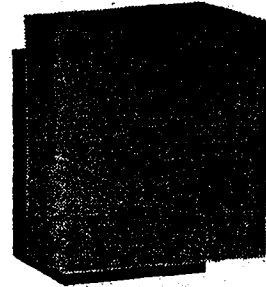
Mastering the HP-12C

by Rick Fournier

If you work in Real Estate or Finance, here's your own comprehensive audio-tape training program for home study. Stresses fundamental understanding of your calculator, not simply how to press buttons. This is the same course Rick has given in hundreds of seminars, including three invited presentations for National Association of Realtors national conventions.

It's really 3 courses: an Introduction, Problem Solving, and Programming. Each course has a manual and 4 tapes (total: 24 sides), with instructions, and tests you can send in for grading.

Stock #12-575 (Mastering HP-12C, Tapes) List \$80..... \$69.50



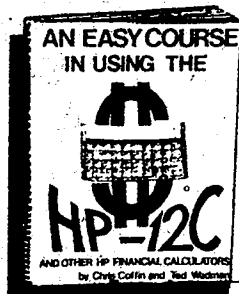
HP-12C Business Calculator

An Easy Course in Using the HP-12C

by Coffin/Wadman

Written just for you, to work at your own pace. You can relax, sit back and let these experts show you the way with lots of illustrations, example stories and quick reviews. This is a sometimes playful treatment, from the beginning, with many common applications in lending and investment analysis. It may also be used with other HP calculators, such as the 37, 38, 67/97 with pac software, and 41 with module software. HP #92234

Stock #12-260, Easy Course 12C, 255p wirebound.....\$21.95



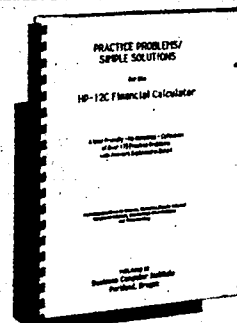
Practice Problems/ Simple Solutions for the HP-12C

by Rick Fournier

A friendly, no-nonsense collection of over 175 practice problems, with answers explained in detail.

Includes questions on Finance, Simple and Compound Interest, Uneven Cash Flow Analysis, and Programming.

Stock #12-681, Problems-12C, 96p combbound.....\$16.95



Practical Real Estate Financial Analysis: Using the HP-12C Calculator

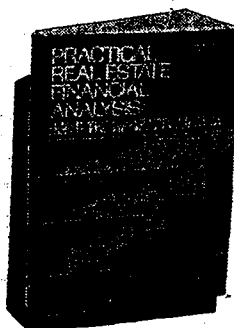
by Greynolds/Aronofsky

- Executives
- Appraisers
- Consultants
- Bankers
- Accountants
- Lawyers

Step-by-step, for self-study—all the fundamentals, plus analysis of creative financing arrangements. Arising in an SMU short course, this book spells out the methods you need, in detail.

Programs are included to extend the power of your HP-12C. Plenty of worked-out examples, plus sufficient drills and exercises to study for certification exams.

Stock #12-461, RE Financial Anal, 233p sftbnd, List \$24 ..\$21.95

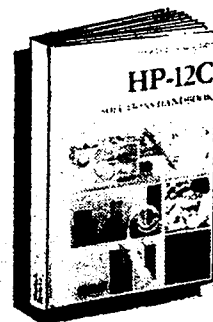


HP-12C Solutions Handbook

hp HEWLETT
PACKARD

Here are keystroke procedures from Hewlett-Packard supplementing your owner's handbook for applications to real estate, lending, savings, investment analysis, securities, forecasting, pricing, statistics, personal finance, Canadian mortgages, and more.

Stock 12-477, HP-12C Solutions, 152p softbound.....\$14.95

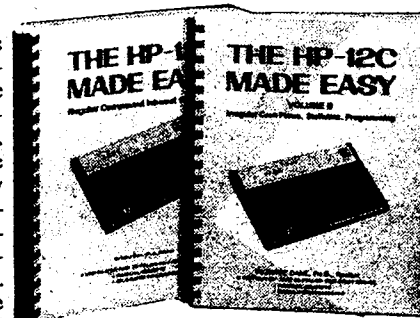


The HP-12C Made Easy by Edric Cane

Open the box, open this book, and you're in business—master teacher Edric Cane will not so much simplify it as make it obvious. A realtor himself, Cane chooses examples mostly from real estate. They illustrate all the compound interest features on the HP-12C for regular cash flows. No prior knowledge of the calculator is assumed (and this course can be used with the HP-37, 38 and 41 machines as well).

This book was born in seminars where thousands of students have successfully gotten understanding and power—seminars at UCLA and UC Berkeley and to boards of realtors, executives and investors from New York to Hawaii. It anticipates your questions and gives clear, complete explanations of concepts.

Stock #12-273, HP-12C Made Easy, 246p combbound.....\$19.95



VOLUME II: Complete your kit of 12C skills—learn how to handle IRREGULAR CASH FLOWS, STATISTICS and PROGRAMMING.

It's all quickly made clear to you by Edric Cane, the master teacher who wrote Volume I as well.

Vol I is not prerequisite to Vol II—but you'll need to thoroughly understand regular cash flows and simple arithmetic on the HP-12C.

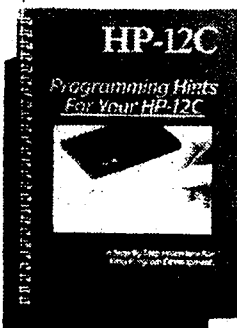
Stock #12-682, 12C Easy Vol II, 228p combbound.....\$19.95

Programming Hints for your HP-12C

Chary

A little simple, direct advice that can help you a lot. Use it as you study your Owner's Handbook—you'll quickly be able to get your HP-12C to do what you want it to. Success is sweet! Includes overlay.

Stock #12-328, Prog Hints 12C, 40p wirebound.....\$9.95

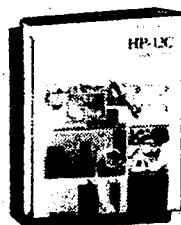


The HP-12C Training Guide

hp HEWLETT
PACKARD

New! A self-seminar from Hewlett-Packard that begins at the beginning and ends with you feeling comfortable with your HP-12C. Lots of examples, tests with answers, summaries and reviews will guide you. When you're finished, you'll be able to calculate mortgage payments, loan amounts, determine IRRs, write and run a program, and much more!!

Stock #90022, 12C Training Guide, 169p softbound.....\$14.95



Button Battery Replacement— Long Life



Like diamonds, these are 'forever'—No. 357 batteries, also called 10L14 or WL-14 or G-13 or RW-42, for *super long life*. They also replace 750 hour batteries marked LR-44 or RW-82 or A-76.

Fits HP-10, 11, 12, 15, 16 and TI-35, 55, 66 and many others.

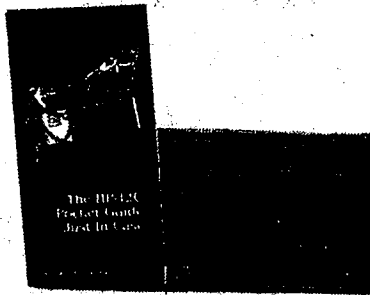
Stock #10-620 [Long Life Battery].....\$2.65

HP-12C Business Calculator

The HP-12C Pocket Guide: Just in Case by Coffin/Wadman

Jiffy HELP that fits in the pouch with your HP-12C—yet it is complete enough, with Descriptions, Instructions and Examples.

It covers every key, every type of problem, even guides you with (excellent) diagrams and illustrations in the authors' humorous style. It is quite well-written, plus you'll recognize the keyboard colors printed right in the instructions. Could you ask for more?



Stock #12-649, 12C Pocket Guide, 50p softbound..... \$4.95

Investment Securities Program Guide using the HP-12C

"With the programs in this book, I've got the answers my clients want while my competitors are still setting up the problem," says Stephen R. Willson, VP (Public Finance), Blunt Ellis & Loewi Incorporated; "I'm not always near my computer. But I always carry my HP-12C."

John L. Maginn, CFA, Exec VP and Treas, Mutual of Omaha Insurance Co, says, "I especially appreciated the organization of the *Program Guide* across the spectrum of calculations for securities, options, warrants/calls, and portfolio management. The book is concise, complete and comprehensive—and essential for the investment practitioner that loves the convenience and power of the HP-12C."

Stock #12-435, Investment Securities 12C, 147p softbd.....\$16.95



The Time Value of Money

Dave
Smith

Sit back and relax as you learn—a popular, powerful seminar, ready to listen to, 8 tapes plus an 82 page manual. Thousands of professionals have taken Dave's course at \$195.00—this costs less, and YOU KEEP IT! No prior calculator skills are assumed here—each subject is taught thoroughly, in depth, while keeping it light and easy to understand.

Dave Smith is a full-time broker with an engineering education. He'll show you how to do cash-flow analysis, analyze and compare investments and much more. You'll get the comfortable power with your HP-12C that you want for a competitive edge!

Stock #12-537 (Time Value of Money, Tapes) List \$145., \$139.95



Creative Financing Techniques Paper and Property

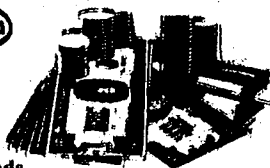
Dave Smith

Make large sums of money in the real estate and mortgage markets using these most profitable techniques. Get all the benefits of creative financial transactions with Dave Smith's proven methods.

Keyed to the HP-12C, this new 8-tape seminar follows Smith's successful Time Value of Money course. Here you'll become a creative expert with balloons, wrap-arounds, blankets, refinancing, rolling options, splits and fractions, buying with bonds, and more.

Get started! Wealth comes to those who hustle wisely. Includes manual.

Stock #12-819 (Creative Finance, 8 tapes) List \$250.....\$194.95

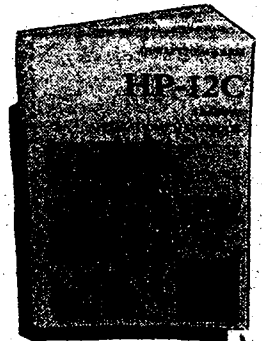


HP-12C Leasing Applications Handbook

hp HEWLETT
PACKARD

This is not a textbook. Hewlett-Packard shows you techniques which solve real problems that the leasing professional faces in today's marketplace. These practical applications include: analysis, structuring pretax/after-tax lease payments, lease vs. buy analysis.

Stock #90021, Leasing Applications, 117p softbound..... \$14.95



Cash Flow Analyzer

Chary
Software

Brokers: close more deals! Investors: know if a deal 'pencils out'! Sellers: be sure of your highest price.

Upgrade your HP-12C to a Real-Estate Investment Analysis Computer—in just seconds you can have 14 investment parameters to review, and you can change numbers for recalculations, on-the-spot (expenses, seller's interest rate, down payment, gross multiplier, price or income).

Includes program, handbook and color-coded keyboard overlay.
Stock #12-308 (Cash Flow Analyzer)..... \$19.95

Effective Monthly Payment Program

Chary
Software

Tell your customers the good news! With this program in your HP-12C you can give them their total monthly payment (PITI) before and after income tax savings—to the penny.

This is quick, simple, impressive salesmanship. You can give 'what-if' demonstrations of exactly how price, down payment, loan payments, property taxes and insurance affect their cost of ownership both before and after income taxes.

Program comes with manual of clear, professional explanations, instructions and examples—just key it in. Handsome keyboard overlay included.

Stock #12-594 (EMP Program)..... \$14.95

The Only Easy Owner's Guide to the HP-12C by Rick Fournier

Impress your client (or your boss) with instant 'what-if' calculations and precise bottom lines. Seminar leader Fournier takes you on a friendly, no-nonsense tour of ALL the HP-12C's features.

He sets up practical problems you'll understand, then works them out completely as examples. He explains the background with a nuts-and-bolts approach you can learn from, then shows you the keystrokes and even lists the display readouts you'll see along the way.

Stock #12-667, 12C Guide, 152p combbound..... \$16.95

Acrylic Calculator Stand

Brand New

Crystal clear ¼ inch plastic supports your HP-12C (or HP-11C, 15C or 16C) at just the right angle. Its simplicity and clear, non-skid pads give it a rich custom look.

Stock #998 [Acrylic Stand].....\$14.95



11

HP-17B Business Consultant

- Business and Finance
 - Amortization with table printout
 - Bonds; price, yield
 - Date arithmetic
 - Depreciation
 - Interest rate conversions
 - List-based cash flows
 - Mark-up as percent of price and cost, percent change, percent total
 - Number lists; edit, sort, store
 - Time value of money

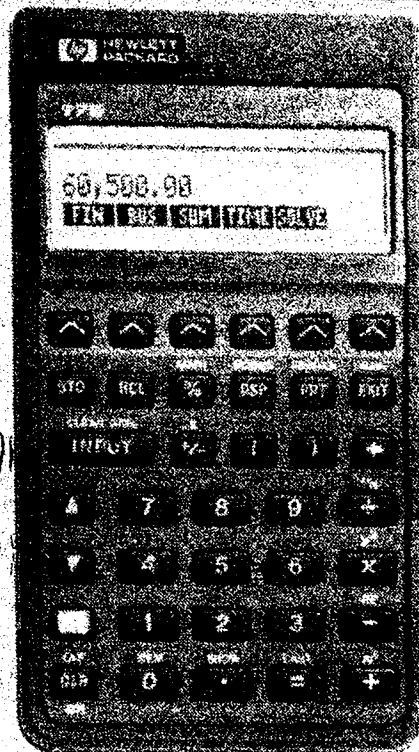
- Statistics and Math
 - Mean, standard deviation (1 or 2 variables),
 - Weighted mean
 - Forecasting/curve fitting
 - LN, LOG, e^x , 10^x , y^x , \sqrt{x} , x^2 , $1/x$

- Time and Dates
 - Appointments and alarms
 - Clock, calendar

**hp HEWLETT
PACKARD**



New



- Algebraic Entry System with Menus and Softkeys for Easy-to-Use Power
- State-of-the-art Vertical Design with one-piece keyboard/case (robot assembled) and the sleek lines of a new German car
- HP SOLVE—enter custom equations without programming
- Clock, Calendar and InfraRed Printer interface

This powerful calculator from Hewlett-Packard is an indispensable companion for all the business problems you face daily. Practical, dependable, the HP-17B is by far the most function-packed business calculator you'll find anywhere for the price.

The HP-17B's powerful set of functions includes time value of money,

amortization, discounted cash flows (NPV and IRR), interest rate conversions, percentage calculations, bonds, depreciations and more.

You'll use the HP-17B's list-based cash-flow and statistics functions to find solutions for a wide variety of business problems. Plus, you can store lists of data for quick retrieval, editing and calculating. And the HP-17B keeps a running total as you go.

You can analyze your sales by fitting them to four different curve models and use the HP-17B's forecasting application to predict future sales. In addition, this multipurpose calculator performs time calculations and reminds you of pending appointments.

And 6,500 bytes of usable memory mean you have enough room to store everything you need.

The HP-17B—it gets the job done right!

Stock #HP-17B [Business Calculator] List \$110\$84.95

An Easy Course in Using the HP-17B

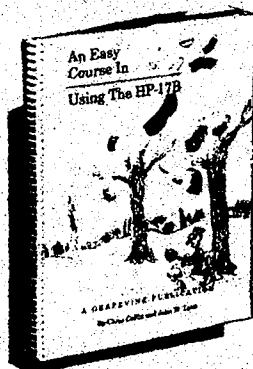
by Grapevine

A clear, straightforward explanation of your HP-17B. It's written in Grapevine's friendly style, so it's easy to understand, right from the first.

You'll learn to work with menus, lists, arithmetic—how to develop your personal list of equations. Then you'll explore the built-in financial equations, the 'hows' and 'whys' of loans, mortgages and investments—and make sense of them all with the Time Value of Money keys NPV, NFV, IRR, and MIRR.

Clear diagrams and explicit, worked-out examples from Savings, Real Estate and Banking will tie it all together for you, painlessly!

Stock #17-540, 17B Easy Course 92236A, List \$23.....\$21.95



Elegant HP Soft Leather Cases for your HP-17B and 27S

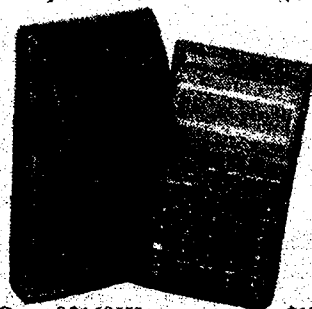
**hp HEWLETT
PACKARD**

Pliant cowhide, lined with a second layer of leather, in colors to match your briefcase. List \$19.

Stock #HP-897 [Black Leather Case 92169K].....\$17.95

Stock #HP-898 [Brown Leather Case 92169L].....\$17.95

Stock #HP-899 [Burgundy Leather Case 92169M].....\$17.95



Step-by-Step Books for Business Using the HP-17B



Stock #HP-544, Real Estate, Banking, Leasing 90019\$9.95

Stock #HP-545, Business, Finance, Accounting 90020\$9.95

Stock #HP-546, Marketing, Sales 90021.....\$9.95

Stock #HP-547, Personal Invest, Tax Plan 90022\$9.95

Stock #HP-548, Tech Applications Using HP Solve 90044..\$9.95

**For an acrylic or oak stand for your
17B, see page 51.**

The HP-19B Business Consultant II

John C. Dvorak of the *San Francisco Examiner* and *PC Magazine* calls the Business Consultant "The hottest new portable super calculator." He likes the printer, too: "Forget about RS-232 cables. This is the way to go. Watching a little printer magically print data from an infrared link is both eerie and exciting."



**HEWLETT
PACKARD**

**Data-Saving and Sorting
Power**

Now—the first business calculator
with **GRAPHICS**: scatter * plots, histograms,
curve fits, etc., and you can print them! Also
with **SCIENTIFIC** Functions: trig and hyperbolic.
More than 450 functions in all.

NEW



**Problem-Oriented
Power**

**Time-Managing
Power**

**Menu-Driven
Power**

Solve your special problems WITHOUT PROGRAMMING!

■ **USER DESIGNED POWER**—Hewlett-Packard asked people like yourself what they wanted in a finely-designed business calculator. Now you've got it. There are 2 straightforward keyboards—one has numbers and function keys while the other keeps your alphabet separate for typing ease—yet the Business Consultant II folds for your pocket. The revolutionary 4-line LCD screen shows you the numbers you're calculating with, or menu options to choose from. An infrared printer interface drives the optional printer, without bothersome cables.

■ **MENU-DRIVEN POWER**—the Business Consultant II is self-guiding, with Prompts in English, so you'll find it easy to use right from the start. You won't be referring to the manual very often.

Standard business formulas are already built in. Simply make a choice, then push a button.

To help you find your way around, menus—a series of headings—appear on the Business Consultant's four-line screen.

They make these functions push-button close:

- | | |
|-------------------------|-----------------------------|
| ■ Interest rates | ■ Statistics |
| ■ Time and appointments | ■ Internal rate of return |
| ■ Payment schedules | ■ Interest rate conversions |
| ■ Markup and margin | |

■ **PROBLEM-ORIENTED POWER**—the Business Consultant II is smart, so you'll only tell it the problem formulas, and it will figure out how to solve your problem for you. No more will you need to program your solutions; just tell your BUSINESS CONSULTANT what the problem is!

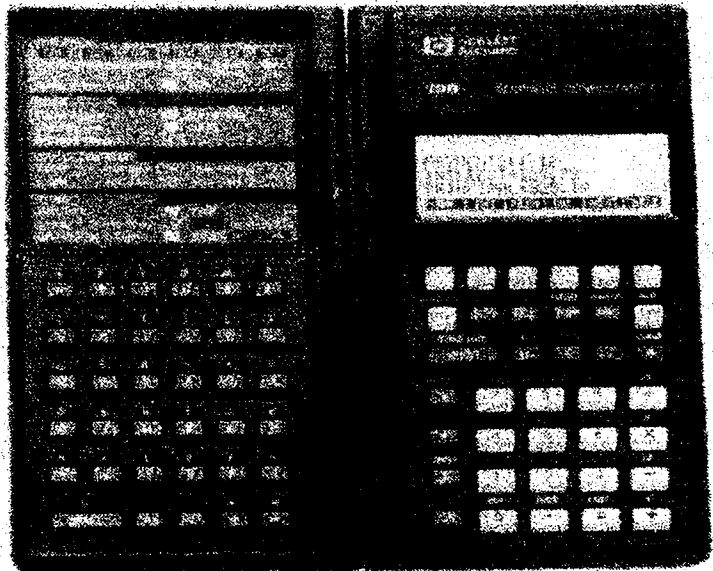
■ **TIME-MANAGING POWER**—the Business Consultant II is punctual, so it will remember appointments for you—and remind you with a beep. In addition to the 19B's calendar, there's a handy clock in it, and memory for your expenses, so you can note them right on the spot. With the clock you can keep track of billable time.

■ **DATA SAVING & SORTING POWER**—when you key in data to do statistical analysis (say, mean and standard deviation even on weighted data) your Business Consultant II remembers every data point, not just those sums it uses to calculate your statistics. Furthermore, it will sort your data points, so you can find their minimum, maximum, range, median, mode, and percentiles, or print them all out in sorted order.

The Business Consultant II does bond price/yield/depreciation, plus all the usual financial calculations, percent, compound interest, cash-flow analysis, calendar, statistics, factorial, trig, probability, and $\ln x$, e^x , y^x —all the functions you expect.

Its new power includes Interest Rate Conversions, Markup as % of Cost and Price, Net Future Value (NFV), Net Uniform Series (NUS), Clock Functions, Appointments and Alarms, Logarithmic and Exponential and Power Curve Fitting, Currency Conversions.

It calculates with Algebraic Logic, dealing with equations just as you



write them. It has 6500 bytes of RAM memory for your own customized menus, equations or data, and it remembers everything while it's turned off.

The Business Consultant II is 3 5/8" wide by 6 1/2" high and 5/8" thick when folded; open, it's 7 1/2" wide. Owner's Manual and batteries included.

Stock #HP-19B [Business Consultant II] List \$175 \$134.95

Step-by-Step Books for Business Using the HP Business Consultant II



Let experts help you set up your calculations so you can work with them most easily. These professional references include practical routines and tips for getting the most from the Built-in Menus as well as setting up Personal Menus for your specific profession. Order the ones that fit your work.

Stock #HP-544, Real Estate, Banking, Leasing 90019 \$9.95

Stock #HP-545, Business, Finance, Accounting 90020 \$9.95

Stock #HP-546, Marketing, Sales 90021 \$9.95

Stock #HP-547, Personal Invest, Tax Plan 90022 \$9.95

Stock #HP-548, Tech Applications using HP Solve 90044... \$9.95

Business Consultant Pocket Companion by Grapevine

Pocket-sized 80-page quick reference guide for the 18C. Friendly how-to instruction that fits in your calculator case or suit pocket—packed with clear diagrams, simple examples and user-friendly explanation.

A perfect supplement to the Grapevine Training Guide for the 18C.

Stock #18-443, 18C Pocket Companion, 80p wirebound \$7.95

Investment

DOS/PC Systems

Modelling Financial Time Series

by Stephen Taylor

Can you tell future prices
from the past?

Anyone interested in financial markets soon discovers that changes in prices are frequently substantial and always difficult to forecast. Here is the first major statistical text in 15 years to focus on financial time series.

Chapters 1 and 2 introduce financial markets, previous research and definitions. Chapters 3 to 7 cover construction of accurate models for daily returns.

Implication for traders of futures and options are explored in Chapters 8 and 9. A computer program is given for readers who want to model their own time series.

Stock #B-451, Time Series, 268p softbound.....\$42.95

Real Estate Accounting and Mathematics Handbook

2nd edition

by Robert Wiley

Do you analyze, manage, finance, appraise, market or develop real estate investment activities? Keep pace with the rapid technological advances in real estate analysis with this practical combination of accounting and mathematical materials.

Covers basic quantitative tools for managerial and financial accounting, Lotus 1-2-3 applications for RE finance and investment, IIP-12C calculator applications with examples of keystroke solutions.

Common sense how-to examples, plus full authoritative reference to method (you'll want it on your shelf).

Stock #B-522, RE Acctng/Math Hndbk, 380p hrdbrnd.....\$52.50

Winning on Wall Street Integrated Investment Management Package

Your complete set of 3 investor's programs—for the price of any one alone. Get your prices from Dow Jones with *Trader's Data Manager*. Use the *Trader's Forecaster's* sophisticated technical analysis system to choose your positions. Then follow your portfolios with reports from the *Trader's Accountant*.

Everything is automated, including sharing of data among these programs (so you only pay your quote vendor once). All 3 modules operate similarly so you learn them easier.

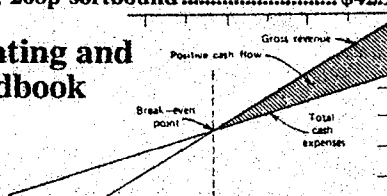
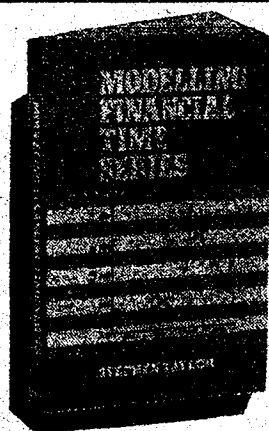
Accountant gives unique audit trail and tracks cash balance for multiple portfolios, so it's ideal for investment advisors or clubs, as well as those who reinvest dividends, at different prices each time. Prints 10 types of report, including one by tax lot.

Forecaster does various moving averages and oscillators, plus NVI, PVI, PVT, DVI, OBV, Point and Figure—enough built-in tools to satisfy the ardent technician.

Data Manager uses your PC's hi-res graphics mode to chart up to 190 time periods on a single graph—daily for 9 mos or monthly for 16 years—and does it fast. You can display prices, etc, for any moment on your graph.

PC/Compatible with 192K RAM, color graphics, modem, graphics printer. 3 Manuals.

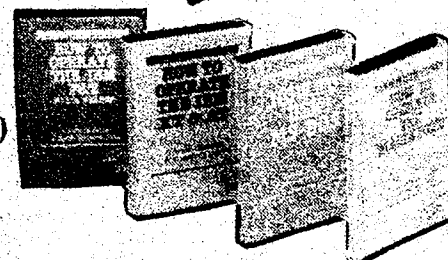
Stock #S-830 (Wall Street, 5%) List \$700.....Sale \$199.95



Audio Cassette Training Tutorials

- MS-DOS
- IBM PC
- XT & AT
- PS/2 (PC-DOS)

Fliptrack



Listen and Do—for hands-on learning the natural way! Just pop a cassette into any standard player and sit down at your computer.

It wouldn't be used from AT&T to Cal Tech and the Department of Agriculture to the Bureau of Prisons if it didn't work—quick and sure. This delivers more than you expect. Comes with highly useful Quick Reference Guide.

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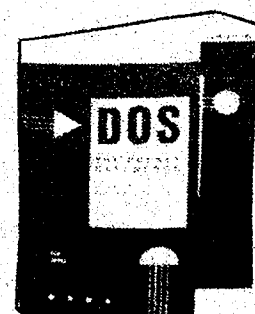
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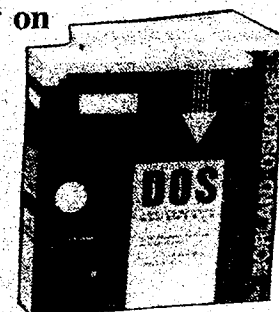
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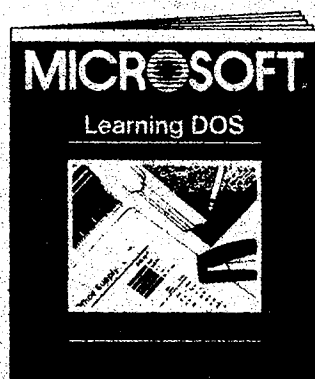
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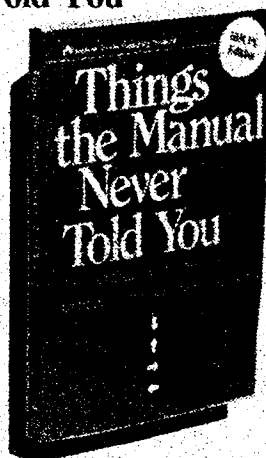
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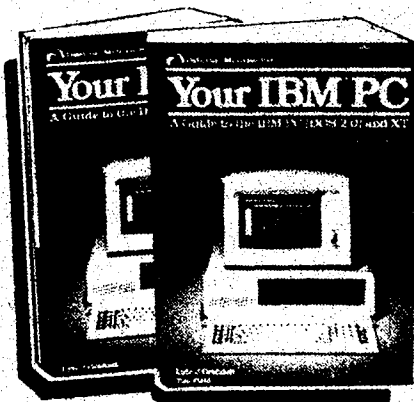
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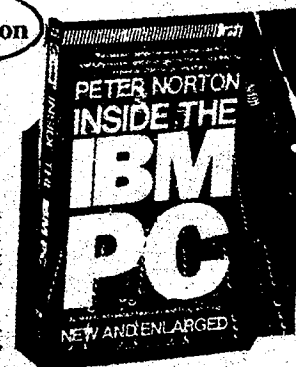
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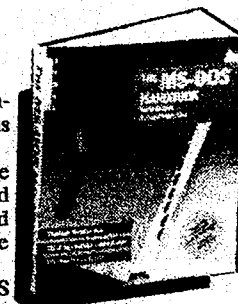
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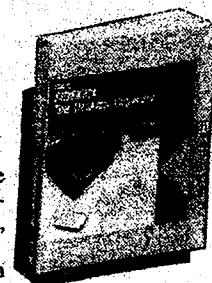
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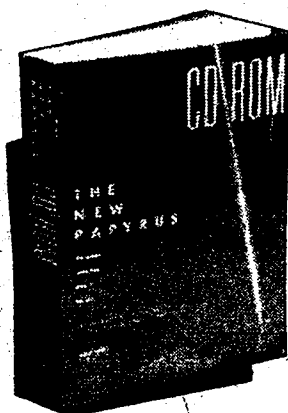
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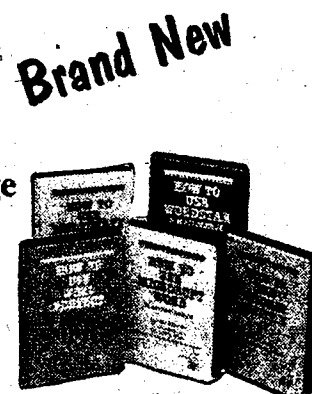
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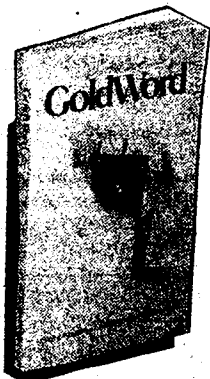
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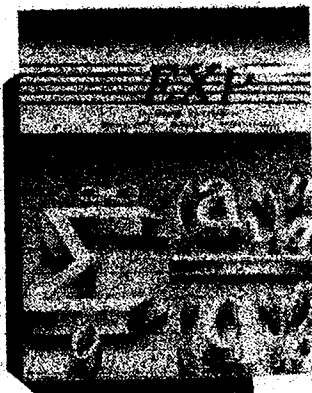
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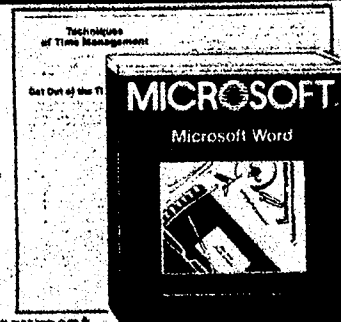
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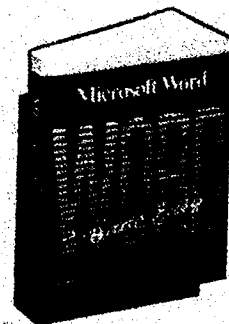
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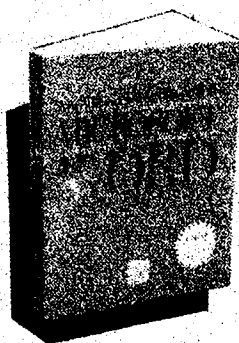
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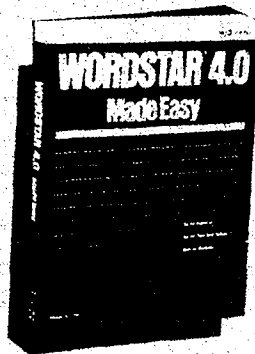


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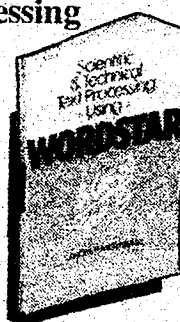


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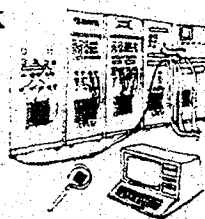
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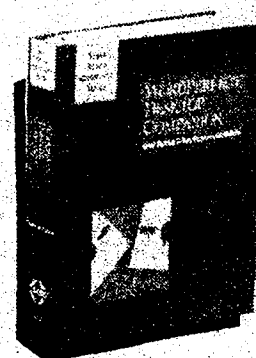
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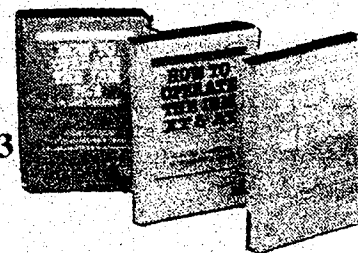
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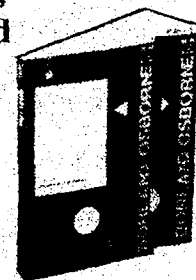
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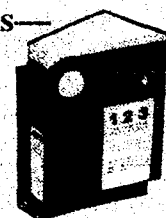
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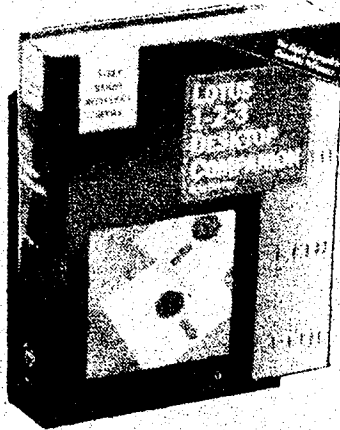
by Greg Harvey

A blockbuster—streamlined for when you're stuck—so that you turn directly to your topic, usually without checking the index.

Greg Harvey designed this reference so, when a function isn't working as planned, a command is producing unpredicted results, or a macro refuses to give up its bugs—you can solve your problem, quickly, and get on with your work.

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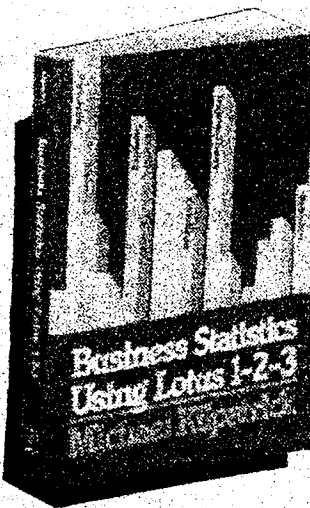
by Michael Kilpatrick

Manage your business and chart its growth—with this practical guide for everything you need to know to do statistical analyses using 1-2-3.

You can forecast sales, schedule production, budget labor, control procurement and inventory, recruit personnel, research your market, control finances and more.

Kilpatrick reviews standard concepts like correlation, regression, sampling, statistics, even decision theory. Plenty of step-by-step examples use 1-2-3 so you never have to go through all the grinding calculations.

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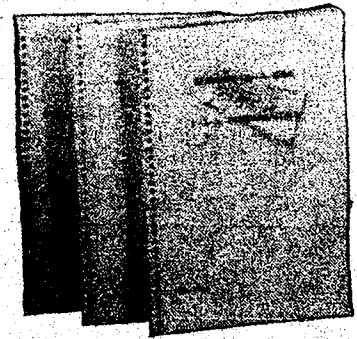
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by Gilbert/Williams

If you've never used Lotus 1-2-3 before and want to learn how, this book is for you. One of its authors has the technical background to teach corporate users, and the other author is a novice who had never before used the program. They write in everyday English and give step-by-step instructions. You will understand.

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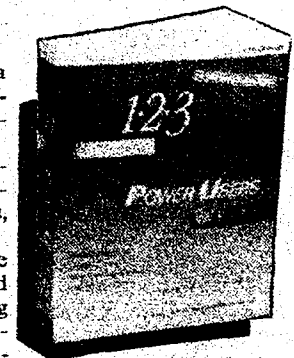
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Turn your intermediate 1-2-3 skills into a powerhouse of advanced tricks and techniques with the easy-to-use help of best-selling author Campbell.

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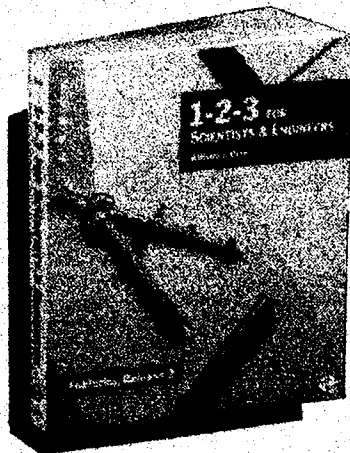
by William Orvis

Did you realize that ordinary 1-2-3 offers mathematical operators and functions comparable to those in FORTRAN or BASIC? It does them with 15-digit precision and easily prints them out in handsome charts and graphs, too.

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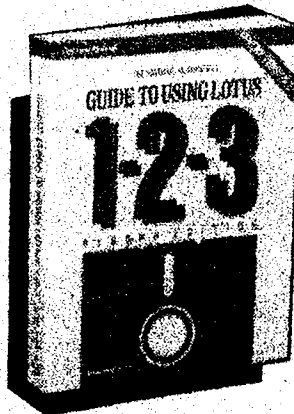
by Edward Baras

Reviewers said of the first edition: "Might be just what you need. . . describes basic skills as well as more advanced topics." *Lotus Magazine*

"... extremely useful as a way to understand the complexities of the Lotus system." *Booklist*

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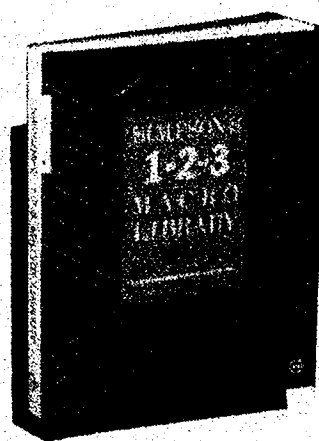
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Increase your productivity instantly!

Master the art of macro-building with this outstanding tutorial on planning, creating, storing and using 1-2-3 (version 2) macros.

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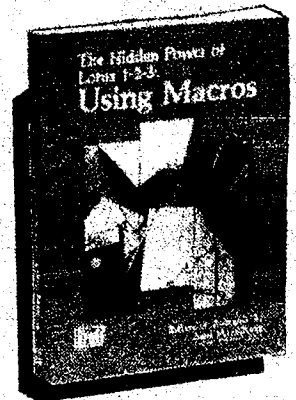
Using Macros The Hidden Power of Lotus 1-2-3

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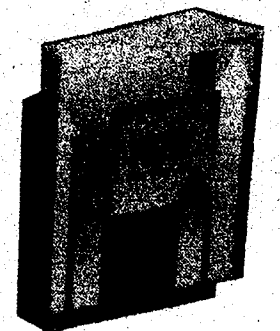
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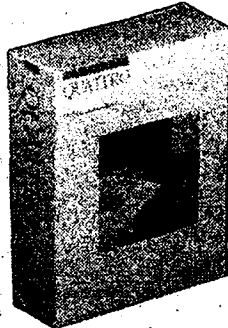
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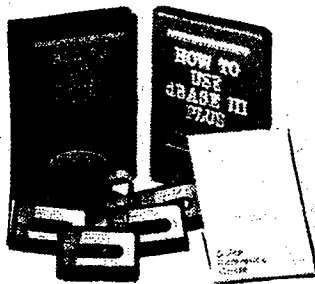
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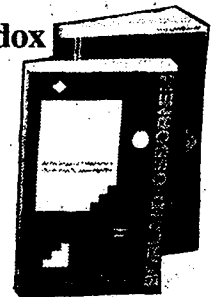
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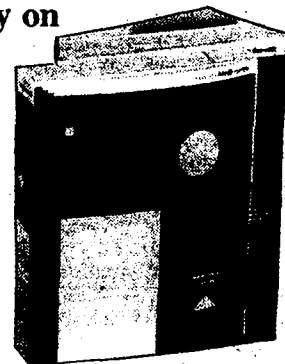
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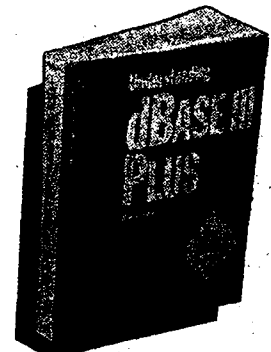


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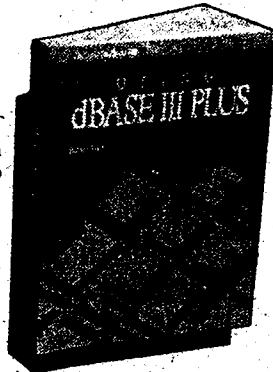
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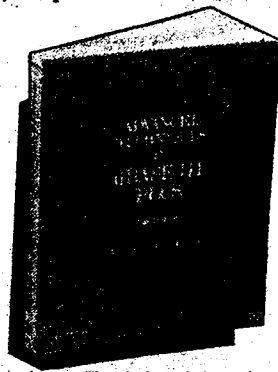
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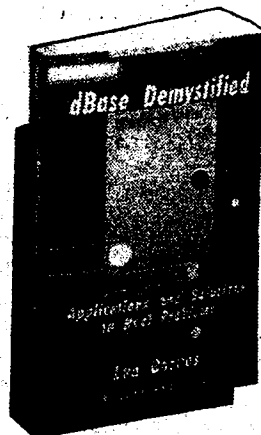
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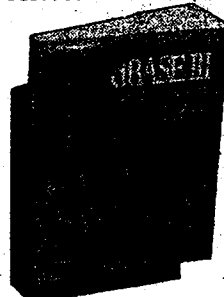


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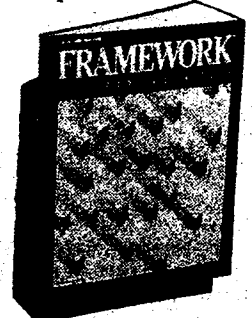
Operator	Data Types	Meaning
=	C, N, D	Equal to
<> or #	C, N, D	Not equal to
>	C, N, D	Greater than
>=	C, N, D	Greater than or equal to
<	C, N, D	Less than
<=	C, N, D	Less than or equal to
\$	C	Contained within
CAT		Catalog data base file
DBF		Data base file
DBT		Data base text file
FMT		Format file
FRM		Report form file
LBL		Label form file
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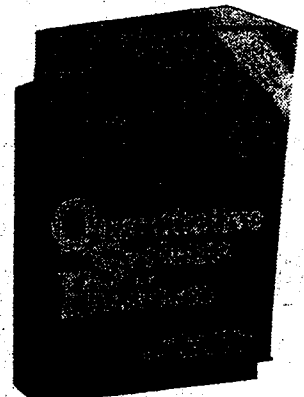
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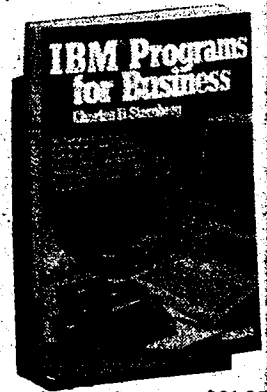


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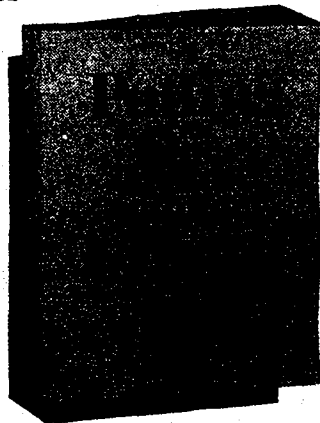


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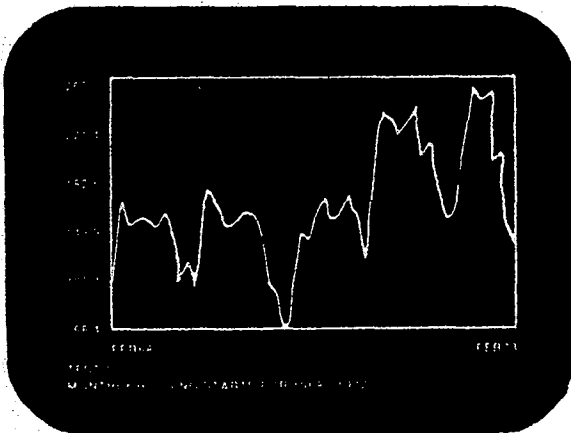
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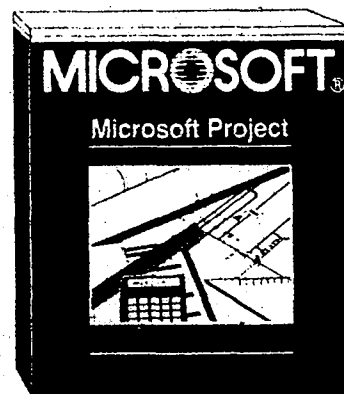
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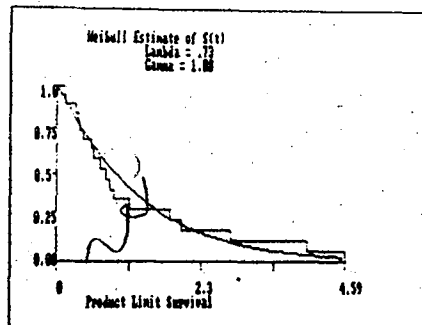
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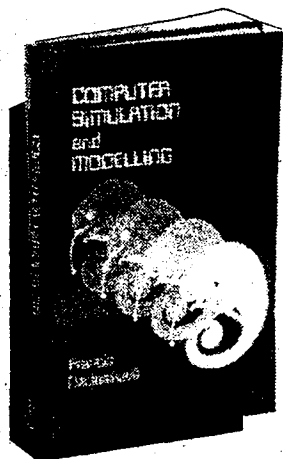
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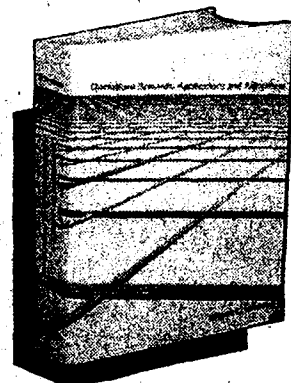
by Wayne Winston

Reader-friendly refresher and reference at a beginning or intermediate level of OR or Linear Programming.

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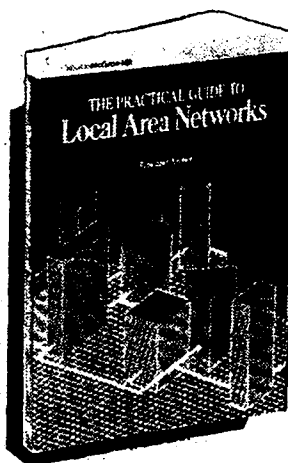
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Archer takes you completely through the planning process, pointing out the advantages and potential pitfalls at each step. Then he studies the 5 most popular LANs available for PC/Compatibles: 3 Com Ethernet, Corvus Omnet, Orchid PCnet, Novell Net Ware, IBM PC Network and IBM Token Ring.

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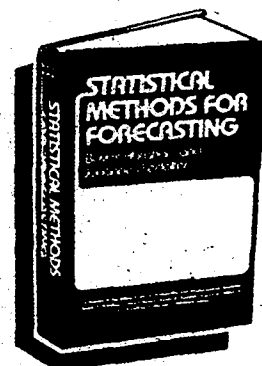
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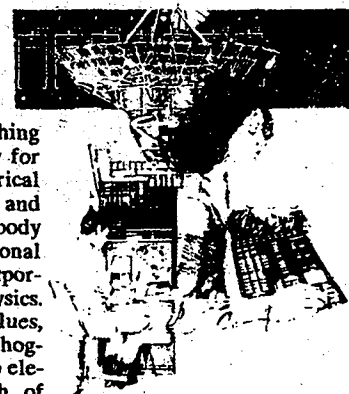


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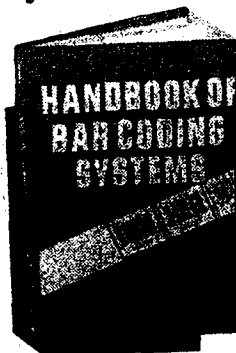
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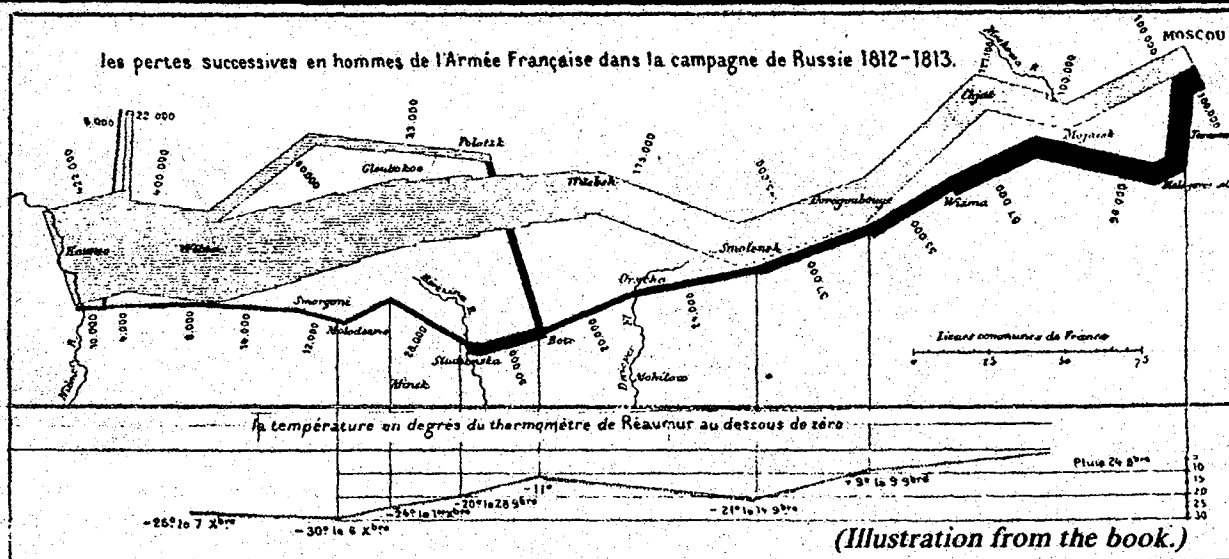
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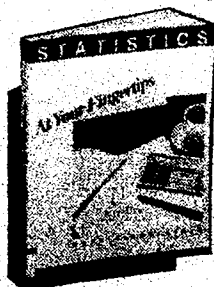
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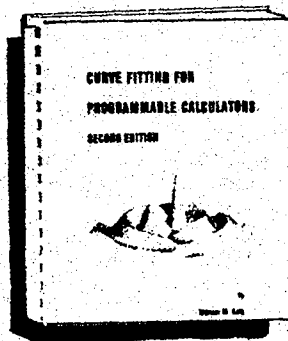
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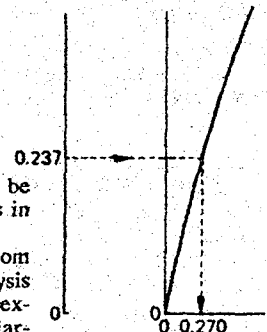
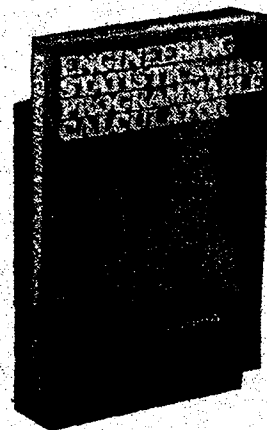
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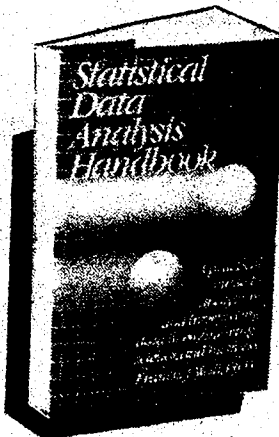
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Not a text on statistics—instead, this is a working tool that presents data analysis and interpretation in clear, concise terms. It's for you... even if you have NO formal training in statistics.

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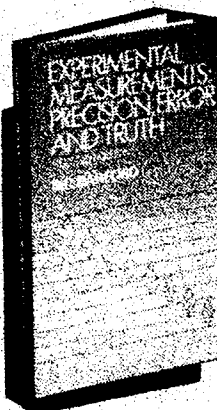
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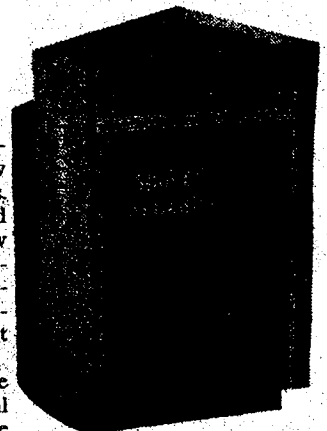
Applied Statistics

by Lothar Sacks

We are in luck—this English translation of the 5th German revision now joins the Russian and Spanish versions. It is very popular as a learning and reference source, with easy-to-follow recipes and cross-references for scientists, technicians, engineers, executives, students, physicians, and researchers in other fields. Abstract concepts and derivations are avoided.

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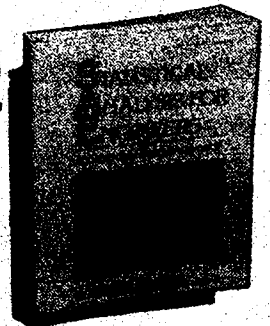
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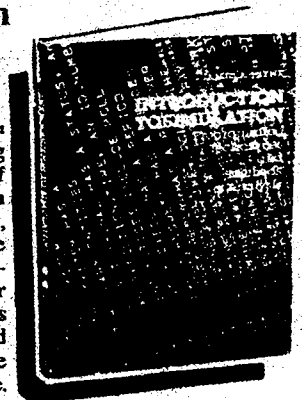
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by James Payne

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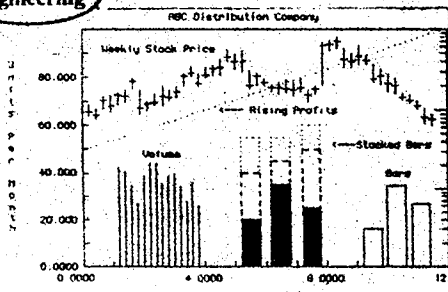
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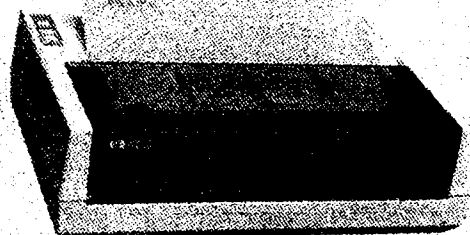
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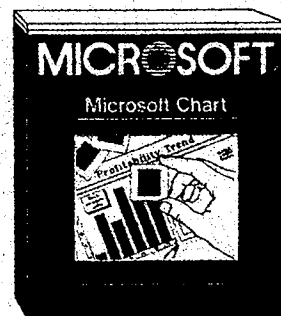
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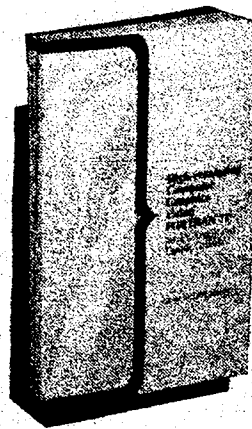
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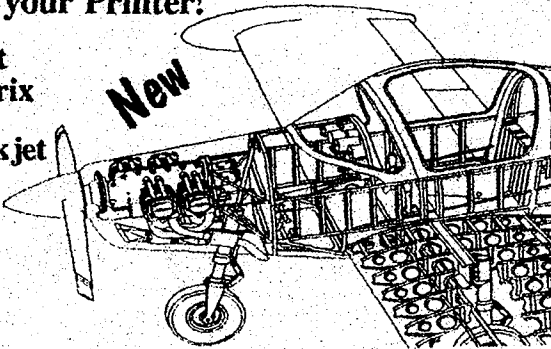


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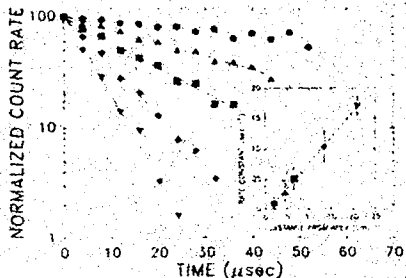
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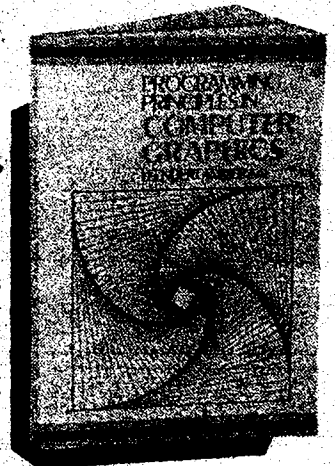
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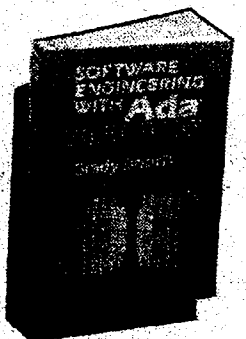


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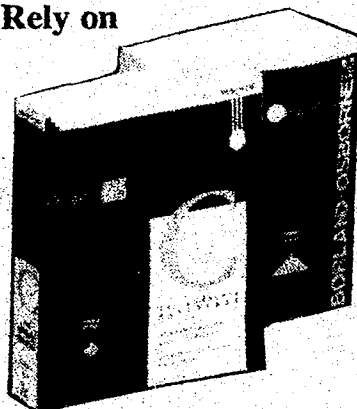
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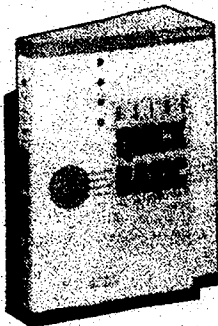
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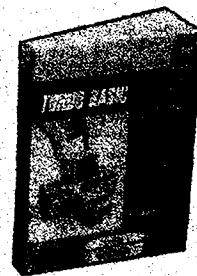
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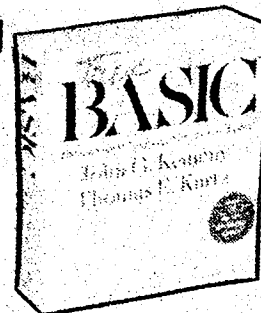
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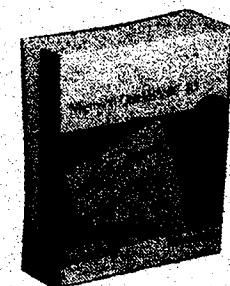
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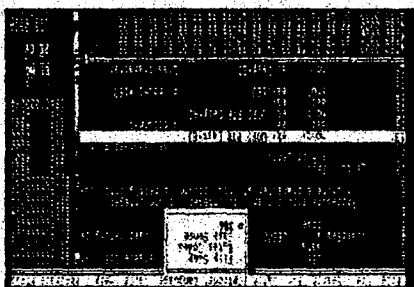


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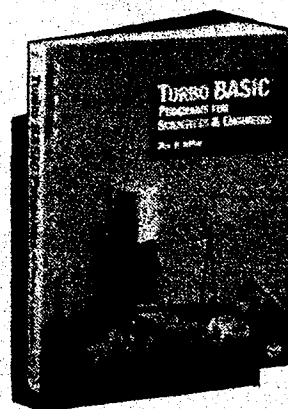
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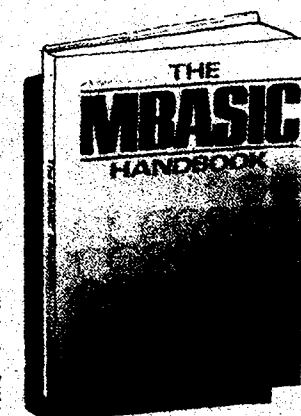
Fights 'manual obscurity' three ways! This is an easy-to-read, easy-to-use tutorial for Microsoft BASIC as well as the proprietary versions of BASIC which Microsoft wrote for most popular brands of micros (including Apple, Radio Shack and IBM).

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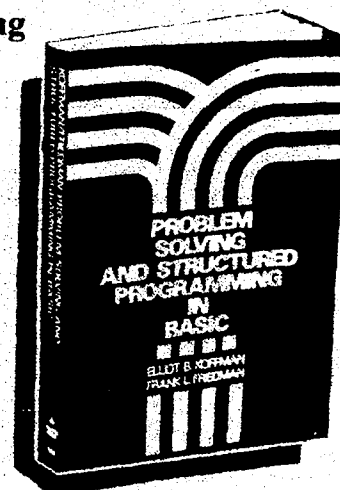


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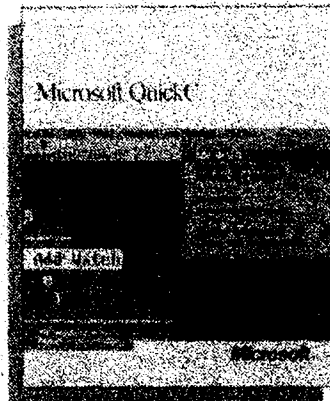
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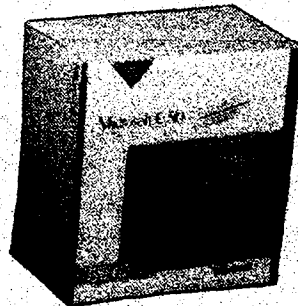
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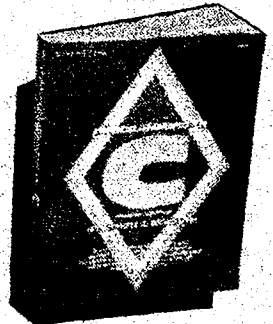
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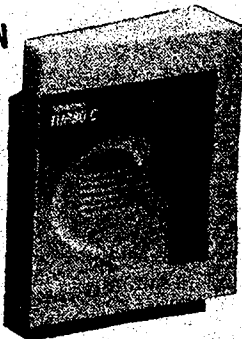
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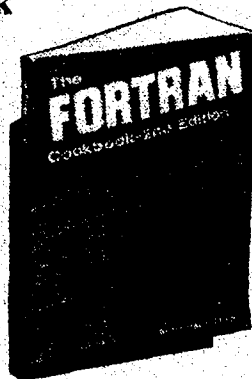
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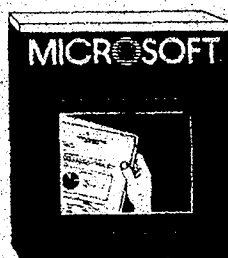
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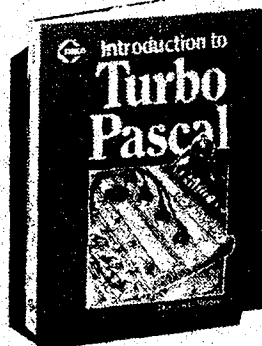


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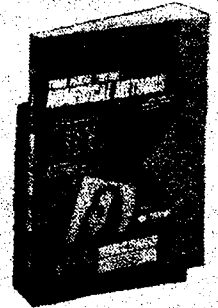


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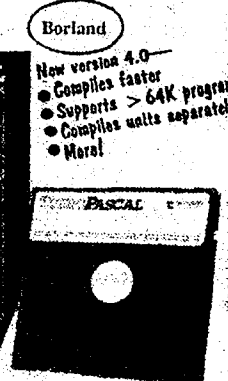
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See 8087/287 Math Coprocessors on page 91.

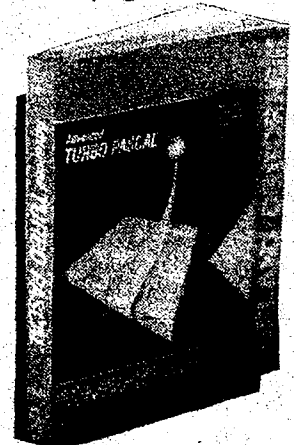


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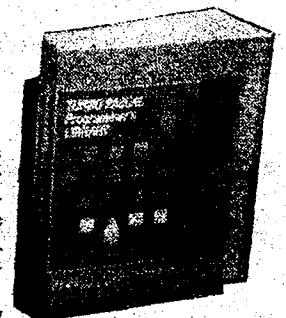


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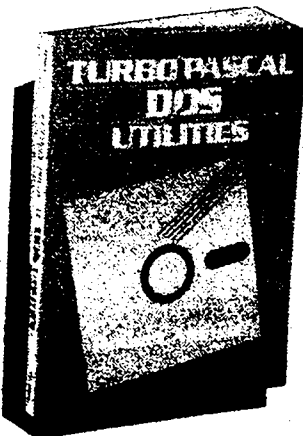
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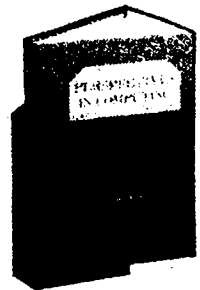
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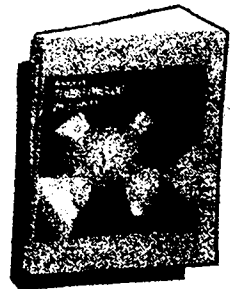


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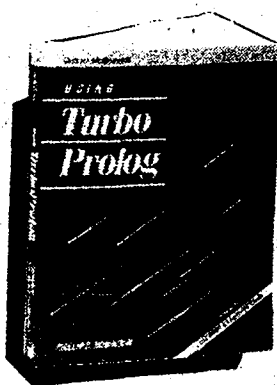
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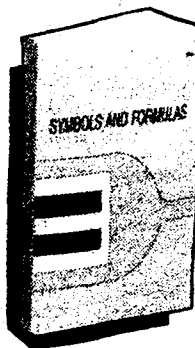
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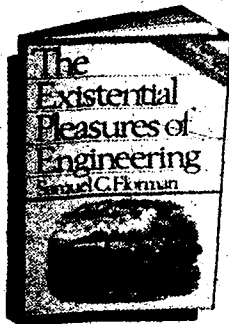
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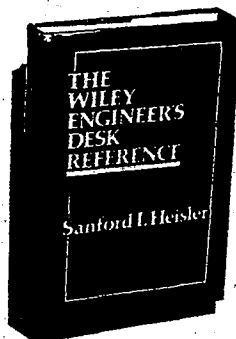
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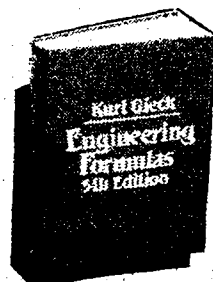
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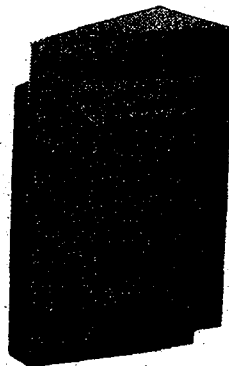
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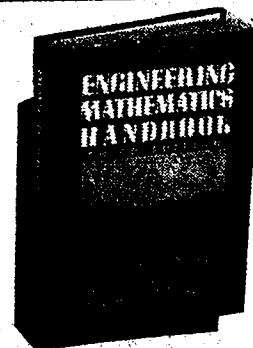
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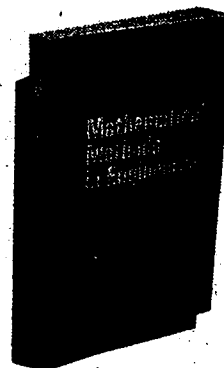
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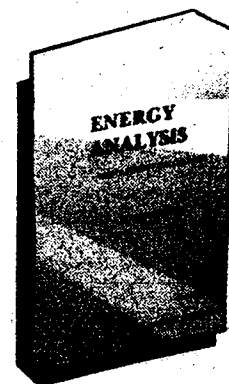
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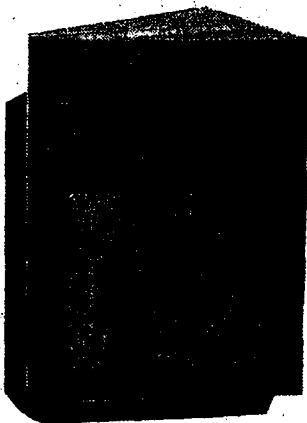
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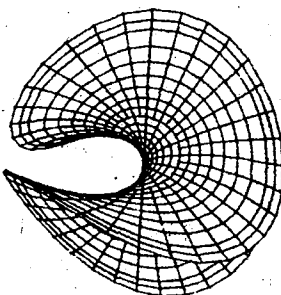
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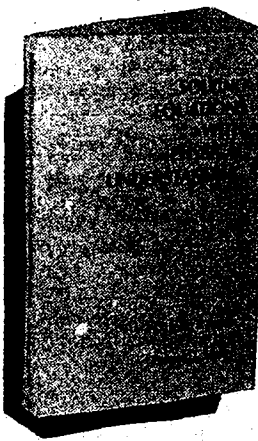
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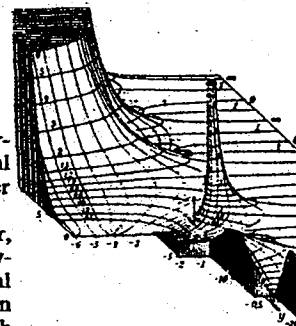
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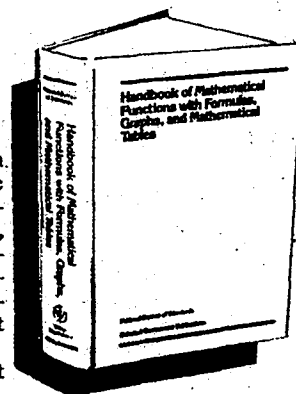
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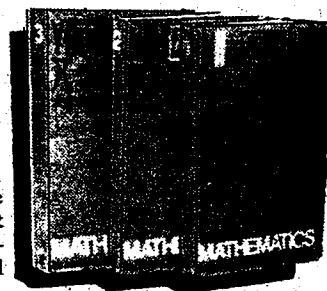
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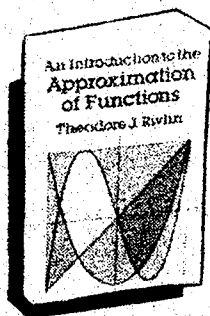
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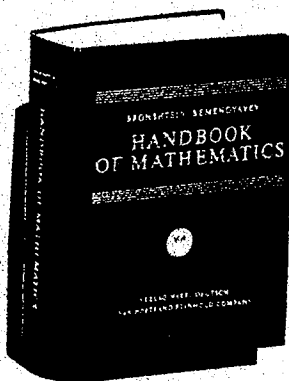
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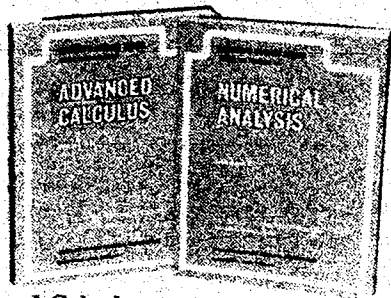
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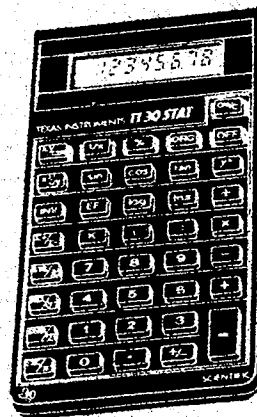
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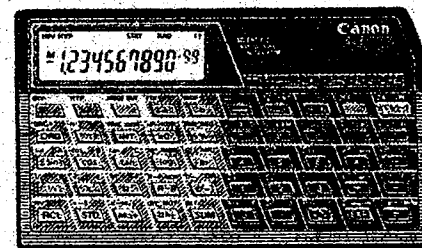
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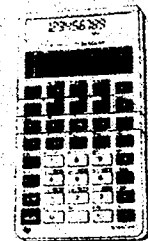
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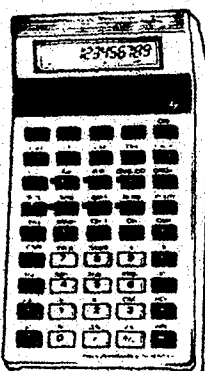
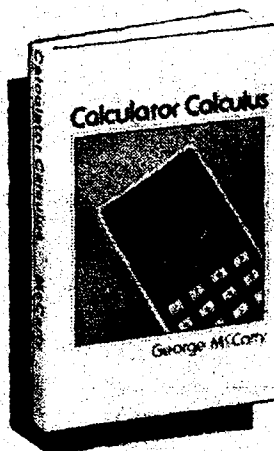
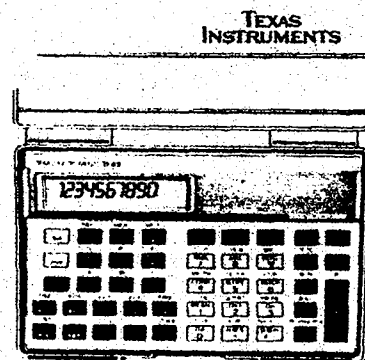
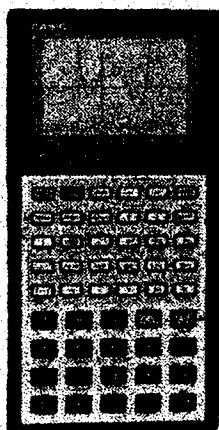
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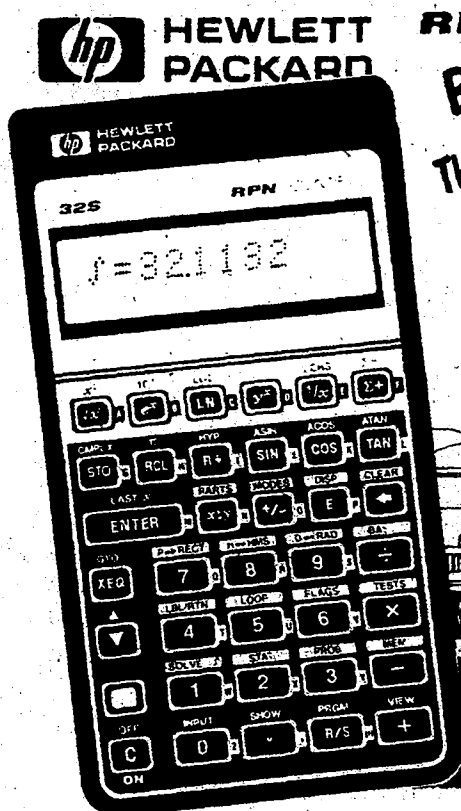
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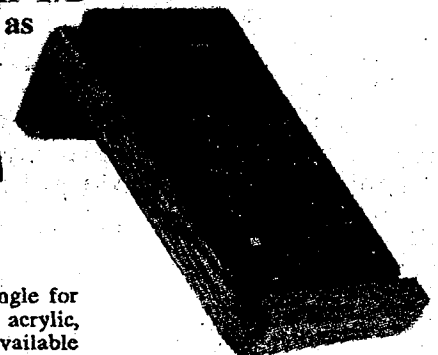
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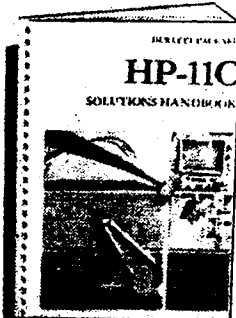
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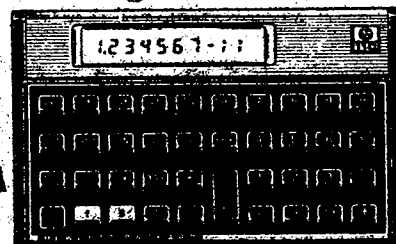
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Every function and feature of the HP-11C, plus:
SPECIAL FUNCTIONS: Root Finding (Solve); Integration; Complex Number Arithmetic.

PROGRAMMING: Up to 448 Steps; Up to 67 Data Registers; Up to 25 Labels; 12 Conditional tests; 7 levels of Subroutines; 10 flags.

MATRIX OPERATIONS: Real and Complex Matrix Arithmetic; Determinants; Inversions; Linear Systems; Transpositions; Norms and Residuals (it can invert an 8x8 matrix in 85 seconds and solve 7 equations for 7 unknowns in 22 seconds!). Batteries included.

Stock #HP-15C, List \$80.....\$61.95

Stock #H-719, HP-15C extra Owner's Handbook.....\$10.00

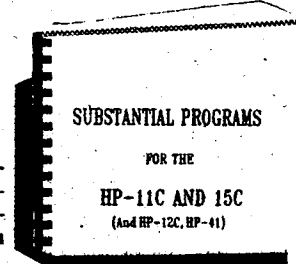
Substantial Programs for the HP-11C and 15C

by Thomas Beers

Want a Parabolic Fit or Multiple Regression coefficients? Confidence Interval estimates from stratified samples? Time Value of Money functions and Amortization Schedules?

You can have them all on your 11C or 15C, plus several Forestry and Surveying programs as well. Each program is fully described with a background discussion, formulas and worked-out examples. The financial programs are also given in HP-41 versions, with barcode.

Stock #11-462, Substantial Pgrms, 213p combbound.....\$19.95



HP-15C Advanced Functions Handbook



HEWLETT
PACKARD



Continues where the Owner's Handbook leaves off—tells you how your 15C performs its advanced functions and how to interpret their results. There's a whole section on using SOLVE effectively; another that shows you just how to work with the Numerical Integration key-function.

A third section covers calculation in the Complex Mode and shows you how to use SOLVE and to integrate complex functions with example applications. Section 4 fully describes Matrix Operations, with some application programs (like least-squares and eigenvalues/vectors) that you might use later.

The appendix thoughtfully surveys accuracy and error analysis.

Stock #90011, 15C Adv Functions, 221p softbound.....\$14.95

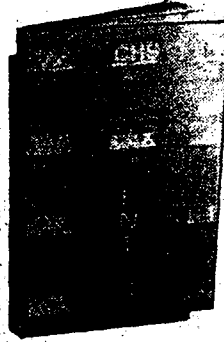
TI-95 Procalc Scientific Calculator

Enter
(translated from the French)

by Jean-Daniel Dodin

A hundred hints, suggestions, and techniques to help you get used to and use the RPN logic of HP calculators (especially the 11C and 15C). You're guaranteed to calculate and program faster and more reliably when you use these simple tips and subtle tricks.

Stock #11-329, Enter, 146p softbound..... \$5.95

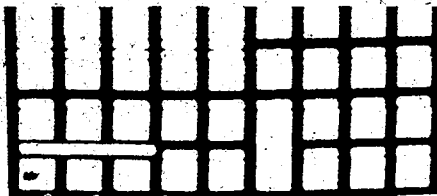


Programmer's Overlays

A 'must' if you program your Series 10 calculator. Each Programming Overlay has white labeling areas located over those keys where input and output data may be stored. Located above the remaining keys are windows which allow the user to view the existing function labels. Each overlay comes with a light adhesive backing to hold it securely in place.

Stock #15-641 [Pack of 5 Overlays]..... \$8.95

Chary Software

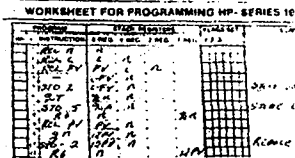


Worksheet for Programming HP 10-Series Calculators

Organize—work methodically—and be able tomorrow to understand what you did today. Compose your programs on these 11" x 17" worksheets—there are spaces for EVERYTHING: Labels, Instructions, Register Contents, Flag Status, Comments, Subroutines Called, Input and Output Variables, and Description. Not for HP-16C.

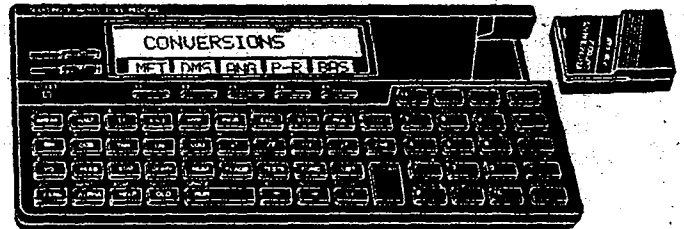
You'll be impressed by your own neat professional results.
Stock #10-596 [50 Series-10 Worksheets]..... \$3.95

Chary Software



TI-95 Procalc
TP's Top-of-the-Line
Scientific Programmable now has Menu Windows!

TEXAS
INSTRUMENTS



Giant Memory with 7200 program steps or 900 data registers or 6200 bytes of file space—in 8K of Constant Memory

Menu Windows give you fast access to an unprecedented 200+ functions—first you select a group of 5 windows from the keyboard, then you use 5 function keys to choose your window. This unsurpassed variety of built-in functions includes 2-variable statistics, probability, metric conversions, factors, hyperbolic trig, decimal/hexadecimal/octal arithmetic, and much more. Plus, these function keys are definable inside your own programs.

Options: additional 8K Memory Cartridge, Statistics Cartridge, Mathematics Cartridge, and more soon. You'll have ports to connect PC-324 Printer and CI-7 Cassette Interface.

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Stock #95-772 (Stat Cartridge) List \$50..... \$39.95
Stock #95-900 (Chem Eng Cartridge) List \$50..... \$39.95
Stock #TI-695 [8K RAM Cartridge] List \$50..... \$39.95
Stock #PC-324 [Portable Printer] List \$115..... \$89.95
Stock #AC-9201 [Adapter] List \$19..... \$16.95
Stock #TP-324 [Paper] List \$6..... \$4.95
Stock #CI-7 [Cassette Interface] List \$35..... \$26.95
Stock #PA-201 [AC Interface]..... \$6.95

Custom Software Modules for the TI-95 and TI-74

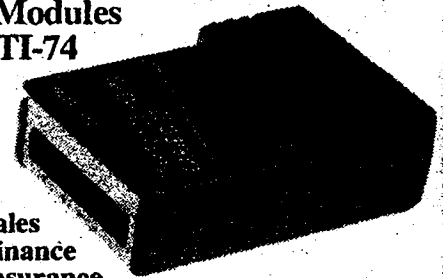
TEXAS
INSTRUMENTS

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- ☐ Manufacturing
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- ☐ Accounting
- ☐ Medicine
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We can integrate the formulas, programs, estimating procedures, books and other data that your people use frequently into one module that plugs into a TI-74 or a TI-95—you'll have a hand-held, programmable system exclusively designed for your applications.

Printouts without scratchpads, data without tables, answers without phone calls—all for under \$300! Imagine such a custom system for yourself—then send us your program. We also offer programming service—call for details.

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Contains news, programming hints and whole programs for TI-74 and TI-95 owners. For a sample copy, send a self-addressed business-sized envelope with 45 cents postage to us here at EduCALC—ask for 'TI Newsletter'.

HP-27S Scientific Calculator



Mastering the HP-27S

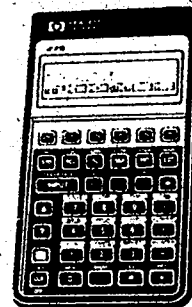
by Richard Harvey

Shows you how to get the job done—quickly and practically!

For instance, you may well want more support for Solver, so Harvey makes it clear, in plain English—you'll learn to use Stat lists in Solver, logical operations, S (Solve for), looping, precedence, and other powerful features just hinted at in your owner's manual.

Not just a how-to book, either—you'll keep this one close at hand as a ready reference for all HP-27S functions and operations.

Stock #27-623, Mastering HP-27, 110p combbnd, List \$18 \$15.95



An Easy Course in Using the HP-27S

by Grapevine

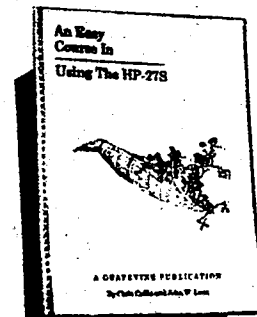
A clear, straightforward explanation of your 27S. It's written in Grapevine's friendly style, so it's easy to understand, right from the first.

This Easy Course starts with the basics, with lessons on keyboard operation, arithmetic and how to move through a menu. Next it explains the built-in equation-solver (including all its 'smart' features). Then you'll put it all together in a series of commonly encountered, practical problems (with complete solutions).

You'll also get extensive training in personal finance using the TVM (Time Value of Money) menu, including concepts and methods of financial analysis.

Includes clear diagrams and explicit examples.

Stock #27-542, 27S Easy Course 92236C, List \$23 \$21.95



■Math

Logs, exponentials, trig, hyperbolics
Permutations, combinations, factorials
Conversions for angles, hours
Coordinate transformations
Base conversions, arithmetic

■Finance

Time value of money
Amortization with table printout
Percent change

■Statistics

Mean, standard deviation (1 or 2 variables)
Number lists; edit, sort, store
Forecasting, curve fitting

■Time and Dates

Clock, calendar
Appointments and alarms



**HEWLETT
PACKARD**

■Science and Business, both in one unique calculator

■for Technical Students or Professionals in Management Positions

■Algebraic Entry System with Menus and Softkeys for Easy-to-Use Power

■State-of-the-art Vertical Design with one-piece keyboard/case (robot assembled) and the sleek lines of a new German car

■HP SOLVE—enter custom equations without programming

■Clock, Calendar and InfraRed Printer interface

With one powerful calculator, you can handle the technical aspects of your profession, as well as the financial analyses of your position. Use logarithms, hyperbolics, trigonometry, base conversions and arithmetic. Then move easily into time value of money, amortization, and calculations involving days and dates.

You'll find yourself as well prepared for a session with the controller as with the R & D team. This is an essential tool for the technical manager.

Statistics, forecasting and curve fitting have never been so easy. Your data is kept in lists so it's easy to review and edit anytime the situation changes. And you can store any number of lists in the 6.7K bytes of memory available to you. Work with one- or two-variable statistics, four different models for curve fitting; keep running totals as you go.

Any excuses for being late go right out the window with up to 10 alarms to remind you of pending appointments. You'll be sure of being in the right place at the right time.

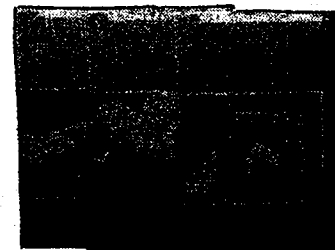
No more conversion tables, either. Push one key to switch between any of four number bases, then go on with your arithmetic operations.

Stock #HP-27S [Sci/Business Calculator] List \$110 \$84.95

Step-by-Step Solution Books for the HP-27S



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Books for Business

Stock #HP-544, Real Estate, Banking, Leasing 90019 \$9.95

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Advanced Technical Solutions using HP Solve

Learn 2 new SOLVE functions, perform numerical differentiation and integration, carry out complex number functions and vector operations, find GCDs and LCMs, perform geometry functions, series expansions, matrix operations, factors and primes, and coordinate transformations.

Stock #HP-548, Technical Applications 90044 \$9.95

Accessories for your HP-27S—

HP Leather Cases are on page 12

Acrylic or Oak Stands are on page 51

HP-28S Scientific Calculator

**The Unexpected 28S
Is This Your
Next Calculator?**

**NOW—New model 28S
has giant 32K RAM memory.
Plus enhanced memory management,
graphics, and programming support,
and it's 56% faster!**

**SEPARATE
KEYBOARDS**

**ON-SCREEN Menus
and SOFTKEYS**

PROGRAMMABILITY

**SYMBOLIC ALGEBRA,
even
SYMBOLIC CALCULUS**



A first report:

If you're at all like us, this is what you've been holding your breath for (in the calculator direction, of course). Just a few years back, calculators were exciting. Maybe once a year there was a new model that could do startlingly more. Not recently, however.

Now here's our next tantalizing toy and technical tool. We haven't got room here to do it justice, there are so many interesting features and specs for it. We'll sketch it for you, though...

You'll have **ON-SCREEN MENUS** and **SOFTKEYS**, just like a PC—sensible access to hundreds of functions (128K ROM and 32K RAM) and high-level problem solving. Gamma function, random numbers,...

Complex numbers, matrices, vectors, lists, and algebraic expressions can be viewed, edited, and then used in calculations just as easily as ordinary numbers. Dot and cross products, determinant,...

You can choose **RPN LOGIC** for calculations **OR** use the built-in **ALGEBRAIC LOGIC**—with RPN its 4-line display shows your stack **OR** you'll see your equation displayed just as you would write it. You choose.

You'll do no programming to get solutions, either—it will solve for any unknown variable anywhere in your equation.

It will convert between different unit systems, too. The values of 120 units are built-in, and you can add your own. Are you ready for all this right now?

You'll use **SEPARATE KEYBOARDS**, the right hand one for **NUMBERS** and the left for **LETTERS**. Later, you can fold it to pop into your shirt pocket.

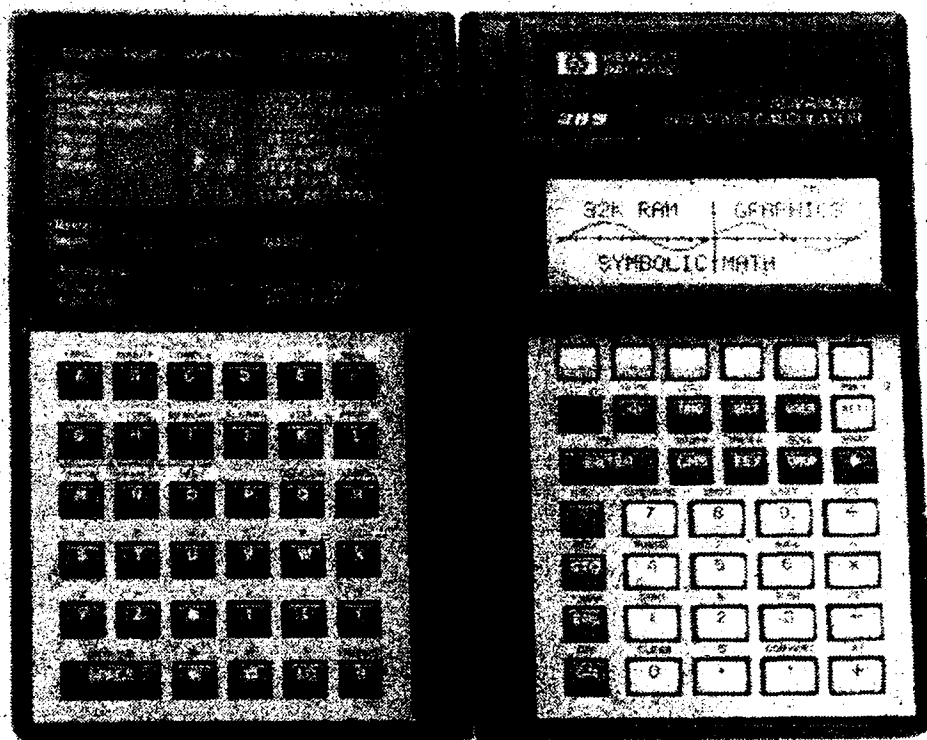
You can plot graphs of your functions, even two at a time. Then place the cursor near where the graphs cross and press a key to calculate the x-value of the crossing, correct to 12 digits. We were amazed.

Scatter plots of your statistical data are easy too. Imagine showing all this to your colleagues!

Plotting. Plot mathematical functions and statistical data; set plot scales, axes, and center; display graphics.

Statistics. Single- or multi-variable statistics; summation, deletion, mean, standard deviation, total, maximum, minimum, variance, covariance, correlation. Linear regression and predicted value. Normal, Student's t, F, and Chi-square distributions.

A major leap in technology—you'll do **SYMBOLIC ALGEBRA**, even **SYMBOLIC CALCULUS**. You'll manipulate unknowns and letters as well as numbers, even differentiate functions to get their derivative functions. This is the first small machine



capable of doing symbolic mathematics, like MACSYMA on a mainframe, and it can be yours right now.

Symbolic Algebra. All real and complex number functions; expand, collect terms; expression editor; subexpression recall and substitution, symbolic solve; quadratic equations.

Calculus. Symbolic differentiation of arbitrary expressions; symbolic integration of polynomials; numerical integration of arbitrary expressions; Taylor series.

Programmability.—You can use all of the built-in functions with your own menus and softkeys, plus sophisticated utilities.

Binary Integer Operations. Decimal, octal, hexadecimal, and binary bases; arithmetic; variable wordsize; bit shift and rotate, byte shift and rotate, arithmetic shift; logical operators; floating-point/integer conversion.

Programming Features. User-defined functions, local variables, indefinite nesting and recursion, IF... THEN... ELSE, FOR... NEXT, DO... UNTIL, WHILE... REPEAT; halt, continue, abort, single-step, pause, read key, beep, display, error message, error number; set/clear/test 64 user flags, conditionals, logical operators, object type.

New Features for the 28S.—hierarchical directories for your own custom menus and input menus. Program support includes automatic spacing of arithmetic operators, program formatting, and error messages which identify commands. Number list arguments are automatically evaluated and arrays and lists can be symbolically addressed.

Additional argument types. POS, +, AND, OR, NOT, XOR, CROSS, PRVAR, RND.

But you can't see the best part—Your HP-28S comes with a built-in InfraRed Printer Interface. This means no wires or cables to your portable thermal printer—just point your 28S at it and press a key for an instant record. Have your printer now, or get it later—your choice.

The HP-28S lists for \$235. It will be the world's standard for years to come. You're sure to get one sooner or later. Why not now? We have them in stock, and we'll give you a discount savings of \$55 now.

Hewlett-Packard has been the choice of engineers and scientists for the past 15 years, ever since the introduction of the HP-35. HP is simply the best. Yours will last you for years to come.

It comes fully supported with its 336 page *Owners Manual* and its 352 page *Reference Manual* (which has a complete dictionary of all functions), and batteries.

Stock #HP-28S [Sci/Professional Calculator] List \$235...\$175.95

HP-28S Scientific Calculator

Used HP-28Cs

Special Bargain!



The HP-28C is basically an HP-28S with only 2K of memory. These units are all less than a year old and come complete with 2 manuals. They work perfectly—we guarantee them for 90 days.

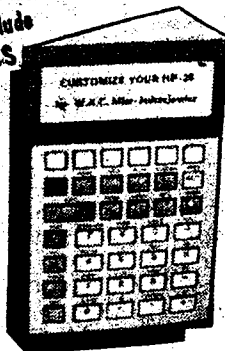
Supply is definitely limited, so order yours right away if you want one—it's first come, first served.

Stock #28-996 [Used HP-28C].....\$79.95

Customize your HP-28

by Wlodek Mier-Jedrzejowicz

Revised to include
the HP-28S



Make your 28 behave exactly the way you want it to. Here you get information and ideas that are not in the manuals.

The first 2 chapters show you how to do some fairly simple things, like setting modes and creating variables. Chapter 3 gives ways to use the special instruction SYSEVAL.

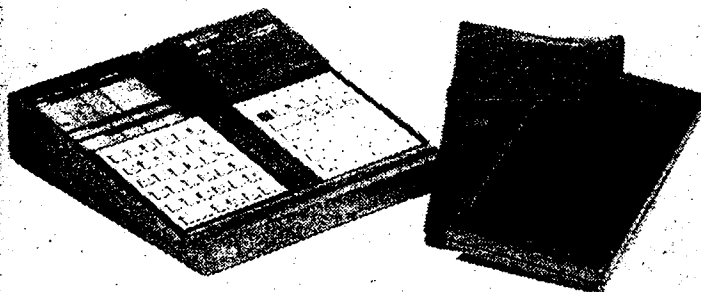
You'll learn about machine-language programming in Chapter 4—you can really take control. A final chapter shows you exactly how to customize by modifying the hardware. Appendices discuss differences between HP-28 models.

Now you'll be able to make your HP-28 act more like a FORTH computer or else more like an HP-41.

Stock #28-557A, Customize your HP-28, 100p softbound...\$16.95

Supplement sheets for the original version to bring it up to the level of the revised edition.

Stock #28-557S.....Free



For your HP-28S—

Need an InfraRed Printer, a Desk Stand or a Leather Case? You'll find them on page 14.

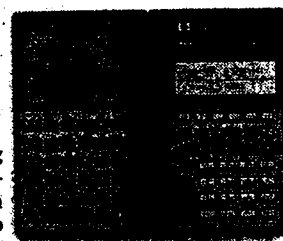
Interface your 28S to your PC! See HookuP on page 49.

HP-28 Insights

by William Wickes

New

Guide to Understanding,
Applying and Programming
the HP-28C and HP-28S



If you want to do serious programming on the HP-28, you'll find this indispensable. It contains over 100 programs, with more than half the book applicable to programming—and Wickes is the author of the respected book *Synthetic Programming on the HP-41C*.

Introductory chapters cover History, RPN, Objects and Execution, the Stack, Variables, and Problem Solving. Next you'll learn about the Solver, User-Defined Functions and Symbolic Math. Then you go to work on Program Development, Arrays and Lists, and Plotting. Available mid-May; order now for earliest shipment.

Stock #28-616, HP-28 Insights, 340p wirebound.....\$24.95

An Easy Course Using the HP-28S

by Grapevine

Looking for a clear, straightforward explanation of the powerful HP-28S? This is your book! It carefully inspects all the wonderful features of this machine, giving you the pictures and practice you'll need to make the HP-28S your favorite calculating tool.

First, several chapters bring you up to speed on the mechanics of operation, and show you exactly which keys you need to control and command the display, the stack, and the menus. You'll get lots of practice problems and explanations designed to train your fingers for action.

Then you go straight to the heart of the machine, explore all the different information 'objects' and how you can manipulate them, combine them, name them and (best of all) think about them. You'll see how HP's well-known stack-oriented arithmetic becomes the engine behind all this math power, and soon you'll be harnessing it for yourself!

Then in brief separate discussions, this Easy Course touches upon specialized topics such as symbolic algebra and calculus, plotting, and programming.

It's all in Grapevine's familiar 'Easy Course' format, with Robert Bloch's illustrations—a book designed to let you work at your own speed (and your own speed will soon amaze you)! It's always a pleasant surprise that learning about a calculator can be this satisfying—it can be, when the right explanations transform a mysterious machine into a friendly and powerful tool.

Stock #28-532D, HP-28S Easy Course 92236D, List \$23....\$21.95

Stock #28-532, HP-28C Easy Course, 233p spiralbound.....\$21.95

HP Step-by-Step Books for the HP-28S and HP28C



Let experts help you set up your calculations so you can work with them most easily. These professional references include practical routines and tips for getting the most from the Built-in Menus as well as setting up Personal Menus for your specific profession. Order the ones that fit your work:

Stock #28-602, Elec Engineering 90103 (28S only).....\$9.95

Stock #28-603, Algebra & College Math 90101.....\$9.95

Stock #28-604, Vectors & Matrices 90105.....\$9.95

Stock #28-605, Calculus 90102.....\$9.95

Stock #28-606, Probability & Statistics 90104.....\$9.95

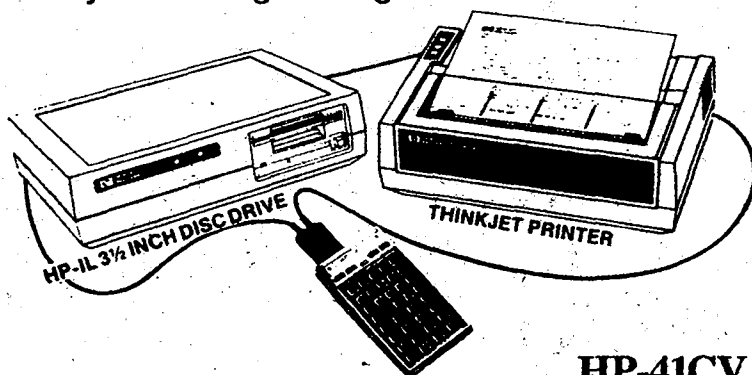
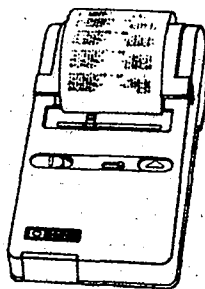
Stock #28-607, Math Appl 90111.....\$9.95

HP-41 Calculators

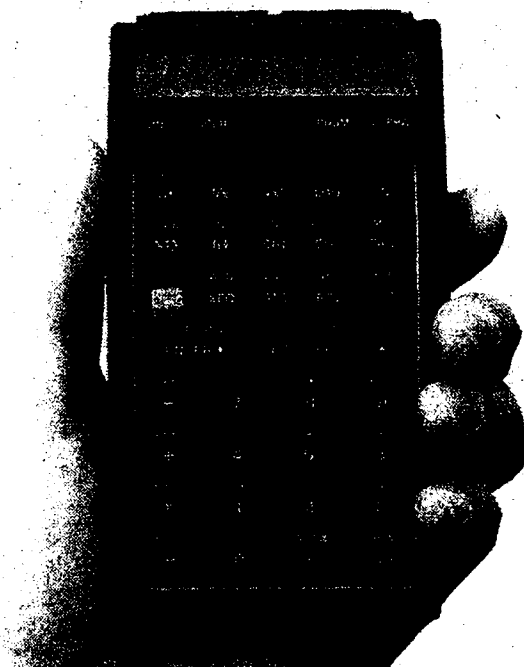


Here's where you find...

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HP-41CV
HP-41CX



ABSOLUTELY the WORLD'S BEST, the HP-41—standard for the leaders in each scientific profession, coveted by the smartest students.

Faster than a mainframe for your everyday problems, with keyboard simplicity, the easy logic of RPN, and the precision of 10 quick digits—the HP-41 actually guides you to your solution.

- **Big Main Memory:** 319 data registers or 2233 bytes of program and data memory.
- **Additional Memory:** 124 registers or 868 bytes of 'expanded' memory built-in (optional for the CV with Extended Function/Memory Module).
- **Even that is Expandable:** plug in 1 or 2 Extended Memory Modules—each will increase your memory by 238 registers or 1666 bytes—the possible grand total (for all models) is 919 registers or 6433 bytes!
- **24K Operating System:** 200 built-in functions at your fingertips (12K system with 128 functions in model CV, expandable to 24K with Extended Functions/Memory Module).
- **It is a Clock, Calendar, Alarm, Timer, and Stopwatch:** your HP-41 can become the heart of a time-based system controller (optional with Time Module for model CV).
- **Continuous Memory:** programs and data are remembered while your unit is OFF—no need to reprogram it.
- **Lots of Software for Your Profession:** there are many Application Pacs right now—for math, science, engineering, business and finance, surveying, navigation, etc. See below in this catalog. Plus magnetic cards, cassettes and bar codes to load many other programs, including over 6000 in the Users' Library.
- **4 Quick and Easy I/O Ports:** just plug in ROM software modules, memory modules, interfacing and more.
- **Take it with you, Anywhere:** it's only 205 g (7.2 oz.). With its LCD display you'll get about 6 months use from a set of alkaline batteries which are included (rechargeable batteries optional).
- **RPN Logic:** you see intermediate results of calculations, recover from errors easily.
- **ALPHANUMERIC, User-Definable Keyboard:** assign your own programs to any key—use ordinary words for prompts and labels.
- **Full Documentation to HP Standards of Excellence:** complete, readable manuals and handy quick-reference guides included.

- **You Get the Whole Kit:** tough carrying case, 4 alkaline batteries, keyboard overlay, Users' Library subscription card, Owner's Handbook included.

Stock #HP-41CV, List \$175.....	\$129.95
Stock #HP-41CX, List \$249.....	\$179.95

EduCALC Technical Notes

By Richard Nelson

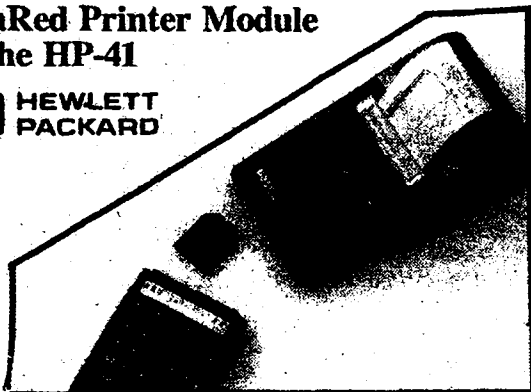
Have a technical question? We may have the answer all ready for you—send us a 25 cent stamp for each stock number you request:

- Stock #TN1, HP-41CV or HP-41CX?
- Stock #TN2, HP-28C or HP-41CX?
- Stock #TN3, HP-41 Printers. What are the choices?
- Stock #TN4, Adding More Memory to My HP-71.
- Stock #TN5, Adding More Memory to My HP-41.
- Stock #TN6, Combining HP-41 Modules to Save Ports.
- Stock #TN7, HP-41 Speed Ups. Worth the cost?
- Stock #TN8, Advanced User Products.
- Stock #TN9, HP-41 Power Sources.
- Stock #TN10, HP-41 EPROMs
- Stock #TN11, Video Monitors and Handheld Calculators
- Stock #TN12, Connect PCs & HP Handhelds via HP-ILs.
- Stock #TN13, Programming 'Languages' on the HP-41.
- Stock #TN14, Static Electricity and my Calculator.
- Stock #TN15, Equation Solvers.
- Stock #TN16, Instrumentation, A/D, and Control with Handheld.
- Stock #TN17, HP-41 MCODE Programming.
- Stock #TN18, Off-Line Storage for my HP-41.
- Stock #TN19, HP-41 Glossary of Terms.
- Stock #TN20, Factoring Large Numbers on the HP-16.

HP-41 Calculators

HP-41 Peripherals

InfraRed Printer Module for the HP-41



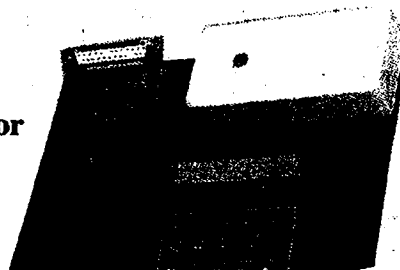
Print via infrared from your 41—this new module just plugs into your instrument. It protrudes about ¼ inch so it can flash printer commands to the 82240 printer. No cables—you merely point and push a button.

The 82240 printer can also be driven by the HP-17B, 19B, 27S and 28C. It is super-portable—small and battery powered, it will fit in a briefcase. This printer is inexpensive—yet it even does graphics, so now you'll be able to draw graphs with your 41 (see our printer description on page 14).

Stock #82242 [41 IR Printer Module] List \$65.....\$54.95

Hook-up

Interface your
InfraRed HP-calculator
to your PC!



Now you can display your calculator's programs, data or graphics on your computer's monitor, so you can review it all at once or show it to others (at a meeting or in class).

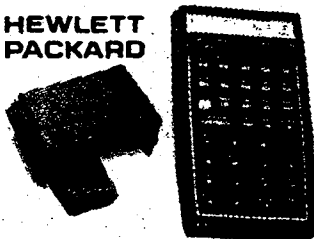
You can also file the calculator output on floppy or hard disc for permanent storage or mailing. Use your calculator to gather and analyze data, then use the computer to store it or manipulate it in a database or spreadsheet.

Accepts IR output from the HP-17B, 18C, 19B, 27S, 28C, 28S, or HP-41 with IR Module. D25 female plug attaches to your PC's serial port (COM1 or COM2). Requires DOS 2.0 or later, any printer to print text; Epson or IBM graphics printer or graphics display optional for graphics output of 19B, 28C or 28S. Manual and software included.

Stock #41-896 [Hook-up, 5¼"] List \$95.....\$84.95

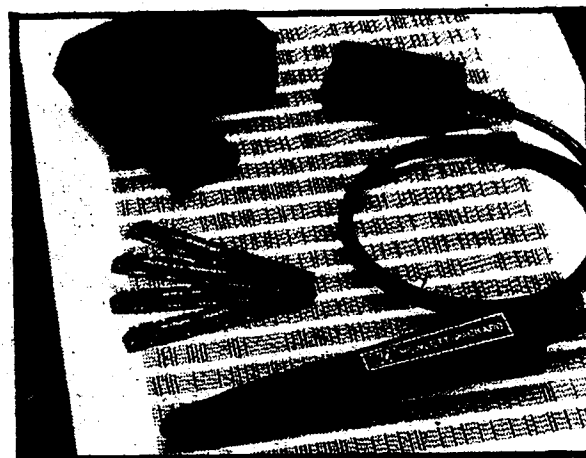
Stock #41-896A [Hook-up, 3½"] List \$95.....\$84.95

Card Reader



The HP-41 Card Reader (and writer) lets you save programs and data on small magnetic cards. This 'smart' Card Reader keeps track of cards as they are read and it even prompts you for the next card. A security feature permits a program to be run but not reviewed or altered through normal operations. An added bonus is that it also accepts program cards from the HP-67 and HP-97 calculators. Holds 224 bytes of data/program per card. Owner's Handbook and 20 blank cards included.

Stock #82104 [Card Reader] List \$195.....\$159.95



Card Reader Optical Wand

Optical Wand



This Wand lets you load programs and data into the HP-41 quickly and easily. Plugged into one of the HP-41 ports, the Wand reads HP bar code from a printed page, translates the information into HP-41 programs and data, and then loads it into the HP-41. Bar code is an inexpensive distribution medium for programs and data. Owner's Handbook included.

Stock #82153 [Wand] List \$125.....\$99.95

Stock #41-707, "Creating Your Own Bar Code" Manual..\$15.00

Stock #82205 [Bar Code Labels 850].....\$10.00

CMT-300 Programmable Recording Multimeter

See review in March 1985
PPC Journal



This gadget looks dumb. It's about the size of a calculator, but there are no buttons, no switches, no readouts. So it was hard for us to believe that when you plug it into your HP-41 you get a 3½ digit DMM, autoranging, auto-polar, with 15 ranges for AC/DC voltage and current, and resistance. That's not bad for a friendly, low-power, dual-slope integrating A/D converter. We even found we could program the 41 to process the readings, so we got ALPHA readouts, relative reference % readings, or dB, as well as equational processing for signal analysis and statistics for data reduction. Then we realized that with the right transducer we could read any type of data such as RPM, pH, temperature, moisture, light intensity, etc. By then we were so impressed we didn't believe the price of \$350.

So you can imagine how we felt when we found out this thing has dozens of built-in firmware programs of its own. For instance, it can be set to start tomorrow at noon and record both windspeed and temperature once-a-minute for 12 hours (if your 41 has clock functions) and print or record on cassette or disk if you wish.

This little phenomenon will be useful for remote-site monitoring, production or diagnostic testing, quality control and assurance, automated lab measurements, datalogging and analysis, line monitoring, as bench equipment, and anywhere a DMM is used but automation is desired. With the CMT-200 it even gives control based on measurement.

CMT-300 just plugs into any HP-41 port—it comes with test probes, keyboard overlay, 56p manual and 90-day warranty.

Stock #CMT-300 [Prog Record DMM] List \$350.....\$319.95

HP-41 Calculators

HP-41 Peripherals continued CMT-200 Data Acquisition and Control System

CMT



You can run a parallel printer or even an oil refinery with this little I/O marvel which plugs directly into an HP-41 port. Has 8 open drain N-channel FET outputs, 8 high impedance inputs, 2 handshake control lines, and 2 special functions lines which allow the 41 and an external device to power each other up—all fully hazard protected. 38 new software functions. Complete with owner's manual.

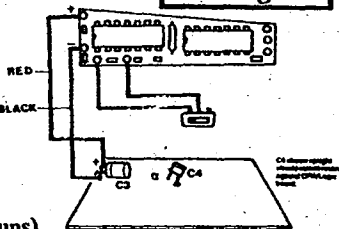
Stock #CMT-200 [Data Acquisition Pac] List \$250 \$239.95

Stock #CMT-200-OM, Owner's Manual only* \$9.95

*Cost may be applied later to the purchase of the unit.

Hyper-41 Dual Speed Clock Upgrade

**Synergistic
Design**



Turbo-charge your HP-41C/CV/CX—get up to 210% increase in speed of operation. Kit includes micro-switch that mounts in the AC tunnel cover so you can switch back and forth between Normal and Elevated Clocking Modes (even during runs).

Installation/Instruction Manual fully describes upgrade process with clear illustrations to guide you. Process requires only the few simple tools that are included in the kit. It takes an hour and a half, but most of that time is spent waiting for the conductive adhesive (included) to dry—there is no soldering. No special skills are required.

Your installation of the Hyper-41 kit will void your HP warranty if your machine is new (details come with kit). The Hyper-41 itself is warranted for one year.

Speed increase excludes peripherals and varies with date of original manufacture of your HP-41; the earliest 41C's can achieve a 70% to 80% increment.

NOTE: HP-41CX 'Halfnut' versions are significantly more difficult to install and require soldering ability. If you are not experienced in soldering, include \$20.00 and your HP-41 and we will install it for you. Allow 4 weeks. (The Halfnut versions are those HP-41's with serial numbers higher than 2543520557.)

Stock #41-684V [HP-41CV with Speed Up] \$209.95

Stock #41-684X [HP-41CX with Speed Up] \$259.95

*Price savings with
BIG DISCOUNTS*

Mag Card Holder

**STAR
FLEET**

This unique soft plastic magnetic card holder with 40 individual slots will add organization to a cluttered world. If your collection of HP-41 mag cards is more than 10, this could be your best \$2.50 investment.

Stock #41-524 [Magnetic Card Holder] \$2.50

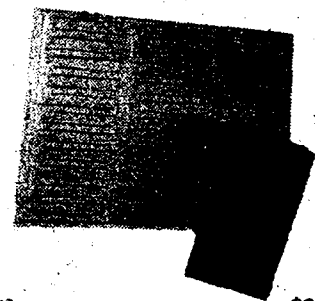
Mag Card Holder

Book style card holder from HP (like the one you got with your card reader). Holds 8 cards per page on 5 plastic pages. It measures 3" x 5 1/2" x 1/2".

Stock #13142 [Mag Card Book] \$4.25

HP-41 Mag Card Holder

IMTEC



Fights chaos! Transparent plastic loose-leaf 8 1/2" x 11" sheet with 66 welded pockets for cards. Printed forms inside show which cards are out-of-file and where they go.

Stock #41-568 [HP-41 Card Sheet] \$3.95

Blank Mag Cards

**hp HEWLETT
PACKARD**

Without holders.

Stock #13141 [40 Magnetic Cards] \$17.95

Stock #13143 [120 Magnetic Cards] \$42.95

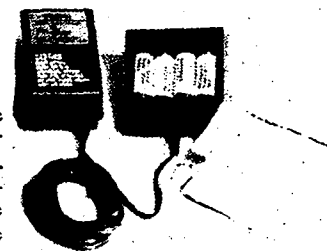
Batteries/Rechargers

Batteries

Stock #N-CELL [Alkaline Batt for 41] Requires 4 ea. \$.98

Stock #N-NiCd [Rechargbl Batt for 41] Requires 4 ea. \$2.50

Extended Use Recharger & Batteries



Save on batteries and have reserve power to boot! The 92266A (recharger and batteries) charges 4 NiCd N-cells. The 92266B battery set contains 4 full-size NiCd N-cells with over twice the capacity of the battery pack. And the recharger works outside the HP-41 so you can recharge spares without sacrificing portability.

Stock #92266A [HP-41 Recharger with Batts] List \$40 \$36.95

Stock #92266B [4 NiCd N-cells] \$9.95

NiCd Multi-Charger for N, AA, AAA and 9-volt size batteries

**Ledford
Micro**

Just think, in the thousands of hours of service from a NiCd (with 1000 recharges) you'll save hundreds of dollars over throw-aways. 5 year/1000 recharge warranty.

Protected against polarity reversal. 41-835 includes sleeve-adaptors for N-cells.

Stock #41-835 [Charger, Adapters, 4 NiCd N-cells] \$19.95

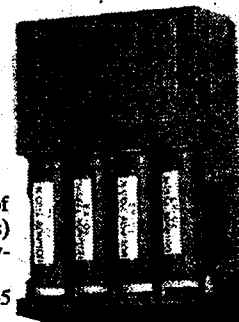
Stock #41-738 [Charger; batteries/adapters not inc] \$9.95

Stock #NAA [NiCd AA-cell] each \$2.95

Stock #41-836 [2 Sleeve-Adapters for N-cells] \$2.50

Stock #N-NiCd [NiCd N-cell] each \$2.50

Stock #9VN [9v NiCd cell] \$8.95



HP-41 Calculators

Batteries/Rechargers cont.

Cigarette-Lighter Adapter

S.O.S.

Power-up on the go! Replaces HP-82059 charger (except for RS-232 interface) to power the HP-41 or its printer, cassette drive, Think-Jet printer, or HP-110.

Stock #41-561 [12 VDC Adapter] List \$39.95.....\$34.95



HP-41 SpeedUp Conversion Service

S.O.S.

Soup up your 41 to run at 170% of stock speed. Just send us your working HP-41—we'll return it in about 3 weeks with new muscle!

Switchable to standard speed for card reading. Conversion will void any remaining HP warranty—but S.O.S. warrants work on your used machine for 90 days or on your new one for one year.

Stock #41-840 [S.O.S. 41-Speedup].....\$39.95

Stock #41-840V (HP-41CV with SpeedUp).....\$168.95

Stock #41-840X (HP-41CX with SpeedUp).....\$218.95

Rechargeable Battery Pack and Recharger

hp HEWLETT PACKARD

The battery pack of 4 half size N Cells fits into your HP-41 and remains in your machine during recharging periods. The external recharger plugs into the pack through the tunnel cover on the side of the HP-41 and provides hundreds of recharges. The recharger fits other HP equipment.

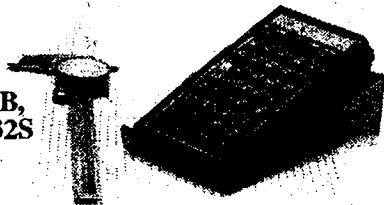
Stock #82120 [Rechargeable Battery Pack].....\$32.95

Stock #82059 [Recharger].....\$18.95

HP-41 Accessories

Desktop Stand for the HP-41

Also Fits the New HP-17B, as well as 22S, 27S and 32S



Just the right working angle for your head and eye. Smoky acrylic, simple and handsome. Or, available in solid oak.

Stock #41-597 [HP-41 Acrylic Stand] List \$14.95.....\$9.95

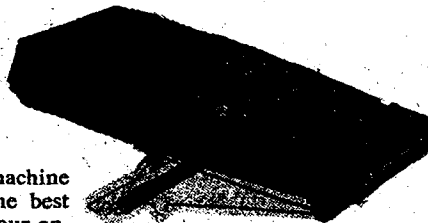
Stock #41-642 [HP-41 Oak Stand].....\$14.95

HP-41 Stand

Computer Bases

If you prefer to tilt your machine instead of your head for the best viewing angle then this is your answer. It is made of stainless steel and easily attaches to the bottom of your HP-41 (super adhesive). It allows 2 positions of viewing, supports a card reader, still fits in the original case and looks good.

Stock #41-538 [HP-41 Stand] List \$12.95.....\$11.95

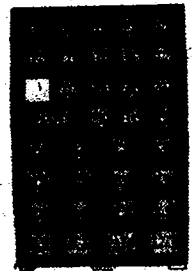


Touchpad Keyboard Overlay

hp HEWLETT PACKARD

It will keep your HP-41 safe from coffee or other problem liquids or particles. This plastic membrane snaps into place over the keyboard. All of the button nomenclature has been reproduced on it.

Stock #82200 [Touchpad] List \$20.....\$18.95



Overlay Kit

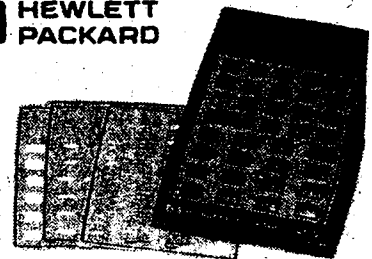
hp HEWLETT PACKARD

Perfect for programmers in the process of developing new programs. Has three blank plastic overlays and one with standard nomenclature. A pressure sensitive sheet of terms as well as blank spaces that may be positioned on the overlay are also included.

Stock #82152 [Overlay Kit].....\$13.95

Stock #82172-5 [5 Blank Overlays].....\$6.50

Stock #82172 [50 Blank Overlays].....\$54.95

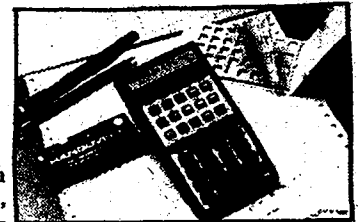


Custom Keyboard Overlay System

J & D Mfg.

NAME YOUR OWN KEYS on your HP-41—this clever system, called Hangovers, speeds calculations, avoids errors, and is attractive to boot. There are 24 paper keyboard overlays included, in 4 colors and already punched out to fit. Fill out one of these with your USER MODE Key labels, lay it on the keyboard, and lock the clear polycarbonate shield in place over it.

Stock #41-643 [Hangovers] List \$8.29.....\$7.95



Leather Calculator Cases

These hard leather calculator cases are perfect for outdoor applications such as surveying, construction, or a machine shop environment. They are made of high quality 7 or 8 ounce cowhide. A belt loop is available on the back of each case (except 41-570). Light tan in color, they give a very professional look outside or inside the office. Sizes are available for the HP-41 with or without a card reader, HP-10, 11, 12, 15, 16 or the TI-58/59. For the HP-41 without card reader there's also a version with windows in back, so you can use your 41 without removing it. These cases are hand-crafted and may require a long delivery time.

Stock #41-511 [Case: HP-41 without CR] List \$39.....\$34.95

Stock #41-512 [Case: HP-41 with CR] List \$50.....\$42.95

Stock #41-513 [Case: HP-10 Series] List \$37.....\$34.95



NEW PRODUCTS and UNIQUE ITEMS
Find out about them in this Catalog!

HP-41 Calculators

HP-41 Accessories continued

Protector

for HP-41 Calculators **NEW**
COMP-U-BAG Anti-Static Version

Zip out dirt and moisture—you can use your calculator right in the oil field (or the pillow fight) if it's in one of these flexible, transparent bags (not sealed against pressure); used daily, each bag will last a couple months. Fits into leather field cases, with easy access to plug-in ports.

Stock #41-543 [Comp-U-Bag] List \$1.75.....\$1.50
Stock #41-543T [10 Comp-U-Bags] List \$17.50.....\$13.50
Stock #41-543A [Anti-Static Bag] List \$3.....\$2.00
Stock #41-543R [41 + RAM box Anti-Static Bag] List \$3....\$2.50

Soft Vinyl Case for HP-41 and Card Reader

Just like the one you got with your HP-41.
Stock #82111A [41 Vinyl Case].....\$9.95

Elegant HP Soft Leather Cases for your HP-41

**HEWLETT
PACKARD**

Pliant cowhide, lined with a second layer of leather, in colors to match your briefcase. List \$19.

Stock #HP-897A [Black Leather Case 92169K].....\$17.95
Stock #HP-898A [Brown Leather Case 92169L].....\$17.95
Stock #HP-899A [Burgundy Leather Case 92169M].....\$17.95

Memory Modules More Memory For Your HP-41

Do you ever run out of memory—and have to discard programs and data you want to save? Why not exploit the fantastic potential of your HP-41—get yourself the freedom of enough space, NOW!

Quad Memory Module

Plug in only 1 Quad Memory Module to add 256 registers or 1,792 bytes—then your 'HP-41C/Quad' has the same memory capacity as the HP-41CV (this is for the HP-41C only).
Stock #82170 [Quad Memory Module] List \$75.....\$34.95

Extended Functions for the HP-41CV or HP-41C Quad

Plug in the Extended Functions/Memory Module (EFM) to get 868 more bytes of memory—plus many new functions you can call on, such as: Clear all key assignments, Delete named program and all following it, Restore flag status, Create data file, Directory of extended memory files, Replace last program in main memory, Purge file, Copy text file to mass storage—38 in all. Owner's Manual included.
Stock #82180 [Ext Funct/Mem Module] List \$75.....\$63.75

We guarantee everything we sell. You may return it to us within two weeks for a full refund, no questions asked.

Extended Memory

for the HP-41CX or HP-41CV/EFM or HP-41C/EFM

Plug in 1 or 2 Extended Memory Modules—each module adds 238 registers or 1666 bytes to your machine. With both added you'll have a grand total memory space of 6433 bytes, including 4200 bytes of extended memory.

Stock #82181 [Extended Memory Module] List \$75.....\$63.75

Double Extended Memory Module for the HP-41 CX or HP-41CV/EFM or HP-41C

S.O.S.

Use only one port—this single module contains two 82181 Extended Memories, so you'll save a port for other uses. Guaranteed 1 yr by S.O.S.
Stock #41-600 [Double X Mem Module] List \$185.....\$149.95

Triple Module—Double X Memory Plus X Functions for the HP-41CV or HP-41C/Quad

Use only one port—you save two ports! This single module contains two 82181 Extended Memories plus one 82180 Extended Functions. Guaranteed one year by SOS.

Stock #41-601 [Triple Mod/Dbl X Mem] List \$285.....\$235.95

32K, 64K & 128K RAM Expansion Box

**New-128K
RAM Available**

Eramco

Field Engineers, Surveyors, Salespersons, and any Professional who needs Remote Data-Acquisition and Computing Power—here's your ultimate portable system, in a card-reader case that fits right on top of your HP-41CV or CX.

It comes with an 8K Operating System (leaving 24K free in each bank). It contains a complete instruction set for initializing files and programs, moving them about in memory and to and from disc or tape, etc. It makes it possible for you to switch between a financial and a technical calculator, for example, and to save the calculator's memory untouched while you perform general calculations during the running of an application program.

Built-in battery backs up memory for 2 1/2 years while unit is removed from HP-41.

Stock #41-670 [32K RAM-41].....\$289.95
Stock #41-788 [64K RAM-41].....\$399.95
Stock #41-872 [128K RAM-41].....\$499.95
Stock #41-788M, Manual only.....\$25.00
Stock #41-788S [64K with MLDL Sys].....\$489.95
Stock #41-788D [8K David Assembler].....\$139.95

16K RAM Storage Unit

Eramco

New Gear—not for beginners—and useless without an operating system (just as an Extended Memory Module is).

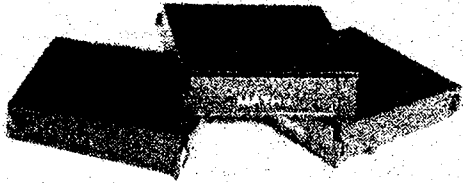
But use it with the ZEN ROM or the MLDL EPROM Box and you get this enormous 16K RAM capacity for your MCODE applications.

The RAM Storage Unit is a small flat plastic box that fits right underneath your HP-41 and plugs into a port. It has room for batteries to preserve memory for at least 6 months while unit is disconnected from calculator. Manual included.

Stock #41-RSU-1 [16K RAM].....\$99.95
Stock #41-ES-41 (Operating System only).....\$149.95

HP-41 Calculators

Application Pacs with HP-41 Modules



Transform your HP-41 into a special-purpose machine, automatically programmed for your own needs. These Pacs contain tremendous new power. Simply plug the module in a port and in some cases install a keyboard overlay and you have hundreds of hours of proven programming at your finger-tips. It's all pre-programmed with every feature the experts could think of. Here are all the available Application Pacs, arranged by the subject areas they cover. Each comes complete with owner's manual.

Here's where you find...

General Interest	53
Math/Science	53
Engineering	54
Navigation/Surveying	54
Business/Finance	56
Utilities/Subroutines	56

General Interest

Standard Applications



RPN Primer • Arithmetic Teacher • Word Guessing Games • Hexadecimal-Decimal Converter • Financial Calculations • Root Finder • Curve Fitting • Vector Operations • Blackjack • Calendar Functions
Stock #15001 (Standard Applications Module).....\$35.95

Home Management



Home Budgeting • Travel Expense Record • Stock Portfolio Evaluation • Your Financial Calculator • Remaining Balance and Accumulated Interest • Tax Free Individual Retirement Account (IRA) or Keogh Planning • The True Cost of an Insurance Policy • Checking Account Reconciliation • Home Owner's Equity Analysis • The Rent or Buy Decision
Stock #15023 (Home Management Module).....\$35.95

Games



Super Bagels • Biorythms • Craps • Hangman • Submarine Hunt • Random Number Generator • Pinball • Space War
Stock #15022 (Games Module).....\$35.95

Time



The Time Module expands your HP-41 computing system with time information and time-controlled operations. Using the quartz-crystal controlled Time Module, your HP-41 can become the heart of a time-based system controller, an alarm clock, an appointment reminder, a calendar, a timer, even an advanced stopwatch. Already built into 41-CX. Owner's Manual included.
Stock #82182 (Time Module) List \$75.....\$63.75
Stock #90395, Time Module Solution Book.....\$14.50

Horserace Handicapping Program

Profit Mgt.
Systems

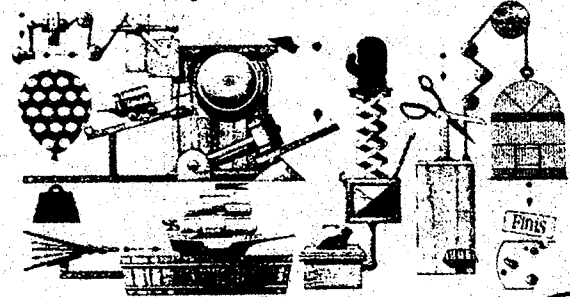


Put yourself at a real advantage over other bettors. Speed Machine II tells you when and how to bet to maximize your return on every dollar—combines fractional and final race times to select the top 4 horses in each race and tells you under what circumstances and at what odds to make your bet.

Contains statistics on every thoroughbred and harness track in North America, and it can store data on 120 horses at once. Includes stopwatch (CX only) and Money-management functions.

Requires HP-41CV or -CX (or HP-41C with quad memory module). Plug-in module comes with keyboard overlay and manual.

Stock #41-533 (Speed Machine II Module) List \$300\$259.95



Math/Science

Redshift
Software

AECROM

- Fast, accurate curve fitting: chooses a best fit from 16 families of curves to fit your X-Y data.
- Inverse hyperbolic functions: ACOSH, ASINH and ATANH as well as SINH and TANH.
- Fractional, decimal feet, decimal inch and metric modes: programs execute in any mode; instant conversions, without special key assignments.
- Creates programs to solve your equations: you key in your equation and it writes the solution program, fast.
- Many useful Display and Print utilities.

Stock #41-700 (AECROM Module) List \$97.50\$89.95

Advantage

Real and Complex Matrix Operations • Simultaneous Equations on Real and Complex Numbers • Solve (roots of $f(x)=0$) and Integrate (similar to HP-15C) • 3-dimensional Vector Operations • Complex Number Operations • Number Base Conversions and Boolean Logic (similar to HP-16C) • Curve Fitting • Roots and Evaluation of Polynomial Equations • Differential Equations • Coordinate Transformations • Time Value of Money (similar to HP-12C) • User-Accessible Subroutines
Stock #15055 (Advantage Module).....\$42.95

Clinical Lab and Nuclear Medicine



Clinical Chemistry • Beer's Law • Body Surface Area • Creatinine Clearance • Blood Acid-Base Status • Oxygen Saturation and Content • Red Cell Indices

Nuclear Medicine • Total Blood Volume • Thyroid Uptake • Radioactive Decay Corrections

Radioimmunoassay Statistics • Basic Statistics • Chi-Square Evaluation and Distribution • t Statistics • Distribution

Stock #15024 (Clinical Lab/Nuclear Med Module).....\$35.95

HP-41 Calculators

Application Pacs continued Math/Science continued

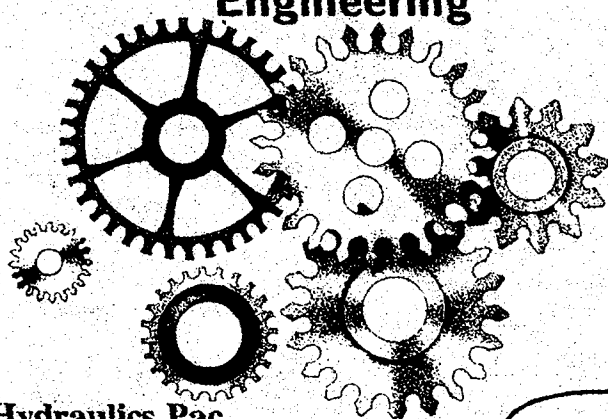
Math/Statistics (Combined Pac)



Matrix Operations • Solutions to $f(x)=0$ on an Interval • Polynomial Solutions/Evaluation • Numerical Integration • Differential Equations • Fourier Series • Complex Operations • Hyperbolics • Triangle Solutions • Coordinate Transformations • Basic Statistics for Two Variables • Moments, Skewness and Kurtosis • Analysis of Variance (One Way) • Analysis of Variance (Two Way) • Analysis of Covariance (One Way) • Curve Fitting (Linear, Exponential, Logarithmic, and Power Curve) • Multiple Linear Regression • Polynomial Regression • t Statistics • Chi-Square Evaluation • Contingency Table • Spearman's Rank Correlation Coefficient • Normal and Inverse Normal Distribution • Chi-Square Distribution

Stock #15049 (Math/Statistics Module)..... \$39.95

Engineering



Hydraulics Pac for the HP-41

Paul Munroe

This Program Module, Keyboard Overlay and 43p. User Manual converts your HP-41 into a powerful hydraulics engineering tool. Analyzes system design problems and then supplies solutions. Pays for itself in minutes for Engineering Sales or Service Personnel. It is a valuable learning tool, too, with English input prompts and output labels: 6 PRESSURE Programs (unit conversions, drop with flow, hose/pipe/tube sizing, fluid compression), 4 VOLUME Programs (unit conversion, liquid/gas change with temperature, accumulator sizing), 3 VISCOSITY Programs (conversions, valve/orifice sizing), 5 AREA Programs (cylinder area/sizing, single/double rod cylinder sizing, ram sizing), 6 ROTARY POWER Programs (hydrostatic/winch transmission sizing, pump bearing life, kw/hp conversion, pump hp), 4 TEMPERATURE Programs (unit conversions, change with throttling, gas-pressure change, heat-exchanger sizing). Descriptive literature available on request.

Stock #41-148 (Hydraulics Module)..... \$99.95

Stock #41-148L, Hydraulics Module Literature..... Free

HP-41 Civil Engineering

March
Programming

Dirt Quantity and Longitudinal Profile Calculations, handheld where you need them, and fast. Drafts the slope of the cross sections and gives cut and fill volumes separately, announcing the end balance at each cross section. Gives differential elevations between natural ground and street section. Calculates (and drafts, if required) longitudinal profile of roads and highways.

Requires HP-41C. Works with English or Metric measurements.

Stock #41-815 (March CE Module)..... \$99.95

Structural Analysis for Civil Engineers



Section Properties • Beams • Simply Supported Continuous Beams • Continuous Frame Analysis • Setting of Continuous Beams • Steel Column Formula • RPN Vector Calculator • Reinforced Concrete Beams • Reinforced Concrete Columns • Effective Moment of Inertia for Concrete Sections

Stock #15021 (Structural Analysis Module)..... \$44.95

Stress Analysis for Mechanical Engineers



Section Properties • Beams • Simply Supported Continuous Beams • Columns • Mohr Circle Analysis • Soderberg's Equation for Fatigue • Strain Gage Data Reduction • RPN Vector Calculator

Stock #15027 (Stress Analysis Module)..... \$35.95

Petroleum Fluids



Z-Factor • Gas Isothermal Compressibility • Gas Formation Volume Factor • Gas Viscosity • Pseudocritical Temperature and Pressure from Gas Gravity • Gas Properties from Composition • Oil Isothermal Compressibility • Oil Formation Volume Factor • Oil Viscosity • Gas-Oil Ratio • Bubble Point Pressure • Two-Phase Formation Volume Factor • Water Isothermal Compressibility • Water Formation Volume Factor • Water Viscosity • Gas-Water Ratio • Rock Compressibility • Total Isothermal Compressibility. Includes unit management systems subroutine.

Stock #15039 (Petroleum Fluids Module)..... \$73.95

Circuit Analysis



General Network Analysis • Ladder Network Analysis

Stock #15006 (Circuit Analysis Module)..... \$35.95

Machine Design

Circular Cams • Generation of a Four Bar Linkage • Progression of a Four Bar System • Forces • Standard External Involute Spur Gears • Helical Spring Design • Forced Oscillator with Arbitrary Function • Coordinate Transformation • Points on a Circle • Circle by Three Points • Unit Conversions

Stock #15020 (Machine Design Module)..... \$35.95

Thermal and Transport Science



Equations of State • Polytropic Processes for an Ideal Gas • Isentropic Flow for Ideal Gases • Conduit Flow • Energy Equation for Steady Flow • Heat Exchanges • Black Body Thermal Radiation • Includes unit management system subroutines

Stock #15019 (Thermal and Transp Science Module)..... \$35.95

Navigation/Surveying

Navigation



Rhumb-line Course and Distance • Great Circle and Distance • Dead Reckoning • Sight Reduction • Perpetual Almanac—Stars, Sun, Planets, Moon • Almanac Interpolator • Great-Circle Position • Rhumb-line Position • Great-Circle Plotting and Voyage • Planning • Sight Reduction Table • Calendar Functions • Greenwich Sidereal Time • Star Almanac • Fundamental Arguments • Astronomical Coordinate Conversion • Longitude to Latitude • Input/Output Routines

Stock #15017 (Navigation Module)..... \$44.95

Application Pacs continued Navigation/Surveying continued

KEYS Surveying Module

Fred
McMichael

New



Access every routine with 1 or 2 keystrokes—no spelling out!
Traverse, inverse, B-B, B-D, D-D intersects, radial stakeout, rotation, sideshots, sideshot with elevations, offsets from a line or curve with stationing, offset intersections, slide line and swing line area cut off, three points on a circle, horizontal curve stakeout, curve solutions, point to point area and traverse-inverse area including curved sides, renumber, coordinate list, directions by point numbers, numerous automatic entries, coordinate prompting for unused points, contours, stake set, slope reduction, double angles and feet to meters conversion with optional output during side shots, hour angle sunshot using ephemeris, compass and advance compass traverse adjustment. Stores and manipulates multiple files.

Requires HP-41CX (or CV with Extended Functions Module). Stores 62 points, or add an Extended Memory Module to store 181 points, or add two to store 300 points (or put 5000 points on disc or cassette).

Stock #41-901 (KEYS Surveying Module) List \$200..... \$189.95

Surveying



Traverse, Inverse and Sideshots • Compass Rule Adjustment • Transit Rule Adjustment • Intersections • Curve Solutions • Horizontal Curve Layout • Vertical Curves and Grades • Resection • Predetermined Area • Volume by Average End Area • Volume by Borrow Pit • Coordinate Transformation

Stock #15005 (Surveying Module)..... \$35.95

Aviation (for pre-flight use)

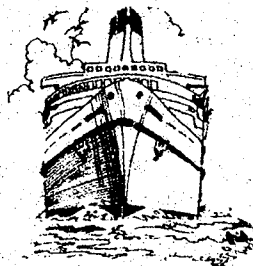


Flight Management • General Aircraft Weight & Balance • Determining in-flight Winds • Flight Plan Position by one or two VORs • Mach Number & True Airspeed

Stock #15018 (Aviation Module)..... \$35.95

Loadcom

AP
Systems



Ship Stability Ability—Fast!

Merchant Officers get entire loading plans in minutes, handheld. Handle any type ship, carry ship to ship, use on deck/control room/bridge.

GM, KM, KG, free surface correction and moments. Drafts, trim, displacement, fresh water corrections. Totals—DWT, cargo, fuel, water, ballast, stores.

Requires HP-41CX; printer optional. Module includes Navcom navigation system.

Stock #41-814 (Loadcom Module) List \$219..... \$199.95

Stock #41-814M, Loadcom Manual only..... \$10

Stock #41-814R (Loadcom, Module only)..... \$189.95

HP-41 Astro ROM Sun/Polaris Nonephemeris Module

Elgin, Knowles & Senne
Surveying Consultants

Collect Sun and Polaris observation data (times and circle readings) and compute an accurate astronomic azimuth to the backsite point, on site and without inputting ephemeris data. Easy-to-follow prompts guide your inputs—and you have many options, such as conversion to state plane grid azimuth, altitude and azimuth of a celestial body, and generation of ephemeris data for any date to 2010.

Requires HP-41CV/CX or HP-41C with Quad Memory Module; Time Module required with C or CV to use time and date options. Printer optional; HP-IL interface to Lietz SET 2 or SET 3 instruments optional. Technical Support telephone number offered. Module comes with User Manual and Quick Reference Card.

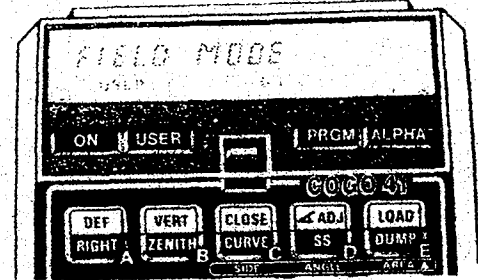
Stock #41-691 (Astro Module) List \$130..... \$119.95

Stock #41-691PC (Astro, PC version, 5 $\frac{1}{4}$ ") List \$130..... \$119.95

COGO 41 Module

D'Zign

New



• Touchpad dustproofs keyboard and makes this module easy to learn, easy to use

• 16K ROM gives menu selection for programs and solutions routines

• Common unit-conversions are right on the keyboard

• 3 quick-change modes for Field, Office and Field Layout

• Input direct from instrument via interface and IL

Field mode allows multiple input of angles and distances during a traverse. The angular error/turn is displayed with the closing routine and may be auto-adjusted. Store by point number with 2- or 3-dimensional coordinates.

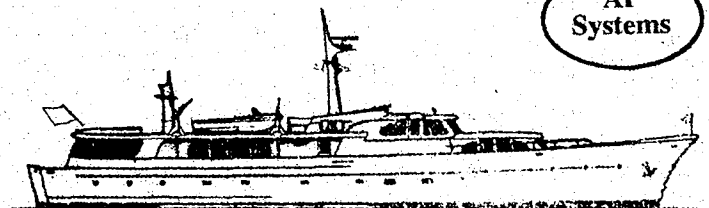
Office mode assumes angle and distance inputs have been measured. Full coordinate geometry for intersections using brg-brg, brg-dist, dist-dist and offset to a line, plus intersections of spiral and circular curves with other curves and lines. Predetermined areas, coordinate transformation, all from stored coordinates.

Field layout mode includes Remote Slope Staking, Topographic Pickup and Alignment Layout by station and offset. Lay out the curbs along Street Intersections, Cul-de-Sacs, etc., with a few keystrokes.

Stock #41-913 (COGO 41 Module)..... \$230.00

Navcom

AP
Systems



Eliminates the drudgery—automatically applies sextant corrections, automatically records sights with built-in quartz clock time, automatically updates position for fixes. Built-in perpetual almanac. All prompts and answers displayed in plain English.

Requires HP-41CX. Pop-in module includes all functions of HP Navcom Module (15017).

Stock #41-813 (Navcom Module) List \$189..... \$169.95

Stock #41-813M, Navcom Manual only..... \$10

Stock #41-813R (Navcom, Module only)..... \$159.95

HP-41 Calculators

Application Pacs continued

Navigation/Surveying continued

Tomsrom 1 Surveying Module

Thomas Bruns

Contains eleven new functions: an inverse function, a meters to feet, feet to meters conversion function; hours, minutes, and seconds multiply and divide functions; enhanced polar/rectangular coordinate conversion functions; clear extended memory function; zenith angle functions; and a horizontal angle reduction function.

TOMSROM 1 also contains a coordinate management program: make files; purge files; assign coordinates to a point number; delete coordinates; and transfer coordinates to and from a mass storage device (cassette or disc drive).

The surveying driver program includes a coordinate geometry program. Traverse and inverse by point number, provisions for curved sides, sideshots, and a User distance reduction. A traverse with compass rule adjust program. A coordinate transformation program; transform coordinates by inputting required data or by inputting two known points in each system. A successive point and radial stakeout program for field data output; horizontal distance, angle right, angle right doubled, bearing, and azimuth. An intersection program to perform bearing-bearing, bearing-distance, distance-distance, and offset from a point to a line intersection.

There are also numerous subroutines available to use in your own programs. Requires HP-41CX or 41CV with Ext. Functions Module (82180). Comes with module, manual, and overlays. Holds 61 points.
Stock #41-791 (TOMSROM 1 Module) List \$140 \$129.95

Business/Finance

Market Forecaster

William Finnegan
Associates

New Program
for the HP-41



Foretell the size and direction of Stock Market movement for the next 2 to 4 months—use this new program and a current copy of *Barron's*. You can literally see into the future, utilizing an econometric model with a correlation to future market moves of $r = .90$ over the last 22 years. Over the same period, simulated returns were 33.6% to 42.3% per year, after commissions. On funds managed since 1979, the Market Forecaster has never had a losing year. In fact, it has tripled the performance of the Dow with half the investment exposure. Now you can use this same technology to tell when to buy stocks, mutual funds or options, or when to retreat to the sidelines.

This amazing power comes in an HP-41 module with a keyboard overlay and manual of explanations and instructions. Price of Manual alone is deductible from later purchase of module. Order now—if you wait till tomorrow you'll be another day behind.

Stock #41-131 (41 Forecaster Module) List \$334 \$299.95

Stock #41-131B, 41 Forecaster Manual, List \$22 \$20.00

Stock #41-131R (41 Forecaster, Module only) \$249.95

Market Forecaster software is also available for the IBM PC (on disc with manual included).

Stock #S-131P (PC Forecaster, 5 1/4") \$316.95

Financial Decisions



Compound Interest Solutions • Internal Rate of Return • Modified Internal Rate of Return (FMRR) • Net Present Value • Loan Amortization Schedules • Depreciation Schedules • Bond Price and Yield • Days Between Dates

Stock #15004 (Financial Decision Module) \$35.95

Securities



Bond/Note Price and Yield • Routines for Option Writers Using the Black-Scholes Evaluation Method • Warrant and Option Hedging • Yield on Call Options Sales • Butterfly Options • Bull Spread Option Strategy • Convertible Security Analysis • Stock Portfolio Valuation • Bond Speculation Using Margin • Convertible Bond Investment Analysis

Stock #15026 (Securities Module) \$35.95

Retail Car Sales

Special
199.95

Order before
10/31/88

Millennium
Systems

Dazzle that shopper—make your sale! With the AF-1 module plugged in, your HP-41 will do all the arithmetic, bookkeeping, look-up, etc., and flash authoritative monthly payments for your customer to see.

Automated accounting includes everything: sales tax, document fee, 3 insurance options, smog cert, trade-in and pay-off, down, pickup fee, mfr's rebate, service contract, license, add-on or APR. Recompute any number of times to see how changes lower the payments. Copy off final figures onto contract. Compute your profit at any stage.

Works with every model of HP-41—and in HP-41CX (or with time module) it will date records and compute first payment date. Optional printer gives permanent record. ONE COMMISSION WILL PAY FOR THIS.

Stock #41-653 (Auto Sales Module) ~~\$299.95~~ \$99.95

Real Estate



Compound Interest and Loan Amortization • Internal Rate of Return • Modified Internal Rate of Return • Net Present Value • Depreciation Schedules • Income Property Analysis • The Rent or Buy Decision • Price and Yield of a Mortgage Traded at Discount/Premium • APR of a Loan with Fees • Present Value of an Increasing/Decreasing Annuity
Stock #15016 (Real Estate Module) \$44.95

Utilities/Subroutines

Extended IL ROM

Skwid
Ink

Tired of having to reload extended memory file by file after a MEMORY LOST? This ROM contains functions allowing you to save extended memory directly to mass storage. There are also functions for saving all of memory (main and extended) and I/O buffers.

The Write functions of the HP-IL module have been rewritten to allow them to access up to 1 megabyte in mass storage devices.

Other functions include a new directory function (so you may list the directory to any device on the loop), how much room is left on the medium and how many directory entries are left. You may also place a volume ID on the medium without formatting the medium.

In the printer section of the ROM are multiple column list and print program functions. These allow you to list a program in up to 15 columns on a single sheet of paper.

ROM module comes with 37p User's Manual.
Stock #41-686 (Extended IL Module) List \$106 \$89.95

Auto/Start Duplication

Stock #15042 (Auto/Start Duplication ROM Module) \$35.95

HP-IL Development Module

Sale
1/2 price! While
they last



Debug an HP-IL implementation or perform HP-IL transactions which cannot be performed with other HP products.

For example, you can make the HP-41 into an HP-IL analyzer. You can internally transfer bytes between any two of: the stack, the ALPHA register or a sequence of registers, the HP-IL loop, or an array of bytes (the buffer). You can get I/O in hex, octal or binary. More. More. More.

Stock #15043 (Development Module) \$36.95

Application Pacs continued Utilities/Subroutines continued

CCD (translated from the German)

New 8K microcode ROM adds more than 100 keywords to your HP-41—plus enhancements like lower case characters and synthetics (STO M) right from the keyboard. Direct synthetic programming with normal keystrokes, and new CAT-, XEQ-, and ASN-funktions. PEEK & POKE utilities, with access to all RAM locations at byte level, and full handling of hex. 30 new math functions handle matrices in RAM or X-Memory, new I/O functions with error checking and formatted output.

Complete with English manual, quick reference guide and keyboard overlay.

Stock #41-562 (CCD Module)..... \$149.95

ZENROM Module

Zengrange

A Synthetiker's delight—it's like doubling the memory of your HP-41. Just plug in this 4K machine-language ROM and ALL SYNTHETIC FUNCTIONS become automatic and commonplace, without key assignments or memory used. Keyboard overlay included to show all the options for synthetic text functions. RAM Editor function works anywhere in RAM. Machine Code Editor function accesses any place in ROM (edits any plugged-in MLDL or Protocoder II).

Carefully thought-out so it's easy and efficient to use. There is a manual with good, clear instructions—and whole chapters on the theory of Synthetics and Machine Code which even a beginner can read! Owner's Manual included.

Stock #41-550 (ZENROM Module) List \$115..... \$99.95

Stock #41-550M, Manual only*..... \$19.95

Stock #41-550R (ZENROM, Module only)..... \$80.00

PPC ROM Module

Special

PPC

The PPC ROM is an 8K Custom ROM Module manufactured by HP for PPC, an independent user organization. The accompanying 500-page manual exhaustively documents the use of its 122 programs in 4 categories—math, peripheral, utility, and synthetic. State-of-the-art programs allow you to sort registers, alpha compare, do matrix operations, create synthetic instructions, assign any 2-byte function to a key, analyze bar code, do multiple function and precision plotting, perform calendar operations, count bytes, fit curves, compute derivatives, do financial calculations, integrate, and much, much more. The most powerful HP-41 ROM available, and the best value to boot.

The PPC ROM contains 67 synthetic programs. The 500-page manual is an excellent source of information for intermediate users of SP who want to learn more.

Stock #41-518 (PPC ROM Module) List \$95..... \$59.95

Stock #41-518M, Manual only*..... \$19.95

Stock #41-518R (PPC ROM, no Manual)..... \$72.00

Extended I/O

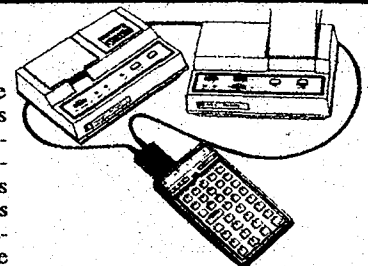


The module provides 59 functions which extend the I/O capabilities of the HP-41 beyond those provided by the HP-IL Module (82160). HP-IL Module is required for use with most functions of the extended I/O Module. With the Extended I/O Module, the HP-41 can be used to control HP-IL devices or non HP-IL instruments through HP-IL interfaces. The Extended I/O functions can be divided into 4 main categories:

1. Mass storage functions
2. Character manipulation functions
3. HP-IL control functions
4. Advanced control functions

Stock #82183 (Extended I/O Module) List \$75..... \$63.75

HP-IL Module



The HP-IL Interface Module plugs into any one of the four ports in the HP-41, connecting your hand-held computer with an ever-growing family of HP-IL peripherals and instruments. The module gives your HP-41 control of up to 30 devices on the loop. There are three function sets supplied by the HP-IL Module: printer, mass storage, and general input/output (I/O). It includes such functions as Accumulate column into print buffer, List program lines, Print y-axis, Plot function interactively, Print stack, Remove stored file, Store program onto medium, Copy all storage registers into data file, Set interface to auto mode, Input status information from selected device, Set all devices to low power state, Trigger all devices set to respond and 43 more. Owner's Handbook included.

Stock #82160 (HP-IL Module) List \$125..... \$99.95

XQ2 Keyboard

LAITRAM

Access any HP-41 function with 1, 2, or at most 3 keystrokes; spelling functions is no longer necessary! Just plug the XQ2 ROM into your C, CV, or CX, install the easy-to-use keyboard overlay, and turn on your instrument. It will wake up with only 16 keys active—and you will begin saving hours of key-punching labor.

Ted Wadman, co-author of *An Easy Course in Programming the HP-41*, advises that: Anyone who is heavily into programming the HP-41 will find it worth his time to become familiar with this keyboard. It's a thoughtful design. Of course, it isn't perfect—you can't use it with the ZENROM or any program that uses local ALPHA labels, such as finance ROMs.

Stock #41-630 (XQ2 Keyboard Module)..... \$119.95

Plotter



The 8KB Plotter Module fits easily into one of the HP-41's four ports to give you bar code generation and plotting capabilities. The Plotter Module enables you to use your Series 40 computer with the HP7470A Graphics Plotter (opt. 003) to plot Series 40 bar code as well as non-HP bar code. It also enables a Series 40 to print Series 40 bar code using the HP82162A Thermal Printer/Plotter. Take advantage of ready-to-go bar code generation programs or write your own. The Plotter Module also allows you to produce high-quality plots on HP's low cost, HP7470A Graphics Plotter. This module contains 52 plotter functions to help you design your own programs.

Stock #82184 (Plotter Module) List \$90..... \$79.95

LAITRAM XQ2

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1515. 1516. 1517. 1518. 1519. 1520. 1521. 1522. 1523. 1524. 1525. 1526. 1527. 1528. 1529. 1530. 1531. 1532. 1533. 1534. 1535. 1536. 1537. 1538. 1539. 1540. 1541. 1542. 1543. 1544. 1545. 1546. 1547. 1548. 1549. 1550. 1551. 1552. 1553. 1554. 1555. 1556. 1557. 1558. 1559. 1560. 1561. 1562. 1563. 1564. 1565. 1566. 1567. 1568. 1569. 1570. 1571. 1572. 1573. 1574. 1575. 1576. 1577. 1578. 1579. 1580. 1581. 1582. 1583. 1584. 1585. 1586. 1587. 1588. 1589. 1590. 1591. 1592. 1593. 1594. 1595. 1596. 1597. 1598. 1599. 1600. 1601. 1602. 1603. 1604. 1605. 1606. 1607. 1608. 1609. 1610. 1611. 1612. 1613. 1614. 1615. 1616. 1617. 1618. 1619. 1620. 1621. 1622. 1623. 1624. 1625. 1626. 1627. 1628. 1629. 1630. 1631. 1632. 1633. 1634. 1635. 1636. 1637. 1638. 1639. 1640. 1641. 1642. 1643. 1644. 1645. 1646. 1647. 1648. 1649. 1650. 1651. 1652. 1653. 1654. 1655. 1656. 1657. 1658. 1659. 1660. 1661. 1662. 1663. 1664. 1665. 1666. 1667. 1668. 1669. 1670. 1671. 1672. 1673. 1674. 1675. 1676. 1677. 1678. 1679. 1680. 1681. 1682. 1683. 1684. 1685. 1686. 1687. 1688. 1689. 1690. 1691. 1692. 1693. 1694. 1695. 1696. 1697. 1698. 1699. 1700. 1701. 1702. 1703. 1704. 1705. 1706. 1707. 1708. 1709. 1710. 1711. 1712. 1713. 1714. 1715. 1716. 1717. 1718. 1719. 1720. 1721. 1722. 1723. 1724. 1725
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HP-41 Calculators

Application Pacs continued Utilities/Subroutines continued

Barcode Generating ROM

Skwid
Ink

Print beautiful HP-41 barcode on your LaserJet+ or ThinkJet printer—instantly and economically.

Specify any type of barcode that the HP-41 wand can read (program, numeric, alpha, sequenced, direct execution, and paper keyboard). The ROM generates the correct checksum, supplies the correct barcode type, and prints the barcode. A multi-column option allows numeric barcode to be printed on label stock. With barcode, you can swap programs and data by mail with anyone who has an optical wand. You can even use barcode as the ultimate backup memory system.

Additional functions allow you to automatically compile all GTO and XEQ functions in a program, and to attach an END to a program read in from any source without destroying the compiled branch information.

Complete with manual. Requires ThinkJet or LaserJet+.

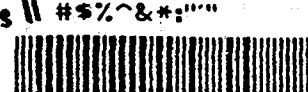
Stock #41-834 (41 Barcode Module).....\$199.95

Stock #41-834A (41 Barcode Mod, super fast version).....\$249.95

HP-41 Barcode Generator for the IBM-PC

Tony
Malburg
For LaserJet+
and Series II

"HP-41 BARCODE"



"NONEXISTENT"



Sell your HP-41 programs,
or send them to friends.

Just use these generators to print your programs in barcode form—they can then be read with the HP 82153 Optical Wand.

Each program comes on disk for PC/Compatibles driving an Epson/Compatible, NEC 24 pin, Star Micronics or Olympia NP dot matrix printer, or an HP-LaserJet/Compatible. Each supports the LINK program to 'print' your 41 programs to a PC file.

Generator A accepts ordinary text files containing HP-41 program instructions (including synthetics). It outputs both non-private and private program barcode.

Generator B outputs direct-executing, numeric, alpha-replace and alpha append codes. There's even a special routine so experimenters can create custom codes.

Each generator package comes with a manual giving complete descriptions and explanations as well as instructions.

Stock #S-395A (41 Barcode Generator-A, 5%) List \$50.....\$44.95

Stock #S-395B (41 Barcode Generator-B, 5%) List \$50.....\$44.95

Combined Modules

Combined Module

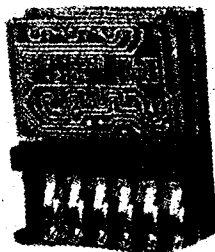
S.O.S.

You can save two or three ports by using these off-the-shelf combined modules. The 'chips' from three HP modules are combined into one and function just like they were in three separate ports. S.O.S. guarantees these conversions for one year.

Stock #41-614 (HP-IL plus Extended I/O).....\$199.95

Stock #41-689 (Timer plus Nav-pac).....\$133.95

Stock #41-627 (Math Stat plus two Ext Mem's).....\$219.95



Not Enough HP-41 Ports?

Combine two or three HP-41 modules into one!

Dual Modules—Combine a Quad Memory, Extended Memory or Time Module with each other or any normal Application Pac.

Triple Modules—Combine one Extended Functions and two Extended Memory Modules (this is the most common), or any one normal Application Pac with two Extended Memory Modules (HP-41CX).

HP-IL Conversion—Your HP-IL can be combined with either the HP-IL Development, Extended I/O or Plotter Module. All conversions are warranted by S.O.S. (not HP) for 1 year after conversion. Please allow 2 to 3 weeks, list any modules that you are enclosing for conversion on the order form and indicate that they are supplied by you. Price of service does not include modules.

Stock #41-531D [Double Module Conversion].....\$30.00

Stock #41-531T [Triple Module Conversion].....\$55.00

Stock #41-531L [HP-IL Conversion].....\$45.00

EPROM Modules

Custom EPROM Modules for the HP-41

You can have your own programs burned into a custom EPROM module in SMALL QUANTITIES! These are the same size as HP modules and merely plug into any port.

That means you can test market just a few, or supply only a few of your salesmen with proprietary programs. Send your programs and worksheet on cassette tape, disc, or cards. Allow 2 wks.

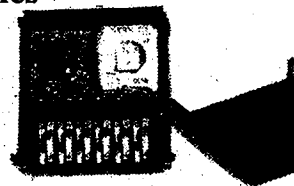
In addition to the blank module (priced below), burn-in costs range from \$35 to \$90 per unit and \$10 to \$15 for duplicates (see EPROM Services, below). Worksheet required.

Stock #41-841 [CMT 10-4K] List \$95.....\$89.95

Stock #41-595 [CMT 10-8K] List \$110.....\$99.95

Stock #41-609 [CMT 10-16K] List \$120.....\$109.95

Stock #41-617, Worksheet.....Free



EPROM Services

Your program or data can now be burned into an EPROM. All you need to supply is your worksheet and your program data on a cassette, disk or magnetic cards (2 sets of mag cards required). What you get is an EPROM (cost included for CMT-110) containing your program data. Send for your free programming worksheet (Stock #41-617). Allow 2 weeks for the programming. Completed worksheet required.

CMT-10 Modules:

	Original	Duplicates
Stock #41-676A (programming EPROM 4K)	\$35	\$10 each
Stock #41-676 (programming EPROM 8K)	\$50	\$10 each
Stock #41-677 (programming EPROM 16K)	\$90	\$15 each

CMT-110/HHP: (Price includes EPROM)

Stock #41-678 (8K programmed EPROM)\$65 \$25 each

Stock #41-679 (16K programmed EPROM)....\$105 \$30 each

ROM Modules

8K or 16K (One Time Programmable)

If you have tested your EPROM enough to be sure it's perfect, it may be time for you to produce ROMs at a fraction of the EPROM price. These ROMs can never be reprogrammed, so your EPROM must be completely tested.

For use, these plug into your 41 just like any Application Module. Minimum order 10.

Quantity	8K	16K
10-24	\$85.00	\$115.00
25-99	\$82.00	\$110.00
100-249	\$80.00	\$105.00

EduCALC

Delivery time is approximately 5 weeks. Please contact EduCALC for more details.

HP-41 Calculators

EPROM Modules continued

Zeprom Programmer

Firmware

Create your own 16K application modules for the HP-41—economically!

Have your own local EPROM programming capability. This self-contained device can be controlled from your HP-41—so the only other gear you'll need is an ultra violet light for erasing EPROMs.

US-made machine builds a complete 16K ROM image with global labels that can be linked across the entire 16K; it also serves as a ROM emulator for testing.

Programmer may be controlled by a 41—it's fully compatible with the cassette and disc drives. It also connects to a PC via an RS232 interface. It has 2 ports and can create 2 ROMs at once. (For further technical info, call 503-753-9314.)

ZEPROMs are programmable/erasable/reprogrammable plug-in modules that fit the HP-41. Made by Zengrange, Ltd, they can be configured 8 or 16K, or 12 or 16K bankswitched, and can accommodate User Code, M Code, or both. They can be erased and reprogrammed without dismantling the module case.

Best of all, ZEPROMs have been fully tested to British and NATO military standards of quality and reliability—including MIL STD 883C and BS9400.

Stock #41-863 [Zeprom Programmer] List \$650.....\$599.95

Stock #41-864 [Zeprom 16K module blank] List \$135.....\$125.95

Economy

UltraViolet EPROM Eraser

**Logical
Devices**

New

Tiny (4 x 2 x 2 inches) and Fast (less than 3 minutes)—erases one at a time. 110 VAC power, plastic enclosure.

Stock #LD-925 [UV EPROM Eraser].....\$59.95

HEPAX Modules

Big RAM memory for your HP-41—each model of Hepax is a standard-size module containing 8K or 16K of RAM. You can store your own programs and/or data in it and use it just like an HP Application Module.

Two models of Hepax contain, along with their RAM, a 16K ROM full of support functions (including equivalents to all the file-handling functions of the Extended Functions Module). Advanced functions include a powerful tool for disassembling HP-41 machine language, a hexadecimal editor so you can write your own functions in machine language and a way to transfer whole 4K blocks of Hepax memory to/from mass storage.

'Memory lost' cannot affect your Hepax Module and programs in it can be write-protected—data is maintained as long as the module is in your instrument.

Comes with a 100p manual. You can use 2 Hepaxs at once, and only one will need ROM functions.

Stock #41-895A [Hepax, ROM & 8K RAM].....\$287.00

Stock #41-895B [Hepax, ROM & 16K RAM].....\$394.00

Stock #41-895C [Hepax, 8K RAM only].....\$235.00

Stock #41-895D [Hepax, 16 K RAM only].....\$326.00

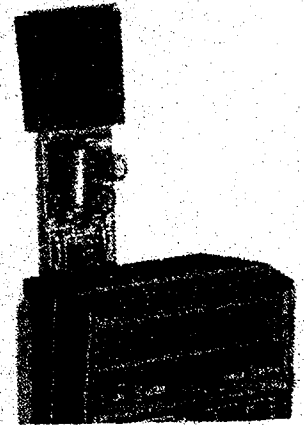


One at a Time Zeprom Programmer

Zengrange

Now—inexpensive custom modules in small and medium volume runs. Easy to use—merely plugs into an HP-41 port and a Zeprom is plugged into it. Building a useable ROM image does require some skill, but if you're familiar with the use of the Zenrom, for instance, you'll find the One-Off simple to command.

Stock #41-894 [One at a Time Programmer] List \$85.....\$69.95



Soft/Bookware

Celestial Navigation with the HP-41

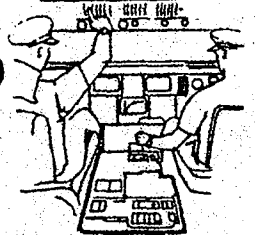
**MNP
STAR**

Flight Deck Programs by a 2000-hour pro—useful to Marine Navigators and Astronomers, too. All programs come on magnetic cards with complete documentation and instructions.

Local Hour Angle, Sidereal Hour Angle, Polaris Latitude; plus navigator's intercept for Stars, Sun, Moon, and Planets.

Stock #41-631 (41 Celestial Nav, Mag Cards) List \$48.....\$43.95

Stock #41-631L, Celestial Nav Literature.....Free



Printed Flight Plan System

**MNP
STAR**

Produces professional-looking Flight Plans WITH EASE for any type of aircraft that normally requires a flight plan. Step-by-step instructions are written in Airman's terms where possible. You just follow the examples here to get successful results after your first trial.

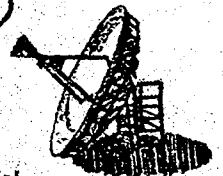
Format provides all vital data for each leg of your flight. You can compute an unlimited number of zones (or legs) and an unlimited number of alternate airports. Discusses open Wind Triangles in detail, including how to recognize them.

Requires HP-41CX or HP-41C with Quad Memory and XFNS Modules or HP-41CV with XFNS Module, Card Reader and ThinkJet Printer on HP-IL loop. Comes on 9 magnetic cards.

Stock #41-748 (Printed Flight Plan, Mag Cds) List \$60.....\$54.95

Non-printing version does not require ThinkJet printer—you read out results on calculator display.

Stock #41-838 (Non-Printed Flight Plan, Mag Cards).....\$54.95



Advanced Programming Tips for the HP-41 by McCornack/Jarett

For serious programmers—explains modular programming (and how to save bytes and running time), synthetic programming (with several unpublished techniques and line-by-line analyses of many programs), M-code (so you can decide if this area of programming is for you), and application routines (with discussions of several for the ZENROM and CCD modules).

Bar code is included for the programs.

Stock #41-491, 41 Adv Programming Tips, 340p sftbnd.....\$20.95

HP-41 Calculators

Soft/Bookware continued

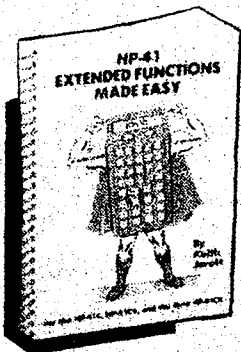
HP-41 Extended Functions Made Easy

by Keith Jarett

If you own an HP-41CX or an Extended Functions Module, you need this book. If HP's manuals have left you wondering whether you can really do anything useful with your Extended Functions/Memory Module or HP-41CXs, it's not your fault. The manuals barely begin to describe their capabilities. This book explains each function fully at an intermediate-to-advanced level, giving examples and typical uses.

Application programs include: a mailing list manager, a text editor, a root finder, differentiator, integrator, and much more. Chapter 10 has several powerful synthetic utility programs (with barcode) for advanced users or wand owners. Put your Extended Functions and Extended Memory to work!

Stock #41-206, Ext Functions Easy, 240p spiralbound\$16.95



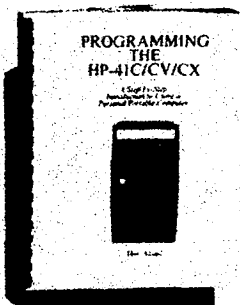
Programming the HP-41C/CV/CX

by Thomas Adams

Give this step-by-step course a half-hour every day and you'll soon be a programming pro. The author has himself written many (medical) programs for the HP User's Library—now he shows you how with lots of examples, charts, diagrams and illustrations.

Despite its intermediate level, this introductory book has no prerequisites, and you can follow it with any model of the HP-41.

Stock #41-413, Prog HP-41C/CV/CX, 171p spiralbnd\$19.95



Navigation at Sea using the HP-41CX

Justin Gray

at sea your boat is at risk and your life is at stake

Learn this modern version of an ancient art so you can set sail with confidence. Justin Gray's years of teaching experience lead you, right from GO, to practical mastery of coastal and celestial navigation.

You'll use HP's Navigation Pac to its limits, and you'll have the added programs (listed in manual and available separately on 16 mag cards with program documentation) that a small-boat captain needs—how to sail with no other instruments than a sextant, and as a backup to SatNav and Loran.

Be prepared when your boat's power fails and you're out of range of Loran—your HP-41CX will still be working.

Requires Extended Memory (82181) and NavPac (15017) Modules.

Stock #41-794M, 41-Nav Manual only, 67p combbound\$12.95

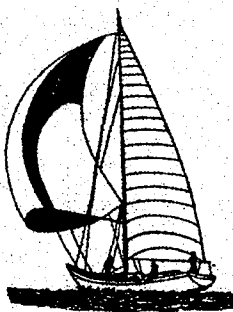
Stock #41-794 (41-Nav Manual, Mag Cards, Docmntn)\$47.95

Stock #41-794C (41-Nav Mag Cards, Documentation)\$36.95

Now—Justin Gray's Nav at Sea programs are also available in a plug-in module. Requires the HP-41 with HP Nav Pac Module, but not the Extended Memory Module.

Comes with documentation and full instructions. This is the most comprehensive navigation set-up for the HP-41.

Stock #41-905 (Nav at Sea Module) List \$140\$129.95



Extend Your HP-41

by Wlodek Mier-Jedrzejowicz

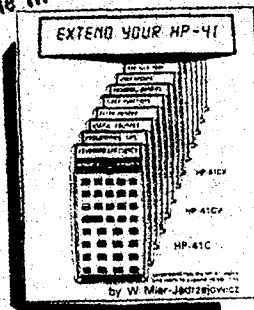
This is the definitive work on the HP-41!

The ULTIMATE REFERENCE BOOK for your HP-41 system—plus many hours of FASCINATING READING. The first 200 pages show a beginner how to make full and efficient use of his instrument; even experts will appreciate some of the clever programming hints in this advanced-level book.

Next come explanations of Time and Extended Functions, and Extended Memory, with a full discussion of peripherals and modules (including the Advantage). The last 200 pages introduces synthetic programming and illustrates several new SP tricks, covering PRP and PAC functions plus synthetic key assignments that use no synthetic instructions! Appendices include bar code and a list of system bugs.

This is the largest and most complete collection of useful facts for the HP-41 system—no 41 owner should be without it.

Stock #41-621, Extend your HP-41, 670p softbound\$29.95



Inside The HP-41

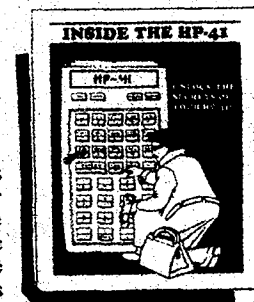
by Jean-Daniel Dodin

(translated from the French by Mary-Denise Dodin and I. Vandenabeele; revised and edited by Wilson W. Holes)

Price Reduced

Discover the secrets of your HP-41! Here is your intermediate-level tour through its inner workings. Learn about memory structure, the status registers, the byte grabber, synthetic programming, and microcode—the language of the HP-41's microprocessor. See examples of the intricate internal programming of the HP-41, the microcode that makes the HP-41 what it is.

Stock #41-355, Inside the HP-41, 256p softbound\$12.95

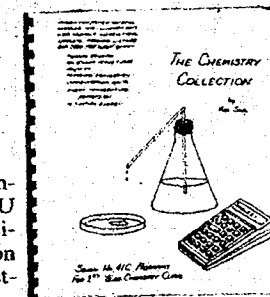


The Chemistry Collection Raises your Exam Scores!

by Ken Saul

HP-41 programs for frequent 1st year Chemistry problems, written by a former OSU student and published by the HP User's Library. Helps a lot in the lab as well as on homework and exams. Complete program listings and bar code. 7 programs.

Stock #41-414, Chem Collection, 47p combbound\$14.95



The Physics Collection

by Ken Saul

Raises your Exam Scores!

HP-41 programs for frequent 1st year Physics problems, written by a former OSU student and published by the HP User's Library. Helps a lot in the lab as well as on homework and exams. Complete program listings and bar code. 10 programs.

Stock #41-415, Physics Collection, 66p combbound\$14.95

HP-41 Calculators

Soft/Bookware continued

Point Storage Conversions

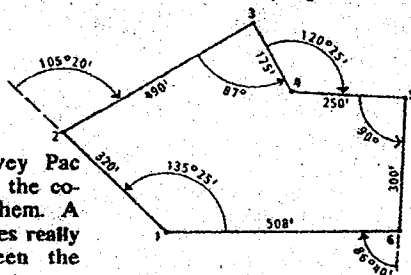
Combined, these booklets turn your existing HP Surveying Pac into a complete Point-Storage System. Use them separately or together. Requires HP-41, Survey Pac and a few minutes time for editing. Each booklet contains program listing, user instructions and keystroke examples; also available with all programs on magnetic cards.

Traverse, Inverse and Sideshots

Works just like the Survey Pac you're used to, but it stores the coordinates as it calculates them. A short driver program also does really fast radial inverting between the stored points for radial stakeout.

A built-in compass adjustment routine not only adjusts the coordinates, it also inverts between them as it makes the adjustment. No need to re-input the adjusted coordinates to get the new bearings and distances.

Stock #41-536, Trav/Inv/Sideshots, 20p combbound \$6.95
Stock #41-536M (Trav/Inv/Sideshots, Mag Cards incl).....\$12.95



Solutions Booklets

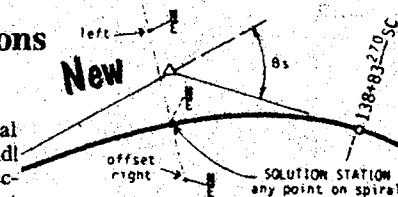
Quick solutions to a surveyor's everyday problems—programs for use in HP-41 with Survey Pac.

Spiral Curve Solutions

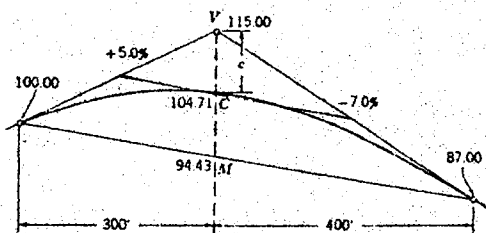
The only complete spiral curve program for a handheld! Contains the standard Deflection-Chord and Tangent-Offset solutions, and will also calculate the coordinates of any station or offset to a station anywhere within the system.

Subroutine will automatically calculate the inverse from the instrument to any calculated point; new Spiral to Line and Spiral to Curve intersection routines.

Stock #41-888, Spiral Curve Solns, 36p combbound..... \$6.95
Stock #41-888M (Spiral Curve Solns, Mag Cards incl)..... \$12.95



Vertical Alignment Solutions



Calculate continuous vertical alignment without changing back and forth between grade and curve routines. Output is in a form that makes sense and prevents mistakes.

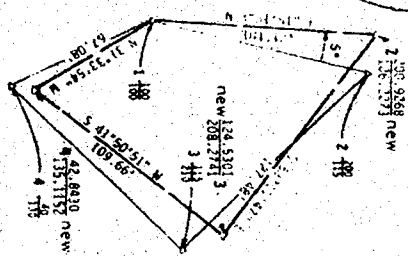
Asymmetrical curves are handled as easily as symmetrical. Includes a routine for calculating compounded or reverse vertical curves.

Stock #41-885, Vertical Alignment Sols, 16p combbound \$6.95
Stock #41-885M (Vertical Alignment, Mag Cards incl)..... \$12.95

Coordinate Transformation

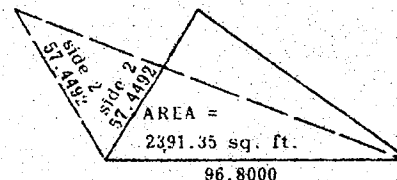
Rotate or re-scale the coordinates you stored as you calculated the traverse, or input the coordinates manually. Eliminates the need for inverting with the traverse routine after rotation or scaling of coordinates, because the inverting is done automatically as the coordinates are changed. Takes half the time of the Survey Pac program.

Stock #41-886, Coordinate Transform, 20p combbound \$6.95
Stock #41-886M (Coord Transform, Mag Cards incl).....\$12.95



Triangle Solutions

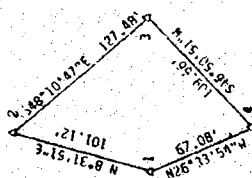
New



Three sides known: Side-Angle-Side, Side-Angle-Angle, Side-Side-Angle, Angle-Side-Angle. Area known: Area-Side-Angle, Area-Angle-Angle or Area-Side-Side. If there are two possible solutions to a problem, both are output.

Stock #41-890, Triangle Solutions, 14p combbound..... \$6.95
Stock #41-890M (Triangle Solutions, Mag Cards incl)..... \$12.95

Intersection Solutions



Use this one with the stored coordinates to establish any new points needed. It will use pre-stored or manually input coordinates by point number to quickly solve intersection problems. Brg-Brg, Brg-Dist, Dist-Dist or Offset to a Line.

Stock #41-527, Intersection Solutions, 16p combbound..... \$6.95
Stock #41-527M (Intersection Sols, Mag Cards incl)\$12.95

Predetermined Areas

New

Calculate needed areas for subdividing with the stored point numbers from your traverse. Fast resolution of the area. User assigns the new point numbers as the areas are calculated. All newly generated coordinates are stored for reuse.

Stock #41-889, Predetermined Areas, 20p combbound..... \$6.95
Stock #41-889M (Predetermined Areas, Mag Cards incl).....\$12.95

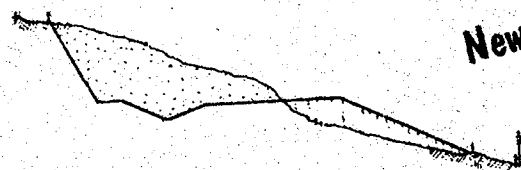
EDM Slope Staking

New

Set slope stakes with your EDM. Program reduces each shot to the information needed to make out the stake. Subroutine gives the angle and distance for setting the reference stake, then produces the information to put on it.

Works from anywhere in the general vicinity of the alignment you are staking as long as you know the station and offset of the instrument and backsight.

Stock #41-887, EDM Slope Staking, 18p combbound..... \$6.95
Stock #41-887M (EDM Slope Staking, Mag Cards incl)..... \$12.95



HP-41 Calculators

Soft/Bookware continued

HP-41CV/CX

Surveying Field Solutions

These programs work! They're being used right now on the BART, Los Angeles and Seattle rapid transit projects. This is due in part to the automatic stakeout routines for the alignment programs—there are no other programs available which will automatically calculate and inverse to offsets to a spiral curve.

The Topo and As-built programs work without a data collector or interface to theodolite. With a printer, the field data is broken down to ready-to-plot form in the field, as shots are taken (and with few keystrokes).

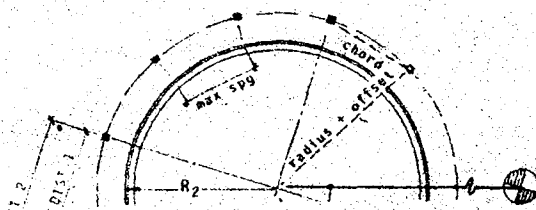
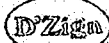
Field Layout programs are Radial Inverse, Alignment & Offsets, Auto-Inverse. Spiral Curves programs are Deflection & Chord, Alignment & Offset, Auto-Inverse, Tangent Offset, Radial Inverse. Field Location programs are Topo, As-builts, Remote Slope Staking, Tunnel Tights, Triangle Solutions.

All in all, this contains over 2000 lines of program listings—programs are also available separately on magnetic cards.

Stock #41-417, Survey Field Sol, 116p combound.....\$21.50

Stock #41-417C (Mag Cards for Surv Field Sol).....\$19.95

Geometrics Solutions



Do you design or lay out subdivisions?

All you need to know are the street widths and the radii—you'll have solutions in minutes, with your HP-41CV/CX.

Street intersections, cul-de-sacs, bulbs and knuckles are solved, with or without coordinate output. Or, you can calculate complete radial layout of a cul-de-sac or street intersection quickly, starting from scratch! No more switching back and forth between traverse, intersection and curve programs!

Book includes complete instructions with program listings. Programs also available already keyed in, on mag cards.

Stock #41-449, Geometrics Solutions, 94p combound.....\$19.95

Stock #41-449C (Programmed Mag Cards only).....\$19.95

Pipeline Engineering Programs for HP-41C/CV

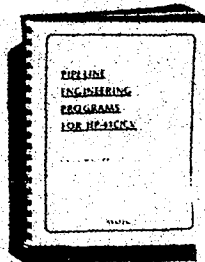
by Shashi Menon

Throw away your charts, graphs and nomograms! Here are your 17 most useful routines—practical, thoroughly tested and fast. Beginning engineer and experienced professional both get easy, portable, rapid calculations at the touch of a button. No programming experience is necessary—in fact, you can master most of these programs in less than 15 minutes each.

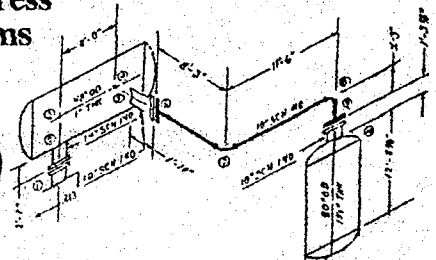
They are given with descriptions and operating instructions, formulas, sample problems, program listings, and descriptions of input and output. You'll need a HP-41CV, CX, or C with Quad Memory Module; a thermal printer is optional.

Stock #41-213, Pipe Eng Prog, 133p softbound.....\$49.95

Stock #41-213C (Cassette for this program).....\$24.95



PipeStar Pipe Stress Analysis Programs 1.1



Analyze 2-anchor 3-D piping systems for thermal stresses. Use the same matrix method with the same accuracy as many mainframe computers.

PIPESTAR 1 complies with either ANSI/ASME B31.1 or B31.3 Piping Code, accepts English or Metric units, will solve a single problem with over 500 data points, and can store up to 20 separate data files in memory. Multiple pipe diameters, wall thicknesses, bend radii, stiffnesses, and k and i factors (calculated by program or input by user) may be used within the same piping system. Anchor movements are also provided for. In addition, the program prompts the user for all input and labels all output (stresses, moments, forces, k and i factors).

Minimum hardware requirements: an HP-41CX or HP-41C/CV with extended memory and a card reader to initially load the program; a printer is optional. All programs come on mag cards. Manual includes complete instructions and detailed, worked-out examples.

Stock #41-793 (Pipestar, Mag Cards) List \$150.....\$139.95

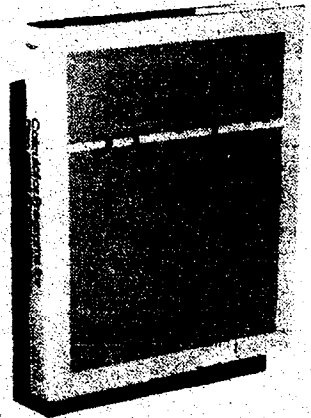
We choose what we offer just as carefully as you choose what you buy.

Calculator Programs for Pipe Stress Engineering by Kenneth Morgan

Use your HP-41CV or TI-59 (instead of the mainframe)—here are ready-to-run programs for Pipewall Thickness (rolled and seamless), Reinforcement Pads, Allowable Span, Vibration, Stress, and Two-Anchor System Flexibility.

It's cheap—it's easy—it's accurate! Each method is explained step-by-step, with references, an example, procedure details and directions for loading. These fully tested and validated programs are all Petrochemical Industry 'Code' equations, or analyses of complex design situations.

Stock #E-411, Pipe Stress Engineering, 403p hardbound...\$44.95



HP Handheld User's Conference

June 3, 1989 • Chicago, IL

Participate in celebrating the HP-41's 10th year in production, Hewlett-Packard's 50th year, and CHIP's 13th at this special, extended day event that will bring together users and manufacturers. Sponsored by CHIP, the oldest US HP club, in conjunction with the summer Consumer Electronics show (June 3 - 6).

Find out more now so you can make reservations early—send a stamped, self-addressed envelope marked "Conference Info" in the lower left corner to EduCALC.

HP-41 Calculators

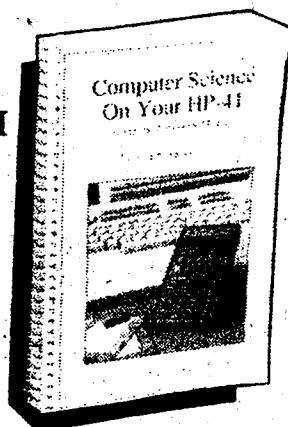
Soft/Bookware continued

Computer Science on your HP-41 using the Advantage ROM

by Ed Keefe

Turn your 41 into an HP-16C! Here's a powerful program in book form, with bar code as well as complete program listing—all done in Grapevine's easy-to-understand style.

Stock #41-485, Cmptr Sci on your HP-41, 183p wirebnd....\$14.95



Data Processing on the HP-41

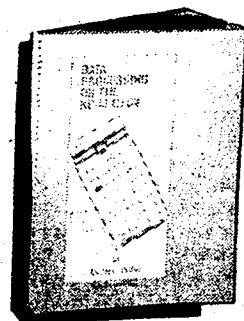
by William Phillips

That's right—DATA PROCESSING on your calculator! You know the HP-1C turns your HP-41 into a PERSONAL COMPUTER with cassette memory and printer. Now a pro teaches you how to use this power.

First he surveys the hardware, RPN and simple programming. Then he describes structured techniques for program design. Then file creation and file processing are explained. Two large programs are studied in detail as examples (one is a useful Cash Register and Running Inventory Program).

Stock #41-165, Data Processing, 147p spiralbound....\$16.95

Special!
\$13.95



Users' Library Software Catalog from HP for the HP-41, 71 and 75 May 1986 Edition

A list of about three thousand programs for the HP-41, most of which are also available for the HP-71, plus a couple hundred for the HP-75—all cross-indexed by subject and author and described concisely. All are available through HP on your choice of media (mag cards, mini-cassette or 3 1/2" disc) with thorough documentation, at about \$12.00 each.

The list of topics is enormous—from crop science to computer science, from payroll to marketing, plus every engineering specialty and every field of numerical math and statistics, and physics, and chemistry, and social sciences. Many of these will work for you.

Stock #41-202B, Users' Library Catalog, 220p softbound....\$9.95



Read our mail—

"I am very impressed with your response time, and your prices have been consistently lower than other places.

I'm surely going to continue doing business with you, and I have passed your catalogs on to my colleagues with my highest recommendation. Thanks for everything."

Tom Marazita, Mucilid Enterprises, Goleta, CA

HP-41 Solvit

Ted
Beers

ROW 1: LINES 1-3



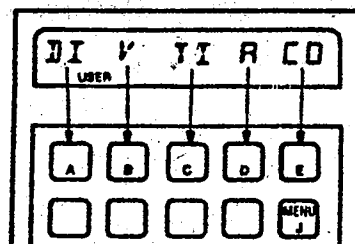
Solve Multiple-Variable Equations for Arbitrary Unknowns on your HP-41. It's like TKISOLVER and other PC programs, or the HP-18C—you input your formula with any number of variables. Then you assign known values and calculate the remaining unknown. Makes a custom menu for each of your equations.

Comes with instructions and examples, program listings and bar code. Requires HP-41CV, CX, or 41C with 2 Memory Modules, and Advantage Module.

Stock #41-766 (HP-41 SOLVIT).....\$29.95

Stock #41-766D (41-SOLVIT Pgm, 3 1/2" Disk only).....\$19.95

Stock #41-766C (41-SOLVIT Pgm, Mag Cards only).....\$19.95



OS-41

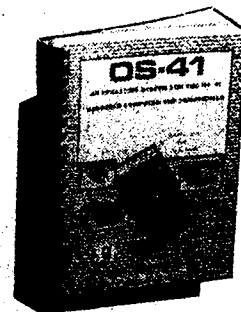
An Operating System for the HP-41 and Peripherals

Beers/Beers

Take one GIANT STEP, you 41 users—here are more than 70 programs which automate various tasks of data and program manipulation for you. You'll be able to quickly transfer/duplicate files/programs to/from tape/disc/main memory/X-mem in bar code/ASCII/program/data form. On the way you can sort alphabetically or create new files as desired.

All these programs come in bar code, and there's an extraordinary 472-page manual that gives you state-of-the-art options, warnings and examples in abundance—an education in itself! This is written from both sides of the fence—the authors are a professor and his son (who is now an HP Customer Support Engineer).

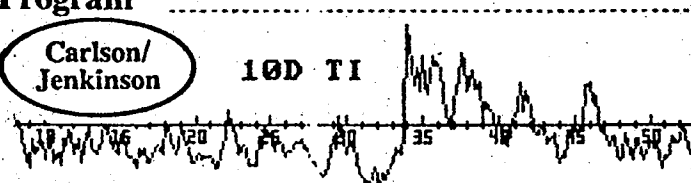
Stock #41-591 (OS-41 with Bar Code).....\$41.95



Technical Indicator Program

Carlson/
Jenkinson

10D TI



With this program and just two minutes per day you can calculate your own market indicators fresh daily for the NYSE, ASE, NASDAQ, or other markets. You get all sixteen of them: McClellan Oscillator and Summation Index, Trader's Index, Advance-Decline Line and Oscillators, Magic-T and Volume Oscillators. Then you use the easy guidelines and examples to interpret overbought/oversold conditions and get buy/sell signals, determine bottoms and forecast tops. No programming experience necessary. Requires HP-41CV calculator (or HP-41C with Quad Module). Includes program listings, descriptions, instructions, examples and interpretations for all indicators.

Stock #41-99, Technical Indicator, 67p combbound.....\$29.95

Stock #41-99MC (Magnetic Card for this program).....\$9.00

Stock #41-99BC (Bar Code for this program).....\$5.00

HP-41 Calculators

Soft/Bookware continued

SOLUTION BOOKS For The HP-41 Only \$14.50 Each!



The solution books provide step-by-step keystroke listings for specific problems in specific disciplines. Although they are not as convenient as the Application Modules, they cover more programming details in many of the same areas. They are perfect for the person who is involved in specific programming solutions, program modifications, or as a reference program library. Available titles are:

Stock #90093, Antennas.....	\$14.50
Stock #90094, Business Statistics/Marketing/Sales.....	\$14.50
Stock #90145, Calendars.....	\$14.50
Stock #90100, Chemical Engineering.....	\$14.50
Stock #90102, Chemistry.....	\$14.50
Stock #90089, Civil Engineering.....	\$14.50
Stock #90092, Control Systems.....	\$14.50
Stock #90088, Electrical Engineering.....	\$14.50
Stock #90139, Fluid Dynamics & Hydraulics.....	\$14.50
Stock #90099, Games.....	\$14.50
Stock #90443, Games II.....	\$14.50
Stock #90084, Geometry.....	\$14.50
Stock #90140, Heating, Ventilating & Air Conditng.....	\$14.50
Stock #90083, High-Level Math.....	\$14.50
Stock #90096, Home Construction Estimating.....	\$14.50
Stock #90086, Lending, Savings, & Leasing.....	\$14.50
Stock #90090, Mechanical Engineering.....	\$14.50
Stock #90143, Optometry I (General).....	\$14.50
Stock #90144, Optometry II (Contact Lens).....	\$14.50
Stock #90142, Physics.....	\$14.50
Stock #90136, Real Estate.....	\$14.50
Stock #90137, Small Business.....	\$14.50
Stock #90138, Solar Engineering.....	\$14.50
Stock #90441, Structural Design (cassette based).....	\$35.00
Stock #90141, Surveying.....	\$14.50
Stock #90082, Test Statistics.....	\$14.50
Stock #90395, Time Module Solutions I.....	\$14.50

HP Manuals in Spanish



Stock #41-90318, HP-41C/ CV Owner's Handbook (Sp).....	\$20.00
Stock #41-90514, HP-41CX Supp to CV O's Man (Sp).....	\$6.95
Stock #41-90530, HP-41CV Owner's Manual (Sp).....	\$19.95
Stock #41-90540, HP-41CV Quick Reference Guide (Sp).....	\$4.95

Need Extra OWNER'S MANUALS?

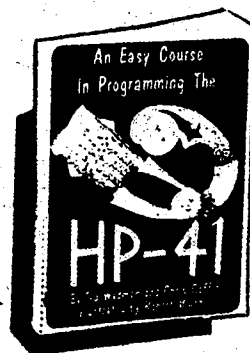


Stock #41-90526, HP-41CV Owner's Man-Basic Oper.....	\$10.00
Stock #41-90474, HP-41CX Owner's Handbook, Vol I.....	\$10.00
Stock #41-90492, HP-41CX Owner's Handbook, Vol II.....	\$15.00
Stock #41-701, Card Readers Owner's Handbook.....	\$5.00
Stock #41-703, HP-82143A Prntr/Pltr Owner's Hndbk.....	\$5.00
Stock #41-705, Optical Wand Owner's Handbook.....	\$5.00
Stock #41-707, "Creating Your Own Bar Code" Man.....	\$15.00
Stock #41-714, Ext Funct/Mem Mod Owner's Hndbk.....	\$10.00
Stock #41-715, Time Mod Owner's Handbook.....	\$15.00
Stock #41-90531, Operation in Detail (CV).....	\$14.95
Stock #41-876, Ext I/O Module Owner's Hndbk.....	\$9.95
Stock #41-877, Plotter Module Owner's Hndbk.....	\$26.95

An Easy Course in Programming the HP-41 by Wadman/Coffin

Beginners, look no further. Here is your book—straightforward and clear, brief and free of technobabble. This treatment is itself programmed, so if you have some experience, you are led quickly to the topic you need. Authors Ted Wadman and Chris Coffin are former HP employees, and they know their stuff—they also know how to make it easy and make it fun. HP #92234T

Stock #41-193, Easy Programm HP-41, 255p spiralbnd ...\$20.95



Statics for Students Using your HP-41 Advantage by Wadman/Coffin

Breeze through the hundreds of homework, test, and exam problems you encounter in a statics class—just use this book's program and your HP-41CV or CX and Advantage ROM.

Merely draw the picture for your calculator, inputting coordinates of pertinent points and known loads on the structure. Then you choose either to sum the known moments and forces about the origin, or to input the orientation of 3 unknown reactions and solve for their magnitudes—it's that easy!

You can solve the internal forces of a structure by the 'method of sections' with a few keystrokes—that's power! Yet you can quickly calculate simple things, too, like the supporting reactions of a cantilever beam.

Comes with program listings, bar code, and easy-to-take instructions. There's even a review of statics principles and the math.

Stock #41-634, Statics Advantage, 80p softbound.....\$11.95



Nonparametric Statistics on the HP-41

by Don Vargo

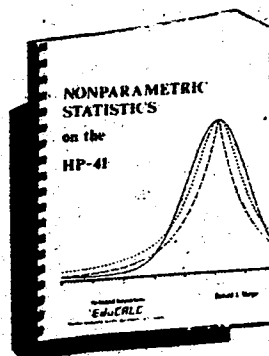
Special!
\$9.95—Order
Before 11/1/88

ATTENTION behavioral, biological and physical scientists: if you're using these popular new methods with a stat pac on a big computer, you're in for a pleasant surprise! On your HP-41 these same tests become straight-forward and forgiving, and errors are easy to correct.

13 tests in all, for One Sample and Matched Observations, Two Samples' Location and Dispersion, Analysis of Variance, Goodness of Fit, and Independence. These programs have a common treatment here, with complete discussions and examples. The manual begins with an introduction to nonparametric methods and a brief review of elementary statistics. Requires an HP-41CV or HP-41C with quad memory module, and a familiarity with inferential statistics.

Stock #41-307, Nonparametric Stat, 166p softbound \$9.95 \$16.95

Stock #41-307BC (Bar Code for above) \$6.95 \$9.95



Super Turbo 41

Super bargain
while they last!

Only a few
in stock

Wow! Built-in FORTH, BASIC and RPN languages with 50K RAM. This is an HP-71 with Translator Pac and an extra 32K RAM hardwired right in—what a handheld!

Stock #ST-71 [Super Turbo 41].....\$589.95

HP-41 Calculators

Synthetic Programming

'SOUP UP' your HP-41

When you press the keys on your HP-41 in PRGM mode, instructions are entered into program memory. Many of these instructions contain more than one byte. Using special techniques to pull apart these bytes and recombine them with other bytes, you can synthesize an extensive set of new instructions which are not described in the Owner's Handbook. The creation and use of these instructions is Synthetic Programming (SP). It provides a wide range of extended capability for your HP-41.

As a simple example, the synthetic instructions STO M and RCL M allow the rightmost 7 character positions of the ALPHA register to be used for general-purpose numeric storage. Many SP capabilities are useful in day-to-day applications, while some are simply fun to play with. If you like your HP-41, you'll like synthetic programming!

Hewlett-Packard does not support SP in any way. They will not answer any questions on SP, and synthetic techniques are not even hinted at in the HP-41 owner's manual. If you want to find out more about SP, consult some of the references on this page. Isn't it time you found out what you have been missing?

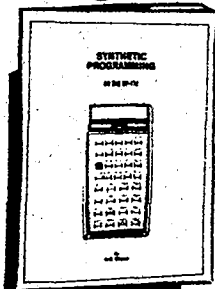
EduCALC does support Synthetic Programming

Synthetic Programming on the HP-41C

by William Wickes

The first and still the most complete and detailed book on the subject. Some of the techniques covered are: Addition of 21 'new' display characters; transformation of the alpha register into 4 additional registers, to use as a scratch pad which does not disturb data stored by other programs; enhanced user control over the 56 user and system flags, such as clearing all 56 simultaneously; SIZE finding automatically in less than 2 seconds; rapid alphabetizing of alpha data; alpha character string processing; 6 new TONE frequencies plus variation of TONE duration; improved key assignment control, like SF 14 or GTO IND X on a single key. A Card Reader or Wand would be very helpful.

Stock #41-92, Synthetic Prog, 96p softbound.....\$10.95



HP-41 Synthetic Quick Reference Guide compiled by Jeremy Smith

Charts, Tables and Diagrams that you'll need for Synthetic Programming, collected from books and journal articles. This compilation is in compact, pocket form—it contains no explanations or examples, though references are given (e.g. to the books by Wickes, Jarrett, and Reinstein).

Stock #41-147, Quick Reference Guide, 40p softbound.....\$5.95



Quick Reference Card for Synthetic Programming

Durable 3-color non-glare plastic card showing byte equivalences and flag functions. An indispensable aid to synthetic programmers, and useful as an ASCII table for computer users.

Stock #41-92C, plastic Quick Reference Card.....\$1.95

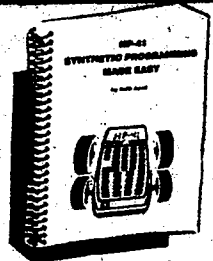


Synthetic Programming Made Easy

by Keith Jarrett

The best introduction to SP for the uninitiated. Highly readable, it uses all the latest simplified techniques, including 'byte grabbing' and 'byte loading', to make the learning fun and easier than ever before. Contains up-to-date programs, including Extended Functions and Time Module applications. Includes a plastic Quick Reference Card (41-92C) for Synthetic Programming. All the basics are here, with a full cross-reference to other sources. By Chapter 3 you will be able to key up synthetic programs from the HP User's Library or any other source. No peripherals or modules required, but a Card Reader, XFUNCTION Module, or Wand will be helpful. Bar code for all programs is included.

Stock #41-146, HP-41 Synthetic, 192p spiralbound.....\$16.95



HP-41 MCODE for Beginners

by Ken Emery

Learn to be an Insider, step-by-step. Ideas and techniques are introduced one-at-a-time and illustrated with programs—so you'll quickly be able to set up the function address table and write a simple program which accesses the mainframe ROMs. All programs are fully documented and demystified.

Advanced programmers will find a complete explanation of the display, including the new one that accesses additional LCD characters and allows alteration of the contrast. There's also a first-time description of the memories HP uses for the display. Other new stuff includes an explanation of partial key sequencing as used by the ZEN and CCD ROMs.

M-Code programming on your HP-41 requires a special Quasi-ROM memory unit, such as the ERAMCO MLDL, the RAM expansion unit, or the CMT-100 Application Module Simulator.

Stock #41-374, Beginners MCODE, 192p wirebound.....\$24.95

HP-41 Coding Sheets

EduCALC

Use this professional tool to get professional results that look professional. With these two-sided, 11 x 17 inch forms you can jot it all down: There's systematic space for Keyboard Labeling, System Configuration, Card Labels, Function Assignments, 224 Program Steps with Comments. Plenty of room, and it's so easy with this form to organize everything and remind yourself of details.

Now you'll be able to compose programs faster, with fewer bugs. Your associates will be able to read and follow your programs, and they'll be impressed by this format.

Stock #41-572 [HP-41 Coding Sheets, 25 sheets].....\$6.95

Stock #41-573 [HP-41 Coding sheets, 300 sheets].....\$69.50

MC-II—The 'Super 41'

HP-41 CX Compatibility. The MC-II 41M supports all HP-41CX functions plus some powerful new ones. You program the MC-II just like you would an HP-41CX, or, use a PC with a text editor instead of 'punching in' programs.

More Memory. The standard MC-II 41 has more than 14,000 registers. Plug-in memory modules let you add memory as you need it.

Faster Execution. The 41M executes HP-41CX user-coded programs 5 to 10 times faster.

Bigger Display. 8 lines by 21 characters of display. The larger display enables the 41M to use softkey items.

Better Communications. The MC-II supports communications with virtually any peripheral via serial, parallel, or HP-IL interface.

HP-IL Support. The MC-II will not obsolete your HP-IL investment. Drive your HP-IL disk drive, cassette drive, printer, plotter, or modem with the optional HP-IL interface.

Larger Programs. See page 84 for more details.

HP-IL Interface Loop

Here's where you find...

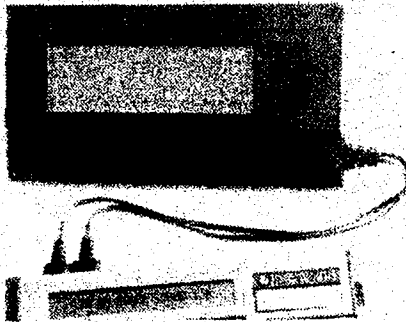
Disc/Cassette Drives	66
Printers/Monitors	67
Interfaces	68
Accessories	70
Bookware	71
Programmers' Aids	71

Your HP-41, HP-71 or HP-75 can plug into any of the following peripherals if it is equipped with the HP-IL (Interface Loop).

LCD Display for HP-IL

CMT

Brand New



- 8 lines x 40 characters with 50 line buffer
- High-contrast super-twist LCD technology
- 8-hour portable operation with 9 v alkaline battery

Use it with your existing HP-41, 71 or 75 programs—no rewriting necessary. Displays the full HP-71B character font set. 8 softkeys give you a controlled view of buffer contents.

It accept standard HP escape sequences compatible with HP-IL controllers. Additional escape sequences give you full cursor control, power to redefine character fonts and softkeys, and raster graphics.

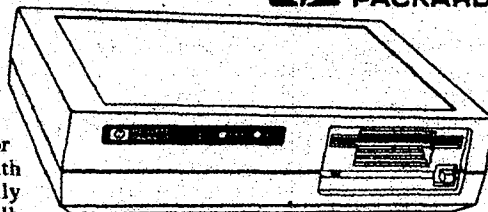
You control viewing angle with a thumbwheel and a kickstand props the display up on your desk. Display area is 15 x 4.5 inches; case is 1.25 x 4 x 7.5 inches; the instrument weighs 12 oz without battery. Jack for external DC power; accepts rechargeable NiCd batteries.

Stock #IL-923 [HP-IL Display] List \$295.....\$274.95

Disc/Cassette Drives

Portable 3 1/2" Disc Drive for HP-IL

hp HEWLETT PACKARD



At last, here's quick-access mass memory for series 40 or 70 machines (and for HP-110). Two sided, with 630K capacity, yet easily portable—it weighs 6 lbs. and is battery powered. Three inches high, with a footprint the size of typewriter paper. The 3 1/2" flexible discs are safer and more reliable than larger ones, due to the hard case and automatic shutter—and the drive automatically monitors wear and checks for defects at each insertion. Average data access time is 1/4 second and transfer rate is 6K/sec.

Complete with rechargeable battery, recharger, disc, one meter HP-IL cable, and manual.

This 9114B version has increased battery life, faster access times, a new battery charge indicator, and a new battery pack.

Stock #9114B [HP Disk Drive] List \$695.....	\$556.95
Stock #92192A [3 1/2" Disc] List \$5.....	\$3.95
Stock #92192X [3 1/2" Discs, Box of 10] List \$49.....	\$36.95
Stock #92191M [Disc Carrying Case, holds 5].....	\$3.25
Stock #92191Q [Desk Top File, holds 25 discs].....	\$19.95
Stock #88014B [Rechargeable Battery] List \$65.....	\$58.95

3 1/2" HP-compatible Disc

Stock #1351 [Spectrum/BASF 3 1/2" Disc].....\$1.95

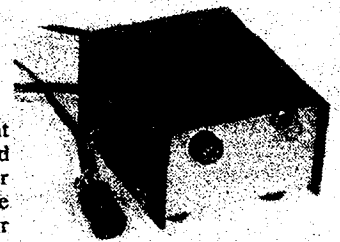
AC Power Supply

S.O.S.

Outputs a non-regulated 6-9 volts at up to 3 amps, connected to a standard Cinch-Jones receptacle. Several of our customers have reported complete success using this AC Unit to power their HP-9114 Disc Drive.

Use of a non-HP power source with the HP-9114 voids the HP Warranty—responsibility for such use lies with the user. AC Unit is warranted for 90 days to be free from defects of workmanship.

Stock #IL-480 [AC Power Supply Unit].....\$69.95



Replacement Battery

Used in the rechargeable battery pack (88014A). The T9 Torx Tool is required to remove the cover; spade terminals connect to the battery.

Stock #LCR-226P [Battery].....\$18.25

Stock #T9 [Disc Drive Torx Tool].....\$5.00

Used HP Cassette Drives

These drives are in good condition (not new) and come with an owner's manual and recharger. They are out of warranty from HP, but if your unit fails to operate properly in 30 days, it will be replaced by EduCALC. Get yours while they last!

Stock #82161U [Used Cassette Drive].....\$219.95

Stock #82176U [Used Mini Cassette].....\$2.95

Digital Cassette Drive

hp HEWLETT PACKARD



The Digital Cassette Drive uses a digital-quality mini-cassette capable of storing up to 128K bytes of information. Files can be located by name easily on this cassette drive. Rewind time is under 30 seconds and read/write operations are executed at 9 inches per second. Search speed is 30 inches per second.

All tape movement is under microprocessor control. Buffer space is provided in the Drive for temporary storage of directory information to help minimize access time and tape motion. The HP82161 can locate files when under program control. It also features STANDBY mode, enabling an HP-IL controller to turn the Drive on or off remotely. This unique feature helps extend system battery life and allows for system operation in remote applications.

The Drive uses a two-motor system to move the tape past a two-track magnetic head specially designed to resist data alteration due to externally generated magnetic fields. Owner's Handbook included.

Stock #82161 [Digital Cassette Drive] List \$550.....	\$479.95
Stock #82176A [Data Mini-Cassette].....	\$9.50
Stock #82176-10 [10 Data Mini-Cassettes].....	\$88.95
Stock #82177A [Cassette Labels, blank].....	\$14.95
Stock #82167A [HP-IL Cable, 1/2 meter].....	\$5.95
Stock #82167B [HP-IL Cable, 1 meter].....	\$7.95
Stock #82167D [HP-IL Cable, 5 meters].....	\$9.95
Stock #82033A [Rechargeable Battery Pack].....	\$24.95
Stock #82059D [Recharger].....	\$18.95
Stock #82037A [Reserve Power Pack].....	\$59.95

New Low-Price HP-IL Cables

Stock #IL-476A [CMT IL Cable, 1/2 Meter].....	\$3.95
Stock #IL-476B [CMT IL Cable, 1 Meter].....	\$4.95
Stock #IL-476C [CMT IL Cable, 2 Meters].....	\$5.95
Stock #IL-476D [CMT IL Cable, 5 Meters].....	\$6.95
Stock #IL-476E [CMT IL Cable, 10 Meters].....	\$8.95

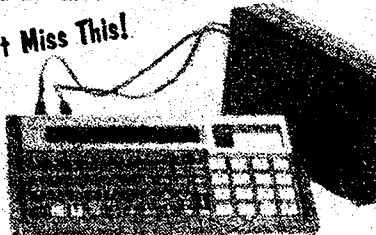


Disc/Cassette Drives cont.

ThinkJet

HP-IL RAM Disc Don't Miss This!

- 128K, 256K, or 512K
- truly rugged
- portable, hand-held
- RS-232 interface (opt.)



At last—super-big, super-fast memory for your HP-41C, HP-71B, HP-75D, HP-110 or Portable Plus (or IBM-PC with Link Card). Uses same command set as 82161 Cassette Drive and same extended commands as 9114 Disc Drive System.

About the size of the 41C, the RAM Disc is powered by a standard 9 v alkaline battery, and is engineered for low drain. There is an on-board lithium battery that keeps data intact for over five months (should the main source run down).

With RS-232 19 pin option, RAM Disc is same physical size but has functionality of 82164 HP-IL/RS-232 Interface.

Stock #IL-820A [128K RAM] List \$345.....	\$325.95
Stock #IL-820B [128K RAM/RS-232] List \$445.....	\$415.95
Stock #IL-820C [256K RAM] List \$495.....	\$449.95
Stock #IL-820D [256K RAM/RS-232] List \$595.....	\$539.95
Stock #IL-820E [512K RAM] List \$795.....	\$705.95
Stock #IL-820F [512K RAM/RS-232] List \$895.....	\$795.95
Stock #IL-820G [NiCd Battery Pack].....	\$15.00
Stock #IL-820H [AC Adapter/Recharger].....	\$7.00
Stock #IL-820R [RS-232 only].....	\$259.95

Microflop Holders

Store your 3 1/4" floppies in a 3-ring notebook! These sturdy transparent plastic pocket-pages hold 4 discs each plus written labels. Your discs will stay clean, and you'll be able to find them easily.

Stock #IL-692 [Microflop Holder].....	ea. \$2.25
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Star Fleet

Printers/Monitors

ThinkJet COLOR Printing!



Stock #51605B [Blue Ink Cartridge for 2225] List \$13.....	\$10.95
Stock #51605G [Green Ink Cart for 2225] List \$13.....	\$10.95
Stock #51605R [Red Ink Cartridge for 2225] List \$13.....	\$10.95

Plain Paper Printhead Cartridge for all ThinkJets and QuietJets

Stock #51604A [Plain Paper Cartridge] List \$11.....	\$9.95
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Now—print on ANY paper

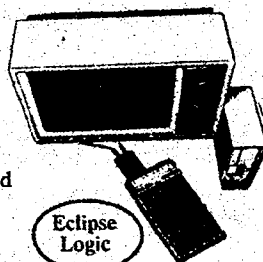
ELI-IL

- Store your HP-41 data on a PC disc
- Debug your HP-41 programs on a PC monitor
- Print your HP-41 output on a PC printer
- Key your HP-41 program into PC, then upload to your 41

Now you can have both—the portable convenience of your handheld HP-41, and the capacity and power of your PC!

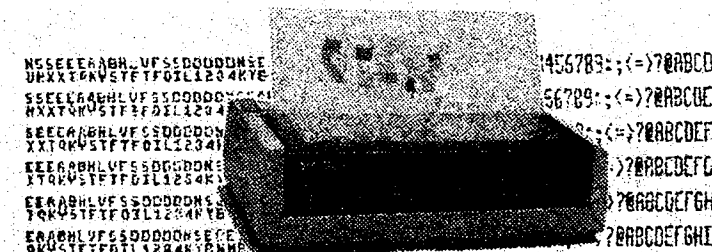
ELI-IL is PC software. It requires the HP-IL Interface Card (82973) in the PC, and the IL Interface (82160) for your calculator. With this you can freely translate up or down, to or from your PC. You can even insert your HP-41 output into a PC database or spreadsheet.

Stock #IL-902 (ELI-IL, 5 1/4") List \$185.....	\$159.95
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Monitor—Green Video

Stock #82913 [12 inch Monitor] List \$325.....	\$275.95
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80 Column ThinkJet Printer

- HP-IL Driven: Use it with your HP-41, HP-71, HP-75, or HP-110!
- Portable: Weighs 5 1/2 lb, and it's battery powered!
- Super Quiet: Revolutionary print-head operates well below 50db noise level.
- Cost Effective: Under \$400, with HP reliability.
- Fast: 150 Characters per second.
- High-Quality Print: With an 11 by 12 dot matrix, bidirectional, logic-seeking, 1KB buffer, and it does underlining or boldface in one pass!

We were skeptical when we first heard from HP about this new printer. A glance at those specs above makes it seem like having your cake and eating it too. The explanation is simple but startling: 'THINKJET' stands for Thermal INK JET, which is a highly innovative technology that scales down all the virtues of big, fast ink-jet printers to a portable size. It cost HP five and a half years of research and development, with a big-bucks budget—and, naturally, it is very popular (which means that you should let us know right away that you want yours).

Ink Jet means that tiny drops of ink are squirted onto the paper, so the printhead never actually touches the paper. That's why it's so quiet. That's also why it needs no ribbon; instead, you simply replace the printhead for just \$10.95. The ink cartridge is right in the head—enough for more than 500 pages of text. Incidentally, 'Thermal' means that the head boils the ink to paint it onto the paper.

More Facts: Size 3.5"H x 11.5"W x 8.1"D—6 2/3" print line on 8 1/2" paper—graphics resolution 96 x 96 or 192 x 96 dots per inch—text resolution 11 x 12 dots per character—print pitches: normal, expanded, compressed, expanded-compressed—print modes: boldface, underline—6 or 8 lines per vertical inch—rich ROMAN8 character set, for Danish, Dutch, English, Finnish, French, German, Italian, Norwegian, Portuguese, Spanish, and Swedish—pin feed for fanfold paper and friction feed for single sheets—8.5" x 11" paper or size A4 (21.0 x 29.7cm)—product life 3,500,000 lines or 100,000 pages—20 watts max, operates from 50° to 104° F.

Stock #2225B [ThinkJet Printer, IL version] List \$495.....	\$399.95
Stock #2225P [ThinkJet, Parallel, Batts] List \$495.....	\$399.95
Stock #2225A [ThinkJet, IB version, AC] List \$495.....	\$399.95
Stock #2225C [ThinkJ Cntrnics Parallel, AC] List \$495.....	\$399.95
Stock #2225D [ThinkJet, RS-232 Serial, AC] List \$495.....	\$399.95
Stock #82199A [Battery Pack].....	\$43.95
Stock #92261A [Printhead Cartridge].....	\$10.95
Stock #82167A [1/2 Meter Cable].....	\$5.95
Stock #82167B [1 Meter Cable].....	\$7.95
Stock #82167D [5 Meter Cable].....	\$9.95
Stock #1107 [Ink-Jet paper, 500 sheets].....	\$10.40
Stock #1106 [Ink-Jet paper, 500 sheets, fan fold*].....	\$13.50
Stock #1108 [Ink-Jet paper, 2500 sheets, fan fold*].....	\$52.00
Stock #92261S [Acrylic Printer Stand].....	\$45.95
Stock #1112 [Dust Cover].....	\$13.95

*Add \$15 (500 sheets) or \$40 (2500 sheets) for Foreign Surface Shipments

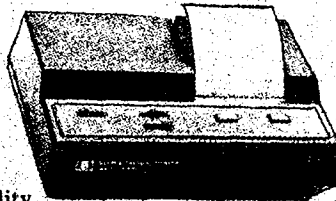
HP-IL Interface Loop

Printers/Monitors cont.

Thermal Printer/Plotter



This HP-IL compatible Printer/Plotter provides you with numeric, upper and lowercase alpha, double-wide characters and intensity control for optimum contrast and readability.



The chief advantages of the HP82162 over the HP82143 dedicated Printer/Plotter are a 101-character buffer for enhanced graphics capabilities and a FORMAT function which automatically centers or justifies copy to the left and right margins.

The Printer/Plotter also supports standby mode, so that any HP-IL controller on the loop can manage its power consumption. HP-IL interfacing ensures that the HP82162 will be compatible with all future HP-IL devices.

Print speed is 24 characters/second. A rechargeable battery pack is supplied as well as a recharger. Operating time is three to six hours between charges. Owner's Handbook included.

Stock #82162 [Printer/Plotter] List \$450.....	\$379.95
Stock #82045A [Thermal Paper, blue, 6 rolls].....	\$9.95
Stock #82175A [Thermal Paper, black, 6 rolls].....	\$9.95
Stock #82033A [Rechargeable Battery Pack].....	\$24.95
Stock #82059D [Recharger].....	\$18.95
Stock #82037A [Reserve Power Pack].....	\$59.95
Stock #82167A [HP-IL Cable, ½ meter].....	\$5.95
Stock #82167B [HP-IL Cable, 1 meter].....	\$7.95
Stock #82167D [HP-IL Cable, 5 meters].....	\$9.95
Stock #41-561 [12V DC Adapter].....	\$29.95

HP-IL LINK Software Package



**HEWLETT
PACKARD**

HP-IL Link allows MS-DOS PCs to:

- Input files from and output files to the HP-71.
- Act as a remote console for the HP-71.
- Input files from the HP-75 and HP-41.

HP-IL Link supports the following PCs:

- PC/Compatibles with HP 82973A HP-IL interface.
- HP-150 with HP 45643A Extended I/O Accessory.
- HP Portable and Portable PLUS computers.

The HP-71 must have an HP 82401 HP-IL Interface; the HP-75 must have a 00075-15001 I/O ROM; and the HP-41 must have an HP 82160A HP-IL Interface.

Includes one 5¼" disc, one 3¼" disc, and a "Getting Started" guide. (Full documentation is contained on disc.)

Stock #82477 [HP-IL Link, 5¼" & 3¼"] List \$95..... \$84.95

HP-IL Interface Card for PC/Compatibles



**HEWLETT
PACKARD**

Transfer spreadsheets or data between your PC and the HP-110 or use your PC as controller on the IL loop. This card goes in a slot inside your PC and enables the PC to be a peripheral device on a loop controlled by the 110; the PC may also be a loop controller using IL-peripheral devices (but not both at once).

Comes with Interface Software Disc containing Owner's Manual, 1 m HP-IL Cable and Service Card.

Stock #82973A [HP-IL/IBM PC, Card] List \$150.....	\$124.95
Stock #82167D [5 m HP-IL Cable].....	\$9.95



LINK 1.02

**Southern
Software**

- Would you like a Big Monitor for your HP-41, 71 or 75?
- Want a Page Printer?
- How about a DISC DRIVE for storage?
- A Big Keyboard? A Mouse?

You can have it all—for less than the cost of one single peripheral! This program links your HP-41, 71 or 75 via HP-IL to an IBM PC/Compatible or Vectra, an HP-150, an HP Portable or Portable Plus. (The IBM and HP-150 versions require the 82973 Portable/Desktop Link card which has the HP-IL capabilities.)

With Link you will never have to buy another gizmo for your handheld. It has four modes of operation which you choose from the PC (or set mode from the handheld). Three are the emulators for disc drive, printer and

a menu of the modes video display.

They do what you expect. Mode 4 is not an emulator. In it the PC appears as an interface device on the loop. The handheld can output data ('write') to any DOS file or device and it can also input data ('read') from it. It gives you access to any DOS file on your PC. You can read/write text files, binary or hexadecimal data, etc. LINK enables you to move the file pointer around so that you can add on to the end of an existing file, overwrite previous data, etc.

A manual gives detailed examples for each handheld for each mode plus a complete listing of responses to HP-IL messages. Choice of disc size.

Stock #S-785 [Link, 5¼"] List \$80.....	\$75.95
Stock #S-785A [Link, 3¼" IBM] List \$80.....	\$75.95
Stock #S-786 [Link, 3¼" HP Format] List \$80.....	\$75.95
Stock #S-786L, Literature for 9114 Disk Drive.....	Free

Interfaces

HP-IL I/O Interface

- ☐ Control relays
- ☐ Turn on solenoids
- ☐ Turn on/off lights



Control a complex system

32 output lines can be used as byte or bit outputs or together as a 32-bit group. Also, one 8-bit port can be Centronics-compatible. There are two TTL 8-bit input ports and an 8-bit DIP switch which is IL-readable.

Analog input section has 8-bit resolution or 8 channels. On-board -12 v power supply (accessible off-board) for analog reference, etc. 7 time increment counters (.00067—0.1224 sec) and 7 event counters (all counters are 2 byte, which = 64K capacity).

NOTE: this is an inexpensive, unpackaged PC Board for professional use. Requires 8—24 v, ¼ a. Call EduCALC for OEM quantity discounts.

Stock #IL-800 [#210 I/O Interface] List \$590.....	\$544.95
Stock #IL-800L, #210 I/O Interface Literature.....	Free
Stock #IL-800D [I/O Drive] List \$450.....	\$418.95
Stock #IL-800W [Wire Connector].....	\$5.95



HP-IL Interface Loop

Interfaces continued

HP-IL/RS-232

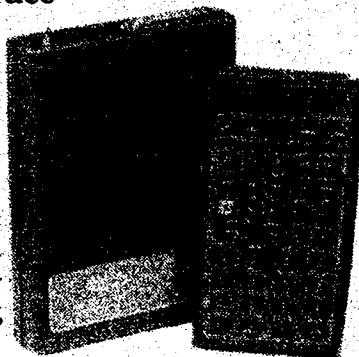
Battery Powered Interface

Hand Held Products

15 to 20 working hours of portable power. Interface is physically identical to the HP 82164—and functionally completely compatible.

It also has some additional functional features, like extended transmit and receive buffers with 8K byte capacities. Uses standard HP wall transformer to recharge.

Stock #IL-842 [IL/RS-232 Batt Pwrdr Intfrce] List \$295..\$269.95



HP-IL A/D Interface

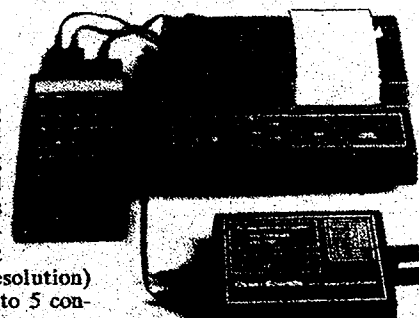
WOW! A combined analog to digital converter and interface between any analog or chart recorder output and the HP Interface Loop—this upgrades existing instrumentation to digital output (3 1/4 digit 2000 count/11 bit resolution) plus full data reduction. Up to 5 conversions/sec.

It uses the program and computing power of the HP-41, HP-71, HP-75 or HP-85. Input ranges of 0-0.2 volt, 0-2 volt, or 0-20 volt. Data transfer to printer, cassette deck, etc. Use for Quality Control, Statistical Analysis, Clinical Assays. 4 1/4 x 3 1/4 x 1 1/4 inches, 110 volts. Literature available on request.

Stock #OS-510 [A/D Interface] List \$450.....\$399.95

Stock #OS-510B [Opt. 8 hr. Battery Pack].....\$49.95

Stock #OS-510L, A/D Interface Literature..... Free

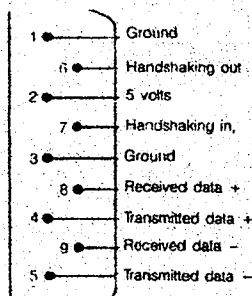


RS-232 Interface

The Most Popular Communications Interface is Now Available for Your HP-41, HP-71 or HP-75.

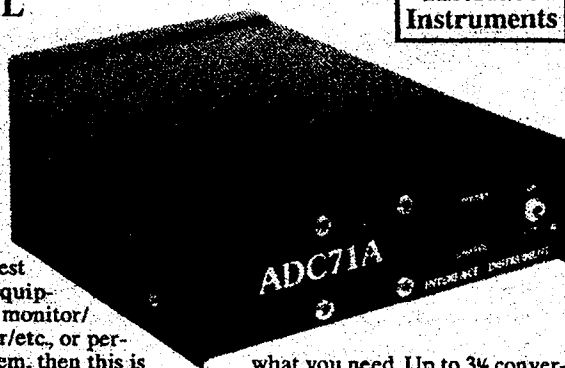
The HP-IL/RS-232C interface is fully asynchronous and bit-serial which lets your handheld talk to and work with other computers, terminals, peripherals, and modems. It features an input and output buffer, interface control logic, function keys and local or remote operating states. Extended I/O module required for most HP-41 applications.

Stock #82164 [RS-232 Interface] List \$295.....\$249.95



Analog to Digital Interface for HP-IL

If you would like to combine the calculating power of the HP-41, 71 or 75, with the output of your best piece of lab equipment/process monitor/chart recorder/etc., or perhaps all of them, then this is



Interface Instruments

what you need. Up to 3 1/4 conversions/sec.

It's a 16 channel input, 8 channel output, 4 1/4 digit, analog-to-digital interface that connects to any HP interface loop. Power consumption is 50 ma while operating and 0.5 ma in standby. One of the unique features is a built-in relay for power-gating external circuitry. It operates on a built-in lead acid battery and internal charger. The battery supplies power for 24 hours of continuous operation. A programmable gain amplifier provides for four ranges, 40, 160 or 640 millivolt or 2.5 volt. One optically isolated 8 bit digital output port is available. Maximum resolution is 2 microvolts, suitable for a thermocouple. Thermocouple reference junction is built-in. 1.9" x 6.2" x 8".

Stock #ADC71 [A/D Interface] List \$750.....\$649.95

Stock #ADC71L, A/D Interface Literature..... Free

See page 56 for HP-IL Module

GPIO Interface



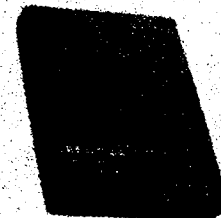
The GPIO Interface will enable you to use your HP-IL system to control equipment operating with parallel bus structures. This device contains the port buffering and a built-in power supply that operates from an HP standard AC adapter (included with the 82165). Potential applications for the 82165 include interfacing to computers for data collection, interfacing to specialized devices in production or lab environments, and interfacing to devices such as printers with parallel interfaces. Owner's Handbook included.

Stock #82165 [GPIO Interface] List \$295.....\$244.95

Stock #82167A [HP-IL Cable, 1/2 meter].....\$5.95

Stock #82167B [HP-IL Cable, 1 meter].....\$7.95

Stock #82167D [HP-IL Cable, 5 meters].....\$9.95



Acoustic Coupler for the HP-41, HP-71 or HP-75



now you can Communicate via HP-IL

With only voice-quality telephone lines and a conventional telephone, this 300-baud modem lets you communicate with other computers in remote locations. It's battery operated and has all the little goodies such as STANDBY and automatic turn-off that you would expect from Hewlett-Packard.

For the HP-41 you'll need the Extended I/O Module (82183).

For the HP-71 you'll need the Data Communications Pac.

For the HP-75 the Data Communications Pac software is the quickest and easiest way; however, you can also use the combination of the I/O Utilities Card (available in the HP-75 Utilities Solution Book, 75-13013) and Asynchronous Terminal Emulator Program which is available in the Acoustic Coupler Owner's Manual.

Stock #82168 [Acoustic Coupler] List \$495.....\$428.95

HP-IL/RS-232 Interface

Firmware

Multichannel, Inexpensive

Two channel RS-232 input, two output; function set compatible with HP82164 HP-IL/RS-232 Interface; 110 to 28,800 baud rates; 500 byte transmit and receive buffers.

PORTABLE rechargeable-battery version available, as well as AC; 187 x 101 x 15 mm.

Stock #IL-759 [Multi 232/IL Inter, 120 VAC] List \$235..\$199.95

Stock #IL-760 [Multi 232/IL Inter, Batts] List \$295.....\$249.95

HP-IL Interface Loop

Interfaces continued

Modem 300 Plus

The FIRST direct-connect HP-IL modem & Bar Code reader

Autodial! Autoanswer! Automatic telecommunications with your HP-41, 71 or 75, and the 'PLUS' is a Bar Code Wand Port.

You won't even need to learn a new command set—the 300 PLUS responds to the same set used by 82164 HP-IL/RS-232 Interface and by Hayes Smartmodems. Plug in the 92267 Wand to read '3 of 9 code' (supplied) or other types (optional by special order). It does tone or pulse dialing, is compatible with Bell 103 modems at 300 baud. AC-powered, integrated with an HP-IL Interface.

Stock #IL-663 [Modem 300 Plus] List \$299..... ~~\$219.95~~ **\$79.95**

Close Out—
While They Last
\$79.95

Modem 1200

New, and Fast!
print-through software
included—free!

Automate your telecommunications, gather remote data! Direct-connect, 300/1200 baud, AC/DC rechargeable auto-dial/auto-answer—all with integral HP-IL interface and Hayes command set

Tone or pulse, full or half duplex mode, baud rate, 7 or 8 data bits, 1 or 2 stop bits, odd or even or no parity (program-selectable). Senses speed at which incoming data is being received and adjusts itself accordingly.

Stock #IL-796 [Modem 1200] List \$349..... ~~\$299.95~~



HP-IL Step Motor Driver

- robot arms
- XY stages
- satellite dishes
- TV antennas
- telescopes ■ machine tools
- printers ■ conveyor belts

interloop



Drive 4-phase motors
up to 24 v and 5 a

Select one of 4 motors. Software programmable for voltage, current, speed, acceleration; half stepping capability. From 0.15 to 2000 steps/sec. Built-in 8-bit input and output ports. Home switching. Requires 24 v, ¼ a plus motor current.

NOTE: this is an inexpensive, unpackaged PC board for professional use. Call EduCALC for OEM quantity discounts.

Stock #IL-801 [#200 Step Motor Driver] List \$830..... ~~\$779.95~~

Stock #IL-801S [Step Motor Source Code]..... ~~\$89.95~~

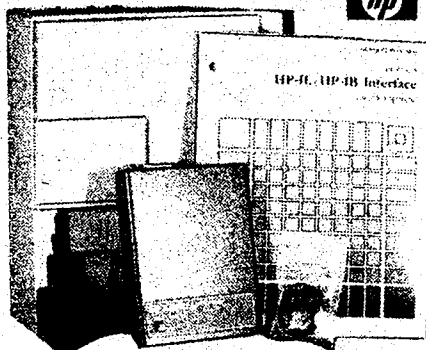
Stock #IL-150 [150 PC/HPIL Interface Card] List \$240.. ~~\$209.95~~

HP-IL/HP-IB Interface

You can connect the HP-41, HP-71 or HP-75 to some of the most sophisticated computer equipment anywhere. This interface expands your handheld's control and communications capabilities by linking low-cost HP-IL systems with high-performance HP-IB (IEEE488) computers and lab equipment. It gives you the option of using over 120 HP-IB compatible devices, not to mention many more offered by other manufacturers.

Stock #82169 [HP-IL/HP-IB Interface] List \$395..... ~~\$334.95~~

Stock #82169L, HP-IL/HP-IB Interface Literature..... Free



Accessories

4-Output AC Adapter/Recharger



Summit
Concepts

Replaces four HP 82059D power cubes and frees 120 v receptacles for other gear. Small, non-polarized, 2-prong AC plug occupies only one outlet! Count the number of cubes—and outlets—you presently use and compare. Has 4 low-voltage HP AC cords. Short circuit protection built into each outlet. Line cord is 5 ft 10 in; output cords are 6 ft.

Stock #IL-816 [4-Output Adapter]..... ~~\$69.95~~

HP-IL Cable Clips

MEGG



Save time and frustration with these little plastic PIL-CLIPs by clamping together each pair of HP-IL cable heads for quick plug-in. Easily installed and removed, can be marked with pencil or pen for identification.

Stock #IL-619 [PIL-CLIPs, package of 6]..... ~~\$2.95~~

Battle Case for ThinkJet Printer or Disc Drive System

Pelican



If your printer or disk drive accompany you in battle, they'll gain years of life by using this unusual case. It's air-tight, waterproof (to 10 feet), and crush resistant. It's made of hi-impact black ABS and looks like a military design. The interior foam is die cut to hold a ThinkJet Printer or HP Disc Drive, an HP-41 or 71 and small accessories. 18" x 14" x 7" external size.

Stock #IL-626 [Printer Case] List \$120..... ~~\$99.95~~

HP-41, HP-71, HP-75 System Carrying Case



This case was designed by O'Neil Product Development, Inc. exclusively for EduCALC. Tim O'Neil used his experience as an HP-41 user to develop this unique design. Fifteen foam blocks have been precut to fit a variety of peripherals. Just pull out the appropriate blocks for your configuration. Wires may be run under the foam and the lid removed to permit in-case operation. The case is lockable and measures 18" x 13" x 3¼".

Stock #IL-608 [Carrying Case] List \$89.95..... ~~\$69.95~~

Price savings with **BIG DISCOUNTS**
Compare us on price alone!

HP-IL Interface Loop

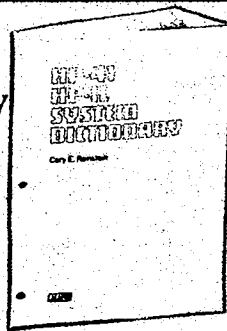
Bookware

HP-41/HP-IL System Dictionary (PPC Dictionary)

by Cory Reinstein
updated by PPC

Updated in September 1983 from its original printing in 1982, it reflects the latest knowledge in this fast moving field. It includes over 900 of the most-used functions. Each function is described, outlined and cross-referenced to other functions it might affect or those that can be used with it. Also included is an execution timing chart for HP-41 functions, a subroutine decision table, special "synthetic" instructions to use to assign any function to any key and methods to produce 128 tones, reference charts for the printer and time module, and lots more.

Stock #P-102, HP-41/HP-IL, 91p softbound..... \$3.95

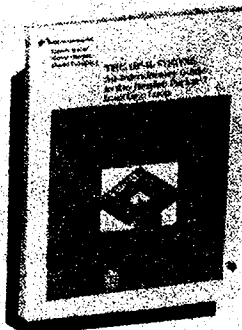


The HP-IL System: An Introductory Guide to the Hewlett-Packard Interface Loop

by Kane/Harper/Ushijima

This is the definitive guide to the Hewlett-Packard Interface Loop. The Loop is a bit-serial interface that links the HP-41 or the HP Series 70 personal computers to a new generation of compact peripherals. Summaries of all HP-IL remote messages and message sequences are also included.

Stock #IL-134, HP-IL System, 106p softbound..... \$17.95



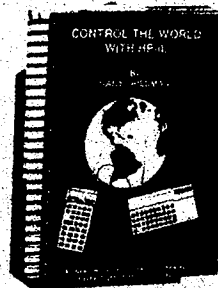
Control the World with HP-IL

by Gary Friedman

You can build and control an intelligent telephone autodialer/answering machine (complete with a speech synthesizer!), an automated dark-room controller, an ultrasonic distance measurement unit, a dissolve controller for two slide projectors, and more.

Photos, illustrations, and circuit diagrams are used throughout the book so all project instructions are easy to follow. The general-purpose building blocks and concepts behind them are so powerful that you'll find dozens of other uses for them.

Stock #IL-490, Control the World, 340p spiralbound..... \$20.95



Need Extra OWNER'S MANUALS?

Stock #IL-708, HP-IL Interface Mod Owner's Hndbk.....\$10.00
Stock #IL-709, Digital Cassette Drive Owner's Hndbk.....\$10.00
Stock #IL-710, Therm Pntr/Pttr 82162 Owner's Hndbk.....\$10.00
Stock #IL-712, HP-IL/GPIO Interface Owner's Hndbk.....\$15.50
Stock #IL-478, 3 1/2" Disc Drive Oper Manual.....\$4.00
Stock #2225-90032, ThinkJet Printer Owner's Manual.....\$9.00
Stock #IL-482, HP-71 IL Owner's Manual.....\$25.00
Stock #IL-839D, RS-232 Owner's Handbook.....\$20.00
Stock #IL-479, HP-IL/HP-IB Owner's Handbook.....\$13.95

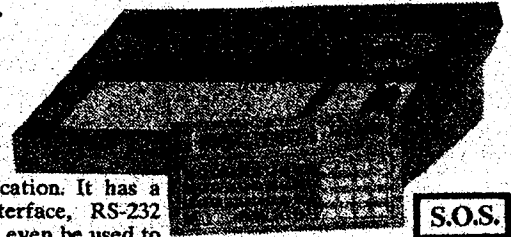
Programmers' Aids

HP-IL TECHNICAL INFO

Stock #82166-90020, HP-IL Interface Kit Tech Guide..... \$15.00
Stock #82166-90016, HP-IL Integrated Circ User's Man..... \$15.00
Stock #41-90449, HP-IL Development Mod Owner's Man..... \$8.00
Stock #IL-483, Converter Manual..... \$10.00

HP-IL Eeprom Programmer

Now you can load EPROMs with data or programs for your HP-41, HP-71 or any other application. It has a built-in HP-IL interface, RS-232 interface, and it can even be used to emulate 32K cassette drive.



The HP-IL interface supports EPROM to RAM, RAM editing, and programming from RAM functions. With the EPROM Programmer's 32K of RAM, you can make direct copies of EPROMs up to a size of 256K bits (27256). Programmer's IL and RS-232 interfaces both support Intel and Motorola hex format files. With the optional IL-622 accessory you can program your own CMT-10 EPROMs for use in the HP-41. Software listings for using the IL-615 are included; programs on magnetic media are available separately (please specify medium).

Stock #IL-615 [EPROM Programmer] List \$1450..... \$1249.95

Stock #IL-622 [CMT-10 Programming Fixture]..... \$495.00

Economy UltraViolet EPROM Eraser

Logical Devices

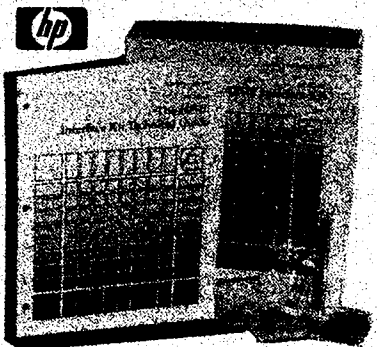
Tiny (4 x 2 x 2 inches) and Fast (less than 3 minutes)—erases one at a time. 110 VAC power, plastic enclosure.

Stock #LD-925 [UV EPROM Eraser]..... \$59.95

HP-IL Converter Kit

The HP-IL Converter Kit provides the special components necessary for building HP-IL into your product. Included are: the HP-IL integrated circuits, the HP-IL transformer set, the HP-IL panel receptacle, complete component-level documentation, four complete sets of parts for prototype evaluation, and HP-IL development software for use on HP-41 and HP-71 systems. Does not include PC board.

Stock #82166C [Converter Kit] List \$395..... \$349.95



HP-IL Converter Parts. The following parts may be ordered for the HP-IL converter on an individual basis as shown below. Standard capacitors and resistors are not listed. Parts are not returnable.

Stock #5061-4306 [Panel Receptacle]..... \$7.60
Stock #9100-4226 [Transformer, HP-IL]..... \$12.00
Stock #ILB3-0003 [IC, HP-IL]..... \$24.00
Stock #1820-2810 [IC, Microprocessor]..... \$22.20
Stock #0410-1305 [Crystal, 4 MHz]..... \$4.00
Stock #9100-1631 [Inductor, 56 mh]..... \$1.25
Stock #92166 KIT [One each of the above]..... \$65.00
Stock #1810-0651 [Hybrid Chip]..... \$18.00

HP-71 Computer

Here's where you find...

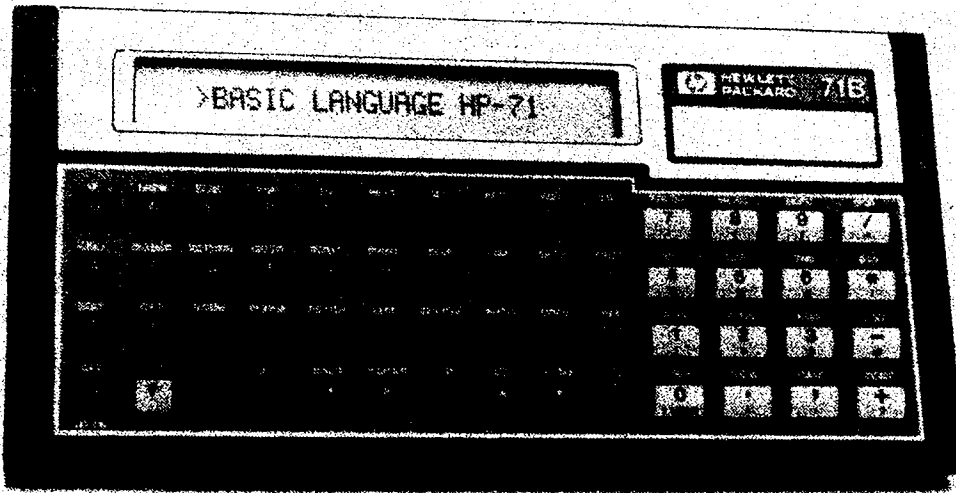
HP-71B Peripherals	72
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Early Warning

Hewlett-Packard intends to discontinue the sale of the HP-71B on November 1, 1988. Sales of its Card Reader (82400A) and its Acoustic Modem (82168A) will also stop. Service and support for the HP-71B will be continued for 5 years.

The HP-71B has been used primarily as a data collector and as a controller, and HP has no direct replacement product for these applications. Therefore, we suggest that you consider your future requirements to give yourself sufficient time and product as you switch to other systems.

We encourage you to assess your needs now and place your orders accordingly.



- **BASIC Language...**
240 instructions!
- **CALC mode...**
quick, easy computations!
- **BIG MEMORY...**
17.5K, expandable to 33.5K!
...or even to 256K!!
- **STATISTICS...**
15 variables!
- **MATH...**
FFT; 45 × 45 matrices, more!
- **FINANCE...**
NPV, IRR, more!
- **TEXT EDITOR...**
manipulate, format!
- **AC CIRCUIT ANALYSIS...**
72 branches, 24 nodes!
- **SURVEYING...**
large, integrated program!

□ indicates optional module

Is this the world's most compact **REAL COMPUTER?**

OR

Is it the world's most powerful **REAL CALCULATOR?**

HERE ARE THE FACTS. YOU DECIDE . . .



It speaks BASIC, with dynamically-declared variables and multi-line user defined functions. But it also has a CALC mode for quick, easy calculations, where you see intermediate results and recall them from a 5-level stack.

The rich programming language has more than 240 functions, statements, and operators, and it includes enhancements like statistics with 15 independent variables, trigonometry, and IEEE floating-point math standards (12 digit precision). Furthermore, variables are common to both modes, CALC and BASIC.

It has 17.5K RAM memory, expandable by 32K modules to 145.5K, and 64K ROM, expandable to a whopping 320K. But it weighs only 340 g (12 oz.) and measures 7.5 × 3.8 × 0.5 inches.

It is fast, much faster even than the HP-41. Yet it excels at technical computations, has Continuous Memory (remembers programs and data while OFF), and sports a clock and a calendar.

It has a block QWERTY keyboard, with typing aids for program entry. And it has a 10-digit number pad, and the entire keyboard is redefinable.

It has an 'open architecture', with a choice of two extra development languages, FORTH and Assembly, so there is lots of software written for it. Yet the 3 media options are ROMs, Cassette Tapes, and Magnetic Cards. So, it's readily customizable.

The HP-IL plug-in option permits a variety of peripherals and instruments to be interfaced at 5,000 bytes/second—including printer, monitor, cassette drive, modem, plotter, or other computers. Hence, there's a wide world of configurations, all with HP support. Yet its LCD shows only 22 characters at a time from a scrollable 96 character line, and it runs for 60 hours on 4 disposable AAA batteries (AC adapter or rechargeable batteries optional).

Powerful, friendly applications software is available for Math, Finance, Text Editor, AC Steady State Circuit Analysis, Curve Fitting and Surveying. But there's no disc to spin—you'll just plug in a matchbook-sized module once, then call this specialized power from your keyboard.

It comes with Owner's Manual, Reference Manual, and Quick Reference Guide. And also with a Blank Overlay, 4 batteries, User's Library/Third Party Software Card, and Carrying Case.

Calculator or computer, you're going to have a lot of fun.

Stock #HP-71B, List \$625.....\$459.95

Stock #HP-71BL, HP-71B Literature..... Free

HP-71 Peripherals

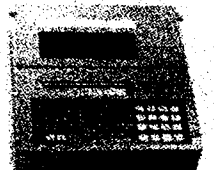
Multicase for the HP-71

CMT

- 8 line scrollable display is readable at sharp angles
- 128K RAM Disc for mass storage
- HP-IL and 9-pin RS-232 communication ports
- tough polycarbonate case protects everything
- internal heater permits operation down to -20°C
- ideal for remote field applications like Surveying

Stock #71-922 [Multicase-128] List \$925.....\$799.95

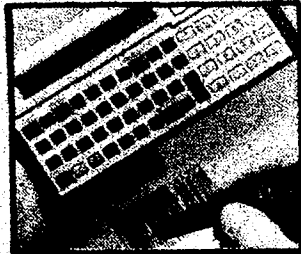
Stock #71-922L Multicase Literature..... Free



HP-71 Peripherals cont.

Zenwand-71 Bar Code Reading, Analyzing and Printing System

Zengrange



A Breakthrough—well under a thousand dollars now gets you a portable (one pound) data-capture device with 17.5K memory and super-fast validation/analysis/storage. Just plug this into a front port of your HP-71B—its component HP wand and ROM interface will decode the following bar code types:

- EAN-13
- EAN-8
- UPC-A
- UPC-E
- UPC-E(1)
- Codabar (USD-4)
- Code 3-of-9 (USD-3)
- Industrial 2-of-5
- Interleaved 2-of-5 (USD1)

It can read each of these codes in both directions—and it will automatically discriminate between codes and report the code type. It can then store its accumulated data to later dump to mainframe.

Zenwand-71 will print code 3-of-9, too, on your ThinkJet via HP-IL.

The Owner's Manual (included) is a good reference for applications programmers. For a complete discussion see the book, *Handbook of Bar Coding Systems*, on page 24.

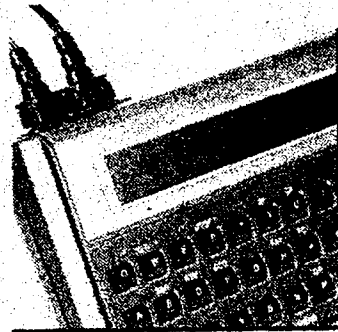
Stock #71-ZWD [Zenwand-71] List \$449.....\$399.95

Stock #71-ZWDL, Zenwand-71 Literature.....Free

HP-IL Interface

**hp HEWLETT
PACKARD**

Plugs inside port at upper left of HP-71 to create a system that can print, plot, store, retrieve, and display information. Control or read instruments, or speak to other computers. 5000 bytes/sec. Built-in ROM includes 46 separate commands. Interface to HP-IL, HP-IB, RS-232C, GPIO, or Series 80. Owner's Manual included.



Stock #82401 [71 HP-IL Interface] List \$125.....\$105.95

Dual HP-IL Adapter

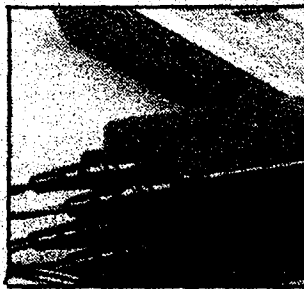
**hp HEWLETT
PACKARD**

Plug two HP-IL modules into your HP-71 simultaneously; the 71 will treat each module as a separate, totally independent interface. Thus your 71 can act as controller on both HP-IL loops, as a device on both loops, or as a device on one loop and as a controller on the other.

In Manufacturing, for instance, this Adapter allows control of instruments and peripherals at the same time as data is sent to a supervisory computer. The HP-71B and Adapter can thus carry out some truly 'big computer' functions.

In Portable Data Acquisition, battery-operated peripherals (printer, disc drive, etc.) can remain powered down on their own IL loop until they need to be accessed, even though the 71 is actively collecting data on the other loop (via its HP-3421A).

Stock #82402 [71 Dual IL Adapter] List \$99.....\$89.95



Card Reader

**hp HEWLETT
PACKARD**

Installs easily into top of your HP-71—uses the same hand-pulled cards as the HP-75 for inexpensive off-line storage of data/programs. 13K bytes per card. 5 cards included.

Stock #82400 [71 Card Reader] List \$165.....\$139.95



Accessories/Batteries

Vinyl Carrying Case

Stock #82463A.....\$9.95

AC Adapter for the HP-71

Same stationary power source as for the HP-41 and HP-75. Does not recharge batteries in the HP-71.

Stock #82059 [Power Supply].....\$18.95

CMT-71 Waterproof Case

**Price
Reduced**

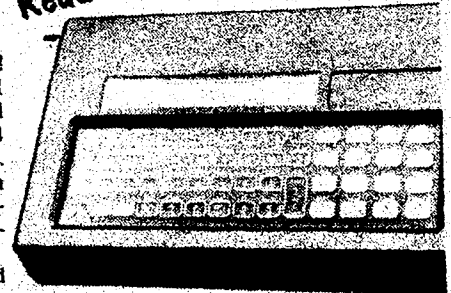
CMT

Collect data in the rain! Tough polycarbonate will cradle your HP-71B and keep it dry (tested for 4 hours in 8 inches of water). There's even a built-in heater for winter use (external battery not included).

There are 4 threaded stainless inserts at corners (2 have eyelets inserted, for straps) and 4 more inserts on bottom for board-mounting. Connector permits extended use with external power pack (pack not included). 5 3/8 x 8 1/4 x 1 1/4.

Stock #71-699 [CMT-71-Case] List \$185.....\$169.95

Call EduCALC for further details and quantity discounts.



Serialplus Case— Environmental Protection

No matter rain, spatter or dust—take your 71 right in there to the data in this sealed aluminum case. Clear embossed keypad/display window.

Built-in RS-232C Interface. Rechargeable NiCd batteries with built-in charging circuit gives 100-hour operation on a 10-hour charge. Baud rate programmable up to 2400. Built-in Bar-code reading capability. HP-IL connections.

Includes charger and RS-232C cable. 8.9" x 5.3" x 1.1", 17 1/2 oz.

Stock #71-765 [SerialPlus 71 Case] List \$395.....\$349.95



**Oregon
Digital**

HP-71 Torx Tool

This is all you need to 'open up' your HP-71B.

Stock #71-T6 [Torx Tool].....\$6.00

HP-71 Computer

Accessories/Batteries cont.

Rigid Leather Case for the HP-71

This hard leather case is perfect for machine shop or outdoor environments. Light tan, 8-oz. cow-hide, belt loop—the professional look.

Stock #71-574 [HP-71 Rigid Leather Case] List \$62.....\$49.95

NiCd Multi-Charger for N, AA, AAA and 9-volt size batteries

Ledford Micro

Beat the cost of throw-away batteries—this universal unit recharges NiCds for the HP-71 (also HP-18C, 28C and HP-41B)—2 or 4 at a time, in only 5 hours.

Just think, in the thousands of hours of service from a NiCd (with 1000 recharges) you'll save hundreds of dollars over throw-aways. 5 year/1000 recharge warranty.

Protected against polarity reversal. 71-739 includes sleeve-adapters.

Stock #71-739 [Charger, Adapters, 8 NiCd AAA-cells].....\$31.95

Stock #41-738 [Charger; batteries/adapters not inc].....\$9.95

Stock #NAAA [NiCd Battery for 71B] Requires 4.....ea. \$3.10

Stock #41-836 [2 Sleeve Adapters for N-cells].....\$2.50

Waist-Belt Battery Pack

CMT

Seat-belt webbing belt with robust jiffy hardware and two water-resistant pouches. Includes two rechargeable 6v batteries (allowing operation at -40°C) and wiring for hookup to CMT-71 Case.

Stock #71-795 [71 Belt Pack] List \$75.....\$69.95

Desktop Stand for the HP-71

Just the right working angle for your eye and for your hand. Smoky acrylic, simple and handsome.

Stock #71-569 [HP-71 Stand].....\$15.95

Anti-Static Protector Bag

Comp-U-Bag

Zip out dirt and moisture, plus protect your instrument from loss of data or IC damage from accidental static electric discharge. Bag keeps keyboard feel, lasts for months. Easy access to ports, fits into leather case.

Stock #71-543S [Anti-Static Bag] List \$2.25.....\$2.00

71 Touchpad

EduCALC

Ruggedize your HP-71 for hazardous duty

Keyboard overlay resists spills and spatters as well as dust and grit. It snaps neatly in place over your keyboard—has all key legends reproduced in their correct colors.

Stock #71-810 [71 Touchpad] List \$29.....\$23.95

HP-71B ACCESSORIES

Stock #82059 [Adapter].....\$18.95

Stock #82707A [30 Blank Magnetic Cards].....\$29.95

Stock #82462A [Overlay Kit, 5].....\$11.95

Stock #82715A [Notebook Card Holder, 5].....\$17.95

Stock #82167A [HP-IL Cable, ½ Meter].....\$5.95

Stock #82167B [HP-IL Cable, 1 Meter].....\$7.95

Stock #82167D [HP-IL Cable, 5 Meters].....\$9.95

Stock #82066B [AC Power Supply—220 volts, Euro].....\$24.95

Stock #AAA [Alkaline Batt for HP-71] Requires 4.....ea. \$1.10

Memory/Special Modules

JPC ROM Module

Les fonctions 71 de Paris!

PPC Paris

Created by the French user's group—more than 100 assembly-language functions that extend your HP-71 in natural ways.

You'll have useful memory tools like WHILE/END WHILE and an automatic indenter—daily conveniences like keyboard control of printer and executions at power-off. You get tight control over your HP-IL peripherals, like changing the font on your printer or getting room available in a mass-storage device. Interactive address-direction editor. Tools to use data in programs. Date calculation. Advanced math functions. Memory editor. Disassemble functions. Lex file merging. More. More.

200 page complete reference manual in English, plus pocket guide Formidable, eh?

Stock #71-917 [JPC ROM Module] List \$185.....\$173.95

EPROMS (Front Port)

Store up to 32K or 64K of custom application programs. Unlike the RAM modules, these modules may be removed from your HP-71 front port without losing their memory, just like any HP Application Pac. They can be intentionally erased with ultraviolet light and reprogrammed many times by an EPROM burner or through our EPROM service. Better than Application Pacs, they are updatable. Programming charges are \$30 from your disc; duplicates are \$10.

Stock #71-672 [32K HP-71 EPROM] List \$115.....\$99.95

Stock #71-731 [64K HP-71 EPROM].....\$155.95

HP-71 Memory Modules (Card Reader Port)

Have up to 128K in your HP-71B with one module. And, when you remove your module its contents are retained by the battery back-up. You can even combine 32K of RAM with 32K of OTP (One Time Programmable ROM) in model CR-32/32.

Stock #71-845A [CMT-CR-32R, 32K RAM] List \$160.....\$149.95

Stock #71-845B [CMT-CR-64R, 64K RAM] List \$295.....\$269.95

Stock #71-845C [CMT-CR-96R, 96K RAM] List \$395.....\$359.95

Stock #71-845D [CMT-CR-128R, 128K RAM] List \$495.....\$445.95

Stock #71-845E [CMT-CR-32/32] List \$245.....\$225.95

Stock #71-845F [extra Battery].....\$7.95

HP-71 Computer

Memory/Special Modules cont.

RAM Memory Modules (Front Port) ^{32K!} ^{64K!}

Get more memory—just plug in up to 4 of these modules. (We can even hardwire up to 8 of these at a modest additional charge.)

New 64K size has a battery to protect data up to 6 mos after removal from your HP-71.

Stock #71-656 [32K Plug-in RAM].....\$149.95
Stock #71-656B [64K Plug-in RAM] List \$295.....\$279.95

CMT 71-PO1 EPROM Programmer

for HP-71 front port EPROMs

A completely self-contained device that allows you to program CMT-71-32KE or CMT-71-64KE EPROMs.

It connects to the HP-71 through a front port. The Programmer's RAM is accessible through commands in the HP-71. To use the Programmer in the 64K mode, a FORTH/ASSM ROM needs to be inserted into another HP-71 port.

Additional software to help build the EPROM image is supplied on the CMT-71 EPROMs along with self-test programs. The EPROMs will need to be erased with ultraviolet light before programming.

The manual contains full operating instructions. It assumes you have some working knowledge of the general use of the HP-71 and the hexadecimal number system. Most references to addresses or data will be made in hex. Typically, to burn a 32K EPROM takes less than 5 minutes. The 64K EPROM generally takes less than 15 minutes.

Stock #71-784 [71-PO1 EPROM Programmer].....\$495.95

Economy UltraViolet EPROM Eraser

Tiny (4 x 2 x 2 inches) and Fast (less than 3 minutes)—erases one at a time. 110 VAC power, plastic enclosure.

Stock #LD-925 [UV EPROM Eraser].....\$59.95

256K Memory in your HP-71?

Your HP-71 can have up to 256K of memory with no external changes and still have 4 open ports for application pacs. Here's how it works: Four 64K memory modules (Stock #71-656B) can be wired inside the case, giving you a total of 272K. This price is for service only (cost of memory modules not included). This service has a 90 day parts and labor warranty. Allow 3 weeks.

Stock #71-673 [1st Module Hard-Wired].....\$39.95

Stock #71-674 [2 or More Modules Hard-Wired].....ea. \$29.95
4K memory modules hardwired for the price of the installation.

One-Time-Programmable (OTP) ROMs for your HP-71

OTP ROMs are even lower cost than EPROMs

After you have 'proven' that your application program works with an EPROM, you can have it burned into an OTP. But, unlike an EPROM, it cannot be corrected if you discover a bug at a later date. It will look and function just like your EPROM and comes in 32K and 64K sizes. Allow 3 weeks for delivery.

Quantity	32K: Stock #...Price	64K: Stock #...Price
5-9	71-789A.....\$92	71-790A.....\$130
10-99	71-789B.....\$85	71-790B.....\$125
100-up	71-789C.....\$80	71-790C.....\$118

*Two weeks' free examination.
We are not satisfied until you are.*

Application Pacs

It's like having an IBM mainframe computer, programmed for your profession, right in your hand! Each pac comes with a ROM module (16 to 48K), which fits neatly inside your 71B, and complete documentation, written to HP's high standards. And, just look at these specs!

LOANS Program Module for the HP-71B

- Brokers
- Loan Officers
- Investors

Brand New

(S.O.S)

Sale Price \$ 100000
Loan to Value % 80.00
Loan Amount \$ 80000
Interest Rate % 12.00
of Years 30
P & I \$ 822

You can ANALYZE your buyer's requirements and the costs of the purchase, SHOW HIM his options with various loan packages and 'what-if' changes, then finally PRINT him his amortization schedule and equity build-up.

Program comes complete in a 32K plug-in module. It is designed specifically to give instant answers to your Real Estate Investment questions: Requires HP-71B with HP-IL Interface and ThinkJet Printer (2225B). 46 page manual gives step-by-step instructions with examples, displays and printouts.

Stock #71-953 (Loans Module) List \$295.....\$274.95

Data Communications

Use a phone line with this versatile terminal emulator to access other computer systems—you can connect to The Source, DJ News Retrieval, and other systems via a modem. Send/receive electronic mail, make airplane reservations, get stock quotes fast. Incoming or outgoing data can be printed or displayed. Incoming data can be saved in a text file for later use—and there's a 500-character input buffer for reviewing information. Your programs can call all these DATACOMM features.

You'll need an acoustic or direct-connect modem or an RS-232 interface, and you'll want a video interface or printer. Module plugs into one of four front ports on your HP-71B.

Stock #82488 (71 DATACOMM Module) List \$95.....\$84.95

Finance

Time-value of money—n, i, PV, PMT, FV. Uneven cash-flow analysis, NPV, IRR, done on grouped flows with friendly prompting for input. Multiple file system of 71B stores data—in amounts limited only by memory size (so you'll tire of entering data long before you run out of capacity). You get fast answers which can be sent to printer. Amortization schedules. Depreciation schedules: ACRS, Straight Line, Declining Balance, SOD.

Stock #82482 (71 Finance Module) List \$75.....\$69.95

Math

Complete set of matrix functions—invert, transpose, conjugate, determinant, norm; dot product; sum, product, etc.—with size limited only by the enormous RAM memory (invert 45 x 45 real matrices, or 42 x 42 complex short, or 32 x 32 complex), and even larger ones with added RAM modules—all with friendly I/O prompts for entries, etc. Redimensioning of arrays, implicit as well as explicit. Binary/octal/hex/decimal conversions. Finite Fourier Transforms on up to 1024 complex points. Solve. Integrate, including multiple or improper integrals. Gamma, hyperbolic functions, plus IEEE Neighbor and Scaling. All commands extend BASIC.

Stock #82480 (71 Math Module) List \$95.....\$84.95

Surveying

Data file manipulation, up to 550 points: design, list, clear coordinates, duplicate points, balance traverse, and adjustment, rotate/translate points, scale coordinates. Coord. Geometry: start, lines, curves, radial stakeout routines. Area/traverse computations.

Stock #82483 (71 Survey Module) List \$95.....\$84.95

HP-71 Computer

Application Pacs continued

HP-41 Translator



Text Editor

Allows simple formatting of text output. Easy data entry and editing of TEXT files, transferred to and from HP-71B. Commands: Text, Edit, List, Copy, Insert, Delete, Search, Format, Sequencing, Help. Generate memos, letters or notes.

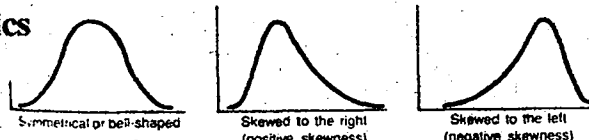
Stock #82485 (71 Text Editor Module) List \$75.....\$69.95

Curve Fitting

Fit a general (possibly non-linear) model function with up to 20 unknowns. Powerful data-entry routine. Determine local maxima or minima for a general real-valued function of up to 20 variables.

Stock #82484 (71 Curve Fitting Module) List \$95.....\$84.95

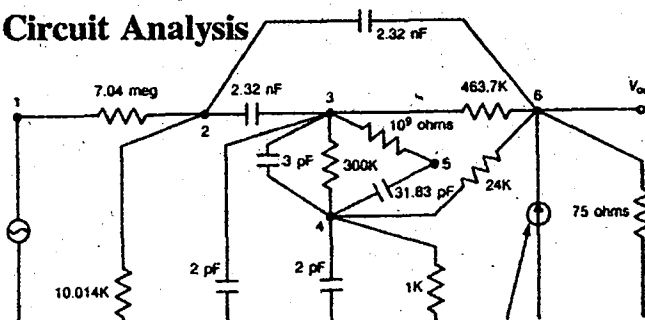
Statistics



WOW! 18 programs including Means and Moments, Histogram, Multiple Linear Regression, Paired t-Test, Unpaired t-Test, One-way ANOVA, Two-way ANOVA, Contingency Table, Mann-Whitney U Test, Kruskal-Wallis Test. Distributions include Student's t, F, Chi-Square, Normal, Weibull, Exponential, Binomial, and Poisson.

Stock #82489 (71 Statistics Module) List \$95.....\$84.95

AC Circuit Analysis



Construct, analyze steady-state models using resistors, capacitors, inductors, transmission lines, voltage-controlled current sources, open or shorted stubs. Print/display gain/phase/gp. delay at any node or any frequency using linear or log instruments. Simulate/analyze passive/active filters, operational/transistor amplifiers. With three 4K memory modules added, it can solve circuits of up to 72 branches and 24 nodes!

Stock #82481 (71 AC Circuit Module) List \$75.....\$69.95

Data Acquisition

Use it with your ThinkJet Printer or Video Interface, and Data Acquisition/Control Unit. Forty new BASIC keywords and nine ready-to-run programs offer solutions to many common data acquisition problems. It's perfect in the lab or field, and on the production line.

Stock #82479 (71 Data Acquisition Module) List \$195.....\$169.95

User's Library Software Catalog for your HP-71

The list of topics is enormous—from crop science to computer science, from payroll to marketing, plus every engineering speciality and every field of numerical math and statistics, and physics and chemistry, and social sciences. Many of these will work for you.

Stock #71-202B, User's Library Software Catalog.....\$9.95

3000	ENGINEERING
4000	Aeronautical/Aerospace Engineering
4100	Agricultural Engineering
4150	Architectural Engineering
4200	Biomedical Engineering
4250	Chemical Engineering
4252	Design (Optimization)
4254	Process Control
4256	Stochometry
4300	Civil Engineering
4302	Environmental Engineering
4304	Hydraulic
4306	Soil Mechanics
4308	Structural Engineering
4310	Transportation
4312	Urban Planning

Adds an HP-41 calculator mode to your HP-71 so you can do keystroke RPN calculating or programming with 147 standard HP-41 functions plus 23 unique new ones. Provides command and algebraic keystroke programming as well. Plus it translates HP-41 programs (your own or published ones) for your 71 and allows you to edit them, then run them superfast (3 to 8 times the speed of the 41). Transfer of programs can be done via an HP-IL loop.

Of course, this is a translator, not an emulator. You'll find some minor differences between working from your 71 keyboard and what you are used to on the HP-41—mostly simplifications of keying sequences. This software was programmed by William Wickes, who has written a nine page description of it in the *CHHU Chronicle*, V2N1 Jan/Feb '85.

As a FREE BONUS you get a complete FORTH language. It has a compiler and 338 built-in FORTH words which enhance the FORTH '83 standard with floating-point, string, HP-IL and file-handling words. (This ROM can not be used with the FORTH Assembly Module.)

All in all, with this module you'll have a 5-language machine (RPN, Command, Algebraic, BASIC, and FORTH) which can access the huge software library available for the HP-41. Isn't that a bargain for \$95?

Comes with Owner's Manual and Keyboard Overlay for HP-41 functions. The manual has no tutorial material so if you're a FORTH beginner you'll want to select a good book from our Programming Section to get yourself started. Of course, you don't have to use FORTH at all to use this module but it's a natural language for you to expand into with your RPN skills.

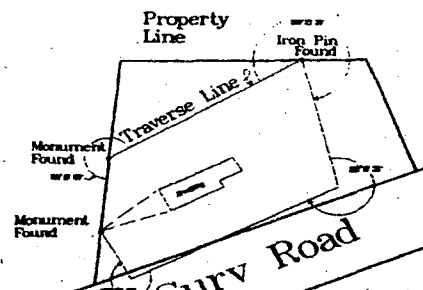
Stock #82490 (71/41 Translator Module) List \$95.....\$84.95

NEW PRODUCTS and UNIQUE ITEMS

Find out about them in this Catalog!

Trig-Surv

Remote



Coordinate geometry and data reduction in field and office.

A professional surveyor needs voluminous data recording and computation—and we've all felt that digital electronics ought to offer us a portable solution, simple and reliable.

Now it's here—you merely plug these two modules into an HP-71 and you'll have a handheld Surveyor's Computer. Designed for your work, with every function you need always at your fingertips.

Pop it in your pocket and you can perform Boundary and Topographical Surveys, Horizontal and Vertical Control Surveys, Rapid Construction Layout Surveys—do simple data collections and field note reductions.

With the 71's standard memory you'll be able to store 250 points. Plus you can store 25 more points for each 1K of added RAM memory—so, for example, a 32K memory module will hold about 800 additional points.

Using the HP-IL interface, you can add a ThinkJet printer and a disc or minicassette drive for mass storage, or dump your data to a computer in your office.

There it is—what you've been waiting for—and the price is right for a professional. You'll appreciate the error-catching routines that are almost human in 'forgiving' mistakes, too. The manual is really helpful, with clear instructions and samples to guide you. Save time—make money!

Stock #71-860 (Trig-Surv, Modules) List \$1195.....\$1075.50

Stock #71-860M, Trig-Surv Manual only.....\$19.95

Manual price may be applied to later purchase of modules.

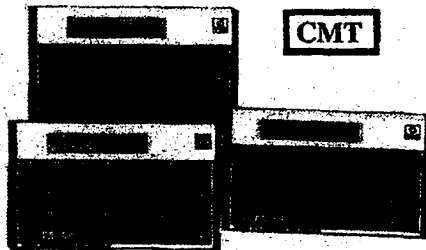
HP-71 Computer

Richard
Hairston

Application Pacs continued

HP-11C, 12C and 16C Emulator ROM for your HP-71B

Free up your desk space, lighten your briefcase! If you use several HP machines in your work, just plug this module into your 71 to have them all-in-one. Provides virtually every function contained in the HP scientific, business and computer science calculators. Complete with manual.



Stock #71-837 (11/12/16 Emulator ROM)..... \$139.95

Soft/Bookware

EQ Solver 1. HP-71 Equation Solver System

Chris
Bunsen

- RUNNING THE EQUATION
- 4.1 Storing To A Variable
 - 4.2 Solve For An Unknown Variable
 - 4.3 Viewing The Contents Of A Variable
 - 4.4 Changing Variable Windows
 - 4.5 Using Storage Registers
 - 4.5.1 Storing To A Register
 - 4.5.2 Recalling From A Register
 - 4.6 Editing The Equation

Find the value of any variable in your equation, fast. The interface is so good that it inspired the menu-system solver in the HP-18C and 28C.

Handles up to 9 linked equations simultaneously, with up to 20 variables in each. Any math function on the 71 can be used, including custom, lex files and modules. Includes Time Value of Money equation, plus equation editor.

Requires HP-71B with Math ROM. Uses less than 6K bytes.

Stock #71-821 (EQ Solver, 3 1/2" Disc)..... \$39.95
 Stock #71-821C (EQ Solver, Cassette)..... \$39.95
 Stock #71-821M (EQ Solver, Mag Cards)..... \$39.95

Nanotext

Paul
Harmon

- Normal print
Expanded print
Compressed print
Expanded/Compressed

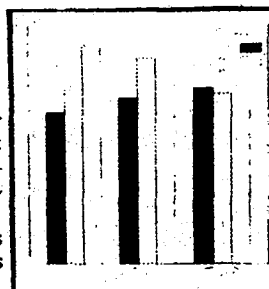
A full video-screen Text Editor for the 71B with some features of a word processor. Formats paragraphs, merges text from other files or outputs to them, jumps to any line or top or bottom of file, moves or copies blocks, searches and replaces, reedits and deletes and undeletes lines or characters.

Requires HP-71B with HP-IL module, video interface and monitor, and tape or disc drive. Extra RAM and printer optional (ThinkJet supported, others driven via embedded escape sequences).

Stock #71-817D (Nanotext, 3 1/2" Disc)..... \$29.95
 Stock #71-817C (Nanotext, Cassette)..... \$29.95

GRAPH71

Chris
Bunsen



Plot functions, draw bargraphs with your 71. Up to 20 hi-res plots can be made all at once—any combination of functions, scatter plots of sets of data points, or subprograms on your ThinkJet.

Comes on disc, fits into 8K. Includes stand-alone data editor to label things, plus 9 new keywords.

Stock #71-850 (Graph71, 3 1/2" Disc)..... \$59.95
 Stock #71-850C (Graph71, Cassette)..... \$59.95
 Stock #71-850M (Graph71, Mag Cards)..... \$59.95

SS71 Spreadsheet Program

Use many advanced features of the latest PC spreadsheets—fully portable in your HP-71—and appreciate number-crunching 'mainframe speed', all without tedious programming. Use HP-IL peripherals at your desk: 80-column printer, disc and/or cassette drive, and on your 80-column monitor you'll have full-screen editing with cursor movement among displayed cells, just like on your PC.

Up to 99 rows x 99 columns with plug-in RAM. Built-in financial functions for NPV and Loan Payments, or sum or mean of cells; plus common number format options (\$, I, F) or custom format in any cell. Use any variable from RAM, any 71B function, any LEX words—in any cell. Comes on disc or cassette with sample file and 28 page Instruction Book. Future updates at no charge!

Stock #71-687D (SS71, 3 1/2" Disc)..... \$69.95
 Stock #71-687T (SS71, Cassette)..... \$69.95

Personal Finance/ Bookkeeping

Fresh
Concepts

Food Expense
Clothing Expense
Utilities
Dinners Out

Furniture Goods
Vacation Expenses
Gasoline for Auto
Misc Auto Expense
Auto Insurance
Medical Expenses
Interest Expense
Home Expenses
Legal Expenses
Education Expenses

Education Loan
Installment Loans
Insurance Loans
Margin Accounts
Misc Loans
Home Mortgage
Vacation Property
Misc Mortgages
Depreciation

Automate your balance sheet and income statement for family finances or a small business.

You'll eliminate bookkeeping errors and establish standard methods. Take it right with you and you'll be suprised at how many items you used to overlook.

Maintain up to 99 accounts, print out past or present balance sheets and income statements covering any time period. Sum or average groups of accounts.

Optional Budget program takes data from bookkeeping update, groups it into budget accounts, and calculates deviations from budget. Prints planned monthly budget, actual expenses and deviations so you can control every account.

HP-71 with HP-IL Module, Printer and Cassette or Disc Drive are required (monitor not required). Comes with complete User's Handbook, utilizes 9K memory.

Stock #71-861 (71-Bookkeeping, Tape)..... \$59.95
 Stock #71-861D (71 Bookkeeping, 3 1/2" Disc)..... \$59.95
 Stock #71-861B (71-Budget, Tape)..... \$29.95
 Stock #71-861C (71-Budget, 3 1/2" Disc)..... \$29.95

Structured Programming Utilities for the HP-71

Bruce
Stephens



Simplify your structured programming by adding 5 keywords to your 71's programming language. These keywords are modeled after constructs in the HP Series 200 Basic Operating System.

Keywords may be nested to any depth and in any order to control the flow of a program. They are •Multiple line IF ... THEN ... ELSE •LOOP ... END LOOP (with EXIT IF) •REPEAT ... UNTIL •SELECT ... CASE ... END SELECT •WHILE ... END WHILE.

1400 byte LEX file on 3 1/2" disc with manual.

Stock #71-843 (Structured Progmg Utilities, 3 1/2" Disc)..... \$44.95

HP-71 Computer

Soft/Bookware continued

RPN Calculator Emulator for the HP-71

Chris Capener

Do you find RPN the natural way to solve computation problems? Replace your CALC mode with this program. It's written in machine code, so it's small enough (1288 bytes) to reside permanently in memory (using no ROM slot) and so fast that it will seem instant.

It has 27 math and 10 data manipulation functions, plus 3 for display formatting and 2 for mode control. To keep it small, this emulator is not programmable, has only one data register and no stat functions. Instead it offers 4 new lex functions that transfer data between the RPN and BASIC environments.

Comes with handsome keyboard overlay and manual on magnetic cards.

Stock #71-844 (71 RPN Emulator, Mag Cards).....\$29.95

Duplicat Back-Up Software for your HP-71

Winkel

Copies blocks of files between RAM and Disc or Tape, either direction. Will also purge RAM of unwanted blocks of files. Comes with manual on disc or cassette.

Stock #71-767D (Duplicat Back-Up, 3 1/2" Disc).....\$29.95

Stock #71-767T (Duplicat Back-Up, Cassette).....\$33.95



PGEN71

Jim Walters

Writes programs and solves equations!

That's right! This one program will produce stand-alone programs that solve equations. You merely feed it equations (from text file or keyboard) and it will do the rest. You can even use special characters like 'theta' or multicharacter variable names like 'COST' or 'VOLTS' in your equations.

In less than a minute you will have a friendly, interactive custom program produced for you. It will solve for any variable—fast. No more re-writing your equations for the computer or debugging your code—concentrate on the problem, not the solution.

PGEN71 runs on a basic HP-71 and the programs it creates do not require it to read. It comes on disk or cassette with complete manual. A real boon for businessmen, engineers, students—anyone who works with equations.

Stock #71-694T (PGEN71, Cassette).....\$49.95

Stock #71-694D (PGEN71, 3 1/2" Disc).....\$49.95

Conversion Pac

TITAN Software

A Lex File with BASIC keywords to add Time, Temperature and Metric Units Conversions to your HP-71. There are 30 keywords in all...cubic meters to cubic feet, hrs/min/sec to decimal hrs, etc.

Stock #71-582 (71 Conversion Pac, Mag Card).....\$24.95

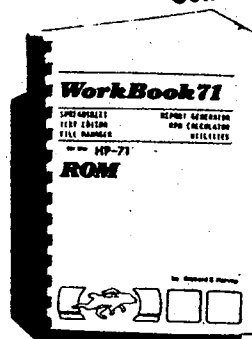
Stock #71-583D (71 Conversion Pac, 3 1/2" Disc).....\$29.95

Stock #71-583T (71 Conversion Pac, Cassette).....\$29.95

WorkBook71 Module revision D an Integrated Spreadsheet/Data Base/Text Editor/RPN Calculator ... all in 1 ROM for your HP-71B

Richard Harvey

Best Seller



•The functionality of HP-75 VisiCalc, the 71 Text Editor ROM and HP-41 Emulator plus other features missing from those ROMs (like data base utilities). If you could get the VisiCalc ROM for the 71 then those ROMs would cost \$325 (even at EduCALC prices!) and would take three ports.

•Common user interface for Spreadsheet, Text Editor and RPN Calculator:

•On-line help: press a key for a description of what it does, release it within a second to do it, over a second and it cancels. Much of the package should be usable without referring to the manual or pocket guide once you are familiar with it.

•Text Editor—simple-to-use editor has 12 special functions (besides cursor keys). Fast, and runs in just 500 bytes (HP editor needs 2100 bytes). Works as a full-screen editor if a monitor is available or line editor without one. Uses a menu: no cryptic command line.

•Text Formatter—prints 300 words per minute. Doubles as a report generator and data-base language with 49 functions, extendable with user-written utilities. Fully interactive with Spreadsheet—print spreadsheets (any way you want) inside a report using a simple command. Special features like right-justified numbers and repeating patterns make professional looking reports easy. Can write a memo or a book (The BASIC HP-71 was written with it).

•RPN calculator—when you just want a good RPN calculator. Not programmable; has continuous memory (10 registers) and interacts with Calc mode. 46 functions plus storage register math (works with STO, RCL and VIEW! Try: [View][%][L]).

•Spreadsheet—a 1-2-3 clone, has 16 special commands plus full movement throughout a file. Formulas can use BASIC or plug-in LEX file functions. Still allows virtual files with up to 65000 cells in any organization of columns and rows. Fully formatted display on a monitor or when printing. File type conversion so you can share files with other computers.

•Two LEX files—20 new BASIC keywords.

•Useful sub-programs including quick sort.

•Better integration—all modules are in the computer at once and one may call another.

•Efficient programs—Most modules start in under one second (the HP Text Editor, for example, takes over 4 seconds, Finance ROM over 3). Minimal memory used for variables—RPN calculator uses less than 300 bytes, spreadsheet uses 1K. There are no special key assignments or key files—it leaves your key assignments how you want them.

•No accessories needed—will run without HP-IL module or extra memory. Supports any HP-compatible video interface, disc drive or printer.

Stock #71-740 (WorkBook71, Module) List \$200.....\$169.95

Stock #71-740M, Owner's Manual Only*.....\$14.95

*Cost may be applied later to the purchase of the unit.

Similar program also available on disc.

Stock #71-611 (WorkBook71, 3 1/2" Disc) List \$80.....\$65.95

Stock #71-612 (WorkBook71, Cassette) List \$80.....\$69.95

Stock #71-611L, WorkBook71 Literature.....Free

See HP-IL Section for more Peripherals:
Digital Cassette Drive, Thermal Printer/Plotter, Video Interface, Impact Printer, I/O Interface, Acoustic Coupler, RS-232 Interface, Video Monitor.

HP-71 Computer

Soft/Bookware continued

The Basic HP-71

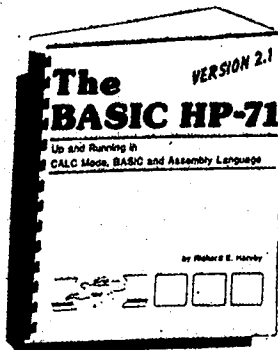
by Richard Harvey

Do you want the ability to write programs and to make better use of programs you already have? How about having a teacher who thinks programming is FUN?

This book has NO PREREQUISITES, yet it will give you all of HP-BASIC and get you started with the powerful techniques of Assembly Language (without your buying HP's 2 vol. *Internal Design Specifications*). There's also plenty of description of the 71 hardware, software and accessories, plus copious reference tables and charts.

This book is a MUST for every 71 user who wants to do more than use ROM programs as-is.

Stock #71-658, Basic HP-71, 160p spiralbound, List \$24.....\$19.95



Structural Steel Pack 1 for the HP-71

Winkel

A Structural Steel Designer can now get his 71 to output the 10 most desirable steel shapes that fit his criteria—and also calculate the adequacy of a chosen shape under any load condition (beam or column).

Minimal configuration is HP-71 and 3 1/4" disc drive. With these 32K Memory Modules and the program installed, "Structural Steel" on your 71 becomes completely portable. You may want an 80 col monitor and an 80 col HP-IL printer or 24 col printer.

Stock #71-768 (Structural Steel 1, 3 1/4" Disc) List \$98.....\$89.95



Need Extra OWNER'S MANUALS?

Stock #71-875A, HP-71 Owners Handbook\$25.00
Stock #71-875B, HP-71 Reference Manual.....\$30.00
Stock #71-875C, HP-71 Quick Reference Guide\$5.00

HP-71 Database System

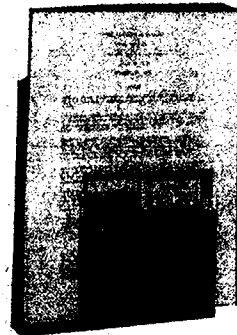
Do you want 16,000 records on a 9114 floppy with a maximal 9 sec seek-time? This string-index system (subject of a recent BYTE article) creates files automatically when you specify the numbers of records, indices, and bytes per record—then automatically updates all records on all indices as you type in new data.

System contains many utilities, such as error checking and overflow prevention. These programs are NOT SECURED and are neatly structured—you can easily modify them in BASIC for report-making or to address other printers than the ThinkJet or LaserJet.

Requires HP-71, HP-IL Module and either 3 1/4 or 5 1/4 inch disc drive.

Stock #71-654 (71 Database, 3 1/4" Disc).....\$95.95

Stock #71-655 (71 Database, 5 1/4" Disc).....\$95.95



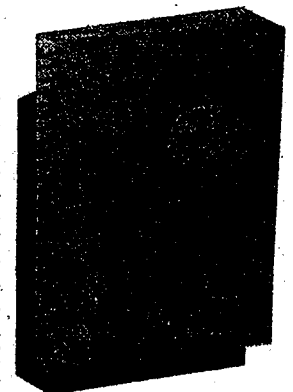
DalSoft

HP-71 BASIC Made Easy by Joseph Horn

What your owner's manual doesn't reveal! Learn how to use CALC mode and the command stack as efficiently as RPN.

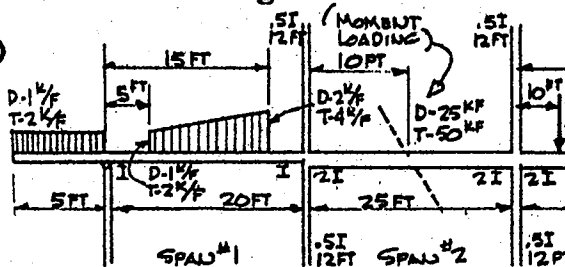
Learn BASIC and operation system tricks including PEEKing and POKEing. Try some of the fascinating, fun and elegant BASIC application programs, or modify them to fit your needs. Use the alphabetical syntax guide for quick reference when you are programming. An excellent tutorial and an indispensable reference, this is the definitive work on BASIC and the HP-71 by the world's foremost expert on the subject.

Stock #71-354, HP-71 BASIC, 163p softbound.....\$18.95



Beamline and Chart Program

Winkel



Beamline analyzes a continuous beam line (with or without end cantilevers) of an unlimited number of spans for dead load plus alternate and adjacent live load—prints out and displays moments, reactions and stiffnesses.

Chart analyzes a particular span for moments and deflections (dead and/or total load)—displays and prints a chart of span listing in 30 increments.

Any type of loading may be entered. Requires HP-71 with IL and 32K memory modules, 80 column monitor with interface, HP 9114 Disc Drive and HP 2225 Printer (using tractor feed).

Stock #71-891 (Beamline/Chart, 3 1/4" disc).....\$59.95

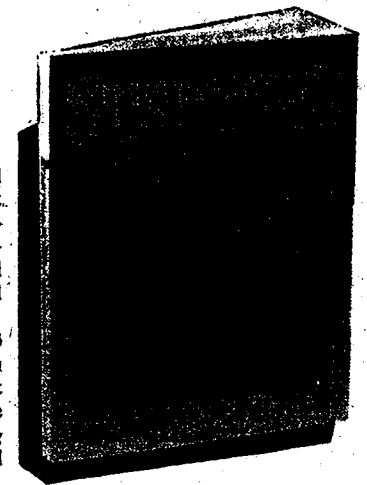
Starting FORTH

by Leo Brodie

FORTH is small and simple and it is easy, useful, and powerful. It gives you control of your applications. Start with this popular teacher—you'll learn all standard FORTH words and commands and soon be writing programs.

New edition describes Forth-83 Standard, notes differences from the FIG model, does fixed-point (fractional) arithmetic, follows the coding style of the author's *Thinking FORTH*, and includes an index and even more self-study problems.

Stock #P-218, Starting FORTH 2 edn, 346p softbound.....\$22.95



HP-71 Computer

Soft/Bookware continued

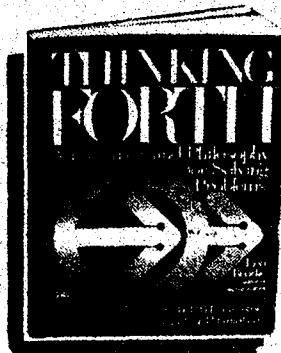
Thinking FORTH

by Leo Brodie

Thinking FORTH is thinking simple, thinking elegant, thinking flexible. FORTH is an ideal means for thinking because it corresponds to the way our minds work. This marriage of FORTH with the traditional disciplines of analysis and style in computer science will give you a new and better way to look at software problems and applications in any language.

You don't have to know FORTH to benefit from this book. Detailed coding samples and cartoons guide both beginning and experienced programmers through advanced concepts of FORTH style and conventions. FORTH 83 standard used.

Stock #P-318, Thinking FORTH, 300p softbound.....\$16.95



Mastering FORTH

by Anderson/Tracy

You'll like learning the mechanics of FORTH on your HP-71 with this step-by-step tutorial—the book is written in the same F-83 International Standard dialect as your 71 uses, so every program keys in without any change whatsoever. Stack manipulation, variables, loops, strings, compiling words, defining words, and more!

Stock #P-357, Mastering FORTH, 216p softbound.....\$17.95



SUPERLEX 71 Conversion/Utility File

FT2M	feet to meters
FT2NM	feet to nautical miles
FT2SM	feet to statute miles
GAL2LTR	U.S. liquid gallons to liters
HI	high contrast
HMS	decimal hours to hours, minutes, and
HR	hours, minutes, and seconds to decima
IN2CM	inches to centimeters
JUL2DATE	julian date to calendar date
KG2LBM	kilograms to pound mass, avoirdupois

47 handy new BASIC keywords. There are 34 Time, Temperature and Metric Unit Conversions—cubic meters to cubic feet, hrs/min/sec to decimal hrs, etc. It also contains 13 keywords that control the AC and ALARM annunciators, quick contrast and display scroll control, lowercase string conversion, a running clock keyword, and more. All keywords may be used in programs or from the keyboard. Comes on card, disc or tape; manual included.

Stock #71-637 (Superlex 71, Card) List \$49.95.....\$45.95

Stock #71-638 (Superlex 71, 3 1/2" Disc) List \$54.95.....\$49.95

Stock #71-639 (Superlex 71, Cassette) List \$54.95.....\$49.95

HP-71 SOLUTION BOOKS

Stock #71-90064, Math.....\$13.95

Stock #71-90065, Games.....\$13.95

Stock #71-90066, Utilities.....\$13.95

James Donnelly originally set the standard for file transfers on the HP-71. He also wrote the three software packages below—they are the 'standard reference' for the HPAF file format. They all work with the standard file structure used by HP's Application ROMs for the 71, as well as various third-party offerings.

HP-71 Data Management Pack

Part #	Name	No.	Price
313232	Glass cleaner	24	7.88
318247	Polishing cloth	8	4.37
320823	Lubricant	8	3.99
464927	Toner (16oz)	12	22.81
464928	Toner (24oz)	12	31.33

James
Donnelly

Includes several BASIC programs and a LEX file that provide basic data storage, manipulation and retrieval capabilities.

Stock #71-849A (71 Data Management, 3 1/2" Disc).....\$79.95

Stock #71-849AC (71 Data Management, Cassette).....\$79.95

HPAF File Utility Pack

SERIAL#	VOLTS-A	VOLTS-B	VOLTS-C
2471541	1.049	5.022	10.099
2471542	1.052	4.977	9.997
2471543	.962	5.057	9.921
2471544	.977	4.986	10.039

James
Donnelly

A tool box for advanced users who wish to modify existing files or debug their own utilities. Provides sorting and editing capabilities beyond those of the Data Management Pack (849A).

Stock #71-849B (HPAF File Utility Pack, 3 1/2" Disc).....\$79.95

Stock #71-849BC (Filr Utility Pack, Cassette).....\$79.95

Query71

James
Donnelly

File	Type	Description
DATADEMO	DATA	Contains a sample
DATALEX	LEX	Contains the keyw
HPAFMERG	BASIC	Contains the progr
HPAFSIZE	BASIC	Contains the progr
HPAFSORT	BASIC	Contains the progr
HPAFTAG	BASIC	Contains the progr

Extended report generation program for extracting selected records or generating summary statistics information from HPAF files.

Stock #71-849C (Query71, 3 1/2" Disc).....\$49.95

Stock #71-849CC (Query71, Cassette).....\$49.95

Programmers' Aids

The HP-71B has 'open architecture'; here are all the tools you'll need to develop your own sophisticated programs or to write proprietary software for it.

XREF71 HP-71 BASIC Cross Reference

a software development utility

Get insurance for the quality of the HP-71 software you write. This PC program reads text files assumed to be decompiled BASIC code from the 71.

It generates a cross-referenced listing of your variables, line numbers, line labels, functions and flags.

Stock #S-865 (XREF71, 5 1/4").....\$39.95

XREF71 Options	
V	Variables
L	Lines/labels
F	Flags
U	User functions

Programmers' Aids cont.

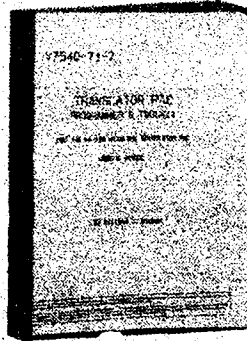
Translator Pac Programmer's Toolkit

HP User's
Library

An advanced programming capability for the HP-41 and FORTH languages. William Wickes, writer of the 82490 Translator Pac itself, wrote these extensions. With this TPPT word set (and your 82490), you can:

- List (decompile) FORTH words and HP-41 programs.
- Single-step FORTH words and HP-41 programs.
- Time program/word execution.
- Run HP-41 programs in 'trace' mode.
- Set breakpoints to halt program/word execution at specified places.
- Write HP-41 programs from within the HP-41 environment, bypassing the translation stage.

Stock #71-798M (TPPT, Mag Card) List \$60.....\$52.95
Stock #71-798D (TPPT, 3 1/2" Disk) List \$60.....\$52.95



Forth Assembler/Debugger ROM for the HP-71B



Dictionary Management

ALLOT
CONTENT
CURRENT
DEFINITIONS
FORTH
FORTH
FORTH
FROM

HERE
HALT
PAC
PRINT
VOCABULARY

System
FROM
STACK

ABORT
ABORT"
ASSEMBLE
BYE
DECIMAL
DEGREES
DEPTH
EXECUTE
FIND

HEN
LATEST
QUIT
RADIAN
TIE
TOGGLE
TRANSVERSE

Complete kit—Assembler Module and 3 1/2" Debugger disk. Contains entire Forth/Assembly Development System of 82441 module as well. FORTH...floating point and string operations, 20 bit implementation, increase new vocabularies, sub. foreign error messages.

ASSEMBLER...produce new Forth primitives, new BASIC keywords in LEX or BIN files.

Stock #82478A (FORTH Assem/Debug Mod) List \$175.. \$159.95

HP-71 Debugger upgrade for 82441



```
PC:43C9E C:0 P:4 M:H A:0000000000000000 R0:0270000000000001
  7A=0 A/GOYES 43C8B B:0000000000000000 R1:0000002FAB737FF6
XC:43C8B -ATTN- C:02FA0300020FF000 R2:0000000000000005
2F599.0008300003000830 D:00050000000F240 R3:0275000000000001
2F599.0000000000000000 D0:37FF4: 02237008 R4:0C0000000F000063
188AD.76C5590C40D7F85 D1:2FA5D: 100F0000 1000 1101 0111 1011
3C801*0000000000000000 OUT:000 IN:0000(0) HP:0 SR:0 SB:0 XM:0
```

Complete, easy-to-use debug software on 3 1/2" disc—works to upgrade your 82441 FORTH/Assembly Development System Module.

Stock #82478-6 (71 Debugger, 3 1/2" Disc) List \$80.....\$69.95

Software Development Utility



Up or down-load files from Series 80 or IBM PC (and instructions for other PCs); use for program development, file and program transfer. Optional mag card can be ordered through EduCALC from the User's Library.

Stock #82440 (Software Utility, Cassette) List \$40.....\$35.95
Stock #82440M (Mag Card, books not included)\$5.00

From a recent winner of EduCALC's Free Calculator drawing—

"I am overwhelmed, flabbergasted, excited . . . Thank you so much for the 15C. I will enjoy it and enjoy learning its capabilities. A quick thumb of 'Enter' says that it too will be fun to read and useful in my tutoring.

Thank you again for 'making my day'." R. A. Sturley, Kirkville, NY

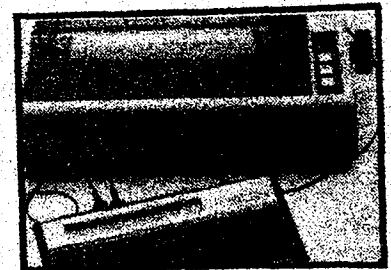
VSOS—Simplified Operation Systems for the HP-71 and HP-75

Compact Executive and File Management programs that simplify execution of application programs and manage main RAM memory for HP-75 and HP-71 portable computers.

VSOS is a single application written in BASIC which assigns itself to a key and when executed provides nine Operation System functions at the press-of-a-key. Provides for loading and saving main RAM files from/to a designated mass storage device (including XMEM or PORT RAM) and for changing the designated device selection. VSOS will call any program in main RAM and the designated device. It will report the amount of available main RAM at any time, purge main RAM files, select the EDIT file, and the HP-71 version will also control file security. VSOS also provides password lock when used to turn off computer.

Supplied with complete documentation on a magnetic card. The HP-75 version is supplied in TEXT file form compatible with systems including the HP82718A POD. Nominal program size is 1000 bytes for the HP-75 and 1245 bytes for the HP-71.

Stock #71-579 (Simplified VSOS-71, Mag Card)\$29.95



Software Developer's Handbook



Provides timesaving ideas and guidelines for consistency among programs written for the HP-71. A 'cookbook' for applications programmers working with the HP-71. Recommended for independent software vendors.

Stock #71-90097M (Handbook with Mag Cards)\$45.95

Stock #71-90097C (Handbook with Cassette)\$45.95

Stock #71-90097D (Handbook with 3 1/2" Disc)\$45.95



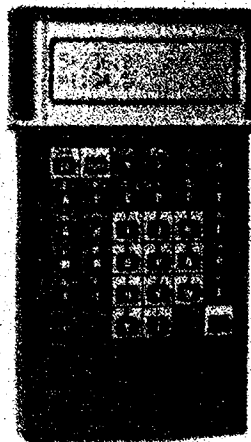
Handheld Computers

Organizer II

The 1-2-3-Compatible PC
you carry in your pocket

Psion

FREE—
AC Adaptor included
with purchase of
#883A or B
Order before 11/15/88



A 'dream' portable, battery powered and calculator sized (5.6 × 3 × 1.1 inches), and the price is right! There is 32K of built-in ROM program plus up to 32K RAM. It easily plugs into your desk PC so you can up or download spreadsheets, data, etc. Two solid-state drives accept up to 256K in EPROM Datapaks or software modules.

Diary that reminds you . . . Built-in

You record your appointments in a ready-made diary by date and time, for the current year and for future years too. You can browse through the entries, or go straight to a specific date. It can be set to turn itself on and beep you up to an hour before an appointment—and show you who, where and when on the screen.

8 regular Alarm Clocks . . . Built-in

You can set up to eight alarms to ring at any time during the day or week. Can be programmed to ring at weekly, daily or hourly intervals as you wish—for example, for morning calls or weekly appointments.

Indexed Filing Cabinet . . . Built-in

Personal and business information is cross-referenced to answer such questions as, "Which restaurants do I know in San Francisco?", "What cars do we stock wiper blades for?" or "Which of my cassettes are by Beethoven?" Stock and customer records, supplier lists, book catalogs and any other reference information can be stored and entries selected quickly and easily on particular criteria.

Personal Secretary . . . Built-in

Stores all your vital personal information, names, addresses, telephone numbers and business contacts. Just type in a small detail as a clue and the powerful built-in cross-referencing system will recall the item you require in less than a second and automatically scroll it across the screen.

Calculator . . . Built-in

Calculations are displayed on the screen as they are performed, so that entries can be checked and changed if you want to carry out several similar (what-if) calculations. It has twelve-digit calculation accuracy, ten memories and full mathematical and scientific functions.

Clock and Calendar . . . Built-in

Shows a weekday, date, month, year, hours, minutes, and seconds.

Programmability . . . Built-in

Contains an extremely powerful yet easy-to-use programming language (OPL) allowing simple and sophisticated programs to be written to meet your own or your company's particular requirements. The programs can be stored either in the built-in memory, or on an optional Datapak, for repeated use later. OPL's many functions include accessing and processing data on up to 96 files held in the machine or on each Datapak.

Product Summary

ORGANISER II—MODEL CM: 32K ROM, with built-in diary, filing, calculator, clock and alarm functions; OPL programming language. Internal 8K RAM for your personal filing, diary appointments and programs. Optional Datapaks up to 64K each; the Comms-Link, program packs and the AC adaptor can be connected.

ORGANISER II—MODEL XP: All the functions and capabilities of Model CM with four times the internal memory (32K RAM) for your

data. Additionally the XP allows optional 128K Datapaks, Barcode Readers and Magnetic Card Readers to be connected.

DATAPAKS: Perform a role similar to floppy disks on desk top computers and up to two Datapaks plug directly into the back of Organiser II. The use of Datapaks adds considerably to the power of Organiser II by freeing internal memory for diary entries and programs, and for the secure, battery independent storage and back-up of your information. A Datapak contains EPROM memory.

SOFTWARE PACKS: These contain pre-written permanently recorded software programs for specialized programs and plug in just like Datapaks.

The Finance Pak: for financial calculations, bank account and expense account management.

The Math Pack: solves analytical mathematical functions and provides statistical analysis.

The Concise Oxford Spelling Checker: look up the spelling of 24,000 words.

The Spreadsheet Pack: a full-function spreadsheet, 26 columns × 99 rows. Operates independently or, using the Comms-Link, can exchange spreadsheets with a PC. Generally compatible with Lotus 1-2-3™ and additionally accepts DIF format worksheets.

Standard Peripherals

COMMS-LINK plugs directly into top port of Organiser II and includes interface, cable, and Organiser II software.

Menu-driven software directly controls printers and provides asynchronous communications to other computers and modems which have an RS232 serial port. Allows bi-directional transfer of files, OPL programs and spreadsheets between Organiser and PC. Provides access to electronic mail and telex services. Communications can be controlled by OPL programs.

For use with IBM PC/Compatibles, a 5¼" disk is provided with extra software. For communications to other PCs any standard communications package will suffice. Has D25 plug for PC or XT.

Comes with a well-written, complete manual. Uses one 9 volt battery (NOT included with unit).

Provides RTS/CTS, XON/XOFF handshaking and XMODEM error-checking protocols. Baud rates 50-9600.

AC ADAPTOR that connects to Organiser's top slot for desk-top use, provides power in parallel to battery—does not charge battery—and preserves the Organiser RAM memory during connection.

BARCODE READER auto discriminates between UPC, CODE 39, 2 in 5 interleaved, EAN8 and EAN13. Includes Organiser II interface, high-level software and digital switched wand. Introduces command BARS into OPL language, which returns value of barcode scan.

MAGNETIC CARD READER includes cable, Organiser interface and high-level software. Introduces command SWIPES into OPL language, which returns as a string the data from track two of the card. Durable for in excess of 300,000 passes.

UV EPROM Eraser is an ultraviolet device that completely clears the contents of an EPROM Datapak, leaving it ready for reuse.

Stock #883A [Organiser II CM, 8K RAM].....	\$179.95
Stock #883B [Organiser II XP, 32K RAM].....	\$249.95
Stock #883C [16K Datapak].....	\$29.95
Stock #883D [32K Datapak].....	\$49.95
Stock #883E [64K Datapak].....	\$89.95
Stock #883F [128K Datapak].....	\$179.95
Stock #883G [Finance Pack].....	\$49.95
Stock #883H [Math Pack].....	\$49.95
Stock #883J [Spreadsheet Pack].....	\$79.95
Stock #883K [Spelling Checker].....	\$49.95
Stock #883M [Comms Link, D25 plug].....	\$99.95
Stock #883N [D25 to D9 adaptor plug for AT].....	\$19.95
Stock #883P [AC Adaptor].....	\$19.95
Stock #883R [Barcode Reader].....	\$249.95
Stock #883S [Magnetic Card Reader].....	\$199.95
Stock #LD-925 [UV EPROM Eraser].....	\$59.95
Stock #9VA [9v alkaline battery, uses 1].....	\$2.20
Stock #9VN [9v NiCd battery, uses 1].....	\$8.95
Stock #883L, Organiser II Literature.....	Free
Stock #883T [Formatter].....	\$99.95
Stock #883U [32K RAMPACK].....	\$89.95

Special—
Order before 11/15/88

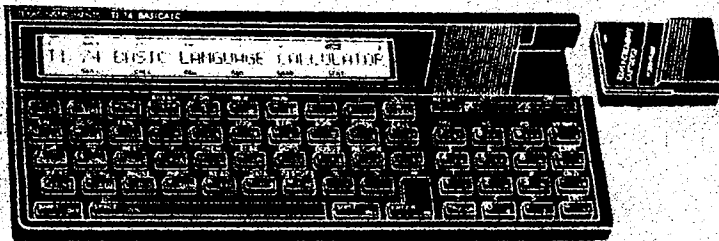
FREE TI Newsletter

Contains news, programming hints and whole programs for TI-74 and TI-95 owners. For a sample copy, send a self-addressed business-sized envelope with 45 cents postage to us here at EduCALC—ask for 'TI Newsletter'.

TI-74 Basicalc
makes short work
of homework.

TEXAS
INSTRUMENTS

Custom Programming
Available through
EduCALC



TI's BASIC-language programmable is the only calculator that combines so much power with so much ease of use.

Easy... because it's powerful

Finally, here's a calculator that makes those long, tough calculations a lot easier. Packed into the sleek, compact TI-74 BASICALC are 113 BASIC commands. Along with 70 scientific functions, and 8K of RAM expandable with optional cartridge.

Easy... because it's flexible

Your TI-74 BASICALC is a BASIC-language programmable calculator that lets you customize your calculations to your special needs. It's a full-function scientific calculator, too, and there are 10 keys you can define yourself for simple, repetitive calculations.

Optional, plug-in software cartridges—Math, Statistics, Finance, and PASCAL programming—boost your problem-solving capability. You can add a 24 column portable printer, cassette recorder, or both.

Easy... because it's friendly

Calculator entries are as natural as writing them down—no reverse Polish notation. The typewriter-like keyboard has large, positive-action keys to prevent double entries. There are built-in command keys, and a 31-character LCD display.

And it's easy to own

Included are protective case, batteries, quick reference card, and comprehensive User's and Programming Guides. Order the BASICALC today...because you want high grades...because homework shouldn't take up all your time!

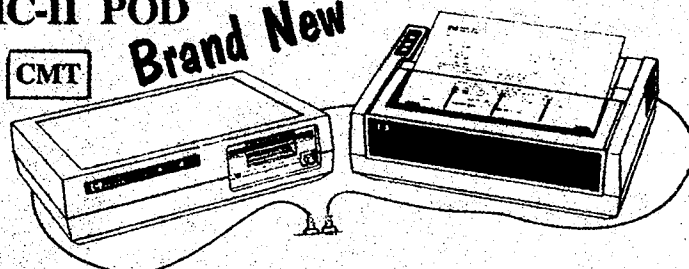
Stock #TI-74 [BASICALC] List \$135	\$99.95
Stock #74-696 (Lrn PASCAL Cartridge) List \$50.....	\$39.95
Stock #74-697 (Statistics Cartridge) List \$50.....	\$39.95
Stock #74-698 (Math Cartridge) List \$50.....	\$39.95
Stock #74-930 Chemical Eng Cartridge) List \$50.....	\$39.95
Stock #74-871 (Finance Cartridge) List \$50.....	\$39.95
Stock #TI-695 [8K RAM Cartridge] List \$50.....	\$39.95
Stock #PC-324 [Portable Printer] List \$115.....	\$89.95
Stock #AC-9201 [Adapter] List \$19	\$16.95
Stock #TP-324 [Paper] List \$6.....	\$4.95
Stock #CI-7 [Cassette Interface] List \$35.....	\$26.95
Stock #PA-201 [AC Interface].....	\$6.95
Stock #74-999 Technical Data Manual, 30p combbound.....	\$9.95
Stock #74-LEARN TI-74 Learn Basic, 299p softbound.....	\$5.98

Handheld Computers

MC-II POD

CMT

Brand New



Use all of your HP-II peripherals with the MC-II! You get HP-II and parallel printer interfaces as well as optional one megabyte memory.

The MC-POD enables your MC-II to control a wide range of peripherals including: Disk Drives, Printers, Displays, Internal and External RAM Disks, other MC-IIs, IEEE-488 Peripherals, and general purpose I/O Equipment.

The HP-II interface is self-configuring. Just set up your loop and begin! The HP-II loop can support a total of 931 peripherals, translate data at 220,000 baud, and uses very little energy. Error checking and damage protection is built into the machine.

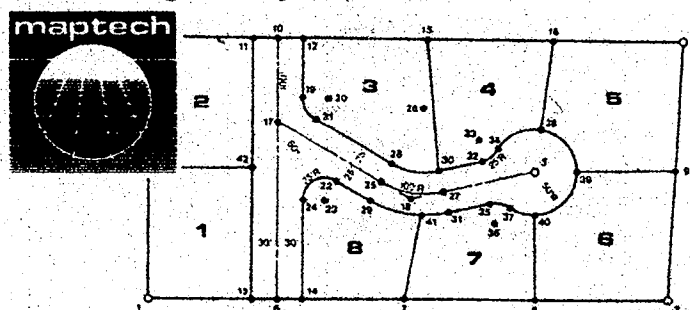
Several new commands have been added: MDX (make a directory), PWDX (print the working directory), HP82163A.X and HPDISP.X, which drive the HP thermal printer and provide HP-II display compatibility respectively.

The MC-POD fits easily onto the expansion port on the back of your MC-II. Since it only adds another 11.5 ounces of weight and 9.375 inches of girth, the MC-II is still a true handheld that can be conveniently carried outside the office.

Stock #MC-POD [HP-II/Parallel INT] List \$295 \$256.95

Surveyor's Field Computer System

New



The Best NEWS for SURVEYORS and CE's since the introduction of the HP-35 in the early 70's!

Collect data with the MC-II—it's immediately accessible for checks on accuracy and unanticipated obstructions as well as field computations for design purposes. System supports a wide variety of survey instruments with one operating procedure, eliminating confusion and costly training programs. You can view entire records as they are input or edited, and raw field data is always available for readjustment or re-editing. Portable printer optional. 16-digit execution with up to 512K memory.

Transfer data to Survey Pac in your PC. Includes Field Traverse program with batch processing, sun and star shot computations, State Plane coordinate conversions, curve computations, and Data Collection transfer. COGO and Stakeout programs solve most land surveying design problems.

The Maptech team originates from HP's Civil Engineering Division, so they bring you years of top-level experience. System includes all software for both PC with graphics card and MC-II.

The Demo Package is the entire, complete program itself, including all manuals. It limits you, though, to 20 uses of each module—enough to run repeated tests, or even complete a job with it. Price of demo is refundable when you purchase program.

Stock #MC-924 (Survey Pac + Data Col, 5 1/4") List \$2459.. \$2299

Stock #MC-924D (Survey + DC Demo, 5 1/4") \$50

Handheld Computers

MC-II

Look—the first Handheld,
Battery-powered Computer—
IBM PC Communicable
and HP-41 Compatible!



Now with
optional BASIC!



■ **Handheld**—8 × 3.8 × 1.75 inches, and you hold it vertically for easy key-ing in the hand. Weights just 22 oz.

■ **Battery-powered**—5 little AA batteries will serve an average user for a month before recharging.

■ **IBM Communicable in Several Ways**—the CPU in the MC-II is an 80C88, a power-thrifty version of the 8088 in the PC/XT, running at 5 MHz (a little faster than the PC).

It has 2 RS-232 Serial Communications Ports (selectable 300 to 19200 baud) so files can be up or downloaded from a PC, printer, field surveying instrument, or other serial device. The Kermit protocol is built into the MC-II so you can easily talk to larger computers, too.

The MC-II operating system supports a (optional) high-level programming language, Microsoft C 4.0 or Quick C, so code can be written and tested on your PC, then linked with the MC-II library and run with no modification (and over 20 times faster than in 71-BASIC).

You can also write code for the MC-II in 8088 assembly language. And it will run dBASE III PLUS.

■ **HP-41CX Compatibility**—your MC-II comes with a '41M-ulator' which has every function of the CX, so every one of the huge library of HP-41 programs will run on it, but 5 to 10 times faster.

■ **Huge Memory**—128K RAM is standard, and 4 ports allow expansion to a whopping 768K! 128K ROM built-in. Addresses 1 Meg.

■ **Display**—8 line × 21 character LCD with 64 × 128 dot graphics.

■ **Peripherals**—in addition to the serial ports and memory ports, there

is a System Expansion Port so you can integrate a barcode reader, modem, measurement device, additional memory, etc.

■ **Plug-in BASIC**—optional module runs most GWBASIC programs without modification; data files are fully compatible. MC-BASIC has a few additional statements: to select I/O devices via an RS-232 port, to select HP-IL events to respond to, to select time and date to perform a routine. It also has a SLEEP command to conserve power while running a program until an event occurs and an OFF command giving a kind of 'suspended animation' until an event or an alarm awakens it. Truly portable, MC-BASIC can stand alone or can use your PC for full screen and keyboard support.

Comes with manual, 41M-ulator and AC Adapter/Recharger.

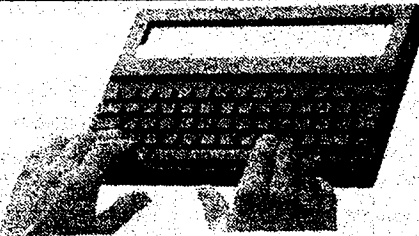
Stock #MC-II [CMT Computer] List \$750.....	\$595
Stock #MC-IIM [128K RAM Module] List \$160.....	\$143.95
Stock #MC-BASIC [BASIC Module].....	\$139.95
Stock #MC-COMKIT [COMKIT] List \$35.....	\$31.95
Stock #MC-Printer [Seiko, DPU-411] List \$245.....	\$216.95
Portable, 80 column compressed, thermal	
Stock #MC-PAPER [Seiko printer paper, 5 rolls].....	\$21.95
Stock #MC-CABLE [2 meter cable, serial].....	\$4.95
Stock #MC-BATPAK [NiCad battery] List \$15.....	\$12.95
Stock #MC-RECHG [AC adaptor for NiCad].....	\$12.95
Stock #MC-TR41 [Translator software, 41C to 41M].....	\$39.95

LapTop Computers

Z88

**Cambridge
Computer**

Brand New



**The first truly portable computer—
from the legendary inventor Sir Clive Sinclair**

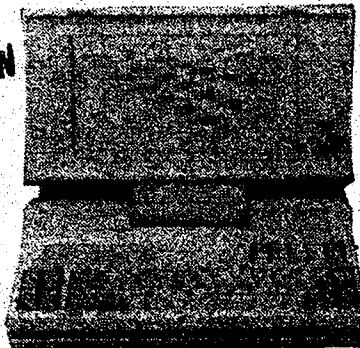
- Sheet-of-paper size—less than an inch thick—less than 2 lbs weight.
- 8 line x 106 character Supertwist LCD screen—QWERTY keyboard with silent, short-travel keys.
- Built-in ROM software—word processor, spreadsheet, database, calculator, diary, calendar, clock, alarm—all work together perfectly. Basic/Assembler language also in ROM.
- Can import/export/manipulate data from PC/Compatibles—converts its own applications software into WordStar or Lotus 1-2-3 files.
- 32K RAM built-in, with memory-pack expansion via its 3 ports—more RAM for computing power—EPROM for mass storage of data of programs (these work like floppy discs but they are smaller and they must be erased for re-use).
- 4 AA batteries give 20 hours of computing or 1 year on standby! AC adaptor included.

Stock #CC-Z88 [Portable Computer]	List \$549	\$499.00
Stock #S-964 [32K RAM Pack]	List \$45	\$39.95
Stock #S-965 [128K RAM Pack]	List \$110	\$99.95
Stock #S-966 [512K RAM Pack]	List \$440	\$399.00
Stock #S-967 [32K EPROM Pack]	List \$45	\$39.95
Stock #S-968 [128K EPROM Pack]	List \$110	\$99.95
Stock #LD-925 [UV EPROM Eraser]		\$59.95
Stock #S-969 [IBM PC Link II]	List \$75	\$69.95
Stock #S-970 [Serial Printer Cable]	List \$22	\$19.95
Stock #S-971 [Parallel Printer Cable]	List \$65	\$59.95
Stock #S-972 [1200 BPS Modem]	List \$225	\$199.95
Stock #S-973 [Carrying Case]	List \$25	\$22.95

MultiSpeed

NEC

Brand New



- Brighter characters
- Crisper contrast
- Full-sized keyboard
- Numeric keypad
- 9.54 MHz fast
- Solid construction

Backlit supertwist LCD with leading edge electroluminescent (EL) screen technology—gives brighter characters with crisper contrast than ever before in a laptop computer.

Enjoy the capabilities of a desktop PC, but portable and fast. Robust engineering for reliability, with NEC 1 year warranty. V-30 chip running at 4.77 or 9.54 MHz with 640 RAM and DOS 3.2. 512K ROM has 6 built-in software programs—Notepad, Filer, Outliner, Dialer, Tel com and Setup.

The MultiSpeed EL Model 2 has two 3 1/2", 740K floppy disc drives (11.5 lbs). The MultiSpeed HD has one 3 1/2" floppy drive and a 20 Megabyte Hard Disc with plated medium (auto-parked and shock-mounted for a long, reliable life; 14.3 lbs).

Stock #NC-EL2 [MultiSpeed, floppies]	List \$2295	\$1495.00
Stock #NC-HD [MultiSpeed, hard-disc]	List \$3695	\$2395.00
Stock #S-2001 [1200 BPS Internal Modem]		\$299.95
Stock #S-2002 [2400 BPS Internal Modem]		\$399.95
Stock #S-2003 [MultiSpeed Carrying Case]		\$99.95

Portable Computer

Toshiba

Brand New



PC Compatible—4.77 MHz, 720K drive, 512K RAM.	
Stock #S-2004 [Toshiba T1000 Computer]	\$799.00
AT Compatible—80286 at 12 MHz, 720K floppy, 40 Meg HD.	
Stock #S-2005 [Toshiba T3200 Computer]	\$3749.00
PS/2 Compatible—80386 at 8/16 MHz, 1.4 M floppy, 40 Meg HD.	
Stock #S-2006 [Toshiba T5100 Computer]	\$4899.00

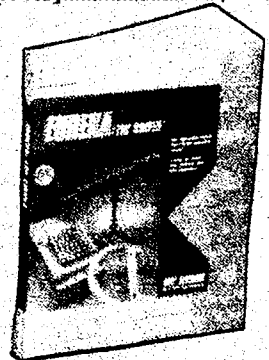
**Eureka:
The Solver**

Quickly solve algebra, trig and calculus problems, including sets of simultaneous equations, inequalities, even linear programming problems. Includes derivative operator and proper integrals, as well as standard trig, log, exponential, statistical and financial functions.

No need to learn numerical approximation techniques—you'll have Borland's famous pull-down menus and context-sensitive help screens. This means Eureka is as easy to learn and use as a hand calculator.

Requires PC/Compatible with 384K; supports 8087 if you have one.

Stock #S-822 (Eureka, 5 1/4")	List \$168	\$119.95
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TK!SOLVER PLUS

UTS

Equation-Processing Software

Your Answer—if you are paid for solutions and not problems. No programming is necessary. Equations, or sets of equations, are solved quickly when you simply

- Enter the equations just as you know them
- Assign values to the known variables
- Press the solve key(!)

Developed by the same people who created VisiCalc, this program is smart enough to automatically select the order in which a set of equations must be solved, and then take information from each equation and apply it in the next.

Tables and Graphs can be made from the values found by solving—you can review the output and send it to the printer. Automatic Unit Conversion lets you formulate problems in one unit of measurement and display answers in another.

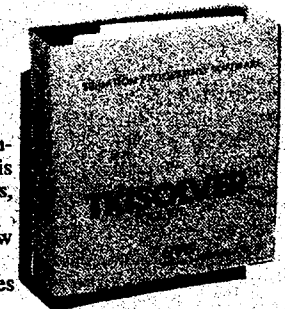
New plus version is 3 to 4 times faster and requires a PC/Compatible with DOS 2.0 or higher and 384K.

Stock #S-742 (TK!Solver Plus 5 1/4")	List \$395	\$295.95
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**TK!SOLVER PACKS
(use with TK!Solver)**

Each Application package overlays the main TK! program to build into it about a dozen modules in your special field.

Stock #S-746 (TK! Financial Mgmt Pack, 5 1/4")	List \$70	\$64.95
Stock #S-743 (TK! Mechanical Eng Pack, 5 1/4")	List \$70	\$64.95
Stock #S-744 (TK! Science Pack, 5 1/4")	List \$70	\$64.95
Stock #S-745 (TK! Construction Pack, 5 1/4")	List \$70	\$64.95



PC Solvers/Calculators

The TK!SOLVER Book

by Konopasek/Jayaraman

'Now you don't have to think like a computer to use one.' Find out everything about this remarkable new software tool for processing equations. Beginner or pro, you'll master it through case studies in science, engineering, business and education. This book is authored by two of the actual program creators.

Stock #C-322, TK!Solver Book, 458p softbound.....\$19.95

Siljak Polynomial Rootfinder

Sierra Digital
Research

All this program does is find (complex) roots of polynomials up to degree 18—but, boy, it does that, with 6-digit accuracy, and fast. On a PC, a fifth degree equation takes 4 sec and an 18th degree equation about a minute (on our Vectra with 80287 it was 1 sec and 15 sec). Requires PC/compatible with 128K RAM.

Stock #S-797 (PC Siljak, 5¼").....\$24.95

PC Hypercalculator 3.00

Sunderland
Software

Now with ALL
HP-12 Financial Functions

Do you still keep a hand-held calculator next to your powerhouse IBM PC or PC-compatible? PC Hypercalculator contains faithful emulations of both the HP-11C scientific calculator and HP-12C financial calculator, plus most-used functions from the 16C.

Has over 120 familiar HP-11C and HP-12C keyboard and program operators, plus alphanumeric prompts, hexadecimal/octal/binary arithmetic with logical operators, equation solving, numerical integration, printing, and on-line HELP. Extra goodies include matrix calculations and complex number arithmetic—even solution of DEs.

There are 100 data registers, 100 labels, 10 flags, 20 levels of subroutines, and 1000 program steps. Data can be stored on disk or transferred directly into or out of another program. Program uses 70K and can be run in pop-up mode if desired. Your HP-11C or HP-12C programs will run on PC Hypercalculator, but 20-40 times faster. Includes free 8087 support and User's Guide.

Stock #S-339 (PC Hypercalculator, 5¼").....\$49.95

Lascaux1000 The Intelligent Calculator

Lascaux
Graphics

With ordinary PC calculator programs your result is a number—you only hope you calculated it correctly. But Lascaux1000 does dimensional analysis for you, so you know you're right—you just check the units.

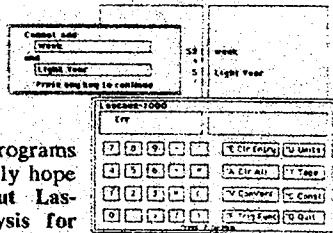
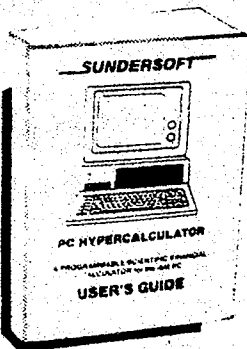
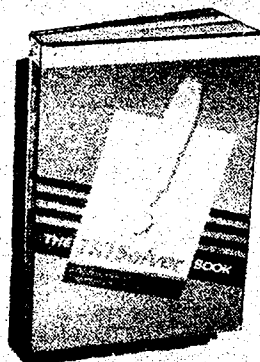
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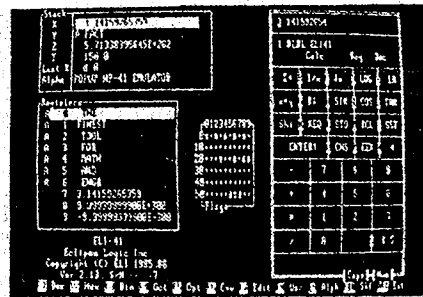
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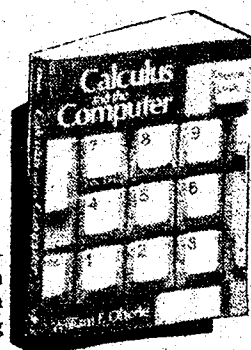
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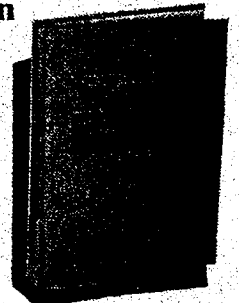
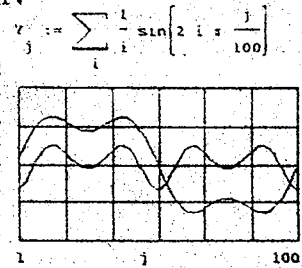
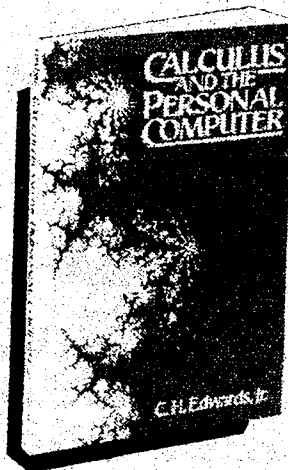
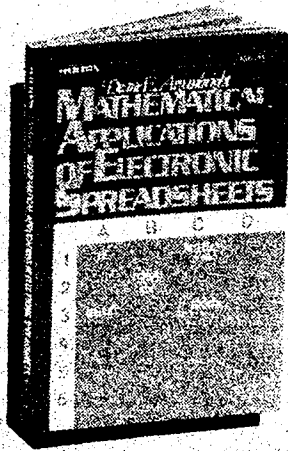
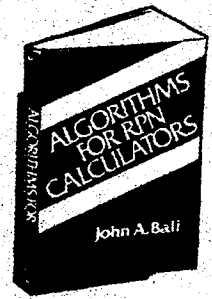
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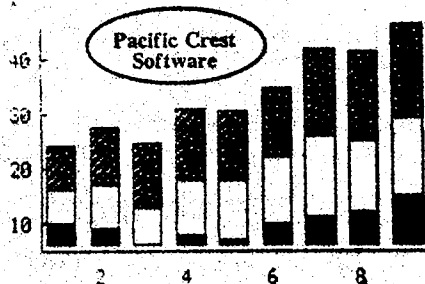
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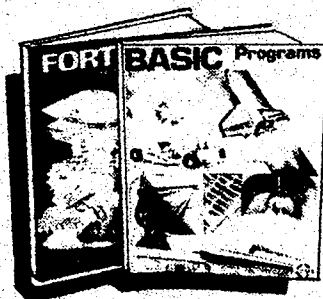
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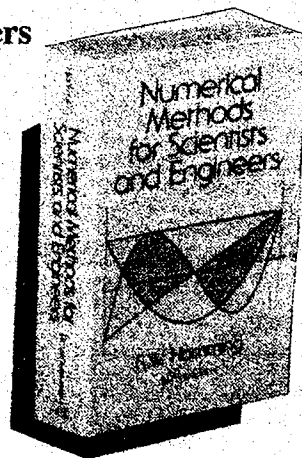
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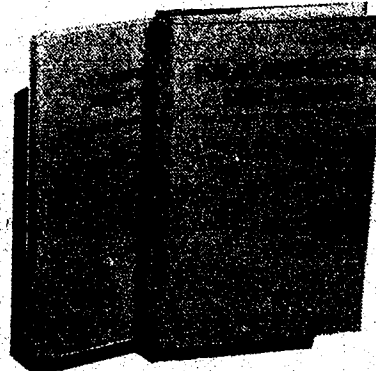
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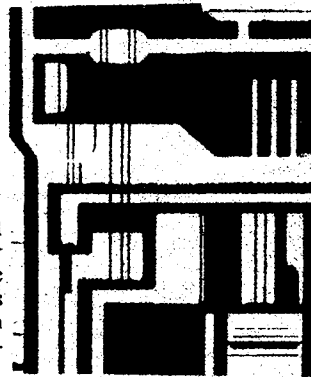


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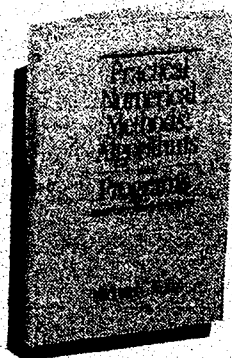
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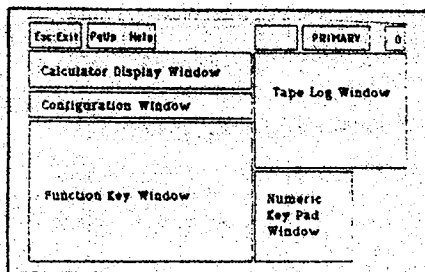
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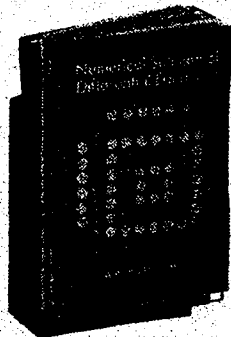


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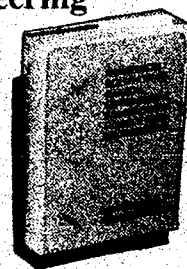
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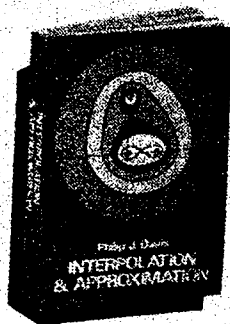
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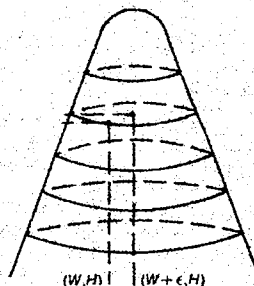


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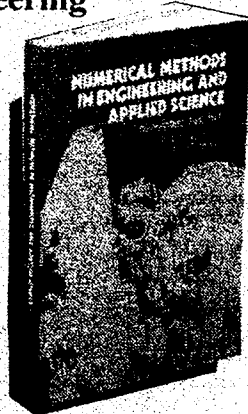
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$$\begin{aligned} &+ 2x_2 + x_3 = 1 \\ &2x_1 + 4x_2 + 2x_3 = 1 \\ &x_1 + 2x_2 + 4x_3 = 1 \\ &\text{and} \\ &4x_1 + 2x_2 + x_3 = 1 \\ &2x_1 + 4x_2 + 2x_3 = 2 \\ &x_1 + 2x_2 + 4x_3 = 3 \end{aligned}$$

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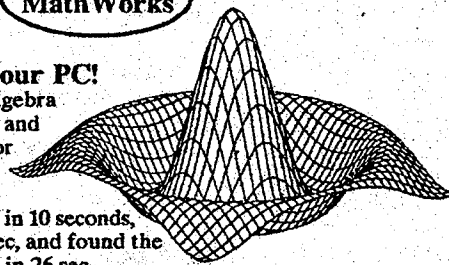
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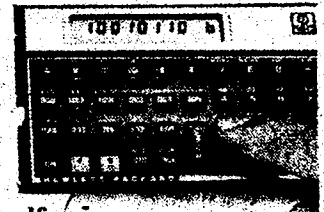


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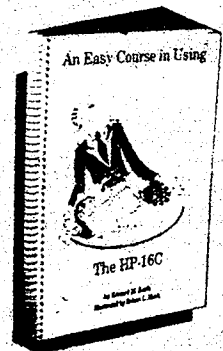
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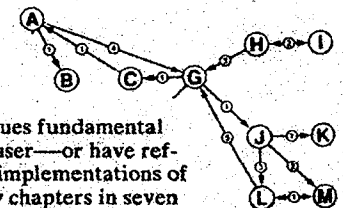
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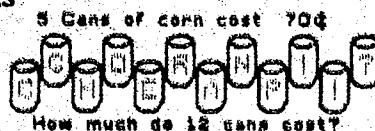
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$$\frac{\text{Cans}}{\text{cost}} = \frac{5}{70} = \frac{12}{x}$$

$$5x = 840$$

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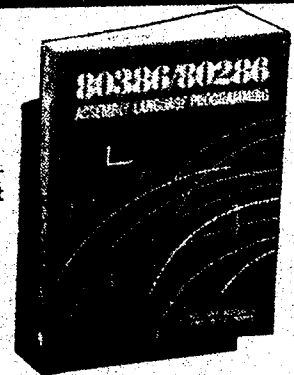
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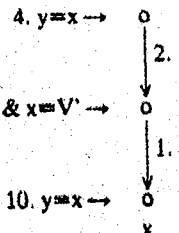
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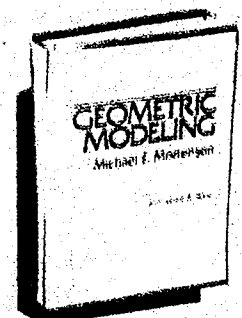
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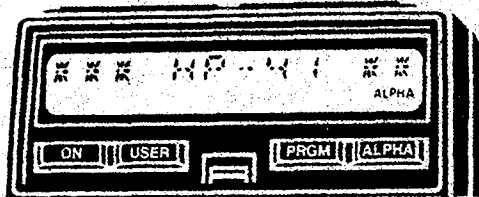
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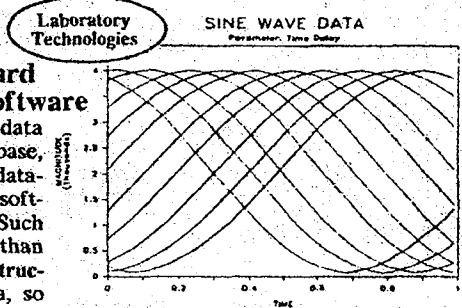
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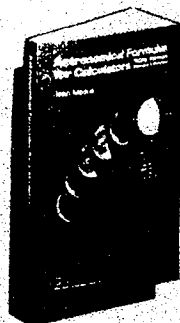
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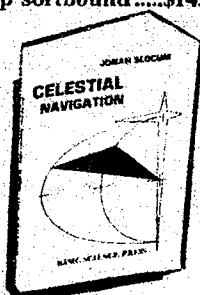
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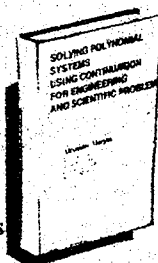
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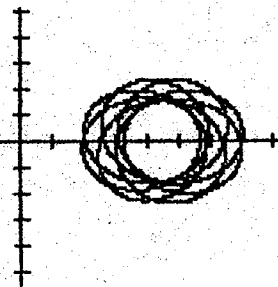
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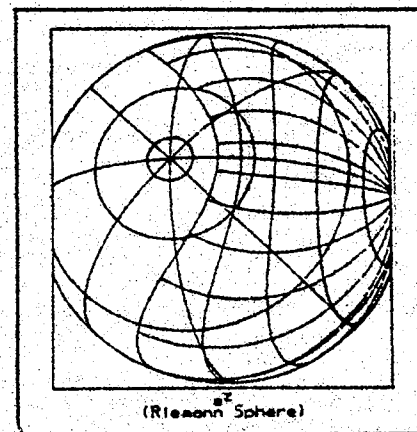
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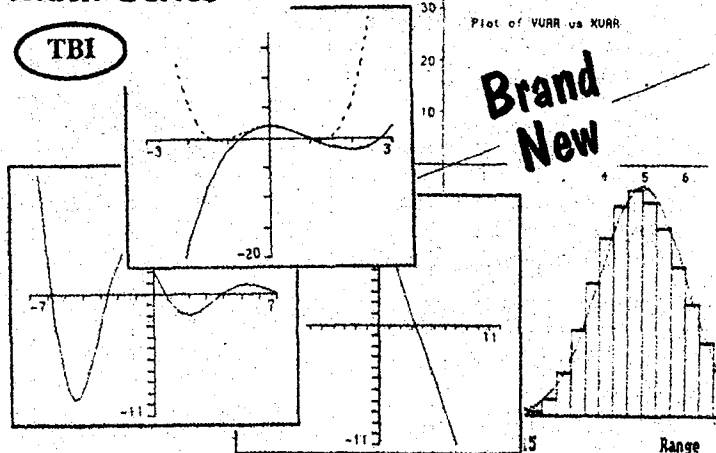
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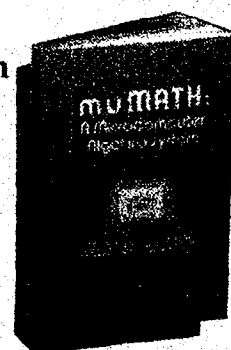
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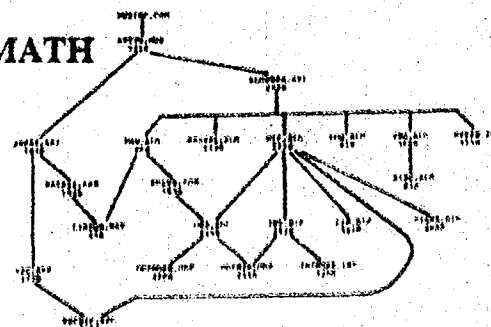


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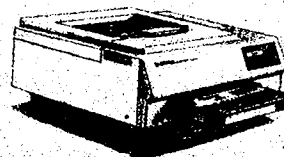
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Color

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Brown
Black (for Series II)



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100 sheets	\$44.00	\$34.95

New

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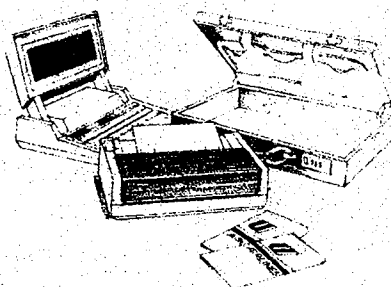
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2227	51605B	51605B
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Color
Black
Blue
Green
Red
Black



Unit (Box)	List \$	EduCALC \$
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	1108	92261N	Fanfold ink-jet printing paper. 20 lb. 8.5 x 11 in.
2228	1110	51630L	Pressure sensitive labels, 3 1/2 x 5/16 in.
Quietjet	1109	51630B	Fanfold ink-jet printing paper. micro 14 7/8 x 11 in.

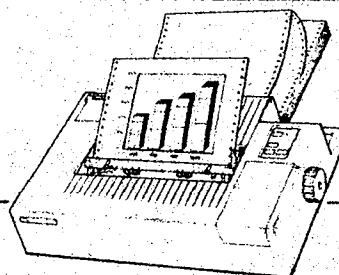
Unit (Box)	List \$	EduCALC \$
500 sheets	\$15.00	\$13.50
500 sheets	\$13.00	\$10.40
2500 sheets	\$55.00	\$52.00
2000 sheets	\$18.95	\$14.95
500 sheets	\$16.00	\$12.80

*See ThinkJet section for special shipping charges.

PAINTJET SUPPLIES



Stock #	HP Part #	Description
1430	51606A	Black Print Cartridge
1431	51606C	Color Print Cartridge
1432	51630P	Fanfold Paper, 250 sheets
1433	15630Q	Film, 50 sheets
1434	51630Y	Cutsheet Paper, 250 sheets



List \$	EduCALC \$
\$27.95	\$20.95
\$34.95	\$26.95
\$17.95	\$13.95
\$64.95	\$51.95
\$22.95	\$17.95

PRINTER RIBBONS



Printer Model	Stock#	HP Part#	Description
2631A/B or 2635A/B or 2639A	1015	92155A	Ribbon cartridges, mobius loop, Black
2631G	1016	92155B	Ribbon cartridges, used with 2631G, opt 200 only, Black
2932/33/34A or 82905A/B	1018	92155L	Ribbon cartridges, continuous feed, Black
82906A	1019	92156A	Ribbon cartridges, continuous feed, Black

Unit (Box)	List \$	EduCALC \$
3	\$65.00	\$53.95
3	\$72.00	\$59.95
3	\$72.00	\$59.95
2	\$22.00	\$18.95

PLOTTER PAPER/FILM

Printer Model	Stock#	HP Part#
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Non-Glossy (use fiber-tip paper pens)

Printer Model	Stock#	HP Part#	Description
For Most	1403	17800P	8 1/2 x 11 in.
HP Plotters	1404	17801P	8 1/2 x 11 in.
7475A	1405	17804P	11 x 17 in.
7550A	1406	17805P	11 x 17 in.



Unit (Box)	List \$	EduCALC \$
50 sheets	\$5.50	\$4.25
250 sheets	\$13.00	\$9.95
50 sheets	\$10.00	\$7.95
250 sheets	\$26.00	\$19.95

Glossy (use fiber-tip transparency pens)

Printer Model	Stock#	HP Part#	Description
7440A, 7470A	1401	17900G	8 1/2 x 11 in.
7475A, 7550A	1402	17902G	11 x 17 in.

Unit (Box)	List \$	EduCALC \$
100 sheets	\$16.00	\$12.95
100 sheets	\$28.00	\$21.95

Transparency Film

Printer Model	Stock#	HP Part#	Description
7400A, 7470A	1407	17700T	8 1/2 x 11 in.
7475A, 7550A	1408	17702T	8 1/2 x 11 in.

Unit (Box)	List \$	EduCALC \$
50 sheets	\$50.00	\$39.95
50 sheets	\$50.00	\$39.95

Vellum

Stock#	HP Part#	Description
1410	9280-0601	8 1/2 x 11 in.
1411	9280-0602	11 x 17 in.

Unit (Box)	List \$	EduCALC \$
150 sheets	\$17.00	\$14.95
150 sheets	\$30.00	\$25.95

Polyester Film

Stock#	HP Part#	Description
1412	9280-0605	8 1/2 x 11 in.
1413	9280-0607	11 x 17 in.

Unit (Box)	List \$	EduCALC \$
50 sheets	\$20.00	\$16.95
50 sheets	\$32.00	\$27.95

PLOTTER SUPPLIES KITS For use on all HP plotters



Printer Model	Stock#	New HP Part #	HP Part #	Description	List \$	EduCALC \$
All	1475	17820PK	5061-5070	250 sheets paper, 15 pens/10 colors/2 widths, pen holder	\$30.00	\$23.95
7470 or 7220/21	1476	17715TK	5061-7561	50 sheets, A Size, transparency film, 12 pens/7 colors/2 widths	\$70.00	\$54.95
7475 or 7225	1477	17717TK	5061-7583	50 sheets, A Size, transparency film, 12 pens/7 colors/2 widths	\$70.00	\$54.95
7550 9872 7090	1477	17717TK	5061-7560	50 sheets, A Size, transparency film, 12 pens/7 colors/2 widths	\$70.00	\$54.95

Hewlett-Packard Supplies

PLOTTER PENS For use with plotters: 7090, 7220, 7225, 7470, 7475, 7550, 7580, 7585, 9872

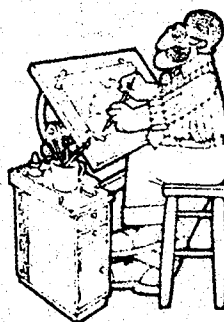
Paper Writing Pens - Fiber Tip

Stock #	New HP Part #	HP Part # 3 mm line	Stock #	New HP Part #	HP part # 7 mm line	Color	Unit	List \$	EduCALC \$
1450	17841P	5060-6784	1451	17842P	5060-6893	Red	5 pens	\$7.00	\$5.60
1452	17831P	5060-6785	1453	17832P	5060-6891	Blue	5 pens	\$7.00	\$5.60
1454	17827P	5060-6786	1455	17828P	5060-6892	Green	5 pens	\$7.00	\$5.60
1456	17825P	5060-6787	1457	17826P	5060-6890	Black	5 pens	\$7.00	\$5.60
1458	17845P	5060-6810	1459	17846P	5060-6858	All above colors	5 pens	\$7.00	\$5.60
1460	17847P	5060-6894	1461	17848P	5060-6895	Green, Aqua, Blue-Violet, Black	5 pens	\$7.00	\$5.60
1479	17849P		1480	17850P		Brown, Orange, Red Yellow, Red-Violet	5 pens	\$7.00	\$5.60

REFILLABLE DRAFTING PENS (Tungsten Points)



Stock #	HP Part #	Line Width	Point Size	Quantity	List \$	EduCALC \$
Short Body for HP 7475						
1490	9300-0955	Ultra-Fine	0.18 mm	1	\$32.00	\$25.95
1491	9300-0956	Extra-Fine	0.25 mm	1	\$29.00	\$23.95
1492	9300-0957	Fine	0.35 mm	1	\$25.00	\$19.95
1493	9300-0958	Medium	0.50 mm	1	\$25.00	\$19.95
1494	9300-0959	Broad	0.70 mm	1	\$25.00	\$19.95
1495	9300-0960	Extra-Broad	1.00 mm	1	\$25.00	\$19.95
1496	5061-8119	Body, Adapter, & Cap for above Points		2	\$18.00	\$14.95
Long Body for HP 7550						
1500	9260-0742	Ultra-Fine	0.18 mm	1	\$32.00	\$25.95
1501	9260-0741	Extra-Fine	0.25 mm	1	\$29.00	\$23.95
1502	9260-0588	Fine	0.35 mm	1	\$25.00	\$19.95
1503	9260-0744	Medium	0.50 mm	1	\$25.00	\$19.95
1504	9260-0579	Broad	0.70 mm	1	\$25.00	\$19.95
1505	9260-0743	Extra-Broad	1.00 mm	1	\$25.00	\$19.95
1506	07580-60025	Body, Adapter, & Cap for above Points		1	\$10.50	\$7.95



OVERHEAD TRANSPARENCY PENS



Stock #	New HP Part #	HP Part # 3 mm line	Stock #	New HP Part #	HP part # 6 mm line	Color	Unit	List \$	EduCALC \$
1462	17741T	5061-5012	1463	17742T	5061-5022	Red	5 pens	\$7.00	\$5.60
1464	17731T	5061-5016	1465	17732T	5061-5026	Blue	5 pens	\$7.00	\$5.60
1466	17727T	5061-5015	1467	17728T	5061-5025	Green	5 pens	\$7.00	\$5.60
1468	17725T	5061-5010	1469	17726T	5061-5020	Black	5 pens	\$7.00	\$5.60
1470	17745T	5060-6818	1471	17746T	5060-6819	All above colors	5 pens	\$7.00	\$5.60
1472	17747T	5060-6834	1473	17748T	5060-6835	Green, Aqua, Blue, Violet, Black	5 pens	\$7.00	\$5.60
1481	17749T		1482	17750T		Brown, Orange, Red Yellow, Red-Violet	5 pens	\$7.00	\$5.60
1483	17729T					Aqua	5 pens	\$7.00	\$5.60
1484	17733T					Violet	5 pens	\$7.00	\$5.60
1485	17735T					Brown	5 pens	\$7.00	\$5.60
1486	17737T					Yellow	5 pens	\$7.00	\$5.60
1487	17739T					Orange	5 pens	\$7.00	\$5.60
1488	17743T					Red-Violet	5 pens	\$7.00	\$5.60
1474		5060-6828				Ink Solvent	1 oz.	\$4.00	\$3.25

DISCS



Printer Model	Stock #	HP Part #	Description	Unit	List \$	EduCALC \$
Series 80, 100, 200	1300	92191A	3.5 in., 0.27 Mb, single-sided, auto-shutter unformatted	10	\$39.00	\$29.95
	1301	92192A	3.5 in., 0.71 Mb, double-sided, auto-shutter, unformatted	10	\$49.00	\$36.95
Series 82900	1302	92190A	5.25 in., 0.27 Mb, double-sided unformatted	10	\$32.00	\$24.95
250, 300, 3000/30 3000/33	1303	92195A	8 in., 1.2 Mb, double-sided, unformatted	10	\$61.00	\$48.95

DISCS - SPECTRUM/BASF

Stock #	HP Part #	Description	Unit	List \$	EduCALC \$
1350	equivalent to 92191A	3.5 in., 0.27 Mb, single-sided	1	\$4.00	\$1.79
1351	equivalent to 92192A	3.5 in., 0.71 Mb, double-sided	1	\$5.00	\$1.99
1352	equivalent to 92190A	5.25 in., 0.27 Mb, double-sided	1	\$4.00	\$99

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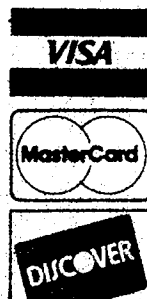
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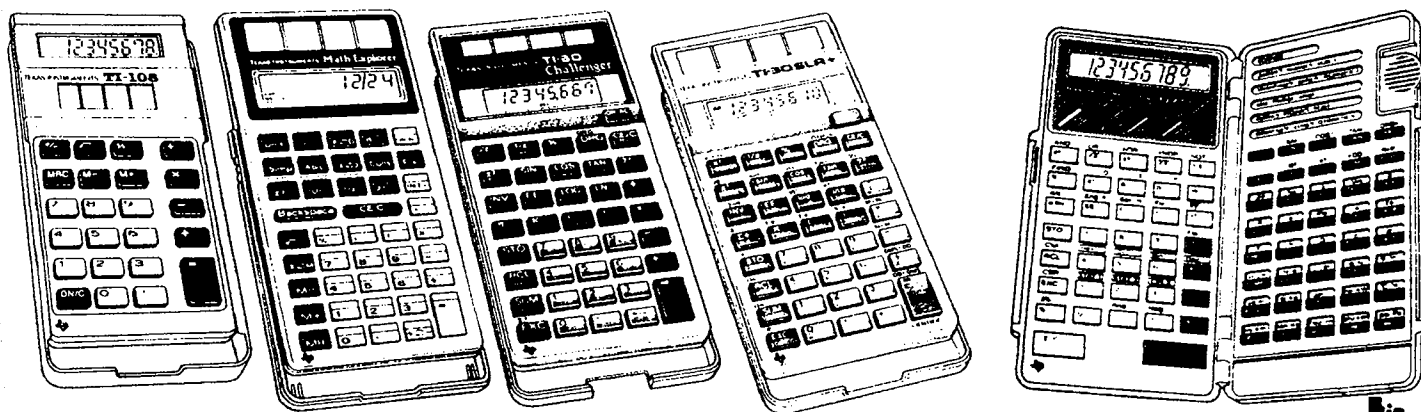
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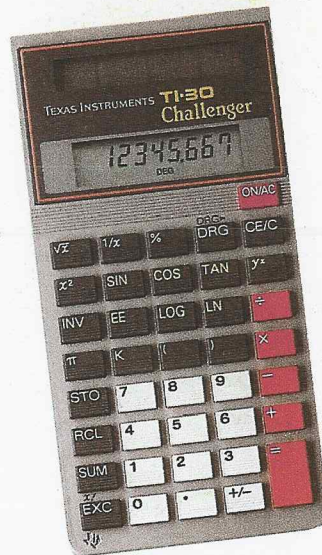
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