EduCALC: A Look Back

Jake Schwartz
The Start – 5/24/76

In 1990 Catalog #48:

It’s our birthday—we’re 14 years old! Stop by for a cup of coffee and help us celebrate—May 24, or whenever you can make it.

Visit Our Store
We’re located right here in Orange County, California, near the intersection of Interstate 5 and Crown Valley Parkway (across the freeway from Mission Viejo Mall).

HOURS:
8 am – 5 pm
Monday – Friday

EduCALC
27953 Cabot Rd.
Laguna Niguel, CA
The EduCALC Product

NEW - The Lecturer’s Calculator
Students can read it from the back of the room!

University of Tennessee: "... easiest, most convenient, if you will permit me..." defined the way to handle students... to my forever gratitude...

University of California: "...I thought it was very..." explained a year of use... really happened to their eyes...

University of Wisconsin: "...pioneering in every...the high expectation that I had for the use of work... students for anyone, middle and high-school students...it was never the complete as well as a conscious advantage...greatly pleased with it in all respects."

The Card-Programmable EduCALC™ 59 GD
Makes Math Spectacular!

PRICE LIST

Full-Size Models with Heathkit Package
Micro-Calculator: 59-GD $189.00
596-GD $289.00
597-GD $289.00
599-GD $399.00
KICD with GRAND DISPLAY: 2105
59-GD $215.00

COMPACT MODELS with Texas Instruments Master Calculators:
296-GD $296.00
307-GD $296.00
313-GD $296.00
319-GD $296.00
KICD with GRAND DISPLAY: 2105

GIVE YOUR LECTURES NEW POWER!
Get student enthusiasm! $920

EduCALC 59 GD

NO MORE TIDIOUS COMPUTATION AT THE BLACKBOARD. Let your EduCALC do the dirty work. You have the enthusiasm, the EduCALC opens up new vistas of teaching, the way of thinking. That's good teaching and FUN.

Which courses for your 59 GD?

With the 59 GD you can set existing 4-bit hexadecimal of the last instruction of the calculator it is the formerly tedious arithmetic of the students. You can do some easy operations of the memory and decimal 10-bit. Equations as well as some common (decimal, hexadecimal, binary, etc.)

In fact, the EduCALC has plenty of professional memory to make your routine Computer Programming courses as simple and easy - it is like having a CPU in your daily Program steps, as well as the usual, the students are told to the big wave display as you are there to the user.

The EduCALC 59 GD plus students' calculators equip a new teaching course. It is easy to use for novices, even for those who are not familiar with computers - their personal calculators are easy to use in groups or alone. And watching the instructor's EduCALC is exciting.

EASY TO USE...

Picture yourself using this dramatic new teaching tool. It requires no special skill or technique. Just plug your EduCALC in its own socket and it will SHUT OFF your re- ticle close to the back cover, instead of blinding your lecturer with read-off numbers and bulk BlackBoard figures, you can now command familiar- ing studies. Students come alive with EduCALC!

THE SUPER-PowerFUL CALCULATOR...

The built-in 1559 "master" calculator has up to 960 program steps, to up 180 data memories, and can receive and store magnetic cards and read them as cards.

It comes with the special EduCALC Main Menu (5000 step). Optional plug-in modules are available for many special applications.

The 1559's simple system of data entry allows you to create your own program as you would write them. You get the detailed manual manual with a user-friendly guide to menu and power of personalized programming.

Is EduCALC Useful Without Students' Calculators?

Sure! Many teachers use it for demonstrations, just like the chemicals and physical science experiments.

Hesitant?

Fare - Why not test it then while you are discussing how much time you spend speaking out numbers and writing them on the board. Could you CAPTURE AND HOLD ATTENTION better if you had an EduCALC? Could you get more done?

Ready to buy your EduCALC now?

Great! Campaign for one! Ask your Chairman to get it. He knows which budget to find the funds in - Supplies and Equipment, Audio-Visual, Computer Science, Innovative Projects, etc. And, he wants to improve your teaching problems.

EDUCATIONAL CALCULATOR DEVICES, INC.
1019 East 6th Street, Laguna Woods, California 92637
Phone: 214 - 412-8060

EduCALC 59 GD

2400 North 40th Ave.
Omaha, Nebraska 68114
Phone: 402 - 734-6000

EDUCATIONAL CALCULATOR DEVICES, INC.
1019 East 6th Street, Laguna Woods, California 92637
Phone: 214 - 412-8060

EduCALC 59 GD

2400 North 40th Ave.
Omaha, Nebraska 68114
Phone: 402 - 734-6000
There's a new kind of calculator being manufactured. It's an EduCalc, a teaching calculator with two display units. It has the usual, red numerical readout facing you as you operate it, and also it has another big display unit showing the same number in the opposite direction toward your audience or class. Its big, bright neon digits have that same twinkling fascination for the viewer that has attracted him to his own calculator.

Anyone who has tried to communicate numbers and calculations to other people knows the problem. The display digits are just too little to be read if you hold the calculator up to be seen, even before a small audience. Yet reading off the numbers loses attention and interest, and so does writing them on a blackboard. The EduCalc gives us a way to really hold an audience, a way to give our calculations "sex appeal".

This important new visual aid for teaching is in use at the University of California, for example. They have found that it captures the attention of students all the way to the rear of a large, well-lit lecture theater.

The "Master" Calculator: Each EduCalc has its own built-in calculator. These calculators are made by Hewlett-Packard. Three different EduCalc models are available:

<table>
<thead>
<tr>
<th>Model</th>
<th>Master</th>
</tr>
</thead>
<tbody>
<tr>
<td>21 GD</td>
<td>HP-21 Scientific Calculator</td>
</tr>
<tr>
<td>22 GD</td>
<td>HP-22 Business Management Calculator</td>
</tr>
<tr>
<td>25 GD</td>
<td>HP-25 Programmable Scientific Calculator</td>
</tr>
</tbody>
</table>

The "Slave" Display: When 115 VAC is supplied, the big display lights up toward the audience. This display is formed of planar gas discharge digits made by Beckman Instruments. They have a wide viewing angle of 130°, a spectacular legibility at 50 feet (15 meters) distance, and a life expectancy of ten years or more.

The Cabinet and Accessories: The EduCalc cabinet is an oak lectern which contrasts with the black face of the big display. It comes complete with a carrying case that doubles as a pedestal with which you can elevate the lectern above desk height. Also included with each EduCalc are the Owner's Manual and/or Application Handbook which are normally supplied with its master calculator.

The Interface Electronics: The EduCalc needs to electronically modify and amplify the signal levels and format of the pocket calculator display before they can be used to drive the big neon display. Medium Scale Integrated (MSI) circuits are used to demultiplex and buffer the calculator output. The engineering is conservative; each EduCalc is built and tested to function reliably for many years.

The Warranty: Each EduCalc is warranted against defects in materials and workmanship for one year from date of delivery.

Compared to computers, the EduCalc gives a really inexpensive teaching system. Students buy their own calculators, so the only expense is the EduCalc itself. Yet this system gets even more student involvement, more excited interest in the math.

This is a dramatic new sales, lecturing, and teaching tool. It costs no more than a good office typewriter. Many teachers have found that the money was readily available to them in budgets marked for "Innovative Projects" or "Curricular Development", as well as in the more customary "Audio Visual" or "Supplies and Equipment" accounts.

The price for the programmable model, the 25 GD, is $450, including delivery in the U. S. A. The 21 GD is $455, and the 22 GD sells at $490. There is a 15-day trial period during which you may return the machine to obtain a full refund if you are not satisfied.

To order one or to receive further information, write the manufacturer:

Educational Calculator Devices
P. O. Box 974
Laguna Beach, CA 92652
(714) 497-3600

65 NOTES
V3 N2 (1976)
8
Other PPC Journal Articles / The ‘70s

6.7 EduCALC AT WESCON

The HP-67 large demonstration display from Educational Calculator Devices, Inc. was used to demonstrate Advanced Applications of the HP-67. From audience comments heard during and after the calculator session, the large digits were easily seen by the hundreds of people in the audience. The word/phrases actually displayed made the presentation exciting and interesting to everyone. Anybody involved with group presentations of PPC’s needs an EduCALC. See 65 NOTES V4N6PS9 for more details, especially the 10% discount offer.

5/7/77

TRADING POST

EduCALC is expanding its large calculator/display product line with new models using the HP-33E and HP-38E identified as models 33E GD and 38E GD respectively. These teaching devices present the calculators display in large 1 inch high digits for viewing by large groups. The display has a viewing angle of 130° and are legible up to 60 feet. The two new models are oaken lecterns about the size of a portable typewriter and weigh 8 pounds. For full details write: George Shultz, Academic Marketing at Educational Calculator Devices, Inc., Box 974, Dept. 2163, Laguna Beach, CA 92652.

5/7/77

From PPC Member Handbook #1 (May 1977)
EduCALC Mail Store Catalogs Begin

Catalog #5 Cover

George McCarty Note on back

YOUR MOST CONVENIENT SOURCE FOR HARD TO FIND BOOKS RELATED TO THE MAGIC OF CALCULATORS

THE EduCALC MAIL STORE BOOK CATALOG

Calculator Calculus
by George McCarty

Pocket Calculator Supplement for Calculus
by Maurer & Breaux

Pocket Programmable Calculators in Biochemistry
by Barrie Warding

Applied Mathematical Physics with Pocket Calculators
by Robert Eising

EduCale Mail Store
27963 Cabot Road
South Laguna, CA 92677

Dear Richard,

This catalog is a new thing (though labeled "5"). If it succeeds, will update it with even more—All?—calculators oriented to your wish to mention it in PPC Notes.

ADDRESS CORRECTION REQUESTED

Best,
George
Catalogs up to Number 75 (1997)

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Making the Catalogs More “Electronic”

HP-41 Systems

Here’s where you find...

<table>
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<th>HP-41 Peripherals</th>
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<tr>
<td>Batteries/Rechargers</td>
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<tr>
<td>Accessories</td>
<td>7</td>
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<tr>
<td>Memory Modules</td>
<td>8</td>
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<td>Application Pacs</td>
<td>10</td>
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<td>Combined Modules</td>
<td>16</td>
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<td>EPROM Modules</td>
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<td>Soft/Bookware</td>
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<td>Synthetic Programming</td>
<td>23</td>
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<td>Turbo-41</td>
<td>25</td>
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“Brand New” versus “New”
Some Rough Catalog Statistics

- 72 catalogs in the archive; 4,709 pages / 23,827 index items
- Overall items per page – 5.0599
- Longest catalog: #37 (1987) - 126 pages, 585 items
- Most items: #42 (1988) - 645 items, 108 pages
  - #41 (1988) – 6.0600, 100 pages, 606 items
  - (Not counting 52S, 64S)
HP-41/71/IL Product Catalogs

12 pages, 96 items
(8.0 items/pg)

8 pages, 65 items
(7.2 items/pg)

8 pages, 57 items
(7.1 items/pg)
# Longest Lasting EduCALC Staff Members

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<tr>
<th>Name</th>
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<td>Jim</td>
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<tr>
<td>Marta</td>
<td>40</td>
</tr>
<tr>
<td>Richard</td>
<td>41</td>
</tr>
<tr>
<td>Christy</td>
<td>33</td>
</tr>
</tbody>
</table>


- Ed: 31 years
- Jim: 40 years
- Marta: 40 years
- Richard: 41 years
- Christy: 33 years
Opening Letters and “Jim” Pictures
HP Calc Popularity, part 1

Classic, Woodstock Series
HP Calc Popularity, part 3
HP Calc Popularity, part 7
# Most Popular HP Items

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<tr>
<th>Peak Number of Items per Issue:</th>
<th>Most Issues per Item:</th>
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<tr>
<td>1</td>
<td>An Easy Course in Using the HP-12C</td>
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<tr>
<td>2</td>
<td>Practical Astronomy With Your Calculator</td>
</tr>
<tr>
<td>3</td>
<td>The HP-12C Made Easy</td>
</tr>
<tr>
<td>4</td>
<td>Handbook of Mathematical Functions</td>
</tr>
<tr>
<td>5</td>
<td>HP-12C Pocket Guide</td>
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<tr>
<td>6</td>
<td>HP-41 Synthetic Programming Made Easy</td>
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<tr>
<td>7</td>
<td>Calculator Calculus</td>
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<tr>
<td>8</td>
<td>Synthetic Programming On The HP-41C</td>
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<tr>
<td>9</td>
<td>HP-41 Extended Functions Made Easy</td>
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<tr>
<td>10</td>
<td>Mathematics: Its Contents, Methods and Meaning</td>
</tr>
<tr>
<td>11</td>
<td>Algorithms for RPN Calculators</td>
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<tr>
<td>12</td>
<td>Astronomical Formulae For Calculators (Second Edition)</td>
</tr>
<tr>
<td>14</td>
<td>Encyclopedic Dictionary of Mathematics</td>
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<tr>
<td>21</td>
<td>Algorithms</td>
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<tr>
<td>21</td>
<td>The HP-48 Handbook</td>
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<tr>
<td>21</td>
<td>Tips and Programs for the HP-32S</td>
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<tr>
<td>21</td>
<td>An Easy Course in Programming the HP-41</td>
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<tr>
<td>21</td>
<td>HP-41 Synthetic Quick Reference Guide</td>
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<tr>
<td>21</td>
<td>The HP-17B Pocket Guide Just In Case</td>
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## Most Popular Books by Longevity 22-49

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<th></th>
<th>Title</th>
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<th>Item Type</th>
<th>Model / Language/OS</th>
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<td>22</td>
<td>Energy Analysis With A Pocket Calculator</td>
<td>Patterson, G. A.</td>
<td>Book</td>
<td>HP-25/TI-57</td>
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<td>26</td>
<td>Statistics at your Fingertips</td>
<td>Finkelstein, Mark</td>
<td>Book</td>
<td>None</td>
<td>31</td>
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<td>26</td>
<td>HP-41/HP-IL System Dictionary</td>
<td>Reinstein, Cary</td>
<td>Book</td>
<td>HP-41 / HP-IL</td>
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<td>26</td>
<td>HP-19B Pocket Book</td>
<td>Donnelly, James</td>
<td>Booklets</td>
<td>HP-19B</td>
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<tr>
<td>26</td>
<td>The Mathematical Experience</td>
<td>Davis/Mark</td>
<td>Book</td>
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<tr>
<td>32</td>
<td>An Easy Course in Programming the HP-11C and HP-15C</td>
<td>Wadman/Coffin</td>
<td>Book</td>
<td>HP-11C/15C</td>
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<td>32</td>
<td>Data Processing On The HP-41</td>
<td>Phillips, William</td>
<td>Book</td>
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<td>32</td>
<td>Nonparametric Statistics Quick &amp; Easy on the HP-41</td>
<td>Volk, William</td>
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<td>RPN/AOS</td>
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<td>32</td>
<td>Basic Fluid System Analysis</td>
<td>Patterson, G. A.</td>
<td>Book</td>
<td>Various</td>
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<td>32</td>
<td>Engine Thermodynamics with a Pocket Calculator</td>
<td>Patterson, G. A.</td>
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<td>Encyclopedia of Engineering</td>
<td>Parker, Sybil</td>
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<td>The Existential Pleasures of Engineering</td>
<td>Florman, Samuel</td>
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<td>Inside The HP-41</td>
<td>Dodin, Jean-Daniel</td>
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<td>Problem Solving and Structured Programming in BASIC</td>
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<td>Investment Securities Program Guide using the HP-12C</td>
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<td>Traub, Joe</td>
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<td>41</td>
<td>Elements of Algebra and Algebraic Computing</td>
<td>Lipson, John</td>
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<td>49</td>
<td>An Easy Course in Using the HP-17B</td>
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<td>Extend Your HP-41</td>
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<td>Book</td>
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(4 more tied at 26)
## Most Popular Software Books: A “Ted Kerber-palooza”

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<th>Item Type</th>
<th>Model / Language/OS</th>
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<td>Curve Fitting For Programmable Calculators</td>
<td>Kolb, William</td>
<td>Book/Software</td>
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<td>HP-42S Surveying Solutions</td>
<td>D'Zign</td>
<td>Book/Software</td>
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<td>Book/Software</td>
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<td>D'Zign</td>
<td>Book/Software</td>
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<td>HP-28S Software Power Tools: Electrical Circuits</td>
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Products Supporting Changing Models

Battery-powered HP 95 to Parallel Printer Data Converter

Get beautiful printout—now your HP 95 can drive a portable parallel printer (such as the Canon BJ-10e Bubbles). You connect this serial-to-parallel converter to any PC via a serial cable and send its output to any parallel printer via a Centronics 36-lead cable. Up to 250 hours on one 9V battery (not included).

Stock #GA935 [Serial/Parallel Converter] List $100............ $79.95
Stock #9V [Alkaline Battery] ................................................ $2.80

Lo-Cost Surveying Software for the HP 48

HP 48SX Surveying Packet #1 version 3.0

Full Coordinate Geometry, including rotations, prismatic areas, intersections and inverse traverses by point numbers for areas. Field layout programs include the host version of our Alignmen/Offset programs to data and flat radial traverses. Also has Triangulation and Chainline Curve solutions and an easy-to-use file system.

Leveling Field Book with 3-in-1 and 3-in-1 Leveling options is something new to handle. Use this calculator as a field book and print out or automatically adjust the level run later.

New version 4.0 has spiral curves, intersection, A.L.T. remote slope readings, geographic pickup, and area calculations, and foot-inch fraction conversion. Manual included.

Requires HP 48SX with 128K RAM Card installed.
Stock #2606 (48 Survey Pack #1 v 3.0, 5½ × 3½") ............... $125

Surveying Software that thinks like you do for the HP 48/SX/GX

Surveying Packet #1 New version 4.0

Still the world's most versatile program but now even more so! A complete Coordinate Geometry program including all the options for the HP 48SX/GX. No more need for manual calculations. You can even use the program to solve equations for you. All for the price of a scientific calculator. Requires HP 48GX or 48SX with 128K RAM Card and serial cable for downloading.

Stock #2606 (48 Survey Pack #1, 3½") .......................... $125

The HP 48 Handbook 2nd Edition

The ultimate programmer's how-to and reference book for S/SX/G/GX

by James Donnelly

New 2nd edition

Covers System Programming

If you intend to make your 48 dance and sing, this is for you. It contains over 1400 pages of HP manuals into a portable collection of concise, convenient tables, tips and facts. More than example programs illustrate the power of the HP 48GX/GX with an emphasis on interactive programming and graphics.

The HP 48 Handbook covers objects/contents/constants/names, memory organization, graphics, statistics, data transfer, menus, user keys, programming, printer control, units, message tables, character codes, flags, and keystroke access.

A huge new chapter on System Programming provides a superb introduction to the internals of the HP 48—objects you can use with SYSEVAL! HP manuals don't tell you what's 'under the hood', but this chapter does! Any HP 48 owner can get a lot more from their machine with a little knowledge about System Programming!

An expanded Command Reference (over 85 pages) lists the complete stack diagrams for all commands and functions, including notes, related flags, and keystroke access.


The HP 48 Handbook for S/SX only

by James Donnelly

If you intend to make your 48 dance and sing, this is for you. It contains the 1400 pages of Owner's and Programmer's Reference Manuals into 198 pages of concise, convenient tables, tips and facts. There's also a chapter on the Solve Equation Library—functions, commands, applications.

Covers objects/contents/constants, memory organization, graphics, statistics, data transfer, menus, user keys, programming, system operations, printer control, units, message tables, character codes, flags, alpha keyboard.

Complete index of commands and functions, with a bonus (54 pages!) of stack diagrams for all commands and functions.

Stock #2246, The HP 48 Handbook, 198p wirebound ........................................... $19.95
Community Projects, part 1

EduCALC News Line (714) 582-3976

Phone EduCALC any time for weekly reports on the latest products and activities for handhelds and palmtops. Updates are made each Tuesday. Topics include new products or services, special offers, novel applications, and news about the activities of user groups.

HP Handheld Conference 1996, August 24 & 25 at Anaheim Marriott Hotel. HP Palmtop, OmniGo and calculator users share applications, hardware, programs and user tips during 2 FULL days of vendor booths, door prizes, HP 48 Programming contest and HP Q & A Panel. Contact Richard X106 for information.

Free – your name engraved – free

During this introductory sale we will personalize your name or initials free on a small plate that you can neatly adhere in a countersunk space on the back of your new 95LX. Just include Stock #95CNP and we will include everything you need to get your FREE engraved name plate. You’ll be limited to 16 characters and your imagination.

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.”
**Community Projects, part 2**

**PROGRAMES ON CASSETTE**

from PPC Journal

217 surprises for your HP-41! PPC is the oldest and largest users' organization for the HP-41, and they've collected every large program (over 20 lines) published in their journal during 1982 and '83. 15 programs for ALPHA Manipulation, 71 for Synthetics, 9 for games, 4 for data handling, 40 for mathematics, 37 for HP-II, 45 for X-functions and X-memory, 50 miscellaneous. Back issues of the PPC Journal for 1982 and 1983 included.

Stock #A-580 (PPC Programs 1982/’83) .................. $99.95

---

**EPROM SERVICES**

Your program or data can now be burned into an EPROM.

All you need is your program/data on a cassette tape or magnetic cards. What you get is an EPROM containing your program/data. This EPROM can then be plugged into one of several EPROM boxes (see HHP-PE). The following information should be supplied: type of EPROM box, XROM number for EPROM(s) (one for each 4K used), EPROM name or header (8 characters), and any special information. Please allow 4 weeks for delivery: your cassette tape or magnetic cards will be returned. Duplicates can be produced for $25. Prices include the cost of the EPROM.

Stock #A-263 (4K EPROM) ........................................ $40.00
Stock #A-264 (8K EPROM) .......................................... $65.00
Stock #A-265 (16K EPROM) ......................................... $105.00

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**Turbo-28**

**Brand New**

Triple the RAM memory—for your big programs, or just many of them, and for data.

All you'll see is a thin plate mounted on the back of your HP-28C. But inside you'll have a whopping 4K of additional RAM memory. This does not affect the instrument's operation at all—you'll just automatically access much more memory.

This modification can be done when you buy your HP-28C or you can send it back to us later. Either way, the work voids your HP warranty—so we give a 90-day warranty on the entire instrument as modified.

Stock #28-832 [Turbo-28 4K Modification] .................. $124.95

More still—More memory than you'll probably ever need. If money is no object, you can even have 32K of RAM added, instead of just 4K. Fantastic? You bet!

Stock #28-832T [Turbo-28 32K Modification] .................. $269.95

---

**Swap Discs**

Public domain software for the HP-41, HP-71 and HP 75 is available for the cost of a blank 3 1/2" disc ($1.95 each). This is a service and not a product, as most of the programs are not documented and none are supported in any way. See Technical Note Listing 26 (page 46 of this catalog) for details.

Stock #DSK1 (CHU01) ........................................... 45/111/105
Stock #DSK2 (CHU02) ........................................... 82/79/133
Stock #DSK3 (CHU03) ........................................... 24/21/99
Stock #DSK4 (CHU04) ........................................... 9/148/9
Stock #DSK5 (CHU05) ........................................... 1/2/160

45/111/105 means 45 HP-41 files, 111 HP-71 files, and 105 HP-75 files on the disc. Most HP user groups have details on the disc contents.

---

**EduCALC Technical Notes**

By Richard Nelson

Have a technical question? We may have the answer all ready for you—send us a 22 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-II-S?
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?
Stock #TN21, Evaluating Software?
Stock #TN22, What is HP-IL?
Attention: Club Secretaries!
Let us know what your calculator club is doing — EduCALC will spread the word! Call Mike Bruggeman in Group Sales, (800) 677-7001.

HP 48 Goodies Disks
Public-Domain Software Programs

- High Density Disks for PCs: 1.2M 5.25" or 1.44M 3.5" (sorry, there are no Apple or Mac versions as yet)
- Lo-Lo-Cost, Donated Programs — provided as is, without support from EduCALC; HP or anyone else; about half of these programs work on the HP 48GX (but that may not be stated)

Each disk comes with descriptive notes. These may also be ordered separately — see page 81 for our 'Technical Notes'. Cumulative Index see TN 52.

No. 1: We have Joseph K. Horn to thank for this: 272 files and 999K bytes on a high-density PC disk, mostly downloaded from HP's Corvallis BBS. Running analog clock, finds hex address of any object. Picture of Alfred E. Newman, horn to 48 assembly language, the game of Blackjack (21), HP 48 bugs & fixes version, Graphic calendar maker walkers, Differential Equation solvers, HP 48CV Emulator comments, Animated rotating world globe. Play real music w/ samples. All about the hidden directory, Tetris video game, much more.

No. 2: We have Derek S. Nickel to thank for this: it contains Voyager V1.0-6, which will allow you to interactively disassemble the contents of the HP 48SX ROM and other 48 programs. There are also HP 48SX Internals, Voyager Reference Manual and Natural Instruction Set.

No. 3: A continuation of No. 1, also from Joe Horn: 1,012,072 bytes in 264 files — games, utilities, programming hints and aids, fractals and other graphics, numerical routines, hardware secrets, etc.

No. 4: Prepared by HP but not supported or warranted by them, tools for use by a System Level RPL programmer on a PC platform to create HP 48 applications, with documentation. Includes approx. 2000 supported (frozen addresses) system objects.

No. 5: Joe Horn has done it again: many new video games with hi-quality graphics; a TV IR remote learning program, latest Hacker Tools, Flight Planning, Black Body Emission, Internal Messages, Planetary Positions.

No. 6: More animation! Boc, Man, Horse, Eye, Bouncing ball, Life 'Game', tank battle, Video Games, Pac Man, Chess, Tetris, Space Invaders. Program: Search & Replace, cut redundant RPL, Last Squares, and exact Polynomial Curve Fit, all factors of x, Quick Editor, Turbo IK, Pocket Planetarium, Address Book, 3D Graphing Suite.

No. 7: Next! Complete index of GD1 — GD7 and a Global File-Finder by name, keyword, or author (FETCH). Tetris, HP Unsembler, Picman, Tiny Binary, 6 color Mastermind, Super fast FTT, Super fast Poly Roots. 3D Surface Plotter, 7 Level stack, To-Do List, X & Y Modem, Bonds.

No. 8: Improved index/FETCH GD1 - GD 6. <LIB>. <RPL>. Golf, Mastermind, T/0/NH, HP's Programs, DiffEq, Weighted Mean Stats, 15 good articles, Fast List Sort, William Tell, etc. in TUNES, 19,000 baud IR SEND & REC, Celestial NAV, Trip calculator, Hi Acc. parallel Recs.

No. 9: Improved DOC file reading. OK 0 or G series (more). Database, Phone Book, Comput/Uncompress for EDUX, Scheduler, BOSS/COBRE, Chick, Auto Adjust, ML Dev. Lab, Double Precision Routines, Auto Plot Poly Fit. 7 Videos: IceCube, Pyramid, Asteroids, Runaway Gunships, Library Creator, System RPL Dev Toolbox.

No. 10: The most advanced hacker's tools available, including: Library Assembler/Disassembler, Assembly and RPL Assembler/Disassembler (JAZZ), Programmer's GRUB and GreyScale Tools, RPL/Assembly Articles, super moving 3D GRUBs, super editors, packers/unpackers, pert search and copy.

HP 11C calculator
Adv. Programmable Scientific/Statistical

- All math and trig functions, along with register arithmetic and conversions (rectangular to polar, decimal angle to hms/m, deg to rad); 2-variation statistics plus gamma function and random number generator; up to 200 program steps or 15 labels, 27 bags, 6 conditional tests, 5 definable keys, 1 yr warranty.

Stock #811101 (HP-11C, instrument only) $229.95
Stock #717, HP-11C Owner's Manual $10

HP 15C calculator
Scientific/Statistical Special Functions

- Top-of-the-line model for professionals and student who require considerable computing power. Every function and feature of the HP-15C plus:
  - Special functions — root finding (SOLVE), integration, complex number arithmetic
  - Programming — up to 448 steps or 67 data registers or 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 (22 seconds to solve 7 equations in 7 unknowns), 1-yr warranty.

Stock #811323 (HP-15C, instrument only) $349.95
Stock #719, HP-15C Owner's Manual $10

InfraRed Printer, Ver A
for your HP-17, 18, 19, 27, 28, 41 with IR Module, 42 or 48
The EduCALC Newsline

Probably an outgrowth of the PPC Phone Bulletins

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Product News

This is Richard Nelson with your handheld and PalmPilot product news for the week of January 26th, 1993. Product updates. Sharp has discontinued the PC-9000 PalmPilot computer and accessories, effective early this year. There are no replacement products. EduCALC will continue to offer this excellent machine as long as supplies last, which won’t be very long at current sales rates. The announcement follows the one late last year that the equally unusual PC-1500 was discontinued. BSE: serial-to-parallel converters: the first pre-production units are done and being sent to beta testers this week. We should have production units of this long-awaited product in a few weeks. This small-package, high-performance interface will make the size-conscious HP-95 users happy. We will also ship a drive program to allow the HP-95 to work with the BSE radio drive series of hard drives. Customers will receive this software when available at no cost from BSE. Switch 1.0. An HP-95 program that provides reduced-keystroke launching of DOS programs from System-Manager programs was incorrectly identified in Switch 1.9 in catalog 18. Switch 2.0 exists and will be shipped in the second week of February. Switch 2.0 adds the ability to switch back and forth between a DOS program and a System-Manager program on the “seven wonderful blue keys”. The DOS program, however, must be switchable, and written or easily modified for this purpose. See stock number 2B97 on page 19.

Listen to the Audio:

Activities News

This is Richard Nelson with your EduCALC handheld and PalmPilot activities news for the week of January 26th, 1993. There are no club meetings to report this week. There must be other handheld and PalmPilot activities other than the well-known HP groups. Let me know if you are aware of activities of interest to users of small machines, especially those that EduCALC supports. One activity that involves the HP user community is the HP-48 Goodies Disk program. Hundreds of users write programs that are shared with other users in either freeware or shareware. Freeware is public domain. Shareware is a step above freeware in that the author approves of copying, but depends on the honesty of the recipient. If you use shareware, you should send the fee that is asked by the author. This fee is usually much lower than the commercial cost. Some programs are treated like public domain, but they are not. These programs are copyrighted with the intent that they are not to be used for profit. There are compilers available on the market, but they are not like the HP’s. There is specific standards of selection and formatting. He will not distribute programs and his selection of programs tend to be oriented to various items or programming topics. There is documentation in process and they are always test the programs. Cross-referencing of programs is included, especially references to earlier versions of programs. Starting with Goodies Disk 7, a cumulative index is included for all previous disks. Goodies Disk has not yet been released. EduCALC offers the Goodies Disk to its members, not a product.

Listen to the Audio:
EduCALC Technical Notes

TNG Technical Notes List

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<td>HP41 Goodies Disk #3 Description</td>
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<td>31</td>
<td>HP41 Goodies Disk #4 Description</td>
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<td>32</td>
<td>HP41 Goodies Disk #5 Description</td>
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<thead>
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<th>Number</th>
<th>Description</th>
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<td>HP48 Goodies Disk #6 Description</td>
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<td>HP48 Goodies Disk #7 Description</td>
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<td>36</td>
<td>HP48 Goodies Disk #9 Description</td>
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<td>HP48 Goodies Disk #10 Description; HP Goodies Disk #11</td>
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<td>Writing your Fourth HP 48 Program</td>
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<td>HP-48 Loop Structures - by Example</td>
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<td>55</td>
<td>Writing your Third HP 48 Program</td>
</tr>
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<td>Writing your Fourth HP 48 Program</td>
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**ADDITION MORE MEMORY TO MY HP-71**

**Should I Put All I Can Internally?**

The HP-71 microprocessor will address up to 512K bytes of memory. This includes both ROM, Read Only Memory (ROM) and RAM, Random Access Memory. The internal operating systems (ROMS) uses 4K. The HP-71 module is normally sold with 64K. But 128K should be added because the HP-71 will otherwise configure the system as 32K for HP-41.

Many HP-71 users want to install more memory as possible. If you subtract the operating system, 128K and the 16K RAM installed, you have 400K of ROM or RAM address space remaining. RAM memory may be added as 32K modules in ports 1-4 (front ports, 128K maximum), 32K modules hardwired inside the machine (256K maximum) or a single module plugged into port 5 (card reader port, 128K available). Table 1 compares the cost of these options. In addition to off-line memory, it is possible to add off-line storage in the form of magnetic cards, cassette tape, floppy disc, or RAM in the form of a HP-IL RAM Disc. Table 1 includes the HP-IL RAM Disc for comparison. The front port section numbers are included beyond four increments for perspective.

**Table 1: Cost of HP-71 Memory (Catalog 37)**

<table>
<thead>
<tr>
<th>Solution</th>
<th>Port 1-4</th>
<th>Hard Fit</th>
<th>Part 5</th>
<th>Port 5</th>
<th>HP-IL</th>
</tr>
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<tbody>
<tr>
<td>32K RAM</td>
<td>$149.95</td>
<td>$5.00</td>
<td>$139.95</td>
<td>$5.00</td>
<td>$149.95</td>
</tr>
<tr>
<td>64K RAM</td>
<td>$250.00</td>
<td>$6.00</td>
<td>$240.00</td>
<td>$6.00</td>
<td>$250.00</td>
</tr>
<tr>
<td>96K RAM</td>
<td>$340.85</td>
<td>$7.00</td>
<td>$330.85</td>
<td>$7.00</td>
<td>$340.85</td>
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<tr>
<td>128K RAM</td>
<td>$430.70</td>
<td>$8.00</td>
<td>$420.70</td>
<td>$8.00</td>
<td>$430.70</td>
</tr>
<tr>
<td>160K RAM</td>
<td>$520.55</td>
<td>$9.00</td>
<td>$510.55</td>
<td>$9.00</td>
<td>$520.55</td>
</tr>
<tr>
<td>192K RAM</td>
<td>$610.40</td>
<td>$10.00</td>
<td>$600.40</td>
<td>$10.00</td>
<td>$610.40</td>
</tr>
<tr>
<td>224K RAM</td>
<td>$700.25</td>
<td>$11.00</td>
<td>$690.25</td>
<td>$11.00</td>
<td>$700.25</td>
</tr>
<tr>
<td>256K RAM</td>
<td>$790.10</td>
<td>$12.00</td>
<td>$780.10</td>
<td>$12.00</td>
<td>$790.10</td>
</tr>
<tr>
<td>288K RAM</td>
<td>$879.95</td>
<td>$13.00</td>
<td>$869.95</td>
<td>$13.00</td>
<td>$879.95</td>
</tr>
<tr>
<td>320K RAM</td>
<td>$969.80</td>
<td>$14.00</td>
<td>$959.80</td>
<td>$14.00</td>
<td>$969.80</td>
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<tr>
<td>352K RAM</td>
<td>$1,059.65</td>
<td>$15.00</td>
<td>$1,049.65</td>
<td>$15.00</td>
<td>$1,059.65</td>
</tr>
<tr>
<td>384K RAM</td>
<td>$1,149.50</td>
<td>$16.00</td>
<td>$1,139.50</td>
<td>$16.00</td>
<td>$1,149.50</td>
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<tr>
<td>400K RAM</td>
<td>$1,239.35</td>
<td>$17.00</td>
<td>$1,229.35</td>
<td>$17.00</td>
<td>$1,239.35</td>
</tr>
<tr>
<td>432K RAM</td>
<td>$1,329.20</td>
<td>$18.00</td>
<td>$1,319.20</td>
<td>$18.00</td>
<td>$1,329.20</td>
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<tr>
<td>464K RAM</td>
<td>$1,419.05</td>
<td>$19.00</td>
<td>$1,409.05</td>
<td>$19.00</td>
<td>$1,419.05</td>
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<tr>
<td>496K RAM</td>
<td>$1,508.90</td>
<td>$20.00</td>
<td>$1,498.90</td>
<td>$20.00</td>
<td>$1,508.90</td>
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<tr>
<td>512K RAM</td>
<td>$1,598.75</td>
<td>$21.00</td>
<td>$1,588.75</td>
<td>$21.00</td>
<td>$1,598.75</td>
</tr>
</tbody>
</table>

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How much memory should I hard wire into my HP-71? If you hard wire too much memory into your HP-71, you may be restricted in the future on how you use your machine. The trend is toward larger RAM and ROM modules, and wiring RAM modules inside the machine leaves the ports free for ROM cards and 16K RAM modules. What good is it if all the address space is used by modules that cannot conveniently be removed? The ports are available but can't be used. If the 400K is partitioned between ports 1-4 and hard wired modules, there would be 256K reserved for the front ports (maximum capacity of 64K each) and 144K for hard wiring. The extra 512K might be allocated.

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EduCALC Technical Note #4
The www.educalc.com Web Site
Advertised from Catalog 72 (1996) to 75 (1997)
Some Sample Pages from www.educalc.com

Technical Notes

The following pages are designed to be printed on your local printer, so you can keep them for future reference. If you have a idea or contribution to these Technical Notes fill out our Technical Notes Contribution Form and we will list your contribution.

by Richard Nelson
nelson@educalc.com

- Stack FT364: Some Electricity and my Calculator (8.5 KiB)
- Stack FT356: Latent Heat of Fusion on HP 48G Calculators (6 KiB)
- Stack FT329: Calculating with Fractions
- Stack FT325: Currency Conversions on HP 12C
- Stack FT327: Personal Data Box Applications
- Stack FT326: HP 48G Goshen Disk 1 Description (1.2 KiB)
- Stack FT325: HP 48G Goshen Disk 2 Description (2.2 KiB)
- Stack FT324: HP 48G Goshen Disk 3 Description (1.1 KiB)
- Stack FT323: HP 48G Goshen Disk 4 Description (1.2 KiB)
- Stack FT322: HP 48G Goshen Disk 5 Description (1.2 KiB)
- Stack FT321: HP 48G Goshen Disk 6 Description (1.2 KiB)
- Stack FT320: HP 48G Goshen Disk 7 Description (1.2 KiB)
- Stack FT319: HP 48G Goshen Disk 8 Description (1.2 KiB)
- Stack FT318: HP 48G Goshen Disk 9 Description (1.2 KiB)
- Stack FT317: HP 48G Goshen Disk 10 Description (2.2 KiB)
- Stack FT316: Subtracting and Adding Time on the HP 20B (8.5 KiB)
- Stack FT315: What’s New in the HP 32SII User’s Guide (1.4 KiB)
- Stack FT314: Basic Input/Output - by Example (16.2 KiB)
- Stack FT313: HP 48G Logical Structures - by Example (19.2 KiB)
- Stack FT312: Writing your First HP 48 Program (17.4 KiB)
- Stack FT311: HP 48G Data Base Basics - Superbowl Final Example (25 KiB)
- Stack FT310: Writing your Second HP 48 Program (17.4 KiB)
- Stack FT309: Writing your Third HP 48 Program (17.4 KiB)
- Stack FT308: Writing your Fourth HP 48 Program (17.4 KiB)
- Stack FT307: HP 41 Roman II Disk Index (10 KiB)
- Stack FT306: Do I need the HP 41C? (7.2 KiB)
- Stack FT305: HP 41 Reading and Writing to Drive 95
- Stack FT304: HP 41SE Programs (9.4 KiB)
- Stack FT303: Converting a Array to a Common Delimited Text (8.9 KiB)
- Stack FT302: HP 29C, 29CL Factor Eggs (7.1 KiB)
- Stack FT301: HP 41MIDS/41M Program (21.2 KiB)
- Stack FT300: Using the I/O2/3B/4 MS Bitmap with the HP 41 (18 KiB)
- Stack FT299: HP 29C/L/CL Factor Eggs (7.1 KiB)
- Stack FT298: Managing Equations on the HP 41C (20 KiB)
- Stack FT297: An HP 41 User Interface: Part 1 Writing User-Friendly Programs
- Stack FT296: HP 41 User Interface: Part 2 Selecting from a Text Menu

Note: 5" "C" suffix indicates EduCALC HP 48 Programming Class handout.

Back to Tech Print Page
The Final Days - 1997

Thursday December 25  Christmas, closed all day

Friday December 26
Warehouse
Move selected products to inventory shelving (Interfab)
Move computers and Carter office to Interfab (pm)
Sales
Assist customers

Monday December 29
Warehouse
Clean out Showroom and locate excess furniture to central location
(27953 warehouse)
Sales
Assist customers
Accounts Payable - Jim Carter
Process payables, issue checks

Tuesday December 30
Warehouse
Clean 27951, 27953, 27955
Sales
Help clean, little telephone activity

Wednesday December 31 1/2 day, party at 12:00 noon.
Everyone cleans
800# transferred to DeVinci
Miscellaneous - Jim Carter
Notify UPS of transfer to Interfab
Notify trash pick up
Reduce local lines to 5
Sell furniture
Notify copier company or move to Interfab (one month)
Follow-on Attempts – 1998-99

“Hijacking” the EduCALC Name Since 2000 (Singapore)

Where to buy a HP Calculator? Click the following links to locate a Reseller in Jakarta, KL, Manila, Singapore or Bangkok.

Hewlett-Packard Calculator in the news:

- HP Calculators released in 2013: HP 30g.
- HP Calculators released in 2011: HP 48g.
- HP Calculators released in 2010: HP 30b.
- HP Calculators released in 2009: HP OfficeCalc 100, HP SmartCalc 300, HP EasyCalc 100.
- HP Calculators released in 2007: HP 35s.
- HP Calculators released in 2006: HP 40s, HP 20s.

Read HP Calculator Timeline for more HP Calculators released on and before 2006.
EduCALC and St. Michael’s Abbey

HP48 & HP49

Programming Exercises

PE0 Through PE21

August 8, 1997 to June 23, 2001

Richard J. Nelson
Keeping things going – Can the community help?

- Need Catalogs – Issues 9, 13, 31 (not 31A), plus some of number 75
- Need Tech Notes – Nos.16, 21, 24, 68C
- Need Newslines – Most of ‘94, ‘95, ‘96, any other
- Are there more programming class materials?