



THE Portable Paper

Hands-on Review of HP's New 95LX Palmtop PC Computer

COMDEX Report: Spring 1991

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WordPerfect 5.0 in ROM!

*You don't need an IBM PC to run the world's best-selling word processor.
Now you can use industry-standard WordPerfect on your HP150 or Portable Plus!*

WordPerfect is the world's best-selling word processor for the IBM PC. Most reviewers feel it's the best word processor on the market.

You probably already know all about WordPerfect. Here is what you need to know about running WordPerfect on the Portable Plus. (HP150 users—give us a call or see our HP150 catalog).

Requirements for running WordPerfect on the Portable Plus:

1. 376K of Main Memory is needed to run WordPerfect.
2. Portable Plus ROM version users should have at least 512K of total RAM.
3. Portable Plus disk-based version users should have at least 896K of total RAM.

WHAT IS PLUSPERFECT?

WordPerfect for the Portable Plus requires PlusPerfect (from Personalized Software). PlusPerfect consists of a disk, the *WordPerfect 5.0 for the HP Portable Plus* users manual, and a 4-color WordPerfect template designed for the Portable Plus keyboard. The PlusPerfect disk includes a PC-emulator and other utilities that allow Portable Plus users to run the IBM-PC version of WordPerfect 5.0.

PORTABLE PLUS VS IBM-PC WORDPERFECT

How does WordPerfect 5.0 for the Portable Plus compare with the IBM-PC version of WordPerfect?

1. The program and features are identical. Only the keystrokes may be different.
2. Any WordPerfect 5.X file created on the Portable Plus or on a desktop PC can be used by WordPerfect on either machine.
3. The WordPerfect disk-based tutorial does not work on the Portable Plus. (The more comprehensive manual tutorial does work).

4. Some of the WordPerfect utilities that come with the WordPerfect disks do not work on the Portable Plus.
5. In most cases you cannot load soft fonts from the Portable Plus to your printer.

WHAT PURCHASE OPTIONS DO I HAVE?

1. If you have a legitimate copy of WordPerfect 5.0 and intend to use that copy only on the Portable Plus, all you need is PlusPerfect.
2. WordPerfect for the Portable Plus includes PlusPerfect and an IBM-PC version of WordPerfect 5.0.
3. The basic WordPerfect-on-ROM package for the Portable Plus consists of 5 ROMs. These 5 ROMs include all the software necessary to run WordPerfect and include a WordPerfect Help ROM that does not have to be installed. (The speller and thesaurus are not included in this configuration.)
4. The 3-ROM WordPerfect Speller combination includes the WordPerfect 115,000 word speller, plus HPDuette (lets you transfer files back and forth between your Portable Plus and an IBM-PC compatible), Shelp (pop-up notepad and calculator), FilePlus (file manager), and TetPlus (modified version of Tetris, the Russian game sensation).
5. The 3-ROM WordPerfect Thesaurus.

UPGRADING FROM A CURRENT ROM VERSION

If you already own our partial WordPerfect on ROM backup you may upgrade using the prices at the bottom of the next column. In order to sell these ROM upgrades at these prices and not to violate our agreement with WordPerfect, you must send us back the ROMs in your system.

You may send these ROMs back after you put in your new WordPerfect ROMs. If we do not receive these ROMs back within three weeks, we will have to bill you \$595 for an entire WordPerfect on ROM package.

NEW PRODUCT PRICING

WORDPERFECT ON ROM

Product# Retail Subscrib

WordPerfect 5.0, Basic WD11NK \$940 \$595
(5 ROMs include:
WP.EXE, WP.FIL, and Help ROM)

WordPerfect Speller RO13NK 525 199
(3 ROMs, also with
HPDuette, Shelp, FilePlus, Tetplus)

WordPerfect Thesaurus RO12NR 250 147
(3 ROMs contain complete thesaurus)

WORDPERFECT ON DISK

WordPerfect 5.0 WD17NS \$645 \$395
(Portable Plus disk version with PlusPerfect)

PlusPerfect WD14NS 150 129
(Disk version)

WORDPERFECT FOR THE HP150

WordPerfect 5.0 WD13NS \$495 \$395
(For the HP150)

WordPerfect 4.2 WD12NS 435 395
(For HP150 with single-
sided drive and hard disk)

WordPerfect 4.2 WD11NS 435 395
(For HP150 with double-sided drive)

UPGRADING FROM CURRENT ROM VERSION

WordPerfect 5.0 Basic WD13NR \$196
(4 ROMs, includes WP.EXE and WP.FIL)

WordPerfect Help RO14NR \$49
(1 ROM)

Speller, Thesaurus (Same as new product price)

60-DAY MONEY BACK GUARANTEE

See order form for details

TO ORDER

Use enclosed postage-paid order form or send check or
credit card information (*, Exp. date, signature) TO:
PERSONALIZED SOFTWARE
P.O. Box 869, Fairfield, IA 52556, (515) 472-6330

ROMBO!

Portable Plus users:

Now you can easily put programs and data on ROM yourself!

— up to 1.5 megabytes per ROM drawer!

No more lugging a disk drive wherever you go! No more taking up precious Edisk space with frequently used programs and data! Now you can easily put almost any program - and important data - on ROM chips and store them in your Portable Plus's ROM drawer.

Once you've done so, your programs and data are available instantly, with no danger of loss and no need for an external disk drive.

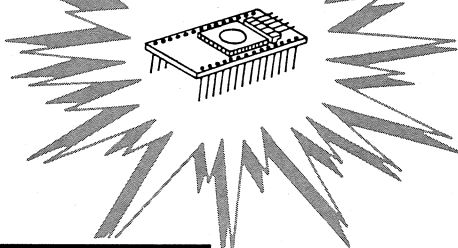
"Burning" your own ROMs is easy - even for a computer novice - with our Portable Plus ROM Burner. All you do is connect the ROM Burner to your Plus, and follow the simple instructions we provide for using the software that comes with the unit. (We even show you how to have your ROM programs automatically show up on your PAM menu!)

ERASABLE!

If you make a mistake while burning in a ROM - or if you later wish to change the contents of your ROMs - no problem. Just use the ultraviolet eraser that comes with our ROM Burner and start over. (Our programmable ROMs are technically "EPROMs", which stands for "erasable programmable read-only memory.")

UP TO 3 MEGABYTES ON ROM!

The ROM drawer that fits into the bottom of your Portable Plus has sockets for 12 ROMs. Each socket can hold a 128 Kbyte ROM. Even though there are more than 50 programs now available on ROM for the Portable Plus, most people only use 2-6 of the 12 sockets - which means part of the 1.5 megabytes of each drawer's available ROM capacity is going to waste.



ONE YEAR GUARANTEE • 60-DAY TRIAL
See order form for details

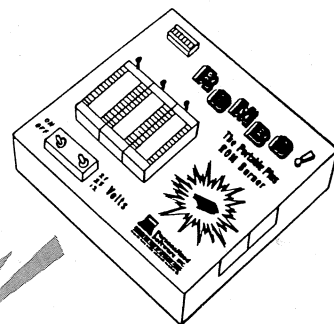
Our Portable Plus ROM Burner lets you fill that unused ROM space with fixed data and with almost any Portable Plus program you wish - including programs that are not commercially available on ROM. This eliminates the need for an external drive and frees up valuable space on your electronic disk.

Regardless of your needs, we invite you to take advantage of this Portable Plus break-through. Put your programs and fixed data on ROM and experience the ultimate in portable computing convenience. Order our ROM Burner for the Portable Plus today.

HERE'S WHAT YOU GET

A must for every Portable Plus user, ROMBO: our ROM Burner package includes:

1. **Personalized Software ROM Burner for Portable Plus, with serial cable.** Burns commercially available 64 Kbyte ROMs or special Personalized Software 128 Kbyte ROMs.
2. **Ultraviolet eraser.** Erases 64K or 128K ROMs for reburn. Lets you correct mistakes or change programs or data. Also useful for testing to make sure your newly burned ROMs work properly.
3. **All necessary software**, including: two compression programs that shrink COM and EXE files so you can fit more programs on ROM.
4. **Two Personalized Software 128 Kbyte EPROMs** (erasable programmable ROMs).
5. **Complete user manual.** Clear, step-by-step tutorial, written for novice and experienced users alike. How to burn ROMs, how to use accompanying software, how to get ROM programs to show up on your PAM screen. Also includes suggestions on what to put into ROM, how to avoid snags, and other tips based on our years of experience in supporting the Portable Plus.



PRICING

- **EP10NH Rombo: Personalized Software ROM Burner Package for the Portable Plus** (ROM Burner, serial cable, ultraviolet eraser, software, two 128 Kbyte EPROMs, user manual) Retail: \$695 Subscriber: \$595
- **Personalized Software 128 Kbyte erasable programmable ROMs (EPROMs) for the Portable Plus**
EP11NR Single EPROM Retail: \$69 Subscriber: \$59
EP12NX Set of 4 Retail: \$276 Subscriber: \$199
- **Personalized Software 128 Kbyte non-erasable programmable ROMs (PROMs) for the Portable Plus**
(Ideal for making multiple copies of ROMs)
EP18NR Single PROM Retail: \$64 Subscriber: \$54
EP19NX Set of 4 Retail: \$256 Subscriber: \$179
- **EP13NR 27C512, 12.5V, 64 Kbyte EPROM**
Retail: \$25 Subscriber: \$22
- **EP14NS ROM Burner software and manual only**
(Useful if you wish to burn your own 64 Kbyte EPROMs for the Portable Plus using a different ROM burner)
Retail: \$250 Subscriber: \$195
- **SW11UC Portable Plus ROM drawer**
Retail: \$195 Subscriber: \$99
- **EP15NE Custom ROM services**
EPROM (includes 10 minutes testing to make sure your ROM works in Portable Plus as specified)
Retail: \$150 Subscriber: \$135
- **EP16NE ROM consulting** (additional testing, batch file rewriting, etc.): \$75/hour
- **RENTAL** \$195 per month. Call for details.

BREAKTHROUGH IN PORTABLE PLUS ROM TECHNOLOGY

Our Portable Plus ROM Burner is a breakthrough for Portable Plus owners. It copies programs and data onto special 128 Kbyte programmable ROMs created exclusively for us.

Aside from ours, the largest commercially available programmable ROMs that fit the sockets inside the Portable Plus ROM drawer are only 64 Kbytes. Our 128 Kbyte programmable ROMs give you double the storage capacity!

Moreover, unlike the procedures you have to go through with other ROM Burners, ours are easy. We supply all the software you need and a user manual that even a novice can follow with ease. Most importantly, ours is the only ROM Burner that lets you burn these ROMs directly from your Portable Plus.

We also offer custom burning of non-erasable ROMs. With volume discount, this can cost significantly less than the price of blank EPROMs.

Call for a quotation.

Combo ROM

Please ignore the prices in these reduced-size ads. The five programs on the Combo ROM all fit on 2 ROMs and are designed specially for Portable Plus users.

Why pay \$500 or more for Lotus® 2.01 when you can have all the features for just \$79.95?

\$79.95 for disk version; \$195 for disk version plus ROM Backup (subscriber prices)

Until now, if you wanted the advantages and compatibility of Lotus 1-2-3, Version 2.01 for your Portable Plus, you had to pay more than \$625 for a ROM.

Now you can have a program that acts similar to Lotus 2.01 for just \$195 (disk and ROM) — or only \$79.95 for the disk version.

You can't get that much spreadsheet power for your Portable Plus for less!

The program is called As-Easy-As, because it's as easy as 1-2-3, and it fully lives up to its name: As-Easy-As does almost everything Lotus 2.01 does (and some things it doesn't).

If you're new to spreadsheets, you'll find As-Easy-As powerful, yet easy to learn and use.

If you already use another spreadsheet, you have very little new to learn. As-Easy-As works in much the same way as Lotus — and it reads and writes Lotus, version 2, WK1 files and Lotus, version 1, WKS files, so you don't have to change your data.

Gain the advantages of a full-fledged spreadsheet at a fraction of the price, order As-Easy-As at our risk today.

Retail Price Our Price

As-Easy-As on disk \$99.95 \$79.95
PRODUCT NO. AS11NS

As-Easy-As ROM Backup \$215.00 \$195.00
PRODUCT NO. AS11NK

Lotus 1-2-3 is a registered trademark of Lotus Development Corp.

As-Easy-As does virtually everything Lotus 2.01 does — and more! Portable Plus version available only from us.

AS-EASY-AS

As-Easy-As features include the following:

- Accommodates large worksheets (8,192 rows by 256 columns)
- Choice of different menu
- Choice of functions including mathematical, statistical, date, time, logical, financial, array, and user-definable
- Powerful frequency distributions tables (Bin)
- Capability of linking current worksheet with information from other worksheets
- Versatile, powerful graphics capabilities, printer support includes HP-GL II and LaserJet, ability to create PC files, chart-generation capabilities for bar, line, X-Y, pie, stacked bar, 3-D, polar, area charts, data labeling & log-log graphs
- User-config. screen options
- XY data regression
- Database operations, data input forms, multi-sheet database files
- Text search, replace, justify
- Goal-seeking capabilities (give desired answer & As-Easy-As gives you the input)
- Configurable Printer setup
- Worksheet auditing
- Named range, function, and macro selection lists
- Multiple planes (3-D simulation)
- Macro program language including 70+ powerful macros
- Macro record/playback capability, single-stepping through macros
- Full support of sub-directories and path names
- Able to shell to DOS

MEMORY REQUIREMENTS

As-Easy-As requires 272K of Portable Plus main memory, plus 120K of electronic or floppy disk space (plus another 50K of disk space if you want to use the Help file).

Need a spreadsheet?
Our Combo ROM not only includes a great spreadsheet, but also sideways printing, file transfer utilities — even a Tetris game!

Spreadsheet:

As-Easy-As — A powerful spreadsheet and “flat file” database program that’s similar to — and fully compatible with — Lotus 1-2-3 Versions 1 and 2.

Sideways Printing:

SideWinder — A program that prints spreadsheets sideways on HP printers so you don’t have to cut and paste.

File Transfer:

TermPlus — For transferring files between computers via modem.

HP Duette — For transferring files between your Portable Plus and any IBM PC compatible desktop computer via serial cable.

Tetris Game:

TetPlus — A modified version of Tetris, the Russian game sensation.

At last! EASY TO USE COMMUNICATIONS SOFTWARE

for the HP110 and Portable Plus

HP110 users: Tired of struggling with the built-in Terminal program?

Portable Plus users: Is PC2622 or Reflection too complex for your needs?

In either case we have good news: two of the easiest-to-use communications programs we’ve ever seen.

Term110 was developed by Cliff Looyenga, who writes the “Wizardry” column for The Portable Paper. It runs on the HP110.

TermPlus was developed by Portable Paper contributor David Hughes from an earlier

prototype. It runs on the Portable Plus.

Both programs allow you to:

- Send and capture ASCII information;
- Quickly send programs, Lotus worksheets, and archive files via the XMODEM protocol;
- Log onto electronic bulletin boards and remote computers automatically;
- Store and access directories of phone numbers;
- Run other programs without severing the phone connection.

Both programs have on-line help, and use around 25K of electronic disk space.

Most importantly, both programs make efficient, logical use of function keys and menus to make the job of transferring files and programs easy.

You won’t appreciate how easy until you try Term110 or TermPlus for yourself. We invite you to do so today at our risk.

Term110 (for HP110) or TermPlus (for Portable Plus) \$99.95

(Specify which program when you order)

Portable Paper subscriber price \$79.95

RECOMMENDED FOR	
HP110 Portable	•
Portable Plus	•
Portable Vectra	•
HP150	•
IBM PC and compat.	•
Available on ROM Backup for the Portable Plus*	•

60-DAY MONEY BACK GUARANTEE
See order form for details.

TO ORDER

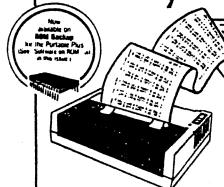
Use enclosed postage-paid order form or send check or credit card information (i.e., exp. date, signature).

Personalized Software

P.O. Box 929, Fairfield, IA 52504-515 (72-0000)

*ROM backup of TermPlus includes IBM disk formatting utility. ThinkJet control pop-up, and more.

No more cutting and pasting—Now you can print it sideways!



SIDEWINDER

At last! Sideways printing for the HP Portable, Portable PLUS, and ThinkJet!

(And the HP150, Vectra, IBM PC, MS-DOS computers, and most HP graphics printers)

It's called SideWinder, and it's perfect for Lotus 1-2-3 print files, MemoMaker files, or any other text (ASCII) file that's too wide for a normal page.

Just type in the file name, and SideWinder does the rest, printing up to 53 rows sideways — for as long as your paper supply lasts. You'll never need to cut and paste again!

SideWinder's high-quality graphics characters are indistinguishable from ordinary characters, and SideWinder prints just as fast as your ThinkJet can.

In addition, a built-in mini text editor lets you get inside your print files and easily create double-width characters and underlines.

SideWinder \$69.95

\$59.95 for Portable Paper subscribers

PRODUCT NO. SW11NS

SideWinder 1.01 users may upgrade to current version 2.01, which supports 8 character, by sending Personalized Software \$7.50 or by mailing a self-addressed 3.75 stamped envelope and the SideWinder mail-in card.

HPduette

It transfers files both ways between your Portable Plus and your desktop computer without an HP-IL card!

An HP-IL card inside your IBM PC or compatible computer lets you transfer files to and from your Portable Plus.

It's a good solution to the data transfer problem, provided you only use one desktop computer. But if you ever need to transfer data between your Portable Plus and several other desktop computers, you're stuck — or at least you were until now.

Because now there's a way to do it with HPduette.

It's a program called HPduette. Together with a special serial connecting cable that it comes with, HPduette is all you need to transfer files at high speed both ways between your Portable Plus and any IBM PC compatible desktop.

HPduette is easy to use. Simple menu and, easy-to-understand help are available at all times.

For true convenience in file transfer to and from your Portable Plus, order HPduette today.

HPduette with cable for Portable Plus \$69.95 for Portable Paper subscribers. PRODUCT NO. DU11NS

HPduette \$69.95

HPduette transfers data at 57600 baud. To use HPduette, you connect the 9-pin serial port on your Portable Plus to the serial port on your desktop computer using the serial cable that comes with the program.

Combo ROM
only \$299
PRODUCT NO. ROTINK

PUBLISHER'S MESSAGE

FOR HANDY REFERENCE: Items *directly* relevant to the three

HP Portables are denoted in this issue as follows:

110 110 Portable **P+** Portable Plus **PV** Portable Vectra **LS/12** Vectra LS/12

When items are *partly* or *indirectly* relevant they are denoted as:

110 110 Portable **P+** Portable Plus **PV** Portable Vectra **LS/12** Vectra LS/12



Hal Goldstein

We begin to wind down in these last three issues of *The Portable Paper*. In these issues we will include some of the most useful tips that we have published the last six years.

We will also look to the future. In this issue I share with you my experience with the new HP95LX Palmtop (I really, really like it). We also talk about the Poqet Palmtop PC and look at the Spring, 1991 COMDEX through the eyes of managing editor Richard Hall. (This was his first

(and eventually other) user communities with newsletters and a range of products and services. We choose the name "Thaddeus" for a variety of reasons and because the name has special meaning to my wife, Rita.

Please be sure to drop us a line if you have any ideas on how we can support you, the HP Portable user, in the coming years. Also, tell us if there is anything in particular that you would like to see in the last two issues. If you have anything to share with your fellow HP Portable users you have two more issues so send in your tips, tricks, comments, and reviews immediately.

Finally, we are pleased to announce that we will definitely begin publishing *The Palmtop Paper* in September, 1991. A 1992 subscription (which includes the 1991 issue and the 1992 Subscriber Disk) will be \$39. I hope you will join us in the coming years as *Palmtop Paper* subscribers.

Hal Goldstein

trip to personal computing's Mecca.)

We have renamed the company, Thaddeus Computing, Inc. Personalized Software remains the division that supports HP Portables, the HP150, and the new HP95LX. We renamed the company for several reasons. First, we used the renaming process ("Thaddeus" literally means "most willing to help") to affirm our new understanding of who we are. We are a company that serves various computer

LETTERS

Serial disk drive for the HP Portables?

110 Thanks for another great issue of *The Portable Paper*.

P+ Will the CMT serial disk drive advertised on page 34 of EduCALC #48 work with the HP Portables? It is advertised for use with the HP 48SX and appears to use 3.5" floppies, either DS/HD (1.44MB) or DS/DD (720K). They also suggest using it as a second disk drive for a PC with data transfer via modem or RS-232 using KERMIT or XMODEM. It has a 9-pin RS-234 port and supports baud rates from 110 to 19200. I would very much like to find something in HD format that works with my portables and can exchange floppies with HD IBM compatibles. Will this fit the bill? Would you consider supplying it?

Thanks for the write-up (see Vol.6, No.2, Pg.30). Just to set the record straight, I do work for a major international pharmaceutical company, Burroughs Wellcome. In addition, I AM Chem-micro-Metrics. As Chem-micro-Metrics, I have just released four graphics-intensive chromatography optimiza-

tion programs which were developed on my portables and then converted to run on IBM compatibles. Sales are just beginning, but finally Chem-micro-Metrics is becoming a reality. I want to thank you and your staff for the support I've received. Two years ago I began learning Turbo Pascal, primarily because of the coverage in *The Portable Paper*. Now I'm marketing programs I've written using it.

Thanks also for keeping us up-to-date on what versions of software will (or can be adapted to) run on the HP Portables. I've just ordered Turbo Pascal 6.0 (upgrade from Borland) and will be ordering the upgraded TurboPlus Integrator from you once I get my package in from Borland. Ed Keefe's updates have been as essential in my decision to upgrade as have sales of my programs developed using Turbo Pascal Version 3.0 and the graphics routines adapted for the portables which you distributed.

Sometime this fall, depending on sales, but just as soon as I possibly can, I will be ordering a ROMBO and some 128K EPROMs. That product is another major "PLUS" for you and your staff. Keep up the good work. I will be writing back within a month to order TurboPlus and The Keefe Kollection as soon as I get a receipt for Turbo Pascal 6.0.

William J. Pinnick
Chem-micro-Metrics
1689 Scarborough Rd.
Greenville, NC 27858

[We have contact CMT and hope to get the serial disk drive for testing. If we do, we'll let you know more about it — Hal.]

Suggests changes to *The Portable Paper*

110 Through purchase of a used HP Portable, I have your publication through 1990. I **P+** have reviewed all issues, and have the following comments: **PV**

- LS/12** 1. The majority — as I recall, over 70% of the space in *The Portable Paper* is either direct or indirect advertising for your services or products;
2. Your admittedly low rates of renewal are probably directly related to the above.
3. Essentially, your publication is a catalog, with information as a filler. Few people are willing to pay you as much as you demand in order to receive your advertising.
4. WISE UP — you will probably get more business by cutting the price of *The Portable Paper* or making it free.
5. Be less self-serving and self aggrandizing in your advertising and editorial content.

Byard Pidgeon
Light Design
802 N.W. 10th Street
Corvallis, OR 97330

Writing ROM

Please ignore the prices in these reduced-size ads. The five programs on the Writing ROM all fit on 2 ROMs and are designed specially for Portable Plus users.



The Editor II

It's way beyond MemoMaker!

You won't believe all the word-processing features this \$129* program contains—and it takes up less than 40K of memory!

*only \$99.95 for Portable Paper subscribers!

By Hal Goldstein

Let's face it: MemoMaker is an adequate word-processor, but it has its limits. No search and replace. No simple way to merge files. No destructive backspace key. (To delete the last character you have to use the left arrow key and the deletion key.) No compressed or expanded printing. No... but why go on if you use MemoMaker, you probably have your own list of things you wish it could do.

Well, here's good news: Now there's an easy-to-use text editor that runs on the Portable and Portable Plus that will satisfy almost every item on your wish list. And the program comes with a built-in bonus: It also runs on the HP150, IBM PC, and HP Vectra, which means that now you can use the same program and files on your desktop that you use on your Portable.

The program is called THE EDITOR II. It does everything MemoMaker does plus a heck of a lot more. And you don't have to go to the expense of buying WordStar (for the Portable) or MS Word (for the Plus) to go beyond MemoMaker's capabilities.

THE EDITOR II's most valuable features are listed on the chart to the right. It's quite a list, isn't it? To me, THE EDITOR II is a real blessing. I use it daily instead of MemoMaker, and I've silently given thanks to its author, Ed Gilbert, many, many times. Just a few more words about THE EDITOR II (that's all it takes to be up and running) and I think you'll be a fan of his too.

In addition to the great features listed to the right, there are six more I especially want to emphasize:

1. THE EDITOR II's Lotus-like menu make it incredibly easy to use.

2. THE EDITOR II creates ASCII files, which means you can send your files to and from almost any other program or computer without special formats or codes.

3. THE EDITOR II will automatically back up your files to protect you against mistakes. When you save a file, it automatically backs up the previous version.

4. THE EDITOR II has a built-in spell checker that checks your spelling as you type.

5. THE EDITOR II has a built-in thesaurus that checks your word usage as you type.

6. THE EDITOR II has a built-in word count that tells you how many words and characters you have used.

7. THE EDITOR II has a built-in line numbering system that lets you refer to lines by number.

8. THE EDITOR II has a built-in page numbering system that lets you refer to pages by number.

9. THE EDITOR II has a built-in search and replace feature that lets you find and change text in your files.

10. THE EDITOR II has a built-in print preview feature that lets you see how your file will look when printed.

11. THE EDITOR II has a built-in save as feature that lets you save a file with a new name.

12. THE EDITOR II has a built-in delete feature that lets you delete files from your disk.

13. THE EDITOR II has a built-in rename feature that lets you rename files on your disk.

14. THE EDITOR II has a built-in move feature that lets you move files from one directory to another.

15. THE EDITOR II has a built-in copy feature that lets you copy files from one directory to another.

16. THE EDITOR II has a built-in paste feature that lets you paste files from one directory to another.

17. THE EDITOR II has a built-in find feature that lets you find files on your disk.

18. THE EDITOR II has a built-in list feature that lets you list files on your disk.

19. THE EDITOR II has a built-in sort feature that lets you sort files on your disk.

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6. THE EDITOR II comes with a well-written reference manual and a step-by-step tutorial.

Even in the desktop market, it is difficult to find a word processor with this many useful features at this low a price.

For the Portables, THE EDITOR II simply can't be beat, for these reasons: Order your copy, risk-free, today.

THE EDITOR II on disk . . . \$99.95

Portable Paper subscriber price . . . \$79.95

ROM BACKUP version . . . \$194.95

(THE EDITOR II on ROM and disk)

For users of Version I or SuperROM:

EDITOR II Upgrade Kit on disk . . . \$35.00

Upgrade Kit on ROM and disk . . . \$58.00

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(THE EDITOR II on ROM and disk)

5 easy-to-use programs on ROM to meet your writing needs:

Word Processing:

1. **The Editor II** — Easy-to-use word processor with a host of useful features, including editing two files at once, macros for repeated entry of text and commands, and much, much more.

2. **Webster's Spelling Checker** — Using a built-in 110,000 word dictionary, this highly acclaimed program shows you incorrect spellings in context and suggests corrections. Exceptionally easy to use.

3. **FormatPlus** — An integrated word processing command center that lets you run your word processor, spelling checker, and other software from a single, easy-to-use program. Also lets you format your Editor II documents with headers, footers, automatic page numbering, and more.

File Manager:

4. **FilePlus** — A great file manager. Lists the files in two directories simultaneously. You can tag multiple files and perform actions (such as copy, delete, move, etc.) on all the tagged files at once.

Productivity booster:

5. **Shelp** — Pop-up notepad, calculator, and keyboard macros. Works from within almost any program. A real productivity booster!

By Hal Goldstein

Let's face it: MemoMaker is an adequate word-processor, but it has its limits. No search and replace. No simple way to merge files. No destructive backspace key. (To delete the last character you have to use the left arrow key and the deletion key.) No compressed or expanded printing. No... but why go on if you use MemoMaker, you probably have your own list of things you wish it could do.

Well, here's good news: Now there's an easy-to-use text editor that runs on the Portable and Portable Plus that will satisfy almost every item on your wish list. And the program comes with a built-in bonus: It also runs on the HP150, IBM PC, and HP Vectra, which means that now you can use the same program and files on your desktop that you use on your Portable.

The program is called THE EDITOR II. It does everything MemoMaker does plus a heck of a lot more. And you don't have to go to the expense of buying WordStar (for the Portable) or MS Word (for the Plus) to go beyond MemoMaker's capabilities.

THE EDITOR II's most valuable features are listed on the chart to the right. It's quite a list, isn't it? To me, THE EDITOR II is a real blessing. I use it daily instead of MemoMaker, and I've silently given thanks to its author, Ed Gilbert, many, many times. Just a few more words about THE EDITOR II (that's all it takes to be up and running) and I think you'll be a fan of his too.

In addition to the great features listed to the right, there are six more I especially want to emphasize:

1. THE EDITOR II's Lotus-like menu make it incredibly easy to use.

2. THE EDITOR II creates ASCII files, which means you can send your files to and from almost any other program or computer without special formats or codes.

3. THE EDITOR II will automatically back up your files to protect you against mistakes. When you save a file, it automatically backs up the previous version.

4. THE EDITOR II has a built-in spell checker that checks your spelling as you type.

5. THE EDITOR II has a built-in thesaurus that checks your word usage as you type.

6. THE EDITOR II has a built-in word count that tells you how many words and characters you have used.

7. THE EDITOR II has a built-in line numbering system that lets you refer to lines by number.

8. THE EDITOR II has a built-in page numbering system that lets you refer to pages by number.

9. THE EDITOR II has a built-in search and replace feature that lets you find and change text in your files.

10. THE EDITOR II has a built-in print preview feature that lets you see how your file will look when printed.

11. THE EDITOR II has a built-in save as feature that lets you save a file with a new name.

12. THE EDITOR II has a built-in delete feature that lets you delete files from your disk.

13. THE EDITOR II has a built-in rename feature that lets you rename files on your disk.

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(THE EDITOR II on ROM and disk)

Search and replace.

Just tell THE EDITOR II the phrase to look for, and occurrence and/or replace either selectively or globally.

Edit two files at once.

THE EDITOR II will duplicate the contents of the other. You can view of the same file or files simultaneously.

Backspace delete.

You can erase the last single keystroke.

Block and line center.

[The May/June edition of *The Portable Paper* was about an average edition: 48 pages, cover to cover. The following is a breakdown of those 48 pages:

Portable Paper Content

Direct Advertising	17.5
Cover, indexes, etc.	4.5
Outside columns	6.0
Letters to Editor	3.0
"How to" or general information articles	6.8
Reviews (but don't sell)	1.8
Review (and sell)	8.4

If you include the direct advertising, the center price list, and the reviews of products we end up selling, 60% of the May/June 1991 Portable Paper was related to products we sell. In looking at the first edition of *The Portable Paper* (January, 1986) about 45% of that paper was devoted to direct advertising and reviews or articles about products we sell. We think the increase in product information is a good thing!

There are very few new software and hardware products being made specifically for the HP110 and the Portable Plus, except by us, or people associated with us. The older products are being discontinued and are becoming harder to find. We consider it our job, not only to give you tips and tricks about the HP Portables, but to point you to, and provide a source for, those products still available for the Portables.

Moreover, we want to encourage the continued development of products for the HP Portables. Most developers want to be able to make some money off of their efforts. Whether we sell the products, or just sell advertising space to the developers, advertising is a must in our paper. It provides the subscriber the only source of information on products available for the HP Portables. It is as valuable as the tips and tricks we give.

Yes we sell products, and yes we make money on them. Selling products allowed us to publish *The Portable Paper* for the last six years. The vast majority of our subscribers don't seem to have any problem with this. (We have maintained through the years a 67% renewal rate.) The reason our circulation is diminishing is because the HP Portables were discontinued: the 110 in '86 and the Portable Plus in '89. Our subscribers are switching over to newer machines and giving their 110's and Portable Pluses away. We are still getting subscription requests, many from people who had an HP Portable given to them and want to know where they can get products and support for it.

The Portable Paper is not a "catalog with information as filler," cutting its price will not increase subscriptions, and we are not being "self-serving and self-aggrandizing" in offering useful software and hardware products to our subscriber base.

The November/December edition of *The*

Portable Paper will be the last. Ironically, once or twice in 1992, we will probably publish an HP Portable Catalog (with information as filler). It will probably be free.

The first issue of *The Palmtop Paper*, our new newsletter supporting the new HP95LX Palmtop PC, will be out in September. We will probably not directly advertise in it, but will sell outside advertising. We will charge for a subscription to *The Palmtop Paper*, and expect to have a large subscription base. We'll publish a separate catalog of HP95LX products. (For more information on the HP95LX see pages 6, 14, 16, 28, 35, and 39 — Rich.)

Suggests Supplement to The Portable Paper

I'm saddened by the prospect that this may be the last year for *The Portable Paper*. It has made such a measurable contribution to my computer quality of life. This is the beginning of my sixth year of use of HP Portables. Their ROM and RAM capability is unequalled by any of the competition. The greatest flaw is the lack of IBM-compatibility. Their latest effort should alleviate that.

For sometime now I've been considering a possible supplement to your operation. There is in Indianapolis a weekly publication: *The Trader*. It is an extensive classified advertising paper for people who want to buy or sell all kinds of items. It is an extremely effective source for both, since over its history, its integrity has been beyond reproach, among advertisers and buyers alike.

I'm wondering if possibly *The Trader* would have a franchise offer that could apply to you. I hope this doesn't fall under the category of meddling in your business. When I have more concrete data, I'll pass it on to you.

Bob Glass

**137 Kenwood Circle
Indianapolis, IN 46260-2354**

[I am greatly touched and appreciate the advice and concern of so many loyal subscribers about our future. The HP95LX Palmtop PC, and *The Palmtop Paper*, will allow us to continue what we have been doing for these short six years — Hal.]

Ham Radio and the Portable Plus

The Portable Plus is a great machine for Ham Radio Operators. I use it in conjunction with my FT 75XGII transmitter/receiver and a Packet Radio modem. Using either AdvLink or a home-grown BASIC communications program, I can reach almost anywhere. I use a smaller

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transmitter in my car, along with the modem and the Portable Plus. Even while working at Hewlett-Packard in Boeblingen (Germany) all three pieces of equipment are turned on and watch what is going on.

For those who don't know Packet Radio, it is a protocol like X.25. Using a Ham Radio receiver or a transceiver

(Continued on page 39.)

110%

Making More of Your HP Portable

by Hal Goldstein

HP95LX - Hands on

By Hal Goldstein

I have not been as jazzed about a piece of computer equipment since I first saw the HP110 in 1983. The HP110 was a revolutionary product – an MS DOS machine with Lotus and a word processor built-in. The HP110 was the first MS DOS, lightweight, laptop portable computer with a full-sized keyboard in the marketplace.

The HP95LX Palmtop is similarly a revolutionary product, and I really, really like it. Ever since obtaining one, it has been my constant companion, residing in my pocket ... and each day I continue to learn more about it and become more impressed with its built-in capabilities.

FIRST IMPRESSIONS

Just the look and first-impression feel tells you this piece of electronics is something special. An intangible elegance and the unmistakable stamp of HP quality is apparent when examining the unit.

The first thing that struck me was its small size and all the capability built into that size. My wallet occupies more pocket space. The HP95LX contains a more powerful CPU, more memory, and much more software than the original IBM PC.

The HP Palmtop is made for impatient people like myself who prefer to use and experiment with new hardware and software and then, maybe, look at the manual. I found the hardest part of getting the HP95LX up and running was liberating it from its clear protective thin plastic packaging. Once freed from its protective shield, it was a simple matter to install the AA batteries that came with the unit.

Since I did not initially look at the manual, I didn't realize that the nickel-like object that came with the HP95LX was the backup battery. So, I ignored it and managed to lose it. The unit operated without the backup battery, flashing occasional warning messages about the "low" state of the backup battery. Later, to my relief, I found the backup battery (a 3-volt CR2032 coin-cell) at our local Radio Shack for \$2.

With the main battery installed I opened up the HP95LX. I saw a compact yet somehow uncramped-looking keyboard. I looked at the readable 40-character-by-16-line screen and noticed that the Palmtop was asking me for my name. It subsequently asked me for my title, company

name, time and date. (I later changed my title to "If found, call 515-472-6330"). When done with its questions a clean looking screen popped up containing date, time, and my "business card" – name, title, and company. Below the business card were the symbols of the seven built-in applications, as they appear on the keyboard. On the screen below the pictorial symbols I was told to "Press a blue application key . . ." I looked at the keyboard and found the symbols on the keys for the file manager, communications program, appointment book/to-do list, phone book, word processor, Lotus 1-2-3, and HP calculator. In case you do not understand the symbols, the names of the applications are written below the key in blue.

The color coding of the keys and their labels make the keyboard self-explanatory and easy to use. For example, as an HP Portable Plus and HP110 user, I was curious to see how to configure the 512K built-in memory between electronic disk and internal memory. I noticed the label "SETUP" appeared in orange right above the file manager key. The shift key is orange. Sure enough the Shift Filer key brought me to a setup screen. The screen contained a Lotus-style menu with a number of options. It also told me that 254K was used for RAM Disk and 258K for System RAM. The menu options on the screen made it obvious which sub-menu to go to, to change that configuration. (I was able to maximize my electronic disk at 310K, leaving 202K of System RAM. However, reducing system RAM meant that I could have fewer applications open at the same time.)

Time to play with the applications.

I pressed the blue **123** key and seconds later (without the annoying opening copyright screen) I was in Lotus. I pressed the **MENU** key (with a "/" below it) and selected the Lotus File Retrieve option. HP kindly included five built-in Lotus templates. I called up the template labeled "_EXPENSE.WK1" and followed its macro-driven instructions to insert a few bogus expense items. I then pressed the **MEMO** key and found myself in the HP95LX word processor. I typed a few sentences and pressed the **Lotus** key again and found myself back in Lotus at the same cell where I was before I started MEMO. On a roll, I pressed the **PHONE, FILER, APPT, COMM, and HPCALC** keys, and I danced from one application to the other without losing my place in any of them. This ability to jump back and forth between HP95LX applications really helps make the HP Palmtop exceptionally useable.

New software breakthrough!

50% more file space for as little as \$89.95!

- **Easy to use—if you can save a file, you already know how to use SQUISH PLUS!**
- **A must for every HP Portable owner—ROM Backup version especially valuable if you use a Portable Plus! (Sorry, SQUISH PLUS doesn't run on the HP110.)**

It isn't often we find a program that's a must for every portable user, but Squish Plus is just such a program.

Squish Plus lets you increase your disk storage space by 50% or more for as little as \$89.95—without having to install any hardware or learn any new commands.

Squish Plus compresses files, saving them much more efficiently than DOS. For example, a word processing file of 50K might only take 30K using Squish Plus.

COULDN'T BE EASIER!

To use Squish Plus, you simply add a new drive letter to your system (for example, e:). If you wish, the new "drive" can be password protected.

Then, whenever you save files to the new "drive," Squish Plus compresses them automatically. When you retrieve a compressed file, Squish Plus automatically expands it to its normal size.

The saving in disk space is enormous: Squish Plus compresses data files (spreadsheets, text documents, databases) by 30-70%, and compresses program files by 5-25%. On the average, *you will increase the amount of data you can store on a disk by 50% or more!*

Note: All your other software can use the compressed data *as is*. There are no new commands to learn. You set up directories and perform all file operations—save, retrieve, copy, rename, backup, etc.—the same way you always do. (File backup takes up fewer disks, of course, and is significantly faster.) You can even use the Norton Utilities "Undelete" program to re-

cover compressed files that have been deleted!

Initial set up is easy too. There is no need to reformat or repartition your present disk. All you do is install Squish Plus as a "device driver." (You don't even have to know what that means. The manual—one of the best we've seen—walks you through the procedure in 5 minutes.)

ANY DRAWBACKS?

Other file compression programs impose a speed penalty. But Squish Plus is so efficient *there's virtually no loss of speed*—especially on the Portable Plus—except perhaps for a slight additional wait with some of your program files and largest data files.

Other file compression programs also set aside a significant amount of internal memory space for file decompression. But Squish Plus uses only 36K of memory for everything.

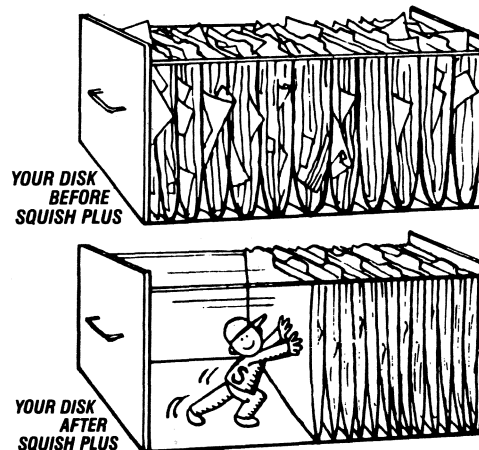
(Portable Plus users may need to increase internal [main] memory by as much as 36K. On the Portable Vectra and LS/12 Laptop, Squish Plus simply borrows 36K from the 640K of memory that's built in.)

WHAT ABOUT DISK SPACE FOR THE PROGRAM ITSELF?

The files on the Squish Plus disk total 139K, including several Squish Plus utilities.

Portable Plus users can get by with just 54K by eliminating all but two essential Squish Plus program files. (You can even reduce your Edisk space requirement to zero if you're willing to disable PAM and load Squish Plus from an HP9114 each

RECOMMENDED FOR:	
HP110 Portable	
Portable Plus	●
Portable Vectra	●
HP150	●
IBM PC and compat.	●
Available on ROM Backup for the Portable Plus	



SQUISH PLUS "compresses" your files so they take up less disk space!

time you reboot).

A better alternative—and the one we recommend—is to purchase Squish Plus on ROM Backup (see box below).

Whatever computer you use, *there is no other way to expand your file storage space that is as easy or economical as Squish Plus*. Order your copy at no risk today.

	Retail Price	Subscriber Price
Squish Plus for IBM PC compatibles	\$99.95	\$89.95
PRODUCT NO. SQ12NS		
Squish Plus for Portable Plus	\$129.00	\$99.95
PRODUCT NO. SQ11NS		
Rom Backup Package (includes Squish Plus for Portable Plus on disk and two 64K Backup ROMs)	\$264.00	\$234.95
PRODUCT NO. SQ11NK		
Squish ROMs (Must own Squish Plus for Portable Plus for each ROM set purchased)	\$135.00	\$135.00
PRODUCT NO. SQ12NR		

60-DAY MONEY BACK GUARANTEE

See order form for details.

TO ORDER

Use enclosed postage-paid order form or send check or credit card information (#, exp. date, signature) to:

Personalized Software

P.O. Box 869, Fairfield, IA 52556 515/472-6330

IMPORTANT MESSAGE FOR PORTABLE PLUS USERS

Special Portable Plus version

The authors of Squish Plus have worked with Personalized Software to create a customized version that runs on the Portable Plus. *This version is available only from us*. Be sure you specify "PORTABLE PLUS VERSION" when you order.

Buy Squish Plus on ROM!

With disk space at a premium in the Portable Plus, the best way to buy Squish Plus is on ROM Backup.

Our exclusive ROM Backup package includes the Squish Plus disk, and two ROMs—128K total—that contain all the Squish Plus files (except for one that you'll never need).

With Squish Plus on ROM, all the useful Squish Plus utilities will always be available, and you won't have to give up any disk space at all.

CALL NOW!

515-472-6330

In preparing this article, I took notes in MEMO and then bounced back to whatever application I was experimenting with. Ideas for this article, for our new publication — *The Palmtop Paper*, for improving our business, and on the meaning of life, began to appear in my running MEMO document. I have always known the wisdom of carrying a note pad with me to jot creative ideas down. However, until now I never did so because the thought of reading through and organizing my illegible scribbling never appealed to me. Since the HP95LX is always in my pocket, whenever I get an idea, I just pop it into my default word processing file, always open and at most two keystrokes away (**ON** and **MEMO**). If for some reason I closed this working word processing file, one of my user-defined function keys (system wide macros) immediately calls the file up and puts me at its end.

Anyone with computer (and Lotus) experience can make good use of the built-in software without using the manual. Three features create this possibility. First, each of the seven applications use a similar, Lotus-like user interface. Pressing the **MENU** key within each application brings up the two-line Lotus menu. The forty-character-wide screen forces one compromise on the Lotus-like menuing system. Unlike Lotus on a PC, the second menu line in HP95LX applications either does not exist or contains additional commands: it does not contain an explanation of the highlighted option.

A second useful feature runs across all the applications and pretty much makes up for the lack of the helpful second menu line. Pressing **f1** from within any application gives a context-sensitive help screen. Although not exhaustive, this help feature is adequate in most instances to get you going if you are stuck.

HP Portable users will relate to the third useful feature. All built-in HP95LX applications use function keys to access features. (For example, pressing **f9** in MEMO lets you Mark a block; **f7** lets you find a character string, **f10** from APPT brings up your to do list.) Most of these built-in HP95LX applications contain labels for the function keys. These labels are displayed on the bottom two lines of the screen in inverse video in a somewhat similar manner as the PAM function keys on the HP Portables.

THE MANUALS

After some time of experimenting I broke down and looked at the HP manuals. Actually, there are two manuals: The *Quick Start Guide* and the *User's Guide*. These manuals are excellent. Experimenting on my own, going through the *Quick Start Guide*, and finally reading the *User's Guide* was a process of peeling new layers of HP95LX useability. The thin, 50-page *Quick Start Guide* guided me through HP95LX hardware features and each of the applications. The information was presented in a simple, clear, non-condescending manner with well-thought-out and well-illustrated examples. The guide pointed out the Palmtop's most important features, supplying me with food for more experimentation.

The *Users Guide* goes into more depth, giving many clear examples of all the features of the machine. It does so in a painless and readable style seldom found in reference manuals. I found the *User's Guide* especially useful in learning more about the calculator.

THE 95LX APPLICATIONS

I am not going to go into much detail about the features of most of the applications. Last issue of The Portable Paper contained a comprehensive features list. Suffice it to say the applications are easy-to-learn, easy-to-use, and robust enough for most Palmtop-type applications.

The file manager allows users to perform normal DOS functions such as Copy, Delete, Rename, MD, Type, and CD. The file manager is used with the Connectivity Pack for the transfer of files between a PC and the Palmtop. A split screen feature facilitates transferring files between computers and between subdirectories within the Palmtop.

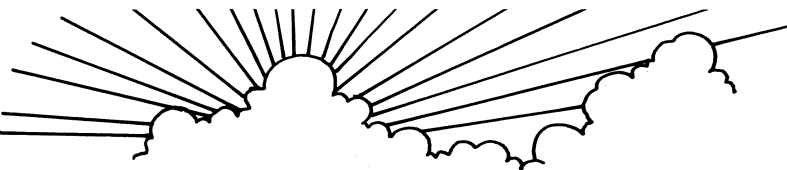
Lotus 2.2 on the 95LX has a few additions and deletions. The two most significant additions are the ability to cut and paste material between Lotus and the other built-in applications and the ability to use the calculator to backsolve. (See discussion on HP Calculator below). Not included in the HP95LX version of 1-2-3 are the PrintGraph, Translate, and Macro Library Manager utilities. HP95LX Lotus 2.2 will handle some Lotus Add-ins.

The word processor is very basic, similar to MemoMaker on the HP Portables with a Find (but not a Find and Replace) command.

The Phone list is a mini-data base program designed specifically for storing phone numbers and addresses. A Find feature lets you search for strings within each record. So, for example, you could find all occurrences of a Zip code or a specific first name.

The appointment book (press **APPT**) contains a built-in calendar, allows for recording appointments and repeat appointments, makes use of optional alarms, and contains a to-do list that automatically moves unfinished items to the next day. You can create and then associate a note with any to-do item or any appointment. APPT also contains stopwatch and timer features and includes a built-in list of major cities throughout the world and their relative time differential. So, for example, you can select Chicago from a built-in list of cities as the "local" city. Associated with Chicago will be the current time (say 1:45 p.m.). You can then select a "world" city, say, Beirut, Lebanon from the list of cities. The correct time for Lebanon (8:45 p.m. in this case) will be automatically displayed.

There is no built-in modem. However, you can connect the HP95LX to a portable serial modem using the 4-pin HP95LX serial port, a cable that comes with the 95LX Connectivity Kit, and a null modem adapter. You can choose VT100, ANSI or TTY terminal emulation. Files can be transferred using XMODEM or Kermit protocols or as straight ASCII text.



The Editor II It's way beyond MemoMaker!

You won't believe all the word-processing features this \$129* program contains—and it takes up less than 40K of memory!

* (only \$99.95 for Portable Paper subscribers)

By Hal Goldstein

Let's face it: MemoMaker is an adequate word-processor, but it has its limits. No search and replace. No simple way to merge files. No destructive backspace key. (To delete the last character you have to use the left arrow key and the deletion key[s].) No compressed or expanded printing. No...—but why go on? If you use MemoMaker, you probably have your own list of things you wish it could do.

Well we have good news! Now there's an easy-to-use text editor that runs on the Portable and Portable Plus that will satisfy almost every item on your wish list. And the program comes with a built-in bonus: It also runs on the HP 150, IBM PC, and HP Vectra, which means that **now you can use the same program and files on your desktop that you use on your Portable.**

The program is called THE EDITOR II. It does everything MemoMaker does plus a heck of a lot more. And you don't have to go to the expense of buying WordStar (for the Portable) or MS Word (for the Plus) to go beyond MemoMaker's capabilities.

THE EDITOR II's most valuable features are listed on the chart to the right. It's quite a list, isn't it? To me, THE EDITOR II is a real blessing. I use it daily instead of MemoMaker, and I've silently given thanks to its author, Ed Gilbert, many, many times. Just a few minutes with THE EDITOR II (that's all it takes to be up and running) and I think you'll be a fan of his too.

In addition to the great features listed to the right, there are six more I especially want to emphasize:

1. THE EDITOR II's Lotus-like menus make it incredibly easy to use.
2. THE EDITOR II creates ASCII files, which means you can send your files to and from almost any other program or computer without special formats or codes.
3. THE EDITOR II will automatically back up your files to protect you against mistakes: When you save a file, THE EDITOR II saves not just the current version, but the previous one as well.

The Formatter

THE FORMATTER gives you advanced formatting capabilities that even THE EDITOR II can't handle—like: multi-line headers and footers • automatic hyphenation (you can even add your own words to the built-in dictionary) • user-specified page length and line length • automatic page numbering • tables and charts • table of contents generation • and more.

THE FORMATTER works by imbedding special formatting codes into your EDITOR II, MemoMaker, or other ASCII text files. You can customize THE FORMATTER for almost any printer.

4. THE EDITOR II takes up less than 40K of memory.

5. THE EDITOR II loads and saves files and executes commands exceptionally fast.

6. THE EDITOR II comes with a well-written reference manual and a step-by-step tutorial.

Even in the desktop market, **it is difficult to find a word processor with this many useful features at this low a price.** For the Portables, THE EDITOR II simply can't be beat. See for yourself: Order your copy, risk-free, today.

THE EDITOR II on disk \$99.95
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ROM BACKUP version \$194.95
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EDITOR II Upgrade Kit on disk ... \$35.00

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Special combined offer— SAVE \$30:

THE EDITOR and THE FORMATTER together—
Only \$119.95 total (Portable Paper subscribers only)

Note: The user manual itself is a challenge, and no technical support is available. We therefore recommend THE FORMATTER for strong computer users or those already familiar with text formatters.

If you need any of the features listed above, and if you're willing to spend the time it takes to learn the commands, THE FORMATTER is for you. Order your copy, risk-free today.

THE FORMATTER \$59.95
Portable Paper Subscriber price \$49.95

THE EDITOR II gives you all these great text-editing features and more:

- **Search and replace.**
Just tell THE EDITOR II what word or phrase to look for, and it will display each occurrence and/or replace the occurrences either selectively or globally.
- **Edit two files at once.**
THE EDITOR II will display two separate portions of text at the same time, one above the other. You can view and edit two parts of the same file—or even two different files—simultaneously.
- **Backspace delete.**
You can erase the last character with a single keystroke.
- **Block and line centering.**
THE EDITOR II lets you center blocks and lines of text with a few simple keystrokes.
- **Powerful macros.**
Store any sequence of keystrokes and play it back at the touch of a single key. Macros can be edited, deleted, stored in files—even autoloaded on startup. THE EDITOR II comes with over two dozen macros to get you started.
- **No limit on file size.**
If you're an HP110 Portable user, you're no longer confined by MemoMaker's 819-line limit. You can have as large a file as internal memory allows.
- **File merge.**
You can merge two or more files together with ease.
- **Compressed and expanded.**
You can imbed control characters in your text to tell your printer to print all or part of your text compressed, expanded, bold, underlined, or whatever else your printer can handle.
- **Unlimited line length.**
Your files are no longer limited to 80 characters per line. This means, for example, you can print 132-character lines on your ThinkJet in compressed mode.
- **Lines per page.**
You can specify the number of lines per page, using the control codes required by your printer.
- **Easy in, easy out.**
You can exit from THE EDITOR II, run another program, then type a one-word command and be back in THE EDITOR II exactly where you left off. This includes exiting DOS—which means you can delete, copy, and rename files while running THE EDITOR II.
- **Right justification and automatic paragraph indent.**
A simple command right-justifies your text and automatically indents your paragraphs however many spaces you wish.
- **Undelete.**
A simple command will undelete the last line or block of text deleted.
- **Upper/lower case conversion.**
Another simple command lets you change between upper case and lower case without having to retype anything.

In terms of useful features per dollar, THE EDITOR II is a truly exceptional buy. I urge you to try it. Order yours today.

Hal Goldstein

Finally, many HP Portable users will appreciate the fact that the game, TigerFox, is built in. TigerFox is a game of mazes and chase. Tigerfox has been available for HP110 and HP Portable Plus users from us for a number of years.

HP CALCULATOR

110 The remaining application, the HP Calculator, is awesome. Not so much because of its many features, but because of its ease of use.

P+ I'll admit it. I've been somewhat intimidated by HP calculators. I did use an HP12C business calculator for a while. However, for the relatively simple things I wished to do (loan schedules, calculations, equations) I began to depend on Lotus on my HP Portable or desktop. Typically, I would spend some time studying the manual and playing with my HP12C to come up to speed. After performing my application, I would not need to use it for a month or two. Then I would have to put forth time and effort to relearn the functions I needed to use.

PV No more. I am sold out to the HP95LX built-in calculator (called HPCALC). I would not be surprised if I use HPCALC more than Lotus!

LS/12 The sixteen-line screen, the help facility, the function key and Lotus-like user interface make the HP calculator easy to use, even without looking at the manual. However, reading the manual and its examples gives an even deeper sense of the power and simplicity of the calculator functions.

Furthermore, the way that HPCALC and Lotus work together makes the whole HP95LX truly greater than the sum of its parts.

Space doesn't allow me to go through all of the features of HPCALC. However, a few examples should illustrate the ease of use and power of the calculator.

EXAMPLE: BUYING A HOME

Suppose I want to purchase a home and determine monthly payments. Using the Lotus-like menu system I press the **MENU** key (like the Lotus slash) and choose TVM (Time Value of Money) from the 14 HPCALC menu options. Up pops a template that contains a place to type in annual interest, amount of loan (Present Value), number of months (or years). I fill in say, 10%, \$115,500, and 360. Then I press the **f9** (PMT) key and the monthly payment of \$1013.60 appears on the screen. Suppose I have a balloon in 7 years. I enter **12*7** for number of payments and press the **f10** Future Value key and find out that I will owe \$109,320 at that time.

Now suppose I wish to know how much interest and how much principle I will have paid at the end of two years (24 months). First I press **f2** (Amort) which brings me to a new screen. I then type **24** and **f2** (GO). On the screen I am told that at the end of 24 months I will have spent \$22,975 in interest and \$1,351 in principal.

EXAMPLE: CONVERSION

The house I purchase is in the country and has 4.5 acres of land. Suppose I want to know how many square miles and square feet that is. I press **MENU**, **Conv**, and **Area**. Another template pops up which lists different units of area measurement (square miles, acres, square yards, square feet, square inches, square kilometers, hectares, square meters, and square centimeters). I move the cursor to **ACRE** and type **4.5**. Immediately, all the values of the other measures of area are placed appropriately on the screen. It turns out that 4.5 acres is .01 square miles and 196,020.78 square feet. Pressing **Menu**, **Options**, **Format**, **Fix**, and then entering **5** increases to five decimal points the value of the conversion. I find out that 4.5 acres is more accurately .00703 square miles. Similar screens are available for conversions of Currency, Length, Volume, and Mass.

EXAMPLE: SOLVING EQUATIONS

The MENU Solve screen lets you create your own equations and solve them on any variable. To take a simple example, suppose I live 10.2 miles from work in my new home and want to determine how long my commute will take. From MENU I select **Solve** and press **f4** (Insert) to insert a new equation to my list of user-defined equations. (I know to press **f4** because the "INSERT" label is listed in inverse video on the bottom of the screen above F4.) I type in a name for the equation and then the equation $MPH=60 \times MILES / MIN$. After entering the equation I press the **f9** (Calc) key. Displayed on the screen are my three variables: MPH, MILES, MIN each followed by an equal sign and the number 0. I move the cursor to MPH and type **45** in the MPH field and 10.2 in the MILES field. On the bottom of the screen I see that my MIN variable has been assigned to the **f4** key, which I press. Immediately the MIN value changes to 13.60000 (I have to change the options again to get rid of the unneeded five digit significance.)

The advantage of using the calculator over Lotus in a case like this is that I can solve for any variable. For example, suppose I find out that it takes me 15 minutes to get to work. I type in **15** in the MIN field and press the **f2** MPH key and find out that my average speed is 40.8.

EXAMPLE: BACKSOLVING WITH HPCALC AND LOTUS

In Lotus one could set up a similar formula. Cells A1 through A3 would contain the MILES, MIN, MPH labels. 10.2 and 15 could be entered in cells B1 and B2. B3 would contain the formula $60 \times B1 / B2$. All would be well if I only needed to compute the final miles per hour from the time and distance. However, suppose I wish to compute MIN from MPH and MILES. I couldn't since the formula resides only in the B3 MPH cell computed as a function of MIN and MILES. HP CALC and its backsolving ability to the rescue!

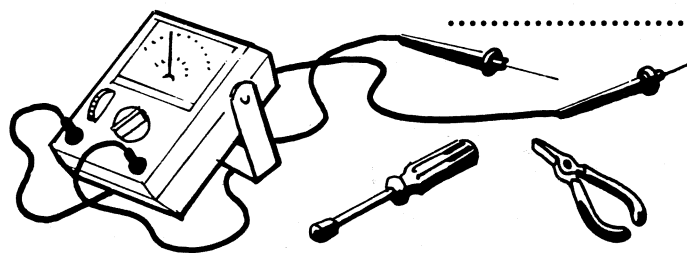
Once I set up my Lotus miles-per-hour spreadsheet, I press the **HPCALC** key. From HPCALC I press **MENU**, and **Solve**. From there I press **f8** to bring up the HPCALC

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Here are some typical charges:

- HP110 or Portable Plus screen replacement or upgrade: \$195
- HP110 or Portable Plus keyboard replacement: \$250

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- HP110 or Portable Plus internal modem replacement: \$195
- FastPlus upgrade (faster processor for Portable Plus): \$250
- 256K to 512K upgrade for Portable Plus: \$395
- 128K to 512K upgrade for Portable Plus: \$495
- HP9114 repair: \$65-135
- HP ThinkJet repair: \$65-135

Other repairs depend on our cost of parts and a \$42/hour labor charge. You can expect a range of \$75-\$250 for repairing most HP Portable and HP150 computers and peripherals.

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T10 screen that interacts with Lotus 1-2-3. Then I press **f8** (form) which asks me which Lotus cell contains the formula. Immediately I find myself in Lotus with the prompt: "Select formula cell." I move the cursor to B3, the cell that contains the MPH formula and press **Return**, and I find myself back in the HPCALC Solve screen. Suppose I want to hold my speed to an average of 30 MPH. I type **30** and press the HPCALC **f9** (VALUE) key. Finally, I need to tell HPCALC which Lotus cell I want recalculated. I do so by pressing **f10** (Solve). Automatically back into Lotus I move the cursor to the B2 MIN cell and press **Return**, and I am back in HPCALC. The bottom of my screen tells me, "Solve result=20.4". If I press the **1-2-3** key I find that 20.4 has been placed in the MIN B2 cell. The MPH formula in B3 remains intact. However, the cell value is recalculated to 30.

EXAMPLE: BALANCING YOUR CHECKBOOK

Another easy-to-use HPCALC option is the MENU's LIST function. This is great for quick and dirty checkbook reconciliations. On the screen you see 10 lines "1)" through "10)". Position the cursor line at "1)", type a number, say **54.32** and press **Return**. You will find yourself at "2)". Type another number, say **123** and press **Return**, and you are at "3)". If you look to the bottom of the screen, you'll find **TOTAL = \$177.32**". You can keep entering numbers (up to 10 and beyond) and you will have a running total and a record of the numbers you typed in.

OTHER HPCALC FEATURES

There are many, many, other features, all easy-to-use. Several other common business templates are available. You can produce an X Y graph of your equations. Any mathematical function you can think of from Log to Factorial to a random number generator to Polar Coordinates and Trigonometric functions to Permutations and Combinations is included. For those doing involved arithmetic, registers and stack registers can be viewed and easily accessed. There is an RPN mode for those trained on original HP calculators and who understand the merits of Reverse Polish Notation.

The HPCALC application is unique and powerful. It is hard to imagine any company improving on this 1-2-3/HPCALC combination except HP. When coupled with the other built-in applications, HP should remain the Palmtop industry leader for many years to come.

MSDOS

The HP95LX is a fully compatible XT computer. However, until some applications are designed for the HP95LX, DOS on the HP95LX seems like an anachronism. HP's shell successfully hides DOS from the everyday user. Switching back and forth between the seven built-in applications is as easy as pressing a key. The file manager is adequate (much better than PAM's File Manager) to perform everyday DOS activities.

Furthermore, to use DOS, you must exit all built-in applications (except the file manager from where you enter DOS). Once in DOS you may not call any of the seven built-in applications.

New HP95LX applications can be written for the System Manager rather than DOS. That means a "hot key" could bring up the new application and that the other built-in applications would still be accessible by their hot keys.

THE KEYBOARD AND SCREEN

110 As you have undoubtedly gathered I am unabashedly enthusiastic about the HP95LX. However, the useability of the keyboard and the screen must be examined before final judgement can be made. The screen, although not backlit, is very readable from a variety of angles. Its size limitation, 40 characters by 16 lines, rather than the standard 80 characters by 25 lines, is only a significant limitation if you run software not designed for the HP95LX. Naturally, Lotus users with large spreadsheets would prefer to see more cells. However, most users will probably be able to accept the small screen size in exchange for the extreme portability of the unit.

The keyboard is another matter. A small calculator-style keyboard is a necessity in order to keep the HP95LX at its calculator size. On the positive side, Lotus and HPCALC users may find the keyboard actually easier to use than the standard keyboard. The HP95LX not only sports a numeric keypad, but it puts common Lotus and HPCALC keys like (,), @, and * in unshifted and easy-to-locate positions on the keyboard. Also, HP obviously put a lot into the keyboard design, trying to maximize its useability.

As I mentioned above, a lot of my use of the HP95LX has been in typing information into the word processor. I find doing so (from my lap or a table) somewhat awkward. My best results are obtained when watching the keyboard rather than touch typing. I definitely would not have liked typing this article into the HP95LX. However, taking notes is acceptable. Lotus and HPCALC users should not much mind the small keyboard. Those who wish to use a small PC compatible unit primarily for word processing chores might consider the Poqet PC (see pages 13, 14, 17, and 34). I find the 95LX's size and super portability more important than having a larger keyboard like the Poqet does. However, if I knew I would be doing primarily word processing, and needed a lightweight computer, I'd take the Poqet.

THE FUTURE

In subsequent articles of The Portable Paper I will talk about add-in products for HP95LX use. Software programs designed for the HP95LX and hardware products taking advantage of the infrared port make the future rich for the HP95LX. The memory card slot increases the capacity to either run additional software or to make room to store more files.

WRITE FOR THE PALMTOP PAPER OR CREATE PRODUCTS FOR THE HP95LX

The first issue of *The Palmtop Paper*, the newsletter devoted to HP95LX, will be printed around mid-September. If you would like to make a contribution to that or subsequent issues please give me a call. The 1992 subscription will be \$39 per year and include a Subscribers Disk and the issue published in 1991.

If you would like to develop or modify a product for the HP95LX, and would like us to market or review your product be sure to give me a call, at 515-472-6330.

ORDERING INFORMATION

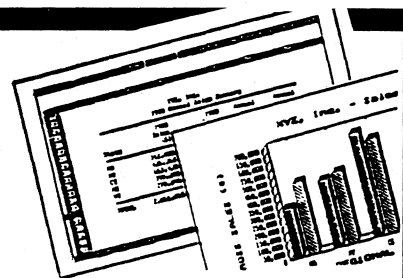
Personalized Software will carry the HP95LX and its accessories, although we expect them to be in short supply through September and will sell them on a first-come, first-serve basis. Call 515-472-6330.

- **1-Year Subscription to The Palmtop Paper**
Part # PTPA01, Retail: \$39.00, Subscriber price \$39.00
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- **HP95LX Palmtop PC**
(Comes with Lotus 1-2-3, version 2.2)
Part #: PTCOM1, Retail: \$699.00, Subscriber price \$629.00
- **128K RAM Card**
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Part #: PTRAM1, Retail: \$199.95, Subscriber price \$179.95
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Part #: PTRAM5, Retail: \$399.95, Subscriber price \$359.95
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Part #: PTCON1, Retail: \$99.95, Subscriber price \$89.95
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(Connects between 95LX and serial printers like the LaserJet)
Part #: PTSIC1, Retail: \$35, Subscriber price \$35.00
- **AC Adapter**
(For U.S./Canada, lets you conserve battery life)
Part #: PTVOL1, Retail: \$15, Subscriber price \$15.00
- **Serial Cable Adapter Kit**
(Lets you adapt the serial cable to serial printers and modems)
Part #: PTSAC1, Retail: \$15, Subscriber price \$15.00
- **Dictionary/Thesaurus Card**
(Adds 116,000 word dictionary, 500,000 thesaurus to your 95LX. Can be used with the Memo Editor)
Part #: PTDTTC1 Available in late 1991

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Until now, if you wanted the advantages and compatibility of Lotus 1-2-3, Version 2.01 for your Portable Plus, you had to pay more than \$625 for a ROM.

Now you can have a program that acts similar to Lotus 2.01 for just \$195 (disk and ROM) — or only \$79.95 for the disk version.

You can't get that much spreadsheet power for your Portable Plus for less!

The program is called As-Easy-As, because it's as easy as 1-2-3, and it fully lives up to its name: As-Easy-As does almost everything Lotus 2.01 does (and some things it doesn't).

If you're new to spreadsheets, you'll find As-Easy-As powerful, yet easy to learn and use.

If you already use another spreadsheet, you have very little new to learn. As-Easy-As works in much the same way as Lotus — and it reads and writes Lotus, version 2, WK1 files and Lotus, version 1, WKS files, so you don't have to change your data.

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Retail Price	Our Price
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As-Easy-As on disk	\$99.95	\$79.95
PRODUCT NO. AS11NS		

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PRODUCT NO. AS11NK		

Lotus 1-2-3 is a registered trademark of Lotus Development Corp.

As-Easy-As does virtually everything Lotus 2.01 does — and more! Portable Plus version available only from us.

AS-EASY-AS

As-Easy-As features include the following:

- o Accommodate large worksheets (8,192 rows by 256 columns)
- o Choice Pull down/Panel Menu
- o Choice of functions including mathematical, statistical, date, time, logical, financial, string, and user-definable
- o Powerful frequency distributions tables (Bins)
- o Capable of linking current worksheet with information from other worksheets
- o Versatile, powerful graphics capabilities, printer support includes 9/24-pin & LaserJet, ability to create .PIC files, chart-generation capabilities for bar, line, X-Y, pie, stacked bar, hi-lo, polar, area charts, delta semi-log & log-log graphs
- o User-config. screen options
- o X/Y data regression
- o Database operations, data input forms, reads/writes dBASE files
- o Text search, replace, justify
- o Goal-seeking capabilities (give desired answer & As-Easy-As gives you the input)
- o Configurable Printer setup
- o Worksheet auditing
- o Named range, function, and macro selection lists
- o Multiple planes (3-D simulate)
- o Macro program language, including 70+ powerful macros
- o Macro record/playback capability, single-stepping through macros
- o Full support of sub-directories and path names
- o Able to shell to DOS

MEMORY REQUIREMENTS

As-Easy-As requires 272K of Portable Plus main memory, plus 120K of electronic or floppy disk space (plus another 50K of disk space if you want to use the Help files).

Poqet PC Update

By Richard Hall

110 We first discussed the Poqet PC palmtop computer in Vol. 5, No.1, Pg.8. Only recently did we actually get our hands on one to find out if it's as good as it looked.

P+ The Poqet PC was first introduced at the Fall 1989 COMDEX. The Poqet is a one-pound, PC-compatible computer about one inch longer, but otherwise the size of a standard VHS video cartridge (8.75"x 4.3"x 1"). The Poqet is powered by two AA alkaline batteries that will last up to 100 hours (2-3 months) with normal use.

PV The Poqet uses design concepts pioneered by the HP110 and Portable Plus: RAM memory for file storage instead of hard and floppy disks; ROM memory for permanent storage of software applications; a shut-off feature that automatically powers-down the Poqet after 5 minutes of inactivity — hit any key and you're back to where you left off; partitionable RAM memory — so you can reserve a portion of the internal 512K RAM for file storage; and built-in software for word processing, calculation, time management, and file transfer.

LS/12 The Poqet comes with six built-in applications:

- PoqetAddress — simple Rolodex-type data base of simple contact information.
- PoqetCalc — a simple calculator that lets you do basic arithmetic functions.
- PoqetLink — a file manager program that lets you transfer files between the Poqet and your desktop with the use of Poqet's Data Link Cable.
- PoqetSchedule — a calendar utility that keeps track of appointments and tasks.
- PoqetTalk — a communications program that allows you to talk with other computers via modem. You must have Poqet's Serial/Modem Cable and an external modem.
- PoqetWrite — an ASCII text editor, much like Personalized Software's *The Editor*. Lets you do basic writing, editing, printing and simple search and replace operations.

The Poqet's extra memory comes in the form of credit-card-sized RAM and ROM cards that fit in two slots in the bottom of the palmtop. You can add up to 2MB of extra RAM memory and any of a number of a number of popular software applications on ROM.

IMPRESSIONS

I took the Poqet along with me to the Spring COMDEX where I used it to take product notes and write some articles (see page 16 for more on COMDEX). Since then Brian Teitzman, Personalized Software's Director of Sales, has been using the Poqet as an electronic "Day-Timer" and note taker.

Brian and I both like the 100-hour, 2-3 month battery life. You almost never have to worry about the batteries, and when you do, you stop at a convenience store and pick up a 2 "AA" alkaline batteries for a couple of bucks.

We also liked its size, even though it didn't fit in either of our inside coat pockets. It didn't matter to us. We are both perfectly willing to cart it around in a briefcase. If you really want to carry it with you, you may have to slip it in your pants pocket, or outside coat pocket.

The Poqet's keyboard takes a little getting used to. My fingers just fit the keys and I had to adjust to not reaching as far. But once I had adapted to the size, I found that I was typing quite fast. I suspect that with continued use, my typing speed would actually improve beyond where it is now with a standard, desktop keyboard.

The Poqet's small, grey, non-backlit screen is a bit hard to see. The screen is a full 80- columns-by-25-rows, but the type is about 50% the size of a standard desktop display. Interestingly enough, this also helped my typing speed. On my desktop, I have a tendency to look at the screen too much and this slows me down. I don't look at the Poqet screen as much and am forced to rely more on my touch-typing skills.

The Poqet is about the smallest machine I would use for any serious writing. My use of the Poqet will probably be reserved to on-the-road rough-draft work. The screen is fine for checking out what you've entered, but I wouldn't like to have to edit, or proof a longer document. Brian will use the Poqet for a personal organizer and a memo/letter writer. Hal, the Publisher of *The Portable Paper*, likes the HP95LX for organizing his schedule and taking quick notes on the go. He uses the 95LX's calculator and Lotus functions also.

As I have to mentioned, the Poqet is just a little too big to easily fit in my inside coat pocket. In my opinion, if the machine was even 10% smaller, the HP95LX would have some serious competition. As it is, the smaller HP95LX is the clear choice for the business person on the go, provided he or she doesn't need to enter a lot of text or data. The Poqet may be a more appropriate choice if you want a small computer that combines personal organization tools with a keyboard that can support serious touch typing (i.e. where the dominant application is word processing).

A NEW POQET?

There are all sorts of rumors that Poqet will introduce a new computer soon. If that is the case, a price drop in existing Poqet may make it an exceptional value.

ORDERING INFORMATION

You can purchase the Poqet from many dealers, or from us. Below is a list of Poqet-related products, their retail price and Portable Paper subscriber prices:

Item	Product #	Retail \$	Subscriber \$
Poqet PC Computer	PQ0164	\$1,450.00	\$1,305.00
Poqet Utilities			
Poqet Tools*			
Peripherals/Accessories			
External Disk Drive	PQ0511	\$ 495.00	\$ 445.00
Parallel Port Cable	PQ0572	99.95	89.00
Data Link Cable	PQ0545	59.95	54.00
ROM/RAM Card Drive**	PQ0400	495.00	445.00
512K RAM Card	PQ0611	300.00	300.00
1MB RAM Card	PQ0620	700.00	700.00
2MB RAM Card	PQ0621	1,400.00	1,400.00
Software on ROM Cards			
Lotus 1-2-3	PQ0715	\$ 495.00	\$ 445.00
Lotus Agenda	PQ0774	395.00	355.00
Lotus Works	PQ0727	225.00	219.00
ACT!	PQ0733	395.00	355.00
XyWrite III +	PQ0763	495.00	445.00
WordPerfect 5.1	PQ01NR	495.00	455.00

* Delivered on receipt of Warranty Registration Card

** Connects to your desktop and lets it read RAM memory cards

Be sure to call before ordering, as we expect the price to drop soon.

The Poqet, the HP95LX, HP110, and Portable Plus

By Hal Goldstein

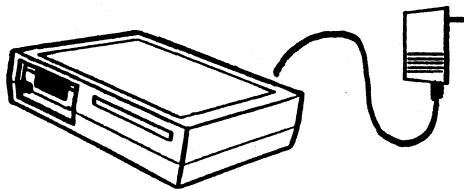
THE BASIC HARDWARE

110 I like the Poqet. It probably represents the minimum in terms of form factor to get a keyboard you can touch type on, and a readable full-sized PC compatible computer.

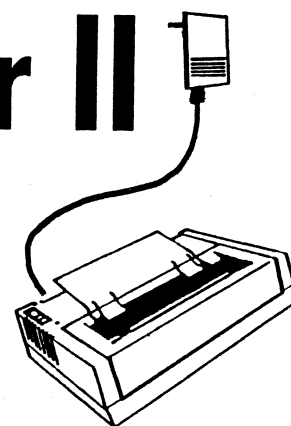
P+ In a few ways the HP95LX is similar to the original **PV** HP110 while the Poqet is similar to the Portable Plus. Like **LS** the HP110, the HP95LX comes with a full, rich set of applications built-in (including Lotus and a word processor). The Poqet with its built-in Poqet Tools is not quite as bear-bones as the plain Portable Plus. However, like the Portable Plus, to add "serious" applications like Lotus or WordPerfect, you must purchase additional ROM cards.

The Poqet, like the Portable Plus, has two empty slots for additional ROM software and additional RAM storage space. Like the original 128K Portable Plus, you must obtain additional RAM memory for storage space to save files.

The out-of-the-box Poqet has only a 20K, D drive to store files. You can use a DOS RAM disk utility to configure some of the 512K built-in RAM as a RAM (electronic) disk. However, this DOS-configured RAM disk does not offer the



Empowerer II



For the HP9114 Disc Drive and ThinkJet Printer

If you've been frustrated trying to use your HP9114 disk drive or your ThinkJet printer only to have their batteries quit before you've finished your work, then you know the problem. Now you need the solution.

THE PROBLEM:

The charge on your 9114 or ThinkJet battery doesn't last long enough for you to do all you'd like. In some cases it doesn't last long enough to do *half* of what you'd like!

According to HP, you can get 40 minutes of continuous usage before the batteries die. In the case of the HP9114 we've never gotten more than 20. Just formatting disks, transferring files, or getting disk-intensive software to work can be a major triumph.

Plugging in the HP9114 or ThinkJet doesn't help, either. That only recharges the battery—you cannot keep working.

WE HAVE THE SOLUTION:

The official HP suggestion is to buy another battery pack and keep both plugged in. When one loses power, replace it with the other. This seems clumsy to us. What if you want to do several hours of disk-intensive work? At Personalized Software we have a better solution—The Empowerer II.

The Empowerer II is a special power supply built into an empty HP9114 or ThinkJet battery case. Just remove your battery pack, slip The Empowerer II into the battery slot, and plug it into your wall outlet. It's that easy!

To run your HP9114 Disc Drive or ThinkJet Printer to your heart's content, order your Empowerer II today.

HP9114 Empowerer II

Retail:\$119, Subscribers: \$95
Product #: EM13NH

ThinkJet Empowerer II

Retail:\$119, Subscribers: \$95
Product #: EM14NH

60-DAY MONEY BACK GUARANTEE

See order form for details

TO ORDER

Use enclosed postage-paid order form or send check or credit card information (#, Exp. date, signature) TO:
PERSONALIZED SOFTWARE
P.O. Box 869, Fairfield, IA 52556, (515) 472-6330

data integrity of the HP95LX, the HP Portable Plus, or the HP110 RAM disk. The Poqet RAM disk works like one on a PC — if you reboot, you lose all the data on your Poqet RAM disk. There is normally no need to reboot the Poqet since the Poqet, like its HP counterparts, is always "on." However, like the Portable Plus, if your system locks up, if you want to change your AUTOEXEC.BAT or CONFIG.SYS file, or if you install a new ROM or RAM card, you will need to reboot. Rebooting on any of the HP machines does not cause data loss as it does on the Poqet.

Unlike the HP110, the HP95LX is expandable. It has one slot to add a RAM or ROM card while the Portable Plus and Poqet have two slots.

ADVANTAGES OF EACH

110 If I were to travel for an extended length of time I would want to take my loaded Portable Plus with many programs on ROM and relatively large storage capacity.

P+ However, for short trips in which I had to do a fair amount of word processing and in which saving 7.5 pounds of weight was important, I would choose the Poqet.

PV If I wanted my computer always available and wanted to take notes and have Lotus, an HP calculator, and electronic scheduler accessible, I would take my HP95LX.

LS/12 Conceivably, for next COMDEX in Las Vegas, I will take both my Poqet and HP95LX. I can have my to-do list and appointment calendar with me, and take notes on the show

floor with my HP95LX. Back in my hotel room or on the plane I can write my article with the Poqet. Both computers are so small and lightweight that there is little baggage penalty for taking both.

If somebody held a gun to my head and said, choose between your HP Portable Plus, HP95LX and Poqet PC, I would choose a fully loaded Portable Plus. For my uses, a loaded Portable Plus (with 1 Meg RAM drawer and a ROM drawer full of my favorite programs) would give me maximum flexibility and power. However, in actuality, all three units are so relatively inexpensive, there is no reason for the computer-dependent to have to choose.

SUMMARY OF ADVANTAGES

HP95LX Advantages:

1. Self-contained in terms of storage space and powerful built-in software.
2. Small size, absolutely portable - can be taken anywhere.
3. Especially strong for business (financial) uses.

Poqet Advantages:

1. Minimum-sized computer that allows for touch typing and full screen.
2. Basic software applications built-in.
3. Especially useful for word processing when on the go.

HP Portable Plus Advantages:

1. Rugged construction. Longest battery life available for a computer of its size.
2. Reasonably comfortable keyboard and screen.
3. Variety of applications can be permanently stored in ROM memory.

It's very conceivable that users may have two or three of the above units ready to use depending on the occasion.



SPECIAL REPORT: COMDEX, SPRING 1991

By Richard Hall

D I thought Hal was doing me a favor, letting me go to COMDEX, Spring 1991 in Atlanta. He was! The Spring COMDEX is smaller than the Fall show held in Las Vegas. Instead of filling six football fields with displays, the Spring show only filled three football fields.

Unfortunately, out of three football fields of displays, there wasn't a whole lot that directly related to the HP Portables — with one notable exception.

THE HP95LX PALMTOP PC

I finally got to use what I've been writing about in the last two Portable Papers (see Vol.6, No.2, Pg.5 and Vol.6, No.3, Pg.8). The HP Palmtop PC was developed by HP's Corvallis division, the same folks that developed the HP110 and Portable Plus. The HP95LX is simply the best palmtop available. It's light and easily slips in a coat pocket (unlike the Poqet PC). The 95LX provides on-the-go business and professional personnel with the perfect personal organizer that includes the following: Lotus 1-2-3 version 2.2, a memo pad, calendar, to-do list, phone and address list, file manager, data communications software, and a full-featured HP calculator. The Palmtop PC is a little too small for a lot of text or data entry work (i.e. writing or editing long documents, entering large spreadsheets). But it's perfect for everything else. (For more on the HP95LX see pages 6, 14, 28, 35, and 39.)

NOTEBOOK COMPUTERS BY THE BUSHEL

There were more notebook computers displayed at COMDEX than Georgia has peanuts. And as time goes by, notebook computers, like Georgia peanuts, are becoming more of a commodity. Over 90% of the "bushel basket" of notebook computers I picked through contained nearly-identical machines: seven-pound 386s with 20-40MB hard

drives and 2-3 hours of battery life. Most of the bunch had an 8" by 11" footprint, some sort of backlit LCD screen, printer and serial ports, and a port for an external monitor.

There were even a few companies that specialized in OEM notebooks computers (they sell you the notebook in quantity and you put your company name on it). After discovering these OEM companies, I went through COMDEX again. I found that more than a few of the "near-identical" notebooks I had seen on the first day were really "identical" machines, marketed by different companies, but produced by the same OEM manufacturer.

I guess the point of these last two paragraphs is that if notebook computers are becoming a commodity like peanuts, then it doesn't really matter much which notebook you buy. The important thing is what you do with it — which recipe you use to turn the raw, portable computing power of the 386 notebook into something digestible and nutritious for you and your business.

ZENITH MASTERSPORT 386SL

There were a couple of exceptions to the "peanut" analogy above. One was Zenith's new MastersPort, a fully-configured laptop computer with standard features including a 386SL CPU, 2MB RAM, a 60MB hard drive and a 1.44MB 3.5" floppy drive. What's unique about the MastersPort is the Intel 386SL CPU it uses (see Vol.6, No.1, Pg.18). This new CPU combines a 20MHz processor with a cache and memory controller all on one chip. This reduces the computer's power consumption and lengthens battery life.

The Zenith representative we spoke to said that the actual battery life would vary depending upon how much one used the floppy and hard drive. When we pressed him for an answer, he said that 6-8 hours of use on a fully charged battery was "very achievable."

Those of you with the HP LS/12 are familiar with Zenith computers. The LS/12 is actually a Zenith SupersPort 286 with HP's name on it. We hear that Zenith, in turn, contracted with a Korean company to produce the SupersPort. And now Zenith is owned by Group Bull, a French company. It all gets a bit confusing, doesn't it!

If you remember, the LS/12 had some problems with the RAM chips on the motherboard (see Vol.5, No.5, Pg.24). The Zenith representative who showed us the MastersPort said that Zenith has long since discovered the cause of the LS/12 problems and remedied the manufacturing systems that caused it.

PEN-BASED LAPTOP COMPUTERS

A number of industry gurus think that pen-based computer systems will be the next big leap for computing. We saw a couple of pen-based systems at COMDEX. They're about the size of a notebook computer, but have no keyboard. The LCD screen becomes an input as well as an output device. Instead of typing the command or data into the computer,

you write it on the screen, or press a visual icon displayed on the screen. Operating systems that can recognize printed handwriting are already in use.

We saw a number of pen-based systems in action, including the Grid system and a prototype of the new Go pen-based notebook computer. Some of the pen-based systems displayed applications already in use by police departments for reporting accidents and hospitals for keeping track of a patient's medical history and the medication he/she has received. We saw IBM's pen-based system at work with Windows. Instead of using a mouse, you touched the screen icon with the pen a couple of times to activate it. A number of major computer companies are working on systems for general use. Expect to see more about pen-based systems in the news.

THE POQET PC

The Poqet PC was at the Spring COMDEX — with me! Poqet is the little one-pound palmtop introduced at COMDEX over a year ago and reviewed by us in Vol.5, No.1, Pg.8 of *The Portable Paper*. I wrote much of this article on the Poqet in my motel room and on the flight home from COMDEX.

I loved the concept of the Poqet from the beginning: a computer-in-a-pocket with a calendar/scheduler, "rolodex," calculator, and word processor. The word processor was very important to me. I'm a writer/editor and I need a keyboard that will support that kind of activity. As much as I like the HP95LX, its keyboard is too small for me.

The Poqet worked well for me. Once I got used to the smaller keyboard I found that I could enter text easily. The small size of the letters on the Poqet's grey, non-backlit screen made editing a little more of a chore, but I got used to that also. All-in-all, the Poqet is an acceptable alternative for those needing a palmtop computer with personal organization tools and a keyboard that supports greater text/data entry requirements. (For more on the Poqet, see pages 13, 14, 34.)

WINDOWS IS BIG

Windows is Microsoft's popular Graphical User Interface (GUI) program that runs on PC-compatible machines like the LS/12. (It works best with computers with a 286 or greater CPU and 2MB or more of internal RAM memory. It can work on 8086 machines like the Portable Vectra CS, but not well.) Windows makes a PC act like an Apple Macintosh. Instead of entering written commands at the DOS prompt line, you use a mouse to point to a graphical representation of the file or command. Then you press a button on the mouse and the command is executed or the file is opened.

About 1/4th of the floor space was devoted to Windows-related products. GUI was big at Comdex this year. Of course, HP110, Portable Plus, and HP150 users know all

about GUI. HP's PAM menu system is one of the first successful GUI's introduced by the computer industry. Subsequent to its introduction Apple came out with the Mac and popularized the use of Icons in the use of GUI's. Microsoft introduced Windows a few years back to bring Mac-like GUI to the DOS environment.

GUI's have not been without controversy. Apple is suing Microsoft (Windows) and HP (New Wave) claiming that their GUI's have "the look and feel" of the Macintosh graphical interface. After Apple initiated its suit, Xerox unsuccessfully sued Apple, claiming that Steven Jobs had copied the look of the experimental GUI system they developed (and decided not to market).

Whatever happens with the Apple, Microsoft, HP suit, GUI is now a fact of life in the DOS environment. New programs are being written that will run solely in the Windows environment. When DOS became the standard operating system years ago, it brought about a shake-out in the fledgling industry. The vast majority of software applications were written for the PC compatible environment. As HP110 and Portable Plus owners are well aware, this spelled doom for the non-standard machines.

The same phenomena will happen to a somewhat lesser degree with non-windows-based software. As Windows becomes more widespread (12 million copies will be sold this year if you believe Microsoft's estimates) more and more programs will be written for the Windows environment alone. Users not operating in its environment will become more and more cut off from the latest, most powerful application developments.

Windows runs best on 386 and up machines with 2MB or more of RAM. Within a year the 386 machine with 4MB of RAM will become the standard in desktops and laptops. To show off the increasing graphics capabilities, displays will become of higher quality. Expect to see innovations in the LCD display field with high-quality VGA, and more color capability. And LCD technology has advantages over CRT's. It's cheaper, uses less power, and emits almost none of the harmful radiation associated with CRT's. An LCD screen is also more compact than a CRT. As LCD quality improves and becomes less expensive, expect to see more LCD desktop options becoming available.

WORDPERFECT FOR WINDOWS

The WordPerfect people sure know how to put on a show! They had one of the most enjoyable, and biggest booths at COMDEX. And they gave you a free WordPerfect hat if you sat through their presentation. (I couldn't talk them into giving me two, even when I told them I was a member of the press.)

We use WordPerfect 5.1 and DrawPerfect to produce *The Portable Paper*, so I was very interested to see WordPerfect for Windows demonstration. I was impressed, as were a

(110% continued on page 23.)

MAXIMUM POWER FOR YOUR PORTABLE PLUS

Easy-to-use, lightning-fast ROM chips save valuable Portable Plus memory and eliminate the need for a disk drive.



The most powerful and unique feature of your Portable Plus is that it lets you store programs on ROM (Read-Only Memory) chips for instant access.

Almost all other portable computers require a disk drive in order to function. A disk drive—even a portable one—is a bulky piece of equipment, easily breakable, and slow in loading programs.

By contrast, a ROM chip weighs next to nothing, is virtually indestructible, and lets you load programs instantly. (Programs on ROM chips don't take up any space on your Edisc.)

All of which means that your 9-pound Portable Plus is the **fastest, most portable, and most reliable computer you can own**—provided, of course, you take full advantage of its ROM technology.

YOUR SOFTWARE DRAWER WAS MEANT TO BE FULL

The engineers at Hewlett-Packard designed the Portable Plus so it could accommodate an optional "software drawer" containing 12 ROM sockets. Clearly, their intention was that those sockets be filled with useful programs.

But if you're like most Portable Plus users, you probably are using

just a few of the sockets for ROM-based programs like Lotus 1-2-3 or MemoMaker.

That's fine as far as it goes, but if you aren't using *all* the ROM sockets—or if you have to carry around an HP9114 disk drive wherever you go—*then you are not using your Portable Plus to full advantage.*

To start using the *full* potential of your Portable Plus, look over the chart at the far right. It contains more than 50 programs and utilities available on ROM chips from Personalized Software.

Taken together, these ROMs cover *every application you're likely to need*—from word processing to spreadsheets to data

communications, graphics, programming languages, and more. Which means once you install these ROMs, you'll have everything you need right inside your Portable Plus. *You'll never have to carry a disk drive again.*

We invite you to browse through the chart, read the information at the right, and then order one or more ROMs today. You'll find them to be fast, reliable, and an incredible boost to your productivity.

Whatever your reason: to free up valuable memory space... to eliminate the need for an external disk drive... or just for the convenience of lightning-fast program loading, *fill your software drawer with ROMs* and you'll turn your Portable Plus into the powerhouse its designers intended it to be.

With our exclusive Double Guarantee, the risk is all ours. Why not order right now?

P.S. If you have questions about any of the ROMs, give us a call. Brian or David will be happy to make some recommendations as to which ROMs might best meet your needs for word processing, spreadsheets, or whatever applications you're interested in.

OUR EXCLUSIVE DOUBLE GUARANTEE ON ROMS

60-DAY GUARANTEE OF SATISFACTION

If, within 60 days, you are dissatisfied with a ROM product for any reason, you may return it for a full refund.

2-YEAR GUARANTEE AGAINST DEFECTS:

If a ROM proves defective at any time within 2 years, we will replace it at no charge.

EASY TO INSTALL

We supply clear instructions and diagrams with every ROM order. If you prefer, send us your software drawer and we will install your ROMs for you—and test them—at no charge.

To remove your software drawer, first back up your A drive (so you won't lose your data), then use an ordinary screwdriver to remove the two outside screws on the drawer.

You won't be able to use your Portable Plus without the software drawer, so we recommend you call us first to make sure the ROMs you want are in stock, and to set an appointment for installation.

That way, we can install and test your new ROMs the day we receive your software drawer, then ship your drawer back that same evening. Return shipping within the Continental U.S. via UPS Second-Day Air is free for all orders over \$200. Please add \$15 to your order if you want overnight return shipping.

(In most cases, if you set an appointment in advance and use overnight shipping both ways, you'll only be without your software drawer for less than two business days. We'll ship the manuals and other materials in advance by surface carrier so you'll have them by the time you receive back your software drawer.)

HOW TO ORDER ROMS

To order, use the postage-paid order form in the center of this issue. For even faster service—or if you have questions about any of our ROMs—give us a call.

IMPORTANT INFORMATION ABOUT OUR ROMS

We offer two kinds of ROM chips. One kind we produce ourselves; these are offered as part of our "ROM Backup Packages" (see below). The other kind are manufactured by Hewlett-Packard; we simply call these "HP ROMs."

ROM Backup Packages

A ROM Backup Package includes both the disk version of a program and the ROM version—plus the standard User's Manual and additional instructions for installing and using the ROM. (In the chart, prices of products marked "PS" are for entire ROM Backup Package.)

According to the agreements we have with the original software vendors, our ROM version is considered a backup copy of the disk version. Unless you already own the disk version, we cannot sell you the ROM Backup by itself.

Please note:

1. If you purchased the disk version of a program from us, we have that in our records. If you purchased the disk version elsewhere, you will need to show us proof of purchase before we can sell you just the ROM Backup.

2. Prices for ROM Backups alone are:

Best of DOS Tools	\$129.
The Editor	95.
Games (Chess+4)	105.
HPDuette	95.
HPPrint	95.
Norton Utilities Adv. 4.0	99.
OutlinePlus	95.
Shelp	55.
SideWinder	55.
Shelp+SideWinder	95.
Sketch	95.
Squish Plus	99.
SuperROM	49.
TermPlus	95.
Turbo Pascal 3	95.
Typing Whiz	95.
Webster's Speller	179.
WordPerfect	295.
Writer's ROM	170.
Writer's ROM II	140.

3. It is important that you read and adhere to the licensing agreement that comes with the disk version of any software you buy, because the same agreement applies to the corresponding ROM Backup. In most cases, this means you can use only one version of the software at a time on only one computer system at a time. Remember, the ROM is a software *backup copy*, not an independent second copy.

HP ROMs

The HP ROMs that we sell do not include (or require) the corresponding disk versions. They are the same ROMs that HP sells, except ours are used—which turns out to be *better* than buying them new. Here's why:

Unlike other used products you can buy, there are no moving parts on a ROM, and nothing that can wear out. Because of this, our two-year guarantee against defects applies to used HP ROMs as well as to our own ROM Backups. (Two years is twice the guarantee against that Hewlett-Packard offers.)

Our used HP ROMs are also covered by our unique 60-day guarantee of satisfaction.

Best of all, our used HP ROMs are priced as much as 50% below retail. Look at the chart at the right and compare! (In the chart, "Retail price" of HP ROMs is HP's price new. "Subscriber price" is our price used.)

SOFTWARE AVAILABLE ON ROM

For product details, see individual ads elsewhere in this issue, in our catalog, or refer to articles in past issues. In this chart, "Type" refers to either HP (used HP ROM) or PS (Personalized Software ROM Backup Package—price includes both ROM and disk versions). CALL FOR AVAILABILITY OF USED HP ROMS

Product	Part #	\$Retail	\$Subscriber	Type	# Chips	Notes
NEW WORD PROCESSORS						
WordPerfect 5	WD11NK	\$919.00	\$595.00	PS	5	Includes PlusPerfect, main WP program, 300K WP.FIL file, help files, printer files. Spelling checker and thesaurus are not included.
NEW WordPerfect Speller						
WordPerfect Speller	RO13NK	525.00	199.00	PS	3	Includes WP's main 115,000-word dictionary, HPDuette, Shelp, FilePlus, and TetPlus (a Tetris-like game).
NEW WordPerfect Thesaurus						
WordPerfect Thesaurus	RO12NR	250.00	147.00	PS	3	WordPerfect 5.0's main, 500,000 thesaurus.
The Editor II	ED12NK	224.00	194.95	PS	1	The Editor version 1 is available as part of our SuperROM chip (see "Combined ROMs" below).
MemoMaker	-	-	-	HP	-	Comes on same chip as Time Manager (see "Combined ROMs" below.)
MSWord	MS20UR	394.00	199.00	HP	2	
MultiMate	MM20UR	520.00	295.00	HP	1	
WORD PROCESSING UTILITIES						
Format110	-	-	-	PS	-	Comes as part of SuperROM (see Combined ROMs)
FormatPlus	FP13NK	174.95	164.95	PS	1	
HPPrint	HP12NK	175.00	170.95	PS	1	
Mini PrinterTalk	-	-	-	PS	-	Comes as part of SuperROM (see Combined ROMs)
OutlinePlus	OU11NK	175.00	165.00	PS	1	
RightWriter	RW11NK	205.00	199.00	PS	2	
Webster Speller	WB13NK	258.95	248.95	PS	2	
SPREADSHEETS AND UTILITIES						
Lotus 123,1A	LT12UR	495.00	295.00	HP	2	
Lotus 123,2.01	LT15UR	625.00	395.00 ²	HP	3	3rd ROM (Help files) doesn't have to be installed.
SideWinder	SW12NK	134.95	124.95	PS	1	Also available on a ROM with Shelp, and on our SuperROM chip (see "Combined ROMs" below).
DATABASE PROGRAMS						
Exec Card Manager	EC11UR	395.00	225.00	HP	2	(Lotus 1-2-3 can also be used as a database.)
COMMUNICATIONS						
PC2622	PC13UR	395.00	239.00	HP	1	VT100 and HP Terminal emulator.
Reflection	RF11UR	525.00	295.00	HP	1	Minor upgrade of PC2622
TermPlus	TE13NK	194.95	174.95	PS	1	Includes FormIBM, Jctctrl, and other great utilities.
PRODUCTIVITY BOOSTERS / GAMES						
Best of DOS Tools	DT12NK	179.00	168.95	PS	2	Selected utilities from DOS Tools ¹
FilePlus	FE14NK	164.95	154.95	PS	1	
Games (Chess + 4)	GA11NK	215.00	175.00	PS	2	Chess, Go-Moku, TigerFox, FastMind, Othello
HP Calculator	CL11NK	95.00	95.00	PS	1	From our 1987 Subscriber Disk
HP Duette	DU13NK	194.95	184.95	PS	1	Contains Portable Plus half of software
NEW Norton Util.(Adv 4.0)						
Norton Util.(Adv 4.0)	NU12NR	249.00	199.00	PS	1	Includes Vers. 3.1 and 4.0 utilities for directory sorting, modifying file attributes, file finding, file size, quick unerasing, text search, main NU program on one ROM.
Shelp	SH12NK	110.00	104.95	PS	1	Includes note extraction program. Shelp also available on ROM with SideWinder, and as part of SuperROM chip (see Combined ROMs below).
Time Manager	-	-	-	HP	-	Comes on same ROM as MemoMaker (see "combined ROMs" below).
Typing Whiz	TW12NK	144.95	134.95	PS	1	
Squish Plus	SQ11NK	264.00	199.00	PS	2	
GRAPHICS						
Sketch	SK12NK	175.00	170.95	PS	1	(Lotus 1-2-3 can also be used for graphics.)
PROGRAMMING LANGUAGES						
MSBasic	MS21UR	331.00	165.00	HP	1	This is not GWBASIC.
NEW COMBINED ROMs						
COMBO ROM	RO11NK	449.00	299.00	PS	2	AsEasyAs, HPDuette, TermPlus, SideWinder, TetPlus
MemoMaker/TimeMgr	MM21UR	245.00	119.00	HP	1	
Shelp,SideWinder	SH13NK	234.95	214.90	PS	1	Also includes SideWinder enhancement utility.
SuperROM	SU11NK	474.00	299.00	PS	1	Mini PrinterTalk is the abbreviated version included on the PrinterTalk disk; it is functionally equivalent to PrinterTalk for most applications.
(5 programs on one chip): The Editor, Format110, MiniPrinterTalk, Shelp, Sidewinder						
The Writer's ROM	WR11NK	499.00	299.00	PS	2	Includes PRNCONF:puts ThinkJet in EPSON mode mode, and TJCTRL, a popup program that controls ThinkJet from any program.
(5 programs on two chips): The Editor, FormatPlus, FilePlus, Webster's Speller, Shelp						
Writer's ROM Part II	WR12NK	350.00	299.00	PS	1	
(2 programs on one chip): RightWriter, OutlinePlus						

¹Utilities included in the Best of DOS Tools ROM backup Package are as follows. For program details, see catalog.

PACK	DUMP	TY	CYPHER	RENDIR	WHEREIS	TEB	SDL	FDATE	LABEL	DIRS	TRANSLIT
CLEAN	DIRALL	ARCE	MOVE	OFF	CHANGE	ARCS20	MOVEALL	TRIM	BEEP	SQPC	SM
VDL	TMA	TJETA	PCOPY	ASK	PRNCONF	WAIT	PCREP	COPY	FDUMP	COPYNEW	

Note: ARCS20 is shareware; the author normally requests a \$35 contribution. However, we've already paid your user fee.

²IMPORTANT: All HP ROM prices given here (unless otherwise stated) are for used ROMs. Used HP ROMs (especially Lotus 2.01) are sometimes not in stock. Call to verify availability of used HP ROMs.

OUR COMPLETE HP110, PORTABLE PLUS PRICE LIST

Product	Part No.	Retail Price	Sub. Price	With Portable Purchase*
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* These items are discounted further with purchase of an HP110 or Portable Plus.
 ** New products or new prices.

HP110, PORTABLE PLUS COMPUTERS

COMPUTERS

Like-new 512K P.Plus ¹	PP46UC-P4	\$2795	\$995	
Reconditioned 512K P. Plus	PP16UC-P4	2795	795	
Reconditioned 128K P. Plus	PP12UC-P4	2590	395	
Reconditioned HP-110	PQ11UC-P4	3000	395	
HP-110 Manual/Software Kit	MA13UC-P4	64	64	
Like-new German Plus ¹	PP47UC-P4	2795	995	
German localiz. ROM	GE31UR-P4	150	99	(50)
Like-new Swiss/Fr. Plus ¹	PP44UC-P4	2795	995	
French localiz. ROM	FR31UR-P4	150	99	(50)
Like-new Swedish Plus ¹	PP40UC-P4	2795	995	
Like-new English Plus ¹	PP41UC-P4	2795	995	
Like-new Italian Plus ¹	PP48UC-P4	2795	995	
Italian localiz. ROM	IT31UR-P4	150	99	(50)

¹ Like-new P. Plus in original packaging, new battery, manual, our 1 year guarantee.

SPECIAL HP110, PORTABLE PLUS BUNDLES

Perfect Plus ²	PE11UX-P4	\$4103	\$1295	
Power Plus System ³	PP11UX-P4	4135	995	
Super Plus System ⁴	SU11UX-P4	6282	1795	
Terminal Plus System ⁵	TE11UX-P4	5170	995	
Thrifty System ⁶	TH12UX-P4	3330	395	
ThinkJet/Disk Drive Special ⁷	TH11UX-P4	1290	295	

² PERFECT PLUS — 512K Portable Plus, ROM expansion drawer, 128K RAM drawer, WordPerfect basic system in ROM and six free bonuses.

³ POWER PLUS — 512K Portable Plus, ROM expansion drawer, ROM-based software: Editor II, Webster's, FormatPlus, FilePlus, Shelp, and six free bonuses.

⁴ SUPER PLUS — 512K P.Plus, 128K memory drawer, ROM expansion drawer, ROM-based software from Power Plus package plus the following on ROM: ECM, TermPlus, Reflection, HP Duette Time Manager, Norton Utilities, OutlinePlus, RightWriter, MemoMaker, GamesPlus, and six free bonuses.

⁵ TERMINAL PLUS — 512K P.Plus, 1200 baud internal modem, ROM expansion drawer with ROM-based software: Reflection, MemoMaker, Time Manager, Advance Mail, and six free bonuses.

⁶ THRIFTY SYSTEM — HP110 with "How to Use HP Portables" video, HP110 Portable Paper Subscription and Subscribers Disk (all software on disk).

⁷ THINKJET/DISK DRIVE SPECIAL — HP-IL ThinkJet printer and 9114B disk drive. Price good with any P.Plus or HP110 purchase.

PERIPHERALS

MODEMS

Used 1200 baud Internal	BM11UC-P4	\$600	\$250	(167)
WorldPort Modem 1200	WM11NH-P4	199	179	
WorldPort Modem 2400	WM12NH-P4	359	319	(295)
WorldPort M. 2400/MNP	WM13NH-P4	499	425	
WorldPort serial cable	WM14NM-P4	30	20	
WP 1200 Upgrade kit	WM13NG-P4	199	179	
WP Acoustic coupler	WM16NH-P4	79	79	
HP9220SD Acoust. cpler	AC11NC-P4	195	135	

PRINTERS, PLOTTER (Reconditioned)

HP-IL ThinkJet Printer	TJ11UC-P4	\$495	\$199	(179)
ThinkJet (AC Powered)	TJ11UX-P4	545	249	(229)
Serial ThinkJet Printer	TJ14UC-P4	495	295	
DeskJet Printer, cable	DJ11UC-P4	837	395	(395)
DeskJet Plus, cable	DJ12UC-P4	995	450	
HP-IL 7470A Plotter	PL11UM-P4	1095	595	
PaintJet	PA12UC-P4	1395	CALL	
LaserJet 500 Plus	LA13UC-P4	4200	CALL	
LaserJet II	LA14UC-P4	2495	CALL	
LaserJet IID	LA12UC-P4	3795	CALL	
LaserJet IIP	LA15UC-P4	1495	CALL	

DISK DRIVES (reconditioned)

HP9114A Disk Drive	DD11UC-P4	\$795	\$199	(179)
HP9114B Disk Drive	DD12UC-P4	795	249	(199)
HP9114B (AC Powered)	DJ11UX-P4	845	299	(249)
15MB Hard Drive	HD11UC-P4	2700	995	

(with HP-IB/HP-IL Interface, cables)

MEMORY, SOFTWARE DRAWERS (Reconditioned, P.Plus)

1 MB HP RAM Drawer	MM11NC-P4	\$1275	\$995	(795)
384K HP RAM Drawer	MM12UC-P4	982	295	
256K HP RAM Drawer	MM19UC-P4	709	225	(199)
128K HP RAM Drawer	MM13UC-P4	436	150	
128K HP Memory Card	MM14UC-P4	273	125	(99)

HP ROM Software Draw.	SW11UR-P4	195	99	(79)
1MB RAM/2MB Flash ROM	MR11NH-P4	1995	1695	

ROM BURNING (Portable Plus)

ROM Burning kit	EP10NH-P4	\$695	\$595	(495)
(ROM burner & eraser, cable, 2 128K EPROMs, software, manual)				
128K byte EPROM	EP11NR-P4	69	59	(49)
(4) 128K byte EPROMs	EP12NX-P4	276	199	(179)
128K PROM (no erase)	EP18NR-P4	64	54	(44)
Four 128K PROMs (no erase)	EP19NX-P4	256	179	(159)
64K 27C512, EPROM	EP13NR-P4	25	22	(19)
ROM burning software	EP14NS-P4	250	195	
Custom 128K burning	EP15NE-P4	150	135	
Custom burning consult.	EP16NE-P4		75 per hour	

INTERFACE CARDS (reconditioned)

HP-IL Card For IBM PC	IL11UC-P4	\$195	\$119	(99)
P.Plus Video Interface	VI14UC-P4	435	195	
P.Plus V.Intf+Monitor	VM12UM-P4	750	275	
Composite monitor	VM11UC-P4	325	150	
HPIL/HPIB Interface	IL13UC-P4	395	235	
HPIL/Serial Interface	IL12UC-P4	295	179	

INPUT DEVICES

Log.Mouse P.Plus System	MS15NM-P4	\$219	\$179	
P.Plus Mouse Sftwre	MS11NS-P4	70	60	
P.Plus Mouse Cable	MS13NM-P4	30	20	
Numeric Keypad, P.Plus	TS11NM-P4	139	135	

THE PORTABLE PAPER

(Subscribers Disks Only Available With Subscriptions)

1991 Subscript. & Disk	PPN1PS-P4	\$55.00	(Free)	
All 1986-91 issues/disks	PL11PK-P4	159.00		
All 1986-90 issues/disks	PL14PB-P4	119.00		
Individual back issue	PP99PB-P4	9.20		
PP Binder Vol.6	PB16NM-P4	7.00		
PP Binder Vol.1-6	PB15NM-P4	35.00		

SOFTWARE ON ROM (P.PLUS)

If the product number ends with "UR", it is a reconditioned HP ROM. If it ends with "NK", it is a new Personalized Software disk plus ROM backup.

* You must own the disk version of the product in order to use Backup Price.

** New products or new prices.

Product	Part No.	Retail Price	Sub. Price	W/Plus Purchase	Backup Price*
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Combined ROMs

Shelp, SdWndr	SH13NK-P4	\$235	\$215	(139)	95*
SuperROM	SU11NK-P4	474	299	(199)	49*

(Editor I, Format110, PrinterTalk, Shelp, SideWinder)

Communications

Advanced Mail	AD12UR-P4	\$295	\$150	(99)	
PC2622	PC13UR-P4	395	239	(99)	
Reflection	RF11UR-P4	525	295	(139)	
TermPlus	TE13NK-P4	195	175	(99)	95*

Graphics

Sketch	SK12NK-P4	\$175	\$171		95*
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Productivity Boosters / Games

COMBO ROM	RO11NK-P4	\$499	\$299	(199)	
(2 ROMs: AsEasyAs, HP Duette, TermPlus Sidewinder, and TetPlus)					
DOS Tools	DT12NK-P4	\$179	\$169	129	
FilePlus	FE14NK-P4	165	155	(99)	95*
GamesPlus	GA11NK-P4	205	175	(159)	105*
HP Calculator	CL11NK-P4	95	95		
HP Duette	DU13NK-P4	195	185	(139)	95*
Norton Utilities (Adv.)	NU12NR-P4	249	199		99*
Shelp	SH12NK-P4	110	105		55*
Squish Plus	SQ11NK-P4	264	199	(199)	99*
Typing Whiz	TW12NK-P4	145	135	(99)	95*

Programming Languages

MSBasic	MS21UR-P4	\$331	\$165	(99)	
Turbo Pascal 3	TP13NK-P4		No longer published		95*

Spreadsheets and Database

As-Easy-As+SideWinder	AS11NK-P4	\$215	\$195	(159)	115*
Exec. Card Mgr	EC11UR-P4	395	225	(199)	
Lotus 123, 1A	LT14UR-P4	495	249	(199)	
Lotus 123, 2.01	LT15UR-P4	625	395		
SideWinder	SW12NK-P4	135	125	(99)	

Word Processors

Editor II	ED12NK-P4	\$195	\$175	(99)	95*
MemoMkr/TimeMgr	MM21UR-P4	245	119	(99)	

* You must own the disk version of the product in order to use Backup Price.
 ** New products or new prices.

MSWord	MS20UR-P4	394	199		
MultiMate	MM20UR-P4	520	295	(199)	
WordPerfect 5.0	WD11NK-P4	940	595	(495)	295*
WordPerfect Speller	RO13NK-P4	525	199		
(3 ROMs; Also including: HPDuette, Shelp, FilePlus, Tetplus)					
WordPerf. Thesaurus-3 ROMs	RO12NR-P4	250	147		
Writer's ROM	WR11NK-P4	499	299	(199)	170*
(2 ROMs: Editor II, Webster's, FormatPlus, FilePlus, Shelp)					
Writer's ROM II	WR12NK-P4	350	299	(199)	140*
(Includes RightWriter and Outline Plus)					

Word Processing Utilities

FormatPlus	FP13NK-P4	\$175	\$165	(99)	95*
HPrint	HP12NK-P4	175	171		95*
OutlinePlus	OU11NK-P4	175	165		95*
RightWriter	RW11NK-P4	205	199		110*
Webster Speller	WB13NK-P4	259	249	(199)	179*

SOFTWARE ON DISK

Product	Part Number	Retail Price	Subs. Price	With P.Plus Purchase
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Communications

CompuServe starter kit	CM11NS-P4	\$39.95	\$35.95	
Kermit	KE11NS-P4	19.00	19.00	
Relay Gold (Plus)	RG11NS-P4	295.00	279.00	
TermPlus	TE12NS-P4	99.95	79.95	(49)
Term110	TE11NS-P4	99.95	79.95	
YTERM	YT11UC-P4	135.00	49.95	

Database/Accounting Software

Condor 3	CR11NS-P4	\$495.00	\$279.00	(249)
Condor Jr	CR13NS-P4	99.95	89.95	
Dac-Easy Accounting	DC11NS-P4	150.00	129.00	(99)
Used dBase II	DB11UC-P4	550.00	295.00	

File Transfer

HPDuette for P.Plus	DU11NS-P4	\$99.95	\$89.95	
Link110	LK12NS-P4	90.00	85.95	
Link Plus	LK11NS-P4	90.00	85.95	
ReadHP	RD11NS-P4	79.95	69.95	

Graphics

Log.Mouse P.Plus System	MS15NM-P4	219.00	179.95	
PrintMaster (Portable Plus)	PR11NS-P4	79.95	69.95	
Sketch	SK11NS-P4	80.00	75.95	
Sketch Halftone disk	SD11NS-P4	9.50	9.50	

Learning Material for HP110, P.Plus

How to Use the HP Portables Video Tapes	VP11NM-P4	\$150.00	\$119.00	(99)
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Productivity Boosting Utilities / Games

BacTools	BC11NS-P4	\$49.95	\$39.95	
DOS Tools	DT11NS-P4	44.95	39.95	
FilePlus	FE12NS-P4	69.95	59.95	(49)
GamesPlus	GA11NS-P4	99.95	69.95	(49)
HP110 Utilities Disk	UD11NS-P4	20.00	20.00	(Free)
HP110 Productivity Disk	SB11NS-P4	35.00	35.00	(Free)
Keefe Kollektion	KE12NS-P4	39.00	29.00	
Norton Utilities Adv.	NU12NS-P4	150.00	99.95	(99)
Norton Utilities	NU11NS-P4	99.95	79.95	(79)
Private File	PF11NS-P4	39.95	34.95	
Shelp	SH11NS-P4	55.00	49.95	(49)
Squish Plus (Portable Plus)	SQ11NS-P4	129.00	99.95	(79)
Tiger Fox	TF11NS-P4	32.95	29.95	
Time Manager (Included in HP110 Productivity Pack above.)				
Typing Whiz	TW11NS-P4	49.95	39.95	

Programming

Compiled BASIC (USED)	MS13UC-P4	\$425.00	\$225.00	
FORTTRAN (USED)	FO12UI-P4	395.00	250.00	
MS BASIC (USED)	MS11UC-P4	325.00	165.00	
MS GW BASIC (USED)	GW11UC-P4	425.00	250.00	
Programmer's Tools (USED)	PT11UC-P4	325.00	175.00	
Turbo Pascal 5.5. P.Plus	TP52NX-P4	219.00	175.00	
Upgrade for Plus, HP150 (must own IBM PC Turbo 5.5, honor license)	TP15NS-P4	69.00	69.00	
T.Pascal 3.0 Optimizer	TP17NS-P4	125.00	119.00	

Project Management

Milestone	ML11NS-P4	\$99.95	\$89.95	
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SpreadSheet and Statistics

101 Macros	MC11NS-P4	\$69.95	\$62.95	
As-Easy-As	AS11NS-P4	99.95	79.95	(59)
Lotus 123, v2.01 / Symphony				
P.Plus Software Driver	LT14NS-P4	69.95	59.95	
SideWinder and Utilities	SW13NS-P4	79.95	69.95	
SideWinder	SW11NS-P4	69.95	59.95	(49)
Statistix 2.0	ST11NS-P4	169.00	159.00	

Word Processors

The Editor II	ED11NS-P4	\$99.95	\$79.95	(49)
Editor Pack	FM16NX-P4	259.00	195.00	
(Editor II, FormatPlus, Webster Speller)				
Editor II/Formatter	ED13NX-P4	119.95	99.95	
PlusPerfect	WD14NS-P4	150.00	129.00	(99)
VI (Unix-like editor)	VI11NS-P4	195.00	169.00	
WordPerfect 5.0 P. Plus	WD17NS-P4	645.00	395.00	(350)
(Includes PlusPerfect)				

Word Processing Utilities

Format110	FM12NS-P4	\$39.95	\$35.95	
FormatPlus	FP11NS-P4	79.95	69.95	(49)
Formatter	FM11NS-P4	59.95	49.95	
HPrint	HP11NS-P4	80.00	75.95	
MemoMaker Pack	FM14NX-P4	159.90	125.00	
(Format Plus, Webster Spelling Checker)				
OutlinePlus	OU11NS-P4	89.95	69.95	
PrinterTalk	PT11NS-P4	49.95	44.95	
PrinterTalk, Format110	PT12NS-P4	89.90	59.95	(49)
RightWords Dict. Ext.	RW12NS-P4	29.95	29.95	
RightWriter	RW11NS-P4	95.00	89.00	(79)
Webster's Speller	WB11NS-P4	79.95	69.95	(49)

ACCESSORIES, SUPPLIES

BATTERIES

HP110 Battery*	BT12HC-P4	\$39.00	\$39.00	
HP9114 Battery	BT13HC-P4	69.00	69.00	
Portable Plus Battery*	BT11HC-P4	59.95	59.95	
Refurb. ThinkJet Battery	BT12NG-P4	49.00	49.00	
Refurb. 9114 Battery	BT11NG-P4	49.00	49.00	
ThinkJet Battery (new)	BT14HC-P4	65.00	65.00	

* Includes instructions, torx screwdriver, nut driver.

CABLES

92221M serial modem 110,+	CA13HC-P4	\$42.00	\$42.00	
HP92221P serial print 110,+	SC13HC-P4	42.00	42.00	
HP-IL Cable, 1 Meter	HP14UM-P4	8.00	8.00	
HP-IL Cable, 1/2 Meter	HP12UM-P4	6.00	6.00	
HP-IL Cable, 5 Meters	HP11UM-P4	10.00	10.00	
Port-Mac DB 9-pin Cable	PO11NH-P4	59.95	59.95	
Port-Mac DIN 8-pin	PO12NH-P4	59.95	59.95	
(Port-Mac Cables connect 110, P.Plus to Apple Macintosh)				
Serial modem 110,Plus	WM14NM-P4	42.00	20.00	
Serial printer 110,Plus	SC13NM-P4	42.00	27.95	

CARRYING CASES

HP vinyl 110, + (Like New)	BV11UC-P4	29.00	29.00	
HP leather 110,+ (Used)	CS11UC-P4	89.00	49.00	
HP fabric system (Used)	SC11UC-P4	110.00	59.95	
Targus leather system	TA11NM-P4	199.95	179.00	
Targus nylon system case	TA12NM-P4	99.95	89.95	

POWER SUPPLIES, RECHARGERS

110, +, 9114, TJ charger	RC16UC-P4	\$20.00	\$20.00	
(European charger)	ER11HC-P4	25.00	25.00	
Empowerer II, HP9114	EM13NH-P4	119.00	95.00	
Empowerer II, ThinkJet	EM14NH-P4	119.00	95.00	
Mobile Recharger	PR11NM-P4	69.95	59.95	
Power Cube	PR13NM-P4	89.95	79.95	

PRINTER and DISK SUPPLIES

3.5" disks (10), case	DS11NM-P4	\$44.90	\$29.95	
DeskJet ink cartridge	CT11HC-P4	20.95	20.95	
HP92261n inkjet 2500 z	TJ12HC-P4	69.95	69.95	
HP51630a inkjet 500 z	TJ13HC-P4	19.95	19.95	
TJ ink cartridge (HP)	TJ14HC-P4	11.95	11.95	
TJ ink cartridge (plain)	TJ15HC-P4	11.95	11.95	
TJ ink cartridge (red)	TJ17HC-P4	13.95	13.95	
TJ ink cartridge (blue)	TJ16HC-P4	13.95	13.95	
TJ ink cartridge (green)	TJ11HC-P4	13.95	13.95	
TJ Printer stand (Used)	AC12HC-P4	49.00	19.00	

UPGRADES / REPAIRS

256K to 512K Plus Upgrade	256KNG-P4	\$1100	\$395	
128K to 512K Plus Upgrade	128KNG-P4	1100	395	
FastPlus (CPU Upgrade)	FA11NG-P4	250	199	(159)
HP110 keyboard repl.	KE11UC-P4	225	195	
HP110 screen repl.	LC11UC-P4	435	195	
P.Plus screen upgrade/repl.	GO11NG-P4	350	195	
P.Plus keyboard replacement	KE12UC-P4	320	250	
Repairs		CALL	CALL	

HP no longer manufactures HP Portable equipment. All items on this price list have never been used or are reconditioned and in excellent condition. All items come with a 60-day money back guarantee and a 1-year Personalized Software warranty.

PRICE LIST: LS/12, PORTABLE VECTRA, HP95LX

LS/12 SPECIFIC PRODUCTS

Product	Part Num.	Retail Price	Sub. Price
LS/12 COMPUTERS			
Used LS/12, 20MB Drive	LS11UM-P4	Call for \$, avail.	
Used LS/12, 40MB Drive	LS12UM-P4	Call for \$, avail.	

LS/12 MEMORY

1 MB EMS Memory	EM11NH-P4	\$295	\$285
4 MB EMS Memory	EM12NH-P4	1320	1220
<i>(Price includes custom installation. Must send LS/12 to Personalized Software to upgrade memory.)</i>			

LS/12 INTERNAL MODEMS

HPD1502a 2400 Modem	IM11HL-P4	\$449	\$369
Holmes 2400 FAX/Modem	DA11HL-P4	699	469

LS/12 DRIVES

Weltec 5.25" Drive	WE11NH-P4	\$349	\$299
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ADDITIONAL LS/12 PRODUCTS

Expansion Chassis, Cable	EX11NH-P4	\$599	\$599
Numeric Keypad	NU11NH-P4	129	115
HPD1057A Battery	NB11HL-P4	299	179
HPD1058A Recharger	BC11HL-P4	109	99
80287 math coprocessor	MA11HL-P4	649	379
LS/12 Carrying Case	CC11HL-P4	59	59

PORTABLE VECTRA CS SPECIFIC PRODUCTS

PORTABLE VECTRA COMPUTERS

Used Port.Vectra CS 20	VE17UC-P4	3595	895
Used Port.Vectra CS	VE12UC-P4	2495	495

INTERNAL MODEMS

HPD1003A 2400 Baud	VE16UC-P4	Call for \$, avail.	
HPD1002A 1200 Baud	MO11UC-P4	Call for \$, avail.	

SERIAL CARD, EMS MEMORY, OTHER CS PRODUCTS

Dual serial/EMS Card	AD11HC-P4	\$250	\$198
1 MB EMS memory	EM11HC-P4	595	295
HP-IL Adapter Card	HP16NM-P4	\$245	\$235
HPD1007A Soft Case	CS12HC-P4	Call for \$, avail.	
Battery (HP D1001-60924)	BA11HC-P4	250	225
Recharger (HP 5061-4335)	VR11HC-P4	97.50	97.50

MONITORS FOR VECTRA CS, LS/12

Monochrome Monitor	VI12HC-P4	\$129	\$119
CGA Monitor	MO12HC-P4	399	299
EGA Monitor	MO13HC-P4	599	479

THE PORTABLE PAPER

(Subscribers Disks Only Available With Subscriptions)

Product	Part #	Price
1991 Subscription & Disk	PPN1PS-P4	\$55.00
For Vectra CS, 1988-91 issues, disks	VE11PK-P4	109.00
For Vectra CS 1988-90 issues, disks	PP15PB-P4	79.00
For LS/12 1989-91 issues, disks	LS11PK-P4	89.00
For LS/12 1989-90 issues, disk	PP12PK-P4	59.00
Individual back issue	PP99PB-P4	9.20
PP Binder Vol.3	PB13NM-P4	7.00
PP Binder Vol.4	PB14NM-P4	7.00
PP Binder Vol.5	PB16NM-P4	7.00

Reconditioned PRINTERS for the LS/12, P.VECTRA CS

Product	Part Num.	Retail Price	Sub Price
New Diconix - parallel	DT11NH-P4	\$519	\$399
New Diconix - serial	DT12NH-P4	539	415
Serial HP2225D ThinkJet	TJ14UC-P4	495	295
Parallel HP2225C ThinkJet	TJ11U1-P4	495	295
DeskJet Printer, cable	DJ11UC-P4	837	395
DeskJet Plus, cable	DJ12UC-P4	995	450
PaintJet	PA12UC-P4	1395	CALL
LaserJet 500 Plus	LA13UC-P4	4200	CALL
LaserJet IID	LA12UC-P4	3795	CALL
Rugged Writer	RU11UC-P4	1695	CALL

PERIPHERALS for the LS/12, P.VECTRA CS

PORTABLE MODEMS, FAX

WorldPort FAX/Modem	WF11NH-P4	\$699	\$599
WorldPort Modem 1200	WM11NH-P4	199	179
WorldPort Modem 2400	WM12NH-P4	359	319
WorldPort M. 2400/MNP	WM13NH-P4	499	425
WorldPort serial cable	WM14NM-P4	30	20
WP 1200 Upgrade kit	WM13NG-P4	199	179
WP Acoustic coupler	WM16NH-P4	79	79

HP95LX PALMTOP PC COMPUTER

Product	Part #	\$ Retail	\$ Subscriber
**The Palmtop Paper, 1-year subscription			
PTPA01-P4	\$ 39.00	\$ 39.00	
**The Palmtop Paper, 2-year subscription			
PTPA02-P4	69.00	69.00	
HP95LX Palmtop PC	PTCOM1-P4	699.00	629.00
<i>(Comes with Lotus 1-2-3, version 2.2)</i>			
128K RAM Card	PTRAM1-P4	199.95	179.95
512K RAM Card	PTRAM5-P4	399.95	359.95
<i>(Expands 95LX file storage capabilities)</i>			
Connectivity Pack	PTCON1-P4	99.95	89.95
<i>Connect 95LX to PC-compatibles</i>			
Serial Interface Cable	PTSIC1-P4	35.00	35.00
Serial Cable Adapter Kit	PTSAK1-P4	15.00	15.00
Voltage Adapter	PTVOL1-P4	15.00	15.00
<i>(For U.S./Canada, conserve batteries)</i>			
Dictionary/Thesaurus Card	PTDTC1-P4	(Available in late 1991)	
<i>(Adds 116,000 word dictionary, 500,000 thesaurus to your 95LX.)</i>			

POQET PC COMPUTER

Product	Part #	\$ Retail	\$ Subscriber
**Poquet PC Computer			
PQ0164-P4	\$1,450.00	\$1,305.00	
<i>(With Poquet Utilities, Poquet Tools delivered on receipt of Warranty Registration Card)</i>			
**External Disk Drive			
PQ0511-P4	495.00	445.00	
**Parallel Port Cable			
PQ0572-P4	99.95	89.00	
**Data Link Cable			
PQ0545-P4	59.95	54.00	
**ROM/RAM Card Drive			
PQ0400-P4	495.00	445.00	
<i>(Connects to your desktop and lets it read RAM memory cards.)</i>			
**512K RAM Card			
PQ0611-P4	300.00	300.00	
**1MB RAM Card			
PQ0620-P4	700.00	700.00	
**2MB RAM Card			
PQ0621-P4	1,400.00	1,400.00	
**Lotus 1-2-3 on ROM			
PQ0715-P4	495.00	445.00	
**Lotus Agenda on ROM			
PQ0774-P4	395.00	355.00	
**Lotus Works on ROM			
PQ0727-P4	225.00	219.00	
**ACT! on ROM			
PQ0733-P4	395.00	355.00	
**XyWrite III + on ROM			
PQ0763-P4	495.00	445.00	
**WordPerfect 5.1 on ROM			
PQ01NR-P4	495.00	455.00	

EXTERNAL DRIVES, TAPE BACKUP

Backup (parallel port drives)			
5.25", 1.2MB Floppy Drv	BP11HC-P4	\$349	\$329
3.5", 2.8MB Floppy Drv	BP12HC-P4	\$425	\$395
Valitek Serial and Parallel Port Tape backup units			
60 MB Valitek	VA11NH-P4	1695	1495
160 MB Valitek	VA12NH-P4	2395	1995

OTHER LS/12, VECTRA PERIPHERALS

EtherNet Adapter	ET11NH-P4	\$695	\$629
Logitech Mouse	MS14NM-P4	119	99
Statpower PC100+ Inverter	ST11NH-P4	179	169

SOFTWARE for the LS/12, PORTABLE VECTRA

The Editor II	ED11NS-P4	\$99.95	\$79.95
Condor 3 for IBM	CR11HM-P4	495.00	379.00
LapLink	LA11NS-P4	139.95	119.00
NoSquint II	NO11NS-P4	49.95	45.95
Squish Plus	SQ12NS-P4	99.95	89.95
REDline	RE11HC-P4	49.95	49.95

Call for consultation and pricing on other IBM-compatible software products.

ACCESSORIES for the LS/12, P.VECTRA

PRINTER SUPPLIES

TJ plain paper cartridge	TJ15HC-P4	\$10.95	\$10.95
TJ inkjet paper cartridge	TJ14HC-P4	10.95	10.95
HP92261n inkjet 2500 z	TJ12HC-P4	64.95	59.95
HP51630a inkjet 500 z	TJ13HC-P4	19.95	19.95
DeskJet ink cartridge	CT11HC-P4	19.95	19.95

FLOPPY DISKS

10 3.5" disks and case	DS11NM-P4	\$44.90	\$29.95
10 3.5" 1.44M disks, case	DS12NM-P4	69.95	59.95

CARRYING CASES

Targus leather system	TA11NM-P4	\$199.95	\$179.00
Targus nylon system case	TA12NM-P4	99.95	89.95

CABLES

Standard Parallel Cable	PL11NM-P4	\$29.95	\$24.95
P.Vectra 25-pin serial prn	SE12HC-P4	29.95	24.95
9-pin AT serial prn cable	SE11HC-P4	29.95	24.95

(110% continued from page 17.)

high percentage of the people I talked to afterwards. It has the look and feel of a page layout program. I'm interested to find out how much of a page layout program it really is. WordPerfect for Windows is in Alpha testing now and is scheduled to ship sometime in August according to a support person I talked to recently. WordPerfect will then adapt DrawPerfect for windows for a 1992 release.

UNMOUSE

110 I have a love/hate relationship with the mouse. It makes
P+ page layout work a lot easier, but it's bit awkward to use.
PV I'm typing away and all of a sudden I have to take my eyes
LS 1/2 off the page I'm entering or editing to find the mouse. Then
I have to push papers and other reference material out of the way so that I have room to maneuver the mouse. Finally, I have to find my place on the page and keyboard before I can start writing again. Fortunately I saw something at COMDEX that may eliminate some of the awkwardness of the mouse.

The UnMouse is a finger pad that replaces the mouse on any PC or Mac application. When you need to use the mouse you simply reach over and touch a 3 x 5 inch pad next to your keyboard. As you drag your finger along the surface of the pad, the cursor moves on your screen. To click the mouse you just tap on the pad. I particularly liked the fact that I didn't have to drag the mouse around on the desk. The model I tested was a little sluggish, hard to manipulate, but I love the concept. If you use Windows and don't particularly like a mouse, then this alternative has a lot of promise. UnMouse was developed by MicroTouch Systems of Wilmington, Delaware, and retails for: \$235.

WHAT EXACTLY IS MULTIMEDIA?

In the beginning there was the podium to give the lecturer something to lean on and protect him from the audience.

Then God said, "Let there be charts, and slides, and overhead projectors." And God noticed that the audience paid more attention to the speaker and slept less in meetings. And God knew that was good.

Finally God thought that there must be something he could create to make sure that nobody ever fell asleep in a presentation again. And Lucifer whispered in God's ear: "Multimedia!"

Well, maybe it didn't happen quite that way, but one thing's true: you can't sleep through Multimedia.

Brian Teitzman (our Director of Sales) and I attended a Multimedia presentation on Intel's new 486 chip. A large, enticing line of COMDEX attendees wound around Intel's fortress booth. After about a ten minute wait, a pleasant attendant ushered us into a cylindrical room with floor-to-ceiling plush gray carpeting and twenty or so comfortable

padded chairs arranged in a circle. Six-foot-square video display monitors hung on the walls. There must have been at least 10,000 huge speakers with big woofers and tiny tweeters concealed somewhere behind the walls.

All of a sudden the sound of a thunderstorm reverberated back and forth between unseen canyons. The screens filled with beautiful pictures of landscapes, and then cities. Bridges and airports flashed by and scenes of beautiful women with young children touched your heart. The sounds of traffic surrounded us; then birds; then a jet taking off; and finally a tidal wave crashing down upon us. I may have some of the details mixed up, but it was something like that.

I think interspersed in there somewhere was some actual information about Intel's new 486 chip, but I don't remember any of it. I guess it doesn't really matter because, based on my experience at COMDEX, the purpose of MultiMedia is to entertain you, and above all, keep you awake. The Intel exhibit did both.

As I left the exhibit I peeked behind a "Don't peek in here" sign and saw a bored "Multimedia Technician" sitting in front of massive stack of computers and audio-visual equipment, reading a trashy novel. Quickly a pleasant attendant ushered me out the door. "Pay no attention to the man behind the curtain," she said. I turned to Brian and said, "Well Toto, this certainly isn't Kansas!"

OTHER THINGS THAT CAUGHT MY EYE

In no particular logical order, here are a few other things that caught my eye at COMDEX.

- **The PN48 Notebook Printer** — a teensy-weensy little laser-quality inkjet printer by Citizen America Corp. The PN48 is a two-pound unit that is 2 x 3 x 11 inches and retails for \$549. It is an extremely quiet dot-matrix printer with excellent output.
- **The Key Mouse** — it looks like a standard keyboard key, but causes mouse action on the screen. Push the left edge of the key and the arrow moves left, right edge and arrow moves right, press the key down twice and it's like clicking a mouse.
- **The BAT seven-key keyboard** — This very unique and interesting alternative to the QWERTY keyboard lets you enter letters, characters, and symbols one handed, by pressing key combinations. It's much like playing a chord on a piano. The BAT system is easy to learn and holds promise for easy typing on very small keyboards. A BAT palmtop computer and a BAT external keyboard for desktops computers are available.
- **ROM/RAM Card Drives** — it's like a floppy drive, but reads the little RAM cards that come with the HP95LX and the Poqet PC. Install the card drive on your PC-

compatible desktop computer and you swap files between it and the palmtops using the RAM card. I saw two or three companies with these drives.

- **Padded arm rests** — keeps the wrists aligned properly while typing. Reduces fatigue and other negative side affects associated with repetitive hand motion.
- **LiteShow II** — A transparent video display that rests on top of an overhead projector. Connect the LiteShow to your computer and display computer screens through it, and the overhead projector, on to the wall. The quality of the displayed pictures is very good.
- **Compu-Answer** — provides a toll free 800 number and technical support for over 2,000 PC-compatible software programs. Cost is \$120 per year.
- **Flextra 3020** — a very high density floppy disk drive that enables you to store 21.4MB on a special 3.5" floppy disk. The drive retails for \$795, the 3.5" floppy disk for \$25. The drive has an access time of 35 ms, about twice that of a standard 20MB hard drive.

HP'S ATLANTA RESPONSE CENTER

While we were in Atlanta we had the privilege of visiting the HP Atlanta Response Center, responsible for supporting HP's computer systems. We spent some time with the group responsible for supporting HP's personal computers, including the HP150, the HP110 and Portable Plus. They said they don't get many calls about those machines and are glad Personalized Software is around to help.

The quality of people and the team spirit they exhibited were the two most impressive things about the personnel at the Atlanta Response Center. They are all bright, knowledgeable, service-oriented professionals. They also know where the good restaurants are in Atlanta and we thank them for a wonderful seafood dinner.

IN CLOSING

The computer industry is changing fast and there's uncertainty associated with the future. Notebook computers are plentiful and their prices are dropping. It's only a matter of time before there's a notebook shake-out and who will survive? Pen-based systems are making their presence felt, but how well will they compete against voice recognition systems when they come on-line? And how will HP's new 95LX palmtop do?

The only really solid pieces of information I came away with were the following:

1. Atlanta is full of friendly people and fine restaurants.
2. Ted Turner owns some, but not all, of Atlanta.
3. The Atlanta Braves are having their first winning season in a long time thanks to some guy named Justice.

Charge your Portable (and HP9114 (and ThinkJet) off your car's cigarette lighter!

It's the Mobile Ni-Cad Recharger (MNR-2) from S.O.S., and it couldn't be easier to use: simply plug one end into your car's cigarette lighter and the other into your Portable, Portable Plus, HP9114, or ThinkJet.*

The time it takes to charge a given unit is about 30% longer than with a wall charger. Your car does not have to be running—the unit can operate overnight with no danger of running down a normal car battery.

Mobile Recharger \$69.95
Portable Paper subscriber price \$59.95
PRODUCT NO. PR11NM

* Also works with HP41C/CV/CX, HP71B, and HP75C/D hand-helds; HP82143 and HP82162 printer/plotters; HP82161 cassette drive; and rechargeable reserve battery packs for all these devices.

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Next year's Spring COMDEX will be in Chicago. If you've never attended COMDEX, try it in the Spring; it's smaller and more digestible.

Making Use of DOS Function Keys

It is a surprise to many DOS users that pressing the **MENU** key when you are in DOS reveals labeled function keys.

The Special DOS Editing Keys are described in the *Operating System User's Guide* of the HP110 Owner's Documentation. Table 6.1 shown below (found on page 6-4 of the MS-DOS section of the Owner's Documentation) describes the special editing functions and leaves a blank space for you to enter the key on "Your Keyboard" that activates that function. We have filled in those blanks.

Table 6.1 Special Editing Functions

Key	Editing Function	Your Keyboard
<COPY1>	Copies one character from the template to the command line	f1
<COPYUP>	Copies characters up to the character specified in the template and puts these characters on the command line	f2
<COPYALL>	Copies all remaining characters in the template to the command line	f3
<SKIPl>	Skips over (does not copy) a character in the template	f4
<SKIPUP>	Skips over (does not copy) the characters in the template up to the character specified	f5
<VOID>	voids the current input; leaves the template unchanged	f6
<INSERT>	Enters/exits insert mode	f7
<NEWLINE>	Makes the new line the new template	f8
<CTRL-Z>	Puts a CONTROL-Z (1AH) end-of-file character in the new template	

CONDOR 3 and CONDOR, JR.

Database management made easy!

If you have customer files, sales records, inventory, or lots of *anything* that you need to keep track of, you need a database management system (DBMS).

If you want a sophisticated DBMS that even a beginner can use, try Condor 3 or Condor, Jr.

Condor 3 runs on the Portable Plus, Portable Vectra, and HP150. Its smaller cousin, Condor, Jr., runs on the HP110 and Portable Vectra only. Both versions let you **set up a database in a single step**, simply by typing a picture of the input form right on your screen. You enter and modify data—or even revise the database structure—simply by typing right on the same form.

Unlike other database systems, you simply tell Condor **what** to do, not how to do it—and you tell it using simple, English-like statements such as LIST CUSTOMER BY NUMBER NAME STATE

AND COMPUTE TOT SALES.T0.DATE.

As a result, it takes only one fifth the time to compute, display, sort, search, or report on your data using Condor as compared with other database systems such as dBASE III. Most users find they can create and begin to use their first database within minutes after opening the package.

Condor 3 (but not Condor, Jr.) is a fully **relational** DBMS. That means you can use Condor 3 to compare, select, and combine data from two or more files. Condor 3 also lets you create your own custom report formats. (Condor, Jr. includes a LIST command for limited report writing.)

You can transfer data back and forth from Condor 3 to Lotus 1-2-3 print files

RECOMMENDED FOR:		Condor 3	Condor, Jr.
HP110 Portable			•
Portable Plus	•		
Portable Vectra	•	•	
HP150	•		
IBM PC and compat.	•	•	

WHAT THE EXPERTS SAY:

"If you want a database you can use immediately (without even opening the manual) . . . Condor 3 is the DBMS to buy."

—Jim Morgan, Data Base Advisor

" . . . a textbook example of what a database management system should be."

—James Perotti, PC Magazine

" . . . for a straight database, I'll take Condor."

—Jerry Pourmelle, InfoWorld

and other files not created by Condor.

Over 150,000 Condor programs are currently in use. We think the Condor people have done a fabulous job of packing an enormous amount of database power into an incredibly easy-to-use system. We urge you to try Condor 3 or Condor, Jr. at our risk today.

Condor 3 \$495.00
\$379.00 for Portable Paper subscribers

PRODUCT NO. CRI1NS

Condor, Jr. \$99.00
\$89.95 for Portable Paper subscribers.

PRODUCT NO. CRI3NS

MEMORY REQUIREMENTS

Condor 3 requires only 128K of memory to run. The entire program, including the report writer, fits in less than 360K. Since each command is in its own file, you can save memory space by deleting any commands you don't need.

Condor, Jr. is even more memory-efficient: the main program is only 25K, and you add individual 10K programs for each function you wish to use.

HPduette

It transfers files both ways between your Portable Plus and your desktop computer without an HP-IL card!

An HP-IL card inside your IBM PC or compatible computer lets you transfer files to and from your Portable Plus.

It's a good solution to the data transfer problem, *provided* you only use one desktop computer. But if you ever need to transfer data between your Portable Plus and someone else's desktop computer, you're stuck—or at least you were until now.

Because now there's a way to do it with software.

It's a program called HPDuette. Together with a special serial connecting cable that it comes with, HPDuette is all you need to transfer files at high speed both ways between your Portable Plus and any IBM PC compatible desktop.

RECOMMENDED FOR:	
HP110 Portable	Portable Vectra
Portable Plus	• HP150
IBM PC and compatibles	•

HPDuette performs complete error checking during the transfer process to ensure data integrity. It handles multiple-file transfers, subdirectory transfers, and DOS "wild card" usage. It lets you use DOS commands such as type, list, rename, and erase without having to exit the program. And it transfers data *faster* than you can with an HP-IL card.

HPDuette is easy to use too. Simple menus and easy-to-understand help screens are available at all times.

For true convenience in file transfer to and from your Portable Plus, order HPDuette today.

HPDuette with cable for Portable Plus . . . \$99.95
\$89.95 for Portable Paper subscribers.

PRODUCT NO. DUI1NS

HPDuette is a registered trademark of Platte River Associates, Inc.



HPduette comes with a serial cable and two disks; you load one disk into your Portable Plus and the other into the desktop.

HPDuette transfers data at 57,600 baud. To use HPDuette, you connect the 9-pin serial port on your Portable Plus to the serial port on your desktop computer using the serial cable that comes with the program.

60-DAY MONEY BACK GUARANTEE

See order form for details.

TO ORDER

Use enclosed postage-paid order form or send check or credit card information (#, exp. date, signature) to:

Personalized Software
P.O. Box 869, Fairfield, IA 52556 515 472-6330

There is no <CTRL-Z> and <INSERT> (f7) does not seem to work on the machines we tested.

By far the most useful of these DOS keys is f3. Pressing **f3** causes the last command you entered to be retyped on the screen, with the cursor at the end of the new line.

Using DOS's PROMPT command, you can program any of the function keys to stand for any set of characters or DOS commands you wish. We will give an example and short explanation below. Those more familiar with DOS and programming can experiment on their own. A detailed examination of the PROMPT command can be found in a DOS manual.

The following command issued from DOS makes the f1 function key initiate the DIRectory command from DOS.

prompt \$e&f0a1k6d8LDIR A:DIR A:\$_

110

P+

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LS/12

In this example, the first six characters after "prompt" tell the Portable to set up a function key. The **\$e** sends the PROMPT command to the HP Portable screen driver, which recognizes the prompt output as a command sequence, and then executes it. The **1k** indicates that f1 will be defined (2k = f2, and so on). The **6d** means that there will be six characters in the label that appears on the screen. Those 6 characters, **DIR A:**, follow 8L in the Prompt Command line. The **8L** refers to an eight-character DOS command to be executed when f1 gets pressed. In this case, the command is **DIR A:\$_** where DIR A: is the directory command, and \$_ is the equivalent of pressing a **Return**.

Placing PROMPT commands into a batch file allows you to set up all of your keys.

■

More Room on Your Floppy Disk

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P+

If you format your 3.5: disk using the format program built into the HP Portable file manager, the disk will have room for 710K bytes of data. But why not have more? If you format the disk with the format program found in the HP110 utilities disk and built into the Portable Plus using option Z, you will have 780K storage—about a 10% increase!

Portable Plus owners issue the following command from the DOS prompt:

format c:/z/i4

HP110 owners (assuming your utilities disk is in drive C) issue the following command from DOS:

a>c:format c:/z/i4

You will be prompted to place the disk you wish to format in the C drive. After formatting, you do not have the capacity to store 780,416 bytes of data instead of the normal

700,416 bytes of data. (This command formats the disk at 1,024 bytes per sector with an interleave of 4. The built-in format program uses an interleave of 8 at 512 bytes per sector.)

A word of caution if you plan to have an IBM PC read your disk (via ReadHP from Personalized Software or the Portable to Desktop Link card). The IBM PC will not be able to read/write to a disk formatted using the Z option.

■

When the HP110 or Portable Plus Have Memory Allocation Problems

110

P+

The HP110 and Portable Plus let you divide up internal RAM memory into Main Memory (the RAM used to run programs) and an Edisc (an electronic hard drive where you can store programs and documents). Simply press **f6** to display the System Configuration screen. The first option is "Main Memory / Edisc." Use your **f3** and **f4** keys to change the setting and press **f8** to exit.

On a 512K Portable Plus the minimum amount of Main Memory you can allocate is 80K, allowing a maximum Edisc of 432K. The maximum amount of Main Memory you can allocate is 508K, leaving a minimum Edisc of 4K. These figures differ on Portable Pluses with more RAM memory.

The HP110's RAM can be similarly divided: 96K Main Memory, 176K Edisc represents the maximum Edisc allocation possible.

THE PROBLEM

The electronic disk allocates space for files in a consecutive order. When you delete a file out of the middle, you leave a gap of unused space in the middle, not at the end of the disk where you need empty space in order to reallocate. "Disk fragmentation" is the term used to describe a disk with patches of non-consecutive empty space.

When this occurs, you may find that you are not able to use the above procedure to reallocate Main Memory/Edisc space. A fragmented disk may mean that you are unable to increase the Main Memory, even though there is plenty of unused Edisc space. To resolve this problem, copy all files from disk A to a backup floppy or other medium; erase the files on disk A; reallocate the file space; and copy the files back on to your now cleared electronic disk.

An alternative is to run PACK (built into the Portable Plus and available from Personalized Software for the HP110) by typing **pack** into PAM or from the DOS prompt.

■

Speed up your Portable Plus

At least 60% faster with our low-cost "FastPlus" upgrade!

By installing a faster processor and increasing the clock speed of your Portable Plus, you can run Lotus 1-2-3 and other applications at least 60% faster than before.

The upgrade is straightforward, but requires skill and experience working inside a Portable Plus.

If you want to try it yourself, see our instructions in *The Portable Paper* Vol. 3, No. 1, pp. 12-14.

If you want our trained technicians to do it for you, call to schedule an appointment, then send us your Portable Plus and \$250.

(This covers the cost of de-soldering the Harris 80C86 processor and replacing it with the faster NEC V30, increasing the clock speed from 5.33 MHz to 8 MHz, and

returning your computer to you via UPS surface. If you prefer overnight return shipping, add \$35.)

In most cases, we'll perform the upgrade and ship your computer back the same day we receive it. In all cases, we guarantee our work for 60 days.

Please note: This upgrade will void your HP warranty, and HP will be under no obligation to service your Portable Plus in the future. However, we will continue to service upgraded machines, and HP repair centers may, in fact, do the same.

This "FastPlus" upgrade will make your Portable Plus more than twice as fast as the original IBM PC—that's even faster than the HP Portable Vectra!

To save time running your spreadsheets, editing your documents, loading programs, saving files, and almost anything else you use a computer for, order the "FastPlus" upgrade today. You'll appreciate the difference it makes!

"FastPlus" upgrade for Portable Plus \$199

PRODUCT NO. FA11G
(Be sure to call first to schedule an appointment.)

Overnight return shipping . . \$35.

Sharing Info Between Two Portables Using HPLINK

110 When you do this, one HP110 or Portable Plus must be the controlling system or host computer, and the other Portable, **P+** and any peripherals attached, will be used as peripherals for the host Portable.

Connect the Portables together with two HP-IL cables making a complete loop. On the Portable to be used as a peripheral, type **hplink** into PAM or DOS and press **Return**. On the host Portable, in the SYSTEM CONFIG, (f6) menu, set the EXTERNAL DRIVES field to **2**.

The host computer functions as it did before, but acts as if it has two new drives, a C and a D drive. The slave computer's A drive becomes the host's C drive, the slave's B drive becomes the host's D drive. To copy files from DOS, type **copy A: filename.ext c:**. To exit the HPLINK program, press any key on the peripheral system.

Moving Text Between Files in MemoMaker

110 To move text between MemoMaker files, define the block of text by using either the **Cut Out Block** or **Copy Block** **P+** functions, and then get the file that you want to insert this block into, using the Get Memo function. Move the cursor to the point in this file that you want to insert the block, and use the **Paste Block** function.

After cutting out or copying the block from the first file, don't delete any lines or characters, or define any other blocks, until you have pasted the first block. Deletions or block definitions will erase the contents of any previously defined block.

MemoMaker File Size Limitations

110 MemoMaker on the HP110 is limited to 819 lines per file. This is because MemoMaker can edit a maximum of 64K of files. Every line in MemoMaker occupies 80 characters. Multiply 80 character times 819 lines and you get 65,520 bytes. MemoMaker's rather unintelligent memory management scheme forces this situation.

NEWS FROM

Personalized Software INC.



Products that make HP Portables smarter

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The Palmtop Paper

10 It's official. We will start publishing *The Palmtop Paper* in September. *The Palmtop Paper* will support HP Palmtop computers in a manner similar to the way *The Portable Paper* has covered HP Portable computers.

32 *The Palmtop Paper* will serve as a clearing house for information about how to make the best use of the HP95LX. The built-in applications and their interconnection supplies plenty of food for discussion. We have already discovered a hidden subdirectory that includes several interesting files including an addictive game of logic called Hearts and Bones that can be integrated with the rest of the HP95LX built-in software.

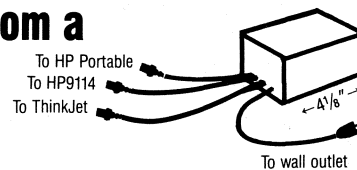
In addition, a whole host of products from HP and other parties will support the HP95LX. *The Palmtop Paper* will provide a vehicle for the user community to know about these products and share their insights about them. We will create an independent catalog of what we hope will be a complete listing and description of add-on products for the HP95LX. We want to keep our newsletter and catalog operations more separate than has evolved in *The Portable Paper*.

In the past six years well over half the information presented in *The Portable Paper* has been supplied by users in the form of columns, articles, and letters. These users have been compensated by the pleasure of sharing insights with others in a global HP Portable user community. We have always taken the point of view that the expertise on HP Portables is not limited to our tiny company in this tiny town in the middle of Iowa. Nor does it reside with the engineers who created the computer. The expertise comes from sharing the knowledge of the everyday user of the computer.

When you purchase your HP95LX, join the new community of HP Palmtop users by subscribing and contributing to *The Palmtop Paper*. I would love for the first issue to contain many letters and articles from subscribers. The deadline for submissions to the first issue will be the last week in August.

Subscription prices will be \$39 for 1992 and \$69 for 1992 and 1993. These prices include a free 1991 issue and annual

Power your Portable, ThinkJet, and HP9114 from a single wall outlet.



Can't plug your Portable, ThinkJet, HP9114, and HP hand-held into the same wall outlet because the recharger cubes are too big? Here's the solution:

The Power Cube/Recharger from Personalized Software.

The Power Cube has four power cords. Three are HP cords that plug into your HP Portable, ThinkJet, HP9114 disk drive(s), or HP hand-held (HP41, 71, 75, series 80, etc.).

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Get rid of that tangle of extension cords, power strips, or whatever else you've been putting up with.

Order a Power Cube/Recharger today.

Power Cube/Recharger \$89.95
\$79.95 for Portable Paper subscribers.

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Subscribers Disks. If you purchase an HP95LX Palmtop from us, the 1992 subscription is free.

1 Meg Drawer Sale

P+ We have had a difficult time obtaining HP 1MB Drawers for the Portable Plus and have been forced to leave our price at \$995. Recently, however, we were able to purchase 50 drawers at a very good price. We will sell these for \$595 as long as supplies last.

RAM / FLASH ROM Drawers

P+ Everyone who has used the 1MB RAM, 2MB Flash ROM drawer has loved it. (See Ed Keefe's Looking Glass column, page 30, and this column in the last several issues). I was talking with Rich Wilson, the ROM/RAM drawer's engineer, the other day. He told me that with Intel introducing its new 2MB Flash ROM chips, a 4MB Flash ROM, 1MB RAM drawer would be possible using his same design. If you used two of the drawers, you would have 8MB of Flash ROM and 2MB of RAM. Rich says that a new device driver would have to be written to "educate" the Plus so it could access all the Flash ROM. Rich thought such a driver could be written.

Back to the real world. Flash ROM prices continue to come down. If we could get an order for, say several hundred, we could bring the price way down - maybe even to the \$1000 range. HP still has about 3000 Portable Pluses in the field and many units are strapped for memory:

***** HP ARE YOU LISTENING? *****

In the meantime we may have one additional 1MB RAM, 2MB Flash ROM unit for sale for \$1695. Call immediately if you want it (or to get your name on an indefinite waiting list). If we do not get a sizeable order - at least 25 - we will not be able to produce more.

A final note: Frank Keresztes-Fischer reports that his

SoftWord 2MB RAM "C" drive works with the Flash ROM drawer. That means Frank has 512K of main memory, 1MB of A drive RAM disk, 2MB of B drive flash ROM, and 2MB of C drive RAM disk. A total of 5.5MB!

ROMBO Update

P+ As reported last issue in this column, Rich Wilson, designer of the Flash ROM card, rewrote ROMBO software. He makes the whole program easier to use. The big news, as described last time, is that his software does away with the 256K subdirectory size limit. That means products like WordPerfect become completely ROMmable.

We will sell the Rich's disk, as is, for \$29. The documentation comes in the form of a DOC file and is understandable for computer users but is not for novices. The program is actually extremely simple to use. We will start including this disk with the new ROMBO units we sell.

2400 Baud Internal Plus Modem

P+ Little progress has been made on the internal 2400 baud Portable Plus modem. We were unable to get a commitment from enough of you (or HP) for 40 units - the approximate break-even number. However, we are exploring another means to produce these units in smaller quantities. Your urgings and interest will determine to a large degree whether we go ahead with the project.

Lots of 75D's

110 We have over 200 HP75D's with extra memory. They contain an excellent version of BASIC. Most have never been used. They have no batteries, HP-IL cords, manuals, or chargers. Batteries can be purchased from EduCalc (800-677-7001) for \$15, as well as other products. The charger and HP-IL cords are the same for the 75D as for the Portable Plus and HP110.

We will sell the 75D's, as is, for \$35. (The original retail was well over \$1000.)

If you want a number of them, make us an offer. We will probably accept it as long as you pay shipping. (See *Through the Looking Glass*, this issue, for more information.)

Hidden Treasure

P+ I want to encourage Portable Paper subscribers to take a serious look at the value offered in our "Hidden Treasures" catalog summarized on the back page of this issue. You more than anyone know of the value offered. What a great system for friends, colleagues, students, or family members. Remember, each Portable includes a five hour video tape on how to use the HP Portable. Purchase a second Portable Plus system for yourself loaded with ROMs or upgrade at last from your HP110 to the Portable Plus.



Through the Looking Glass

by Ed Keefe

ON THE ROAD AGAIN

110 Another semester has come to an end. Having posted my semester grades, I figured it was a good time to make my annual pilgrimage to Personalized Software in Fairfield, Iowa.

P+ Fairfield is about a three hour drive from where I live and work. The drive is through rolling Iowa countryside. It winds through corn and soybean fields and in and out of small country towns. The town of Fairfield itself is very attractive. It's small and peaceful. The people are friendly. Besides this, there are plenty of parking spaces around the town square. And the parking meter attendant is very forgiving of out-of-towners.

PV Personalized Software is located on the north side of the town square, sandwiched in between a sporting-goods store and a portrait studio. It's easy to spot. Look for a sign over the store front with Hewlett-Packard-blue lettering and a picture of the company's cornerstone: the HP110 computer.

NEW PEOPLE

110 While I was there I had a chance to meet many of the new people on the staff of Personalized Software. It constantly amazes me where, in Fairfield, Iowa, Hal Goldstein manages to find the brightest and most knowledgeable people to help him run the company.

P+ *[EDITORS NOTE: We really have special people working for us. Fairfield, Iowa has attracted talented people from all around the world to attend local Maharishi International University (MIU) or to participate in MIU's world peace project. All of our employees take part in this project which is based on the practice of Transcendental Meditation and advanced TM techniques.]*

PV Morning and evening, all the those in the University and Fairfield TM community meditate together in two large, wooden, golden-colored domes in the center of the MIU campus. Quite a bit of scientific research has been conducted on the individual and global effects of the two thousand people meditating together twice daily. According to the theory that explains our project, large

groups of meditators create waves of coherence at a universal level of creation, a level where the laws of nature that govern the universe reside. These "waves of coherence" not only promote world peace but contribute to the creation of "Heaven on Earth." Proponents of the project, which has been going on for a number of years, feel the breakthrough in East/West relations is due to this invisible effect of increasing coherence. According to the theory, seven thousand people practicing the TM techniques together are needed to create permanent peace in the world.

Being located in Fairfield has meant that we have been able to gather an exceptional group of people - many of us willing to make temporary financial sacrifices in order to live in this community while we build an economic base. Our employees have three characteristics that most employers would envy. First they are naturally service-oriented. Secondly, they are growth-oriented - they want to improve themselves. Finally, although very conscious of the importance of the material aspect of life, there is an awareness that deeper, less tangible values are of greater importance.

Even with the strong individuals that work for us, we at Personalized Software still have roughness behind the edges. Very few of us at Personalized Software had much of the practical experience it takes to run a successful business. We have learned much in these past years. Our customer base consists of the exceptional people attracted to the excellence that Hewlett Packard has always stood for. This strong, loyal, intelligent, forgiving customer based has helped us immensely these past six years. We hope you will stay with us as we begin publishing the HP95LX *Palmtop Paper* - Hal.]

I even got to sit in on a staff meeting. It was my kind of meeting: short! The topic was the newly released *Hidden Treasures* sales catalog. You should have received a copy of this catalog with the last issue of *The Portable Paper*. If you happened to set the catalog aside, dig it out, now, and look it over. It's very eye appealing and contains some really great bargains. (Sales meetings are infectious!)

Besides meeting the staff, and visiting with Hal and Rita, I had the opportunity to look at some of the new products that Hal had in house.

FLASH-ROM FOR REAL

I saw my first example of a Flash-ROM drawer in action, in a Portable Plus. This particular Portable Plus contained two megabytes of additional RAM and two and a half megabytes of Flash-ROM. This, in itself, is quite impressive in a machine that is run with MS-DOS 2.11

Flash-ROM is Intel Corporation's name for electrically erasable, programmable, read-only memory (EEPROM). The name is misleading because this type of memory is not, strictly, "read only." It can be written to, erased, and written to, again and again.

In practice, the Flash-ROM for the Portable Plus behaves like a very fast set of EPROM chips. You can use it to create banks of software and data files that draw no electricity once they have been programmed. To rewrite a flash-ROM memory, you just issue a command to erase it.

Forget the ultra-violet zapper.

Even though the list price of about \$1700 for a Flash-ROM drawer seems expensive, consider that you would have to pay about \$600 for a ROMBO EPROM burner and another \$500 for the EPROMs to fully populate a ROM drawer on the Plus. Add to that the cost of one megabyte of RAM at \$900 or more, and the cost of the Flash-ROM drawer is in the ballpark. What makes the Flash-ROM drawer expensive is that it is hand made on a small scale. The development cost is high and the technology is quite new.

The creator of the prototype Flash-ROM drawer also did all the programming necessary to make the Portable Plus manage this kind of memory device. And, believe me, what I saw told me that the programmer knows how to write software that is user-oriented. The software does not have pull-down or pop-up menus. It's utility software, but very easy to use once you get the idea of how the FlashROM memory is laid out.

The disappointing news is that the designer of the Flash-ROM drawer has only enough material and capital to build four of these drawers. Personalized Software needs orders for 10 or more to build them.

If you're in the market for more memory for your Portable Plus and have been thinking about getting a ROMBO Kit and burning your own ROMS, consider the flash-ROM alternative. Flash-ROM is the way to go if your files are subject to frequent change or updates. The Flash-ROM drawer also works well with a ROM drawer, so hold on to ROMBO if you have it.

THE POQET COMPUTER

Hal also showed me his own, new, Poqet handheld computer. I have mixed reactions to the Poqet. It's too big to be called a palmtop. If your palm is large enough to hold the Poqet, then your fingers are probably too large to type on it. It's also too large to carry in a coat pocket, unless you have very deep pockets. And in the past you needed "deep pockets" to pay for the machine.

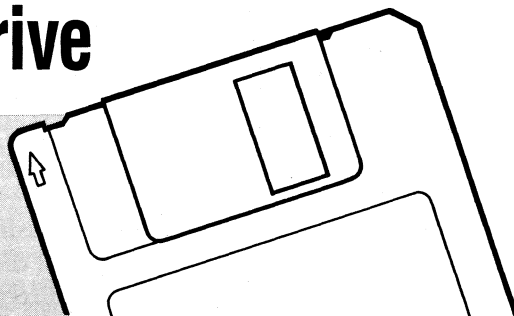
The display of the Poqet is crisp and readable. The keyboard is good. The keys are small and packed closely together. They exhibit very little travel, but the pressure needed to activate them gives them the feel of a much larger keyboard with full travel. I still want to see the Hewlett-Packard 95LX computer before deciding if a handheld, Lotus machine is a practical idea.

AN OLDIE BUT GOODIE

And, speaking of palmtop computers, how many of you remember the HP-75 computer? The HP-75 was HP's first attempt at producing a miniature computer with a full keyboard. It came with 24K of RAM and a one line display of 32 characters. The keyboard featured calculator-type keys.

Now you can use HP Portable or HP150 disks (single or double sided) in a 3½" IBM compatible disk drive

**Volume
Pricing
Available**



Even though your HP Portable/HP150 and the new IBM compatible computers both use 3½" disks, the disks are incompatible—HP disks can't be used in IBM machines.

ReadHP, a "device driver" program developed by Personalized Software, solves the problem.

ReadHP installs in an IBM PC or compatible in minutes, and is a cinch to use: You simply place a 3½" HP disk (single or double sided) in the PC's disk drive, and press a few keys. Voila! The PC can read and write to the disk directly—without losing the ability to read and write to IBM disks.

Want to share your WordPerfect, Lotus, or other files between your HP Portable/HP150 and an IBM compatible with a 3½" disk drive? It's simple: Order ReadHP today.

ReadHP \$79.95

Portable Paper subscriber price \$69.95

PRODUCT NO. RD11NS

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P.O. Box 869, Fairfield, IA 52556 515 472-6330

RECOMMENDED FOR:

HP110 Portable	●
Portable Plus	●
Portable Vectra	●
HP150	●
IBM PC and compat.	●

The HP-75 uses HP BASIC: one of the best versions of BASIC around. The computer even had optional plug-in ROMs that would let you have 8K bytes more memory, the complete VisiCalc program, and a math pack for engineering use.

I mention the HP-75 because Hal has many of these oldies but goodies in stock. He picked them up as part of a purchase of used equipment. The HP-75Ds that Hal has are mounted in a "pod". The pod more than doubles the size of the computer, but adds 64K working memory and a 300 baud modem. The computers do not have any of the optional ROM packs. However, many of them come equipped with wands and the extra 8K byte memory pack already installed.

Hal said that he would be willing to sell these HP-75s cheap. They would be ideal choices for someone who needed a programmable controller device. They could be programmed in BASIC and could use the HP-IL interface. The only catch is that "batteries are not included." The machines came to Personalized Software with the battery packs missing. EduCalc lists the replacement batteries at \$15 each (call EduCalc directly at 800-677-7001). These machines need two such packs.

Before I got my HP110, the HP-75 served me well. I used it to develop a course in BASIC programming and then used the computer, along with a TV interface, to put the course material on a large screen monitor for classroom viewing.

And, in spite of the "Chiclet" style keys, I even used the HP 75 to write a 300 page lab manual for another course. My HP75 is still in daily use. Its alarm wakes me up each morning. And, whenever I need to hack out a BASIC

program, I turn to the HP-75 rather than to GW BASIC on my desktop.

If you can think of any uses for these machines, give Personalized Software a call. They won't turn down any reasonable offer. They may even accept ridiculous offers.

VDE110.COM

After looking at everything new and old that Hal wanted to show me, it was my turn to show him some of my discoveries. First, I wanted to see if the latest version of the Video Display Editor could be made to work on the HP110.

Eric Meyer, the author of the famous VDE program, claims that the word processor can now run in 128K bytes of memory and can be modified to run on any size display. Sure enough, he is right. I modified VDE to work on an ANSISYS monitor with 16 lines of display and transferred it to an HP110. I then configured the machine to use 128K of memory and set it up for ALT screen and keyboard. I next typed **VDE110** at the PAM command line and, lo and behold, the program ran without a hitch.

If you have an HP-110, you really must try VDE on it. The program will give you one good reason to hang on to this machine. If you already have an older version of VDE running on an HP-110, get the latest version (1.61a) and be amazed at what more you can do.

There are so many features in this latest rendition of the VDE text editor that it would be hard to even list them. Some of the newer features include automatic macro recording and playback, multiple file editing (although this may be limited on the HP110), and a style sheet that will let you write C or Pascal source code with ease. One of the

nicer features is proportional font control. You'll need a LaserJet, or other suitable printer, to get the full benefit of this, however. There is even a way to get VDE to have about 70% of the look and feel of WordPerfect 4.2 on the HP110.

The commands in VDE110 mimic those in WordStar. If you don't want to learn how to key in WordStar's Control commands (Ctrl-KB, Ctrl-KK, etc.) just press the **Esc** and ? keys. You should see "Esc=MenuBar" appear on the upper right of the screen. Now, when you press the **Esc** key, you'll get a menu, similar to the menu in "The Editor." This menu has no sliding highlighter. You just press the capitalized letters to activate the commands.

I've put together a single-sided disk containing all the files for VDE 1.61a along with my own version of VDE110.COM. There is also a file on the disk, called VDE110.DOC that describes how I made the modifications and how to get VDE to work on your HP110. Note that this version of VDE110 includes print drivers that will let you produce some great looking documents on a DeskJet or LaserJet printer. Send me a self-addressed, stamped envelope with a formatted disk for the HP110 version of VDE. My address is at the end of this article.

REBUILDING MY PORTABLE PLUS

After a morning of "Show and Tell" at Personalized Software, it was time to get some work done. I wanted to upgrade the EPROMs in my ROM drawer on my Portable Plus. I had tried to remove the EPROMs from the drawer but was unsuccessful. I needed to have someone show me how to do it. I had been trying to pry the EPROMs loose and quit when I heard one of the chips start creaking under the strain.

Larry Baldozier showed me how easy it is. The trick to removing EPROMs is to insert the blade of a small screwdriver under an open edge of the EPROM. Then gently twist the screwdriver. Keep twisting the screwdriver clockwise and counterclockwise as you slide it further under the EPROM. Eventually, the EPROM will slip out of the sockets on the printed circuit board. It's easy, once you've seen it done. Nice going, Larry!

From there, Larry and I used the flash-ROM on his Portable Plus to produce image files and burn the EPROMs. It took about 15 minutes to create working flash-ROM versions of all the software that I had. It took another 5 hours to get the same thing to happen using EPROMs and the ROMBO kit. If the difference between 15 minutes and five hours doesn't sell you on the benefits of flash-ROM, nothing will.

GETTING AS-EASY-AS TO WORK FROM EPROM

When I got back home, I couldn't wait to try out my new version of the Portable Plus. However, I found that I had to rewrite most of my batch files. The programs that formerly

were on my Edisc and external disk drive, were now on the B: drive. In the process, I hit upon a couple of techniques to get As-Easy-As, the spreadsheet, to work from EPROM. I also have a way to run OutlinePlus (the modifiable version) from EPROM, as well.

In case you ever want to put these programs on EPROMs, here are the salient portions of the batch files that will let you run these programs without having to put any support files on your Edisc.

For As-Easy-As, suppose that you want to start the program with the column letters centered in each column. Further suppose that you want to have As-Easy-As execute a particular program upon startup. That startup file may also be on an EPROM. However, you want to get other worksheet files from the \AEA directory on your Edisc.

Here is a batch file program that will make this possible.

```
a:           Make sure you're using the Edisc.
cd\         Change to the root directory.
md aea      Create the AEA directory.
cd aea      Change to the AEA directory.
b:          Switch to the EPROM drawer.
cd\ao       Switch to the directory containing AsEasy.
aseasy /ctr /auto=gbkhp.wks /dir=a:\aea
            Run As-Easy-As with centered columns,
            and startup file (GBKHP.WKS, in this
            case); use A:\AEA as default directory.
```

Using Outline Plus from EPROM is no problem if you choose to stay with the non-modifiable version of that program. However, if you're like me, you may want to use the modifiable version of Outline Plus. This version of the program lets you change the menu structure and the help files and turn off the beep-on-error. The down side is that the program needs three separate support files and these files have to be in the default directory when Outliner starts. Here is part of a batch file that will let you run Outliner from EPROM with the DAT, .MNU, and .HLP files remaining in EPROM as well.

```
a:           Make sure you're on the A: drive.
cd\         Change to the root directory.
md w        Make a directory (herein called "W").
cd\w        Change to this new directory.
b:          Switch to the B: drive.
cd\ao       Change to the directory containing the
            Outliner files.
op a:\w\%1   Run the Outliner (herein rename OP)
            using a file located in the A:\W\ directory.
a:           Switch back to A: upon leaving Outliner.
```

Before you commit yourself to putting the support files on EPROM, be sure they work as you want them to. Once they are in EPROM, they become semipermanent and undoing any mistakes is a real hassle.

2400 baud portable modem for your HP Portable

The 4"×2"×1" WorldPort 2400 costs less than HP's internal modems, is faster, and can be used with more than one computer.



Weighs only 6½ ounces!

If you do data communications with an HP Portable or Portable Plus, you've probably found the internal 300- or 1200-baud modem to be too slow. Until now, the only solution was to buy a bulky external modem and lug it around wherever you go.

A better solution is the Worldport 2400. It measures a trim 4"×2"×1", it's rugged, it weighs only 6½ ounces including the battery, and it sends and receives at 300, 1200, and 2400 baud.

A MYRIAD OF FEATURES

The Worldport 2400 has a wealth of features you must expect to find in a desktop modem several times its size.

EXTRA BONUS FOR USERS OF THE IBM PC AND NEW HP PORTABLE VECTRA

Included with the WorldPort 2400 at no charge is the acclaimed communications and remote control software package, Carbon Copy PLUS (retail value: \$195). The program also comes free with the WorldPort1200—WorldPort2400 Upgrade Kit. (Carbon Copy PLUS will not run on the HP110 or Portable Plus, but both WorldPort modems will run with HP's communications software, namely the Terminal program for the HP110, and TERM and Reflection for the Portable Plus.)

For example, the WorldPort 2400 has auto-dial, auto-answer, and both pulse and tone operation. It comes with a standard modular phone plug for connecting with the telephone line. It offers non-volatile storage of up to 20 commands. And it is fully compatible with the industry-standard Hayes AT Command Set, and with the HP110's Terminal software and the Portable Plus's TERM and Reflection software.

Since a modular plug is not always available, the WorldPort 2400 also has a built-in interface for an acoustic coupler. (The coupler, an optional extra, runs at 300 and 1200 baud.) The unit is compatible with both the internationally accepted CCITT communications standards and the Bell communications standards recognized in the U.S.

The WorldPort 2400 uses a standard 9-volt transistor radio battery (it's included with the unit). A fresh battery will keep the WorldPort humming for 8-10 hours. You can extend battery life by operating the unit from a wall outlet whenever possible, using the optional AC adapter. The WorldPort 2400 draws no power from your Portable's battery.

DOUBLE GUARANTEE

In addition to our standard 60-day money-back guarantee, the

WorldPort 2400 comes with a 2-year manufacturer's warranty covering defects in materials and workmanship.

The WorldPort 2400 offers portability, reliability, well-designed features, and ease of use. Order yours, risk-free, today.

	Retail Price	Subscriber Price
WorldPort 2400 modem	\$359.00	\$319.00
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WorldPort Modem 2400/MNP	\$499.00	\$425.00
		WM13NH
WorldPort 1200 modem (without software)	\$199.00	\$179.00
		WM11NM
Cable to connect modem to HP Portables	\$30.00	\$20.00
		WM14NM
Acoustic coupler (300/1200 baud)	\$79.95	\$79.95
		WM16NM
Upgrade kit: WorldPort1200—WorldPort2400 (includes Carbon Copy PLUS software)	\$199.00	\$179.00
		WM13NM

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A MISTAKE

P+ And speaking of mistakes, here is one that you should be sure and avoid. Once I got all my batch files rewritten, I rebooted my Portable Plus and got an error message that said that COMMAND.COM was "invalid" and that my computer was hung up. What had happened was that I had gotten clever and put a modified version of the DOS COMMAND.COM program in a different EPROM and then used the following command statement in my Portable Plus's CONFIG.SYS file:

```
shell=b:\ut\command.com b:\ut /p
```

The modified version of COMMAND.COM had worked before and had given me a much larger environment space than the HP version did. However, I had gotten too clever and used a file compressor to reduce the size of the COMMAND.COM file from 15K bytes down to 10K. This works fine on my desktop computer, but the Portable Plus refuses to accept any compressed version of the COMMAND.COM file. I spent another 15 minutes figuring out work-around, but the mistake will stay with me until I get time to reburn the EPROM.

B DRIVE ODDITIES

P+ By the way, has anyone ever noticed the odd-ball directory structure of the B: drive? The reason I ask is that my own UDIR utility program will not list the files in any of the directories of the B: drive. For example, if I give the command **udir b:\bin**, all I get is an error message that says "Invalid path" or "Drive B:\ not ready." The same command works fine if I hook up the 9114 and issue the command **udir c:**. I get a list of all the files on the disk in all of the directories. However, **udir b:** does give me a listing of the directories and a listing of the files in B:\BIN (however, not B:\BIN\ETC which is a hidden directory.) Does anyone know why the Portable Plus B:\ drive does not behave like a true disk drive?

Until next time, Happy Porting.

[Ed Keefe is an author, programmer, computer science instructor, and long-time contributor to *The Portable Paper*. He is the president of the Fast Aid Company, 314 SW Logan, Ankeney, IA 50021. Ed's CompuServe ID# is 73277,1064.]

PORTABLE VECTRA VIEWS

By Tom Page

110 Last December my office was moved from Downtown Houston to a suburban location near Houston's Galleria. At this location an automobile is required to do many of the little personal errands that could be performed by a 10-minute noontime stroll in the Downtown area. Automobiles do not change people's needs—they simply expand the physical space required to meet those needs. The extra space is used not to accommodate people, but to accommodate automobiles.

One morning an associate and I were sitting in the Company cafeteria drinking coffee and discussing business and world affairs. I called his attention to traffic on the street in front of the office and remarked, "The automobile has quit working for us. It is no longer making life easier, but in fact is making life more difficult."

My friend responded somewhat defensively, "That can be said about any number of things, including computers."

I did not disagree. A few issues back I described how computers don't always work for us (Vol.6, No.5, Pg.32). At that time I was concerned about crunching numbers without doing any real work. I have since realized I barely touched the surface. The real danger of computers is not the spreadsheets we use to over-analyze numbers, but the word processor. After slogging through a 10-foot-tall stack of documents related to an issue important to my business, but relatively minor when considered on a global scale, I am convinced that had Thomas Jefferson used a word processor rather than a quill pen, I would today be a subject of the Queen of England.

The promise of the word processor is that it allows us to quickly and easily revise our thoughts. Unfortunately, it also allows us to write faster than we can think. Rather than producing a document that clearly and concisely expresses an idea, we either create rambling, disjointed treatises containing no clearly stated thought, or we state fifteen variations of the same idea. The problem is that we fail to organize our thoughts properly and sufficiently.

Although revision with a word processor is much easier, it is often not done because revision is time consuming. Our tools enable us to do a better job in much less time but we fail to do so because these very tools accelerate the pace at which work must be done. By the way, Thomas Jefferson's

draft of the Declaration of Independence contains several scratch outs and insertions.

A character in Tom Robbin's recent novel, *Skinny Legs and All*, postulates that improper grammar is a root cause of mental illness, reasoning that people cannot help but be confused by imprecise speech such as, "The HP95LX is a bad computer." In George Orwell's 1984 the totalitarian government developed "newspeak" to implement mind control. Opposite and meaningless words were substituted for accurate words to make it impossible to express opposition to the government. Consider the idea that word processors can be programmed to not accept certain words and even make substitutions for these words.

"Boiler plate" (standard blocks of text that can be easily merged into documents) is another bad practice that the word processor makes easier. Boiler plate merged into documents make the documents meaningless—their size simply overwhelms the reader. Sophisticated readers learn to skip boiler plate, occasionally missing something important slipped in between the rivets.

I don't know the solutions to these problems. They are more societal than individual, and implementing solutions is very difficult on that level. For example, in our litigation-happy country, lawyers fill legal documents with clause after clause, much of it incomprehensible to the average, educated reader. All this in an effort to make sure their clients are protected, no matter what!

Recognizing that unread documents, no matter how artfully written, are worthless, the laser printer compounds the problem, and offers a solution at the same time. The laser printer makes it possible to produce more and more printed material. Who has time to read it all? On the plus side, the laser printer, with its multiple fonts and ability to print graphics, can be used by advanced word processing and desktop publishing programs to create very attractive and eye catching documents that are more likely to be read.

Fortunately there is more hope. As individuals aware of these computer flaws, we should use the tools our machines provide to write more effectively. Concise, effective writing is learned by practice and making a personal commitment to better composition. It is a good idea to test, from time to time, one's writing ability by using a style checker such as RightWriter. RightWriter will not make anyone a great writer, but it can remind us of the basic rules for good writing.

There is one thing we should do that is of a more global nature. We must demand that our schools devote more time to teaching grammar and English composition. Yes, this is a costly, long term solution, but I don't think we can afford not to make the investment. What good is knowledge if we are unable to share it? Or how can we expect to accomplish anything if we are unable to organize our thoughts to make plans or argue ideas? Most importantly, how can we know if our life is making sense if we are not capable of coherent thought? Since I studied mathematics and physics in college, I have always thought these disciplines to be the best training in logical thought. Mathematics is a good

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*ROM backup of TermPlus includes IBM disk formatting utility, ThinkJet control pop-up, and more.

language for expressing limited forms of logical thought, but at some point even mathematicians must use English to be understood. The English Language can be used to express and explain almost all forms of logical thought.

HP'S PALMTOP COMPUTER

110 I can't wait to get my hands on one of HP's new 95LX palmtop computers. Its miniature keyboard will make it a complement to, rather than replacement for, a laptop computer, although I know people who might find that the 95LX meets their primary computing need. Most truly busy people I know use little pocket calendars slightly larger than a checkbook to plan their time, note important appointments, and keep a list of key names, addresses, and telephone numbers. No computerized calendar/address book program, even on a laptop, has replaced a single one of these "pocket planners." The length and width of the 95LX is actually less than that of a typical pocket planner, but its one inch thickness may make it a little bulky for an inside coat pocket. However, since it eliminates the need to carry an additional pocket calculator, there will be more room in many people's pockets. The 95LX is a good bet to replace many "pocket planners".

An expense report and check register application would do well on this computer. I have maintained these applications on my Portable since day one using 1-2-3. Surely, if there is a need for pocket spelling checkers, thesauruses, and language translation machines, it makes sense to have single computer powerful enough to handle all such applications. Although several of my primary 1-2-3 applications now require memory beyond the capability of my

Portable Plus, I have several very useful 1-2-3 applications I would like to drop in my pocket.

READERS WRITE

110 Gerald S. Watry, in the letters section of the last issue, asked about a program to put in batch files to automatically print date and time headers. I needed the same kind of program and wrote a small Batcom (batch file compiler) utility to perform this service. I will upload this program and its source code to the CompuServe HP Forum. Look for NOWT.ZIP. I use this program in conjunction with a file-finding utility to index floppy disks. The program has two display formats. One puts the date and time in a box for display on the computer screen. If a parameter is placed on the command line the box will be suppressed, producing a single line that can be easily redirected to a file or the printer. I also wrote an IBM compatible version of the program too. It is in the same zipfile. (If you don't own Batcom, call Wenham Software at 508-776-7036 and order a copy. It is well worth its cost.)

Gerald also suggests writing a routine to adjust the clock-rate to get better accuracy. I don't know how to do that, but I want the program. My Portable's clock seldom has the correct time.

John Morrison writes about losing data from a Squish disk. He suggests the problem may have been failure to detach the Squish drives. As I don't use Squish on my Portable, I am not an expert with this program. For a number of months I ran an RBBS bulletin board from a Squish disk on the C drive of a Toshiba T3100. I never detached this disk and I never had a problem with it. I did help Beta test Squish Plus for the Portable Plus and do

remember having some problems with an early version of the Program, but this problem was fixed before the program was released.

BATCH FILE TO START LOTUS 1-2-3

110 The back-to-basics article in the last issue about personalizing the Portable was very good. Those of us who have used these machines for some time tend to forget that new users need basic information. I am a bit concerned about the batch file that starts 1-2-3, automatically loading a spreadsheet that you chose. As written it has no provision to save the updated spreadsheet, and any other application using a similar batch file will overwrite the updated spreadsheet. Let me suggest using the following, more complex batch file to autoload any number of 1-2-3 applications.

```
if exist auto123.wks ren auto123.wks autosav.wks
if not exist %1.wks copy startup.wks %1.wks
ren %1.wks auto123.wks
123
ren auto123.wks %1.wks
if exist autosav.wks ren autosav.wks auto123.wks
```

Name this file 1.BAT. To load a spreadsheet type:

1 filename

Let me explain what the batch file does. First, if there already is an AUTO123 worksheet on the disk, it is renamed to make a place for a new AUTO123 worksheet. Remember when Lotus starts up, it automatically loads a spreadsheet named AUTO123. If the requested application does not exist, the second line will start a new standard spreadsheet of mine named STARTUP. Using the RENAME command rather than the COPY command to create AUTO123.WKS saves disk space by not duplicating the file. After 123 is executed the batch file restores the application worksheet's name and if a previous AUTO123 worksheet was parked it is restored.

I have written a number of batch files to customize my Portable. Most of these are available from the CompuServe HP Forum. For example, CLYDE.BAT is an advanced version of the above batch file for loading 1-2-3. It even includes a provision for file compression. EDBAT integrates word processing and spell checking. SPELL enhances the utility of Webster's Spelling Checker. FONE loads Reflection and manages a system of command files. TML is an advanced version of the old TMSWAP utility.

Look for these files in the Portable library. There are generally two versions of these programs, standard MS-DOS batch files and compiled files using Wenham Software's Batcom batch file compiler. The former are in archive files and have .ARC as the filename extension. The compiled batch files with source code are in ZIP files with .ZIP as the filename extension. Relative complete and accurate documentation is included.

FORMATPLUS

P+ Last issue I did a lot of griping about Ed Keefe's Format-Plus program and made a few suggestions for improvements. I must apologize to Ed for one of my accusations that was not correct. I indicated that Format Plus would not print to a file. FormatPlus does a very proper job of printing to a file. All that is required is typing the filename instead of selecting Screen or Printer. I discovered this after I wrote the article and it was too late to make a correction. I still want a formatting program that will do the other things on my list. I find editing headers and footers in FormatPlus too difficult. Maybe Ed has a trick. If so, I would like to hear about it.

SINCE YOU DID NOT ASK

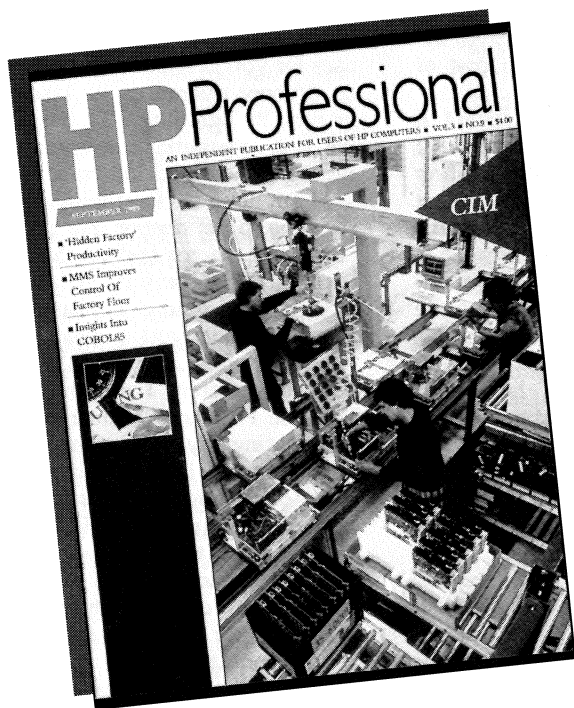
110 Imagination is the first key to making best use of a computer. The second key seems antithetical—it is discipline or control. Discipline is, among other things, not losing files, and using the correct version of a program or spreadsheet. I just watched one of my associates waste two hours of overtime trying to do a study on an obsolete version of a spreadsheet. Why he was using the wrong version is not important. I discovered what he was doing when he explained to me that he was having to adjust a data transfer table to match another program. I told him to extract the data he had just entered and transfer it to the later version. He refused stating that he had made all the changes needed. Of course he had not. As he worked he continued to encounter flaws that had been eliminated in later versions. Finally he gave up and agreed I was right and that he should start the next morning to put his data in the newest version.

CHEAP SECURITY TRICK

110 Like many people I am somewhat absentminded. Recognizing this I am always concerned about setting my Portable down and walking off and leaving it. When feasible I keep an arm through the strap of its carrying case to insure that this does not happen. This trick does not work when standing at a bus stop. Slinging the machine from a shoulder is probably the most secure way to avoid walking away from it, but unfortunately the shoulder strap can become quite uncomfortable. My solution is to set my Portable on the ground and lean the case against my leg so that I can feel it. If I move away without picking it up I will feel it fall.

[Tom works for a natural gas pipeline company in Houston, Texas, and was one of the first to use PC's in the natural gas industry. His excellent contributions to *The Portable Paper* have proved beyond a shadow of a doubt that he is truly "The Savvy User."]

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(Letters continued from page 4.)

(a combination transmitter and receiver) you can use Packet to listen to Ham Radio traffic.

Several Packet Radio stations are connected to mailboxes. Ham Radio amateurs are a curious lot, and tend to read EVERY note in the mailbox. This causes a lot of traffic (and occasional collisions). Some Packet stations are easier to connect to than others.

I listen and receive all data, using a sophisticated protocol program that allows me to create a copy of the mailbox contents without actually connecting to the box. If you are interested, please contact me.

Thanks to Hal Goldstein and his team for helping me solve a problem with BASIC. You did a great job.

I don't know of any laptop other than the Portable Plus that would fit my needs. Because of its battery capacity, built-in modem, and ROM-based software, it's the exact machine I need. I believe I will keep it for a while!

Bernhard Sept
Buero fuer Informatik
Messerschmidstr. 2
7240 Horb Untertalheim
Germany
Phone: (49) 7486 1290
FAX: (49) 7486 9331

[Bernhard is Personalized Software's European distributor and technical specialist. He's also an Hewlett-Packard engineer. Subscribers in the E.E.C. may contact him with any hardware or software questions, on any of the HP Portables or the HP150 — Rich.]

The HP95LX ... and Evolution

[This is a reprint of a letter sent to the product manager of the HP95LX Palmtop PC from Frank Keresztes-Fischer, Portable Paper subscriber and regular contributor — Rich.]

As I read the recent writeup in BYTE about the PALMTOP ... I was pleasantly surprised that HP seems to be testing the PC market as a niche opportunity. It is unfortunate that the consolidation of the Corvallis-based laptop with HP's computer operations lead to the demise of the ROM-RAM approach to HP's PC's in the laptop/notebook form factor.

A very satisfied user of an HP-Portable Plus ... I need to upgrade and am considering which way to go. Unfortunately, I have little respect for much of today's laptop/notebook PC crop. HP's new PALMTOP machine is "deja vu all over again" for those of us who are familiar with the HP110 and the PLUS ... and has much to recommend it.

As a laptop user since early 1985, I am prompted to write this letter and hope that my comments may reverberate in your product planning. If the HP-95LX is the first salvo signaling HP-Corvallis' re-entry into the Laptop/Notebook market in the tradition of the Portable Plus ... this time fully "compatible," and with more marketing elan ... your strategy may well be paved with gold for offering a differentiated product that will have much to recommend it to the serious user-community.

My first involvement in the business world with computers in general and micros in particular was with an HP-110 in 1984 ... and since 1986 with my HP Portable Plus. The "ROM-RAM" nature of these boxes are what made sense to me back then ... and makes more sense to me in these times, especially as the cost of silicon-memory keeps sinking.

My PLUS started out as an HP45711E model ... a well considered product. It connects to the IBM world also via my HP-9114 external 3.5" floppy drive that writes and reads IBM and HP formats. The obvious weakness of this "early" DOS box has been that it is "only 99% compatible" ... thus narrowing one's access to the broad spectrum of application software.

Hal Goldstein's Personalized Software Inc, and the "Portable Paper" have been invaluable resources to me and to much of the user-community of these HP ROM-RAM boxes. Since 1988 I upgraded my PLUS with an 8Mhz CPU chip (full 16-bit 8086 instruction set), with a 2MB RAM disk (excellent I/O performance). I am now contemplating the option of another upgrade of an additional 1MB RAM disk plus a 2MB FlashROM (ROWS ... read often-write seldom) disk. My "non-volatile" RAM disk has performed flawlessly over the past three years ... I never lost a byte. The 2MB FlashROM disk is intended to replace HP's OE "ROM Drawer" of 12 x 128K capacity. It is interesting to note the current murmurs in BYTE about ROM-executable software (including system software ... e.g. DR-DOS 5); this is old hat with HP ROM'd application software on the PLUS. Today's rationale for a ROM in a laptop is more valid in that it requires no power to maintain ... especially in light of desirability of larger ROM drives. Suffice that INFO-World's benchmark tests for my upgraded PLUS indicate an overall performance of a 6Mhz AT.

As a somewhat typical business user, my day-to-day applications include:

- Word-processing (MS-Word, sometimes Wordperfect 5.0);
- Spreadsheet (As-Easy-As from Trius, I dumped my LOTUS 1-2-3);
- Database, both flat (Executive Card

Manager, a rolodex-type ROM application from HP), and a relational application (Condor 3) that runs ideally in my PLUS;

- Accounting (DACEasy), a very I/O intensive application that runs slowly from mechanical drives, but with lightning speed from my PLUS's ROM-RAM system. (I have poked this application, burned it onto a fullbank EEPROM set, and nested it in an interactive batch file for integrated running and file management.)
- Time Manger (an unbeatable HP product for a portable environment), Graphics, Communications, Terminal Emulation, DOS Utilities, TurboPascal, Text Editors (e.g. VDE160), etc.

My reason for describing my PLUS and its uses for you is that I have been spoiled by its no-boot operation, its instant resume feature, its lightning I/O, its long battery life, and its superior convenience, reliability, ruggedness and integration.

I am not a hacker though I wish I had the time to get deeper into programming ... beyond macros and batch files. I have become fairly comfortable with my total machine and gained a measure of judgement of what works, what is desirable, what is useful ... and what is garbage.

Unfortunately I am outgrowing my Portable Plus; and I must confess that I am holding my nose when I look at the current crop of look-alike laptops. Most of them don't add up to as much "on-the-run" utility as my aging PLUS.

It seems that HP abandoned their laptop presence because of a severe case of myopia; it didn't seem to fit their overall computer products strategy despite input from their user community, like myself. As a marketer I tried to see this from their perspective ... a laptop at the "bottom" of their product spectrum can cause all kinds of discomfort, especially vis-a-vis users like me who have never considered their laptops as mere appendages to their desktop machines (it has been my primary PC in my various corporate assignments). For a full-line computer manufacturer like HP, a laptop's only role is to displace larger systems with larger margins ... not to supplement them. This product positioning game is one in which I have had some personal experience outside the information technology markets ... the business issues are the same. However, with the increasing momentum of the PC market toward laptop/notebook products and with the arrival of chip sets like the AMD386DX ... the parade of new PC entries should kick into a higher gear as well. It seems to me that if HP-Corvallis were to refocus on the laptop/notebook/palmtop market then you should be

able to build on your know-how from your earlier RAM/ROM boxes and develop new high-performance ROM/RAM PCs ... with emphasis on defined market segments ... never mind the total market mass of look-alikes and the "know-nothing" reviewers. If you are seeking to penetrate the portable work-style markets that hunger for better solutions, you should also not be concerned with issues of performance positioning alongside desktop and server products (micros), workstations, minis etc. Your position should be to go "balls-out" after the range of market segments within the laptop/-notebook envelope ... to serve the mobile professional with dedication.

In surveying the current scene, one of the major problems I see in the explosion of notebook products ... is that most producers are cooking from the same basic recipe. The result is superficially breath-taking until one discovers that many differentiate their products in such ludicrous and low value features as the styling of the enclosure.

Moreover, the market deserves better than trying to force the desktop hardware formula into a portable form factor. Laptops as well as smaller packages should take into account a different set of user values and needs; these simply are that the user:

- expects instant access to and resumption of his applications;
- has the freedom to function more than six feet from the nearest electric outlet for a reasonable workday's duration;
- enjoys total performance that is not significantly diminished from that of a desktop model (this implies a high level of integration to provide a well rounded platform);
- is provided functionality that supports seamlessly a mobile workstyle.

HP, an American company has total capabilities (product development know-how, financial resources, and a very credible support presence in the market). I think they may profitably consider developing a flexible product that can be configured for a variety of user profiles. Let me describe one such platform.

An open system that can be implemented (and upgraded as close to the user as possible) to a variety of configurations, in a laptop envelope with these maximum dimensions (12.5" w x 10.5" d x 2.5" h x 10 lbs), and with these components:

- 386DX (or equivalent) full 32[^]bit system, that is capable of running up to 25MHz, as well as be in suspension (or sleep mode) without losing one bit of the current applications' data;

- Memory ... minimum 2Mb and upgradable;
- Optional cache (may not be necessary for silicon disks);
- Display ... VGA display options (640x480 minimum resolution), and minimum 32 shades; the customer should have the option of lighted or passive panel for extended battery life;
- Operating system that runs mostly outside the main memory region (eg. what DR-DOS purports to be), and Flash-based BIOS that is upgradable remotely;
- Storage options that are available in combinations of two (perhaps three) to include the following technologies (I believe that a RAM or ROM disk should be capable of packaging in the same real estate as a hard drive or a floppy);
- Hard drives of nominal, medium and maximum capacities;
- Floppy drive (e.g. 1.44MB or higher);
- Non-volatile RAM disk minimum 4MB, and expandable by (e.g. 4MB) increments (to perhaps 32MB capacity);
- Flash ROM disk minimum 4Mb capacity and expandable (to 20MB) capacity. ROM is the ideal storage technology for RO files and applications that don't contain user specified configuration data; ROM also opens the possibility of ROM-executable applications where these might deliver overall performance benefits. Moreover the rapid growth of the Laptop/Notebook segment will most likely spawn adaptations of operating systems as well as popular applications so as optimize performance of these newer systems.
- External ports for printers, telephone jack(s), external monitor (capable of simultaneous function), mouse, and external magnetic storage as well as CD ROM. One of the best innovations would be to rid the laptop world of the bulky cabling ... and replace them with optical-fiber technology or high-speed paired-wire connections similar to HP's "HP-IL" system.
- Internal MODEM and/or FAX for send and receive.
- Pointing device accessible to the user without leaving the keyboard domain ... for example the "J" key joy stick, or an X-Y slide bar below the space bar, etc. (The external pointer port may become optional with a reasonable internal device.)
- Space for an F-Key template. Actually such templates should be available (on demand) on-screen at the bottom of the screen in the same relative positioning as the keys themselves; these seem good candidates for TSR daughter files of the respective applications.

- Battery life in excess of 8 hours of some defined and valid user-profile. Battery recharge technology should be akin to that developed by Schedule-Master Corporation of Atlanta, GA for short cycle recharge.

No doubt you can add to this, Mr. Horn, but I trust that I've communicated to you the flavor of my next laptop; and I don't want to buy it from Japan Inc.

To be sure this new product won't become a "blue-light special," yet it need not be the price leader in the COMPAQ tradition. But you can bet your stock option, that this box will have performance capabilities to suit a broad range of requirements similar to mine. For applications that are I/O intensive this machine configured with "silicon disks" would be free from the I/O bottleneck of machines with conventional magnetic storage (even if including cache). I dare predict that the pure solid-state configurations would be runaway performers that would recommend themselves as the primary PC for increasing user segments of the serious users-on-the-go ... be these executives, field professionals, academics, plus those individuals (including me) that just don't like desktops in their work environment.

In closing, Mr. Horn, I am a firm believer that it is a far more attractive marketing strategy to serve market niches (and these don't need to be market slivers), whose members are "absolutely bananas" about your product than to offer a product that rapidly becomes an "also ran" among the stampede of look-alikes.

Of course, I cannot predict your 5-year strategy for PCs. Let's hope that your current 95LX PALMTOP is the camel's nose under the tent ... leading to vastly more capable notebook/laptop platforms.

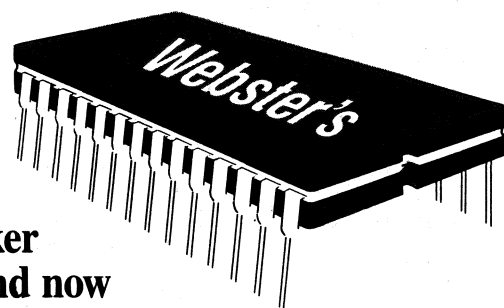
I wish HP the best of success in the resumption of their presence in the miniaturized PC market. The 95LX demonstrates America's homegrown engineering prowess ... and there is no reason for us to yield another inch to Pacific Rim interlopers in these seminal technology markets.

Very truly yours,

Frank Keresztes-Fischer
Filtrona Company
14777 Keel Street
Plymouth, MI 48170

■

Portable Plus users: At last! A great spelling checker available on ROM!



Webster's (web'stərs) n. The spelling checker rated Editor's Choice by *PC Magazine* (Dec. 24, 1985), and now available from Personalized Software for the Portable Plus and HP150.

—Customized on 3½" disk by special arrangement with Simon & Schuster, Inc.

PC Magazine rated eight leading spelling checkers for ease of use, flexibility, speed, overall program size, thoroughness, and accuracy. WEBSTER'S NEW WORLD SPELLING CHECKER came out on top—for a number of good reasons:

First, there's sheer size. WEBSTER'S contains over 110,000 words in its dictionary—five times the number in Hayden's Speller, 2½ times as many as in The Word Plus—yet WEBSTER'S dictionary and main program take up only 207K of disk memory.

Second, WEBSTER'S isn't just easy to use—it's positively a *pleasure*. It reads your files at high speed, then displays every questionable word *in context*, highlighted. At the same time, in a "window" off to the side, it gives you a list of possible correct spellings. A simple menu gives you the following options:

- Accept the word as is
- Replace the word with one of the suggested spellings
- Enter the correct spelling manually

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Available on ROM Backup for the Portable Plus			

- Add the word to an auxiliary dictionary of frequently used words
- Replace all other occurrences of the word
- Look up the spelling of any other word at any time

WEBSTER'S also lets you mark in your text any spelling corrections that change length of a word; this lets you quickly locate portions of text that may need reformatting.

WEBSTER'S will automatically locate double repetitions (like "and and"). It can correct transpositions ("itme" becomes "item"), missing apostrophes ("dont" becomes "don't"), and *typos* of all kinds ("spelling" becomes "spelling," etc.).

If you're not sure of a word, you can even *spell it the way sounds*, and chances are WEBSTER'S will supply the correct spelling. ("Fenomenon" gets corrected to "phenomenon," for example.)

In addition, WEBSTER'S will let you preview a list of all questionable words *before* displaying them in context; this saves you time because it lets you eliminate words from the questionable list (or add them to your auxiliary dictionary) before you begin the editing pass.

John Dvorak, writing in the *San Francisco Examiner*, called WEBSTER'S "the

best spell-checker we've seen in a long spell." Henry Kisor of the *Chicago Sun Times* has called WEBSTER'S "the best proofreading software on the market." We agree with them both—and we think you will too. Order your copy at no risk today.

Webster's Spelling Checker on 3½" disk customized for the Portable Plus and HP150 \$79.95
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PRODUCT NO. WB11NS

Webster's is available on ROM backup for an additional \$179. See ROM ad in this issue for important details.



WEBSTER'S SPELLING CHECKER works with any file produced by the Editor, WordStar, and MemoMaker. It also works with ASCII files produced by MS Word and Word Perfect.

Our version of WEBSTER'S includes a customized 3.5" disk and simple instructions for running the program on the Portable Plus and HP150. A special utility allowing WEBSTER'S to run on the HP150 is included on the disk.

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Just type **qu** (for quick unerase), give the first letter of the name of the file you erased, and *the file gets restored*. Miraculous as it sounds, in many cases that's all there is to it!

HERE'S HOW IT WORKS

How can a deleted file get unerased? Simple. The file isn't really deleted in

the first place. When you delete a file, all that actually gets erased is part of the file's directory entry. (That's why it only takes an instant to delete an entire file.)

Without a directory entry, DOS can't find the file, but THE NORTON UTILITIES can.

Now, what about those cases where you can't possibly recover a file because you've already partially overwritten it with other files? Surely THE NORTON UTILITIES can't help you then?

VERSION 4.0 OR ADVANCED EDITION —WHICH ONE SHOULD YOU BUY?

If you have an HP110, The Advanced Edition does not work. If you have a Portable Plus or HP150, The Advanced Edition of The Norton Utilities includes all of Version 4.0, plus many additional features. Among these are:

1. **Speed Disk:** Packs the files on a floppy, electronic, or hard disk more efficiently. This reduces disk head wear and significantly reduces the time it takes to save or retrieve a file.

2. **Advanced "NU" Program:** Undeletes blocks of text from disks that have become "corrupted" (unreadable by DOS). Also lets you access and modify the DOS directory and F.A.T. table.

3. **Format/recover:** Restores all the files on a hard disk if you have accidentally reformatted it. (Note: this feature does not work on the HP150 or Portable Plus.)

Our recommendation: If you have a hard disk, or want to be able to manipulate directories, or need to access ASCII data from non-HP formatted disks, use the Advanced Edition.

Wrong—they can! THE NORTON UTILITIES won't recover the entire file, of course, but they *can* help you restore the portions of the file that still remain on the disk.

It's done with a powerful utility called **nu** that lets you display, change, and capture to a file any information on any disk. In complex cases you may need to

"Indispensible."

—PC Magazine

"You'll bless this disk."

—Peter McWilliams

(The Personal Computer Book)

"Don't compute without it."

—The New York Times

do some detective work, but **nu** will help you find whatever remains on the disk, thereby saving you from countless hours of retyping lost data.

POWERFUL FILE MANAGEMENT COMMANDS

In my opinion, *the ability to recover lost files alone makes THE NORTON UTILITIES well worth the price*. But there's even more to the package: THE NORTON UTILITIES are also an excellent *disk management system*. Here are some examples of what you can do:

Let's say you want to sort directories and files physically on disk—either by name, extension, size, date, time, or by any combination of these. Just use the **ds** (disk sort) command. I use this one to sort my electronic disk files by size all the time. Then when I display the directory, the larger files come at the end of the list, and I can see at a glance which ones to move elsewhere to free up any needed amount of disk space.

Or let's say you remember putting the phrase "a penny saved is a penny earned" into a text file on your floppy or hard disk but you can't remember which file it was—or even which directory. How to find it? *No problem*. Just type **ts** (for text search), specify the phrase, and the program will display every occurrence of the phrase, identifying each occurrence by directory and file.

Or let's say you can't remember which subdirectory you put a given file into. Instead of hunting for the file manually,

"THE NORTON UTILITIES are among the most helpful utilities I've run across. I use them myself every day, and in my opinion, they're a must. Here's why."

*Hal Goldstein, Publisher
The Portable Paper*

just type **ff** (find file) and specify the name of the file and the directories to search through. The program does the rest.

Other useful features include the **fa** command, which lets you change file attributes (for example, to convert HP150 read-only files into erasable files), and the **fs** command, which tells you the total file size of a group of files (I often use it to find out the total disk space occupied by my Lotus worksheet "WKS" files or by all my text files from a given project).

CUSTOMIZED TO YOUR COMPUTER

Because of their great helpfulness and ease of use, THE NORTON UTILITIES are a best-seller in the IBM PC market. Personalized Software is authorized to distribute them on 3½" disk for users of the HP150, HP110 and Portable Plus. (All it takes is a few keystrokes to customize THE NORTON UTILITIES to your machine; just follow the simple customization instructions included on the disk.) Also included in our package are the standard 5¼" disk sold by Peter Norton for IBM PCs.

THE NORTON UTILITIES are a time-saver for you and a life-saver for your data. Use them just once and you'll wonder how you ever did without them. Order your copy at no risk today.



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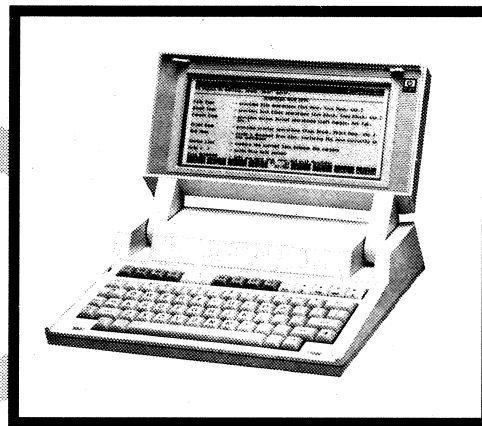
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— Ed Keefe
Ankeny, IA

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— Frank Keresztes-Fischer
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