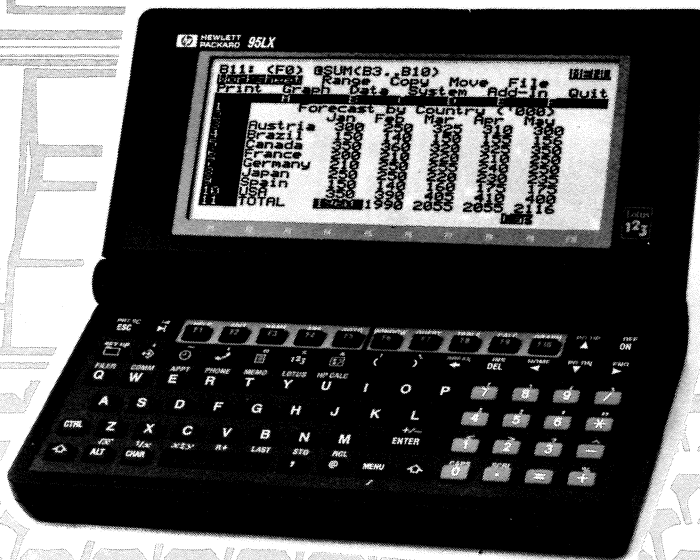


# THE Portable Paper



## HP's New 95LX Palmtop PC Computer!

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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 Subscri

**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.

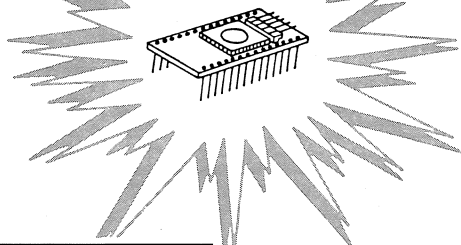
"Burning" your own ROMs is easy - even for a computer novice - with our Portable Plus ROM Burner. All you do is connect the ROM Burner to your Plus, and follow the simple instructions we provide for using the software that comes with the unit. (We even show you how to have your ROM programs automatically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

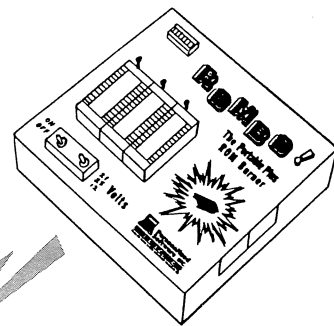
fixed data and with almost any Portable Plus program you wish - including programs that are not commercially available on ROM. This eliminates the need for an external drive and frees up valuable space on your electronic disk.

Regardless of your needs, we invite you to take advantage of this Portable Plus breakthrough. 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, WK5 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.

As-Easy-As on disk \$99.95 \$79.95

PRODUCT NO. AS11NS

As-Easy-As ROM Backup

(Disk + ROM) \$215.00 \$195.00

PRODUCT NO. AS11NK

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

### 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).

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 of Pull-down/Print Menu
- o Choice of functions including mathematical, statistical, date, time, logical, financial, string, and user-definable
- o Powerful frequency distribution tables (bins)
- o Capable of linking current worksheets with information from other worksheets
- o Versatile, powerful graphics capabilities, printer support including 904-pin & LaserJet, ability to create PC files
- o User-definable capabilities for last, first, next, previous, bar, line, pie, area charts, data series, log-log graphs
- o User-configurable screen options
- o XY data regression
- o Database operations, data input forms, macro-driven database files
- o Text search, replace, justify
- o Goal-seeking capabilities (line graphed answer & As-Easy-As gives you the input)
- o Configurable Printer setup
- o Worksheet auditing
- o Manual range, function, and macro selection help
- o Macro program language, including 70+ powerful macros
- o Macro record/playback capability, single-stepping through
- o Full support of sub-routines and path names
- o Able to shell to DOS

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

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

### TO ORDER

Use coupon below postage paid order form or send a check to credit card information to: Personalized Software, P.O. Box 889, Fairfield, CA 94504-7517 (424) 424-1111

RECOMMENDED FOR:	Term110	TermPlus
HP110 Portable	•	
Portable Plus		•
Portable Vetta		•
HP150		•
IBM PC and compat		•
Available on ROM Backup for the Portable Plus		•

\*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, Vetta, 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 includes the upgrade to current version 2.01, which requires 8 characters, by adding Personalized Software \$7.95 or by mailing a self-addressed 3.59 stamped envelope and the SideWinder v2.01 disk.

## HPduette

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

An HP-IL card enables your IBM PC or compatible computer to 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 some other desktop computer, you're stuck — 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 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 performs complex error checking during the transfer process to ensure data integrity. It handles multiple-line transfers, subdirectory transfers, and 1,800 “wild card” usage. It has you use 150 commands such as type, list, rename, and erase without having to exit the program. And it transfers data faster than you can write it on HP-IL card.

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

Put your convenience on file transfer to and from your Portable Plus, order HPduette today.

HPduette with cable for Portable Plus \$89.95 for Portable Paper subscribers.

PRODUCT NO. DU11NS



HPduette comes with a serial cable and the help file. You use the cable to connect your Portable Plus to any IBM PC compatible desktop computer via serial cable.

60-DAY MONEY BACK GUARANTEE

**Combo ROM**  
only \$299  
PRODUCT NO. ROM1NK



# PUBLISHER'S MESSAGE



Hal Goldstein

As we have discussed previously, this is the sixth and most likely final year for *The Portable Paper*. With less than 1,000 subscribers right now we cannot reasonably hope for enough of a subscriber base in 1992 to make a full year of *The Portable Paper* realistic.

That's the bad news. The good news is that if all goes according to plan many of you will become subscribers to our new publication, *The Palmtop Paper*. Assuming we overcome a hurdle or two, we will start a newsletter devoted exclusively to HP95XL Palmtop users. We plan two 1991 issues, a full set of six 1992 issues, and, of course, a Palmtop

## Paper Subscribers disk!

See our lead story about the HP Palmtop. Its as thorough a description as we could muster given the fact that we have not yet got our hands on a unit. I believe the HP 95XL Palmtop PC will be an exciting product. It will have enough uniqueness to warrant a publication similar to *The Portable Paper* that focuses on its strengths, peculiarities, and expandability.

Those of you able to purchase one of the first units should drop us a letter, write an article, or call Richard Hall or myself with your impressions. Let us publish your collective experiences with the 95XL and insights into using it in the first issue of *The Palmtop Paper*. That way new readers will see *The Palmtop Paper* as a forum for collecting and disseminating world-wide HP 95XL user knowledge and be prompted to share their own insights in future issues. If any of you feel qualified to submit regular articles, give me a call. Hopefully, Ed Keefe and Tom Page will be interested enough in this new HP wonder to continue writing versions of their original and unique user-oriented columns for this new publication.

In any case we will continue to support HP Portable users with ROMs, software, batteries, and other HP accessories in the years to come. In particular note the incredible values for Portable Plus and HP110 systems in our new *Hidden Treasure* catalog. These systems are indeed hidden treasures. Quite frankly you, the regular users of these computers, are the only people that understand the uniqueness, power, elegance, and value of the systems offered in the *Hidden Treasure* catalog. Please consider an extra HP Portable system for yourself, colleagues, friends, and family. Pass on your catalog and recommendation to others. Call us for extra catalogs.

This brings us to the question of how we can best serve you in the years to come. I would love to update *The Portable Paper* index to include all 1986 through 1991 issues, perhaps publish several editions of *The Portable Paper* in 1992, and maybe even produce another Subscribers Disk (more work than you can imagine). As I mentioned above, we will continue selling other HP Portable products and services. I am open to suggestions as to how we can best accomplish these feats in a way that serves your needs and is profitable to us. Please mention your thoughts to one of our sales people, or better, drop me a letter!

I hope you enjoy the article about the new HP Palmtop, but don't forget the rest of the issue. I think you will once again find this issue full of interesting tips and approaches to making more use of your HP Portables. I am also pleased to announce that all of WordPerfect 5.0 can reside on ROM in the Portable Plus.

Let us publish your thoughts about *The Portable Paper* and *The*

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

## THE PORTABLE PAPER Volume six / Number three May / June 1991

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**POSTMASTER:** Please send address changes to Personalized Software, The Portable Paper, P.O. Box 869, Fairfield, IA 52556.

*Palmtop Paper* in the upcoming final three 1991 issues of *The Portable Paper*. As always, we look forward to hearing from you and sharing your insights on how to make all of the HP Portables "smarter."

A final note—we are in the process of changing our name from Personalized Software Inc. to Thaddeus Computing, Inc. More on this later.

*Hal Goldstein*

# 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.

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

## Word Processing:

- 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.
- 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.
- 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:

- 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:

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

## 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 delete 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, 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 give up the expense of buying WordStar (for the Portable) or MS Word (for the Plus) to go beyond MemoMaker's capabilities.

THE EDITOR II has 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.

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, it automatically saves a backup copy of the file in the same directory.

For users of MemoMaker and The Editor

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  
Portable Paper subscriber price ..... \$79.95

ROM BACKUP version ..... \$194.95  
(THE EDITOR II on ROM and disks)

For users of Version 1 or SuperROM:

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

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

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- Search and replace. Just tell THE EDITOR II phrases to look for and occurrence and/or replace either selectively or globally.
- Edit two files at once. THE EDITOR II will do portions of text at the same time. You can view of the same file—or files—simultaneously.
- Backspace delete. You can erase the last single keystroke.
- Block and line center. THE EDITOR II lets you lines of text with a few keystrokes.
- Store any sequence of it back at the touch of a can be edited, deleted, autoindented on start-up comes with over two you started.
- No limit on file size. If you're an HP100P longer confined by Me limit. You can have as many files as you want.
- File merge. You can merge two or more files.
- Comment and excise. You can insert comment text to tell your printer what to do with bold, underlined, or printer can handle.
- Unlimited line length. Your lines are no longer characters per line. Simply, you can print on your printer.
- Lines per page. You can specify the page, using the count your printer.
- Easy in, easy out. You can exit from TI another program, the command and be back exactly where you left off. THE EDITOR II will delete, copy, and return using THE EDITOR II.
- Right justification.

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- Right justification.

## FilePlus: The Portable Plus file manager. Fast, sophisticated, easy-to-use!

- List files in two directories simultaneously
- Copy, move, and delete multiple files
- Sort directories
- Create protected ("Read-Only") files
- Back up only those files that have changed since last backup
- And much more!

When Hewlett-Packard introduced the P.A.M. file manager in 1983, the program was ahead of its time. With P.A.M., users could copy, rename, and delete files by pressing function keys instead of having to enter DOS commands. Today, however, users are more sophisticated—and so are the file management programs that have come on the IBM PC market. These programs go way beyond P.A.M. in their abilities and in the convenience they offer the user. Most of these file managers won't run on the Portable Plus, but we've developed one that does. It's called FilePlus, and here are its benefits:

1. Display two directories. This is a feature that even some of the most popular IBM compatible file management programs don't have! FilePlus lets you list two directories (from the same or different disks) simultaneously on screen. This makes it especially easy to move files back and forth between the two directories.
2. "Print and Show". You don't have to use through P.A.M.'s function key menus to perform a simple operation like copying a file. Instead, you simply display the contents of the source and destination directories side-by-side. Tag the file you want to copy, then use a simple Lotus-like menu to enter the "Copy" command with a single keystroke. Use the same "Print and Show" method to run programs and to move, delete, view, etc. any files you wish.
3. Tag multiple files. You can tag any number of files in a directory, then perform the same action (copy, rename, delete, protect, etc.) on all of them at a single step.
4. Sort files. FilePlus can list the files in a directory by name, extension, size, or date. An alphabetical listing by name helps you locate files in a hurry. A listing by size is useful in determining which files to erase in order to free up any needed amount of disk space.
5. Single-step "Move" command. To move a file from one directory to another, you no longer have to copy the file first then delete the original. FilePlus lets you do it with a single "Move" command—and you enter the command with one keystroke!
6. Protect your files. You can protect your files (make them "Read-Only") to guard against accidental deletion. FilePlus even lets you do this with entire directories! You can unprotect the files whenever you wish.
7. Show attributes (Read-Only, Hidden, Archive). FilePlus displays the attributes of all the files in a directory so you can view

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

Webster's (web)stars 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.

PC Magazine rated right spelling checker and right spelling checker. Webster's (web)stars 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.

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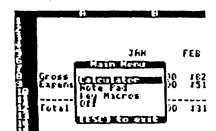
## Shelp

Instant Access Pop-ups for the Portable Plus: Calculator • notepad • macros • and more

Recommended by Hewlett-Packard, and used by more than 1,000 of their employees.

It's a program called Shelp (sheep • help), and it runs on the Portable Plus from within any non-graphics program. Here's all you do:

Press [Ctrl][Shift][Extend char] and pop up the Shelp menu, right in the middle of your application (Lotus in the example):



The menu gives you 4 choices: Calculator, Notepad, Key Macros, and Off.

Choose Calculator and get a 4-function calculator that works like a pocket calculator with memory. You can:

• Save results in ten "buffers" results at the cursor location in whatever application you were using when you invoked Shelp.

Choose Notepad and a "notepad" pop up on your screen. Type whatever you want to, add to your application, and then recall the notepad whenever you want. No more having to scribble notes on paper to remind you of phone numbers, things to do, or bright ideas!

Choose Key Macros and you can assign "traps" or up to 21 keyboard shortcuts to any of the 26 letters in the alphabet. This saves you having to type the same phrase over and over again.

Example: If you type "United States" a lot, you could assign the entire phrase to the "U" key. Just move the cursor to "U" in the Keyboard Macros menu and type "United States".

Shelp runs on the Portable Plus only. It works with Time Manager, MemoMaker, Reflecta, and any other non-graphics program. (Shelp does not run with MS Word.)

Shelp was written by Randy Sals, the former HP engineer who authored MemoMaker on the original HP Portable.

Shelp ..... \$55 (\$49.95 for Portable Paper subscribers)  
60-day money-back guarantee. If after 60 days you are dissatisfied with this product for any reason, you may return it for a full refund. To qualify, use the postage-paid form at the back of this issue or send check or credit card number to: Personalized Software, P.O. Box 868, Fairfield, IA 52556 515-472-5330

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# Letters

## Thanks for the memory!

**P+** I have seen the message "Out of environment space" come up too many times in the past, and have attempted to reserve space in advance using DUMMY statements in the PAM.ENV file as per advice in some past issues of *The Portable Paper*. Still, on occasion, I run into a snag.

Thanks go to Ed Keefe (Vol.6, No.1, Pg.32) for sorting through various iterations of fixes and describing a patch to COMMAND.COM that is simple to follow, and gives me DOS 3.0 environment control and all the space I need. It will cost me some RAM space for now, unless I get around to getting a ROMBO of my own. Or, may I suggest that you consider including this "backup" copy of COMMAND.COM in some future utility ROM offering so that everyone could benefit.

And to respond to a Ed's Jan/Feb article; yes, I would be delighted to run APBasic (a BASIC compiler) on my Plus.

## LOVE THAT LIST

Once again, the subscription cost to *The Portable Paper* can best be viewed as an investment in deriving maximum utility from the HP portables. I will further explore the 1991 Subscribers Disk in the weeks ahead, but for now I'm enjoying the LIST program, which allows me to bounce around subdirectories and review files with such ease. I have only scratched the surface of its potential, but I can highly recommend it already.

## DISC TO DISK

**110** **P+** **PV** **LS** **712** I can't recall seeing any mention in past issues regarding the specifics in corresponding with *The Portable Paper* in electronic format. I'm generating this disc using MemoMaker in an ASCII file, since it probably is the most generic from to read or edit. Or is it? It would be even easier for me if the Paper had a dial-up computer to transfer files over the phone line, as international mail can be hard on floppies, and they are subject to customs inspection at the border as well.

Thanks for the 1991 disk, and the great articles.

**Norm Lang**  
10688 Glenwood Crest, East  
Surrey, BC, V3R 0B4 CANADA

[Our favorite way to receive letters is on disk in ASCII, WordPerfect (or MemoMaker) format. You can also send your comments as CompuServe EMail, ID 72257,714. We also

greatly appreciate the traditional method of sending letters - on paper. — Hal]

## Upset about service on his 9122D Disk Drive

**110** **P+** **PV** **LS** **712** I have been doing business with your company for about 3 years now and for the most part I have been very happy with your service and the way everyone has treated my wife and I when we have done business over the phone. We have come to trust you like a friend, however, we now feel like we have been betrayed by you and misled! About 7 months ago we had your service department work on our HP 9122D Disk Drive and replace the controller board in it. The Drive has worked fine and we paid the charge of \$200 for parts, labor and shipping.

What has made us so upset is receiving your latest catalog showing that this same service, including parts and installation, costs \$156. The way we look at it we were overcharged about \$40. Our plans WERE to purchase some hardware items for our HP150 from you soon, but now I don't know if we can trust you anymore.

**James K. Sorenson**  
765 Langley Drive  
Whiteman AFB, MO 65305

[When we repair HP Portables and HP150 we take parts from other machines (a practice followed by HP). If we were to use new parts the cost would be exorbitant.

Therefore, the cost of repair (parts and labor) is directly related to the cost of used equipment. That cost has decreased over time. Therefore, the cost of repair decreases over time — Hal.]

## Will other ROM burner perform like ROMBO?

**P+** I have access to a ROM/EPROM burner that fits into the Portable Plus underneath where the Software drawer and/or memory drawer are housed. This EPROM burner uses an external 25 volt DC power source to "burn" the EPROM and comes with the software used to do the burning.

I haven't tested the software yet, but I understand that it will only create copies of existing ROMs/EPROMs. Do you know if this unit can be made to function in a way similar to ROMBO? (Can I use it to create custom ROMs/EPROMs?)

Also, what are the limitations with this process in terms of making my own EPROMs and would I be able to burn the larger 256K EPROMs in this unit?

**Andrew Jackson**  
ComputerTime Ltd.  
P.O. Box 26-108 Epsom  
Auckland, NEW ZEALAND

[It is possible to use a standard EPROM unit to burn 64K byte EPROMs. Software available on the HP CompuServe forum will allow you to burn those EPROMs. Unfortunately, the software documentation is cryptic and the software not easy to use.

We created our ROMBO package to burn 128K byte EPROMs. We custom designed and manufactured the EPROMS, worked with a ROM burner manufacturer to custom produce a ROM burner, and reworked the software. The feedback we get from ROMBO users is that our manual is easy to follow and that the EPROM burning process, if not painless, is certainly straightforward.

There is no way to burn our 128K ROMs that I know of without our ROM burner. We are the only manufacturers of those ROMs. (Herron computer in Germany will custom make and burn 128K EPROMs) - Hal]

## Transferring files between a Mac, a PC, and the Portable Plus

**P+** I am writing briefly to share with you my experience in transferring files between IBM PCs, the Portable Plus, and an Apple Macintosh. I have not exhaustively tried this, or optimized the file transfer procedure, but what I report has worked with a MAC SE 30, a Portable Plus, an IBM PS/2 70, and a 55SX.

The most important thing I have found is that the MAC's Apple File Exchange option will translate to and from the Portable Plus formatted disks provided they are the 720K size. I use the HP92192A disks; double sided, double density. Nothing else seems to work.

The MAC will read IBM-formatted disks easily, as it is supposed to do. What I have found is that by using this utility and the correctly formatted disks, I can transfer between the IBM, Mac, and Plus at will. I have transferred all files as pure ASCII. I transfer files between WordPerfect on the IBM, MS-Works on the Mac, and MemoMaker on the Plus. I have also transferred Lotus 1-2-3 files from the IBM and Plus back and forth between MS Excel on the MAC.

I also find the MAC SE30 will read in HP Plus format as an IBM format. Memomaker ASCII files can be read in and used by MS-Word on the MAC.

I am sure there is a lot more to this, but as a busy lawyer I go with what works and let the computer geniuses figure out the optimals.

**Charles L. Gagnebin III**  
20 Mettacomett Path  
Harvard, MA 01451

## Recharge inkjet cartridges

I discovered in the 1991 *Macintosh Product Registry* a reference to the Jetfill Ink Recharge Cartridge for the HP DeskJet, DeskJet Plus, or Desk Writer. To quote the registry's reference: "This single, clean recharge unit refills the ink reservoir in existing HP cartridges, saving costly and unnecessary print head replacements."

A pack of two water-resistant ink recharge cartridges costs \$19.95 (as opposed to \$20.95 for a new DeskJet cartridge). You can order this product from Jetfill America of Austin, Texas. Call 800-749-2993 or 512-469-5647.

**Steven M. Johnson**  
5324 Kenneth Avenue  
Carmichael, CA 95608

## Data loss from Squish Plus

One of the items of software that I recently bought from *The Portable Paper* was Squish Plus. I am using the software on my Portable Plus computer.

I think Sundog software should provide much stronger warnings about the possibilities of data loss than they currently do. I have found that Squish Plus works very well with the electronic disk in my Portable Plus; but I have twice wiped out backup files kept on my 3.5 inch external floppy disks. As near as I can tell, this was due to my failure to detach the Squish disk.

This was particularly burdensome to me because I had my backup files for the electronic drive on Squish drives. When, for separate reasons, my electronic drive got wiped out, I found that my backup, made only the previous day, was absolutely inaccessible. This double failure cost me a couple of weeks of my life to recoup. Neither the Squish Plus catalog nor the people I talked to at Sundog gave me any inkling that I would be running into such dire trouble.

I think your customers should be aware of this possibility.

**John Morrison**  
Automated Container Corp.  
3450 W. Central Ave.  
Toledo, OH 43606

## Putting WP.FIL on EPROM

Thanks for your article on the 256K file size limit being broken. I spent some time the night I got it burning EPROMs and I got WP.FIL installed in EPROM. It turned out to be pretty easy, given the information in your article. The way I did some things was different than using the techniques in the Paper.

If you save the first half of the file to the name "WP.FIL" in the first place, you

don't need to use Norton Utilities to change the name later. Also, you can use Norton to change the file size in the directory of the EDISK before using IMAGE.COM to make your ODD and EVEN files. This way you don't need to know which byte goes into the ODD and EVEN ROMs. Unfortunately, IMAGE didn't seem to handle splitting of the FAT (File Allocation Table) in the same way. I had to go in and fix them in the ODD and EVEN files. The last two bytes of the FAT in the EVEN file, before all the zeros, were 0F F0—they must be changed to 0F 20. The FAT in the ODD file had FF FF and this needed to be changed to FF 10. All in all, this was pretty simple. One other trick that helped was to leave the WP.FIL as the last file in the directory. This way I could put files such as the WP HELP files 1 & 2, WP(WP).SET, and any .PRS and .WPD file in the same directory. It is really nice having WordPerfect self contained with no disk drive needed!

Thanks for the excellent paper and support for the Portable Plus.

**Edward Finley**  
8173 N. University Dr. #68  
Ft. Lauderdale, FL 33321

## Print time/date; adjust clock rate

I wonder if someone there, or one of the readers could write a routine to supply the TIME and/or DATE to be included in a BATCH FILE? MS-DOS has both, but they pause and ask you to supply a new time or date. I want to be able to print the time and/or date automatically as a header, or whatever!

I wonder also, if someone could write a routine to adjust the CLOCK-RATE, that is, the speed of the clock for better accuracy? The information for reading the clock is on pages 5-48 and for adjusting the accuracy is on pages 5-61 of the *Portable Plus Technical Reference Manual*. Assembly language programming seems to be a requirement in order to do either, and so I have to beg others to do these neat little tricks.

**Gerald S. Watry**  
4210 W. 108th St.  
Bloomington, MN 55347

## Market Forecaster no longer available

A while back I wrote about my experience with a program called "The Market Forecaster" from William Finnegan Associates (Vol.5, No.4, Pg.42). You wanted to discuss it. We played telephone tag for a week without making contact. This

letter represents the final "tag."

Any interest in the program has become moot. (This is one of those rare occasions when I can properly use the word "moot.") I received a letter from William Finnegan Associates stating that William Finnegan has died. There will no longer be any support for the program. It was implied that The Associates might start support later. If there is no further support, the statistical basis will gradually become less accurate and in 2 to 3 years the program will cease to be useful. I wrote The Associates and asked to be told of any development.

With a bit of humor I close with, if there is any question, contact me.

**John G. Davies**  
767 Heinel Drive  
St. Paul, MN 55113

## User needs APBasic

I have just received the Jan/Feb issue of *The Portable Paper* and I noticed a section of Ed Keefe's column titled "A Very Basic Question." The article concerned a shareware program called APBasic. I would like to get the program, but being in Saudi Arabia makes it difficult. I would really appreciate it if you could get me a copy of the program. I don't need it right now for my portable, but want it for my IBM-compatible computer. I would be happy to pay for any costs involved, including air mail charges. I have both 3.5 and 5.25 inch drives. My PC is an AT compatible with a 386 cpu.

I enjoy reading *The Portable Paper* and look forward to receiving each issue. Now that the war is over, it's about the only excitement we get over here in Saudi Arabia since the end of Desert Storm.

I have learned more about computers and programs from *The Portable Paper* than from any of the computer books I have read. Keep up the good work.

**Gerald R. Williamson**  
Saudi Parsons Ltd.  
P.O. Box 30167  
Yanbu Al-Sinaiyah, SAUDI ARABIA  
[We forwarded Ed Keefe a copy of your letter - Hal.]

## New MS-Word?

Any further news on a new version of MS-Word for the HP150 or Portable Plus?

**Jim Follwell**  
P.O. Box 3165  
Charlottetown, PEI, C1A 7N9 CANADA  
[I do not think that new versions of most anything will be available for the HP150 or Portable Plus. The reasons are economic (a shrinking market) and technical (lack of PC compatibility). — Hal]

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.

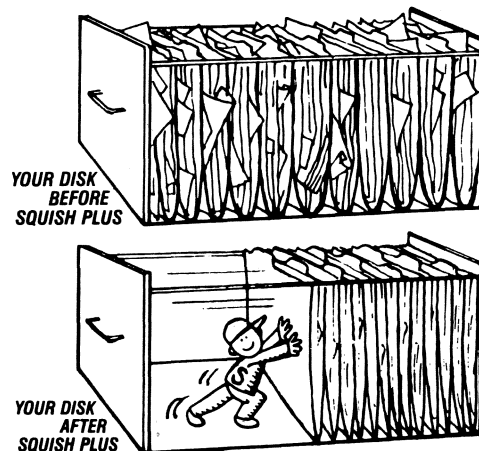
(Portable Plus users may need to increase internal [main] memory by as much as 36K. On the Portable Vectra and LS/12 Laptop, Squish Plus simply borrows 36K from the 640K of memory that's built in.)

## 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
<b>Squish Plus for IBM PC compatibles</b>	<b>\$99.95</b>	<b>\$89.95</b>
PRODUCT NO. SQ12NS		
<b>Squish Plus for Portable Plus</b>	<b>\$129.00</b>	<b>\$99.95</b>
PRODUCT NO. SQ11NS		
<b>Rom Backup Package (includes Squish Plus for Portable Plus on disk and two 64K Backup ROMs)</b>	<b>\$264.00</b>	<b>\$234.95</b>
PRODUCT NO. SQ11NK		
<b>Squish ROMs (Must own Squish Plus for Portable Plus for each ROM set purchased)</b>	<b>\$135.00</b>	<b>\$135.00</b>
PRODUCT NO. SQ12NK		

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## IMPORTANT MESSAGE FOR PORTABLE PLUS USERS

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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.

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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).

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110%

## Making More of Your HP Portable

by Hal Goldstein

**Palmtop PC-Compatible Computer From Hewlett-Packard**

*HP back in the Portable business with its new 95LX — a checkbook-sized PC-compatible palmtop computer with Lotus 1-2-3, 2.2 built in!*

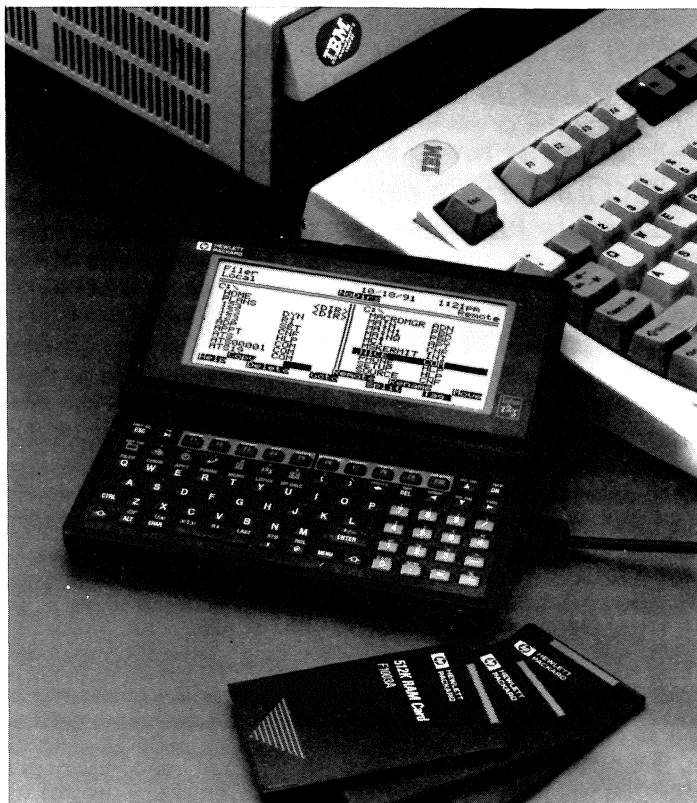
*By Richard Hall*

On April 23rd at a joint news conference in New York, John Young, president of Hewlett-Packard and Jim Manzi, president of Lotus Development Corporation formally unveiled the HP95LX Palmtop computer.

This calculator-sized PC-compatible computer, jointly developed by HP and Lotus, lets you track appointments and assignments, edit letters/reports, organize addresses and phone numbers, handle complex calculations, access electronic information services, and use Lotus 1-2-3 for data analysis, financial modeling, and decision support.

**FEATURES OF THE HP95LX****SOFTWARE BUILT IN ON ROM**

The HP95LX comes with wide variety of software built into its internal ROM including: ■ Lotus 1-2-3, version 2.2 — a full-fledged version is included with a modified screen driver to display its spreadsheets and graphics on the 95LX's tiny screen. ■ An HP19B-II-like advanced financial calculator integrated with 1-2-3. ■ Personal Organizer Tools — including an appointment scheduler with a To-Do list, a Rolodex-type phone and address book, Memo Writer for writing and printing short documents, and a clipboard for cut-and-pasting among built-in applications. ■ Filer — a simple but functional file manager for copying, deleting, and file transfer between the 95LX and your desktop PC (must have Connectivity Pack for file transfer). ■ Data Communications software including VT-100, ANSI, and TTY terminal emulation with Kermit and XMODEM protocols to allow access to E-mail and information networks. ■ Printer drivers supporting HP LaserJet and other printers. ■ Setup Utilities to adjust display, memory allocation, and further customize your 95LX. ■ MS-DOS 3.22. (For more on built-in software see box, next page.)

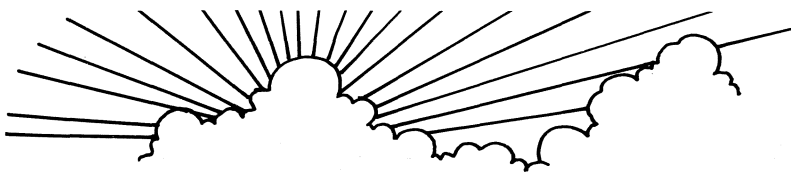
**HARDWARE FEATURES**

The HP95LX sports one-key access to its different applications and a small but useable QWERTY keyboard. Its keys are small, but spread out enough so that, with practice, you won't hit the wrong one. Being an editor, I tend to snicker at people who don't know touch-typing. However, the old "hunt-and-peck" two finger method is probably the most effective one for the 95LX.

The HP95LX is an 11-oz PC-compatible computer about the size of a Day-Timer (6.3 x 3.4 x 1 inches). It has a 16-line x 40-character non-backlit LCD supertwist display with adjustable contrast and works well under most lighting conditions.

The 95LX runs for 1-2 months on two AA alkaline batteries. The ON/OFF switch controls the keyboard and screen only — the internal 512K RAM is always powered up. So if you turn the 95LX "off" in the middle of an application, you're right where you left off when you turn it back "on" — without losing any documents or data. In addition to the two AA batteries, the 95LX is backed up by a small, NiCad battery to keep your 512K RAM alive when your AA's run down, or when you change them.





# 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  
Portable Paper subscriber price . . \$79.95

PRODUCT NO. ED11NS

ROM BACKUP version . . . . . \$194.95  
(THE EDITOR II on ROM and disks)

PRODUCT NO. ED12PP

For users of Version I or SuperROM:

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

PRODUCT NO. ED14NS

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

PRODUCT NO. ED15NR

**PV** PV users: Be sure to indicate "PORTABLE VECTRA" on your order so we can send you proper disk format.

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

### 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'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*

In addition to built-in applications and a setup utility, HP 95LX software includes features that let you:

- Press a single key to access any of the 7 built-in applications
- Press a single key to switch to another application without having to close the first one
- Find your way around an application easily guided by menu keys and softkeys
- Access **menus** from any application by pressing **Alt**
- Move information among applications by copying it to a clipboard and pasting it where you need it
- Save time by creating customized user keys to recall specific sequences of keystrokes that you use often

### Lotus 1-2-3

- Powerful Release 2.2 features let you:
- Use, edit, or create large worksheets—up to 256 columns and 8,192 rows of data
  - Create and view 1-2-3 graphs
  - Zoom in for a close-up look at a portion of a graph
  - Manipulate databases using 1-2-3 data commands including Sort, Query, and Regression
  - Execute macros to speed up repetitive tasks and keystroke sequences
  - Link files
  - Use Worksheet, Range, Copy, Move, File, and Add-in commands
  - Print to a text file or printer
  - Use 1-2-3 @ functions from @ABS to @YEAR
  - Perform cash flow analysis or statistical analysis using built-in 1-2-3 templates

Note: Allways™, PrintGraph, and Translate are not included in the HP 95LX. To use them, transfer your 1-2-3 file from your HP 95LX to your IBM-compatible PC, and run them from your PC version of Lotus 1-2-3.

### Appointment Book

- Appointment book features let you:
- See your daily schedule
  - Repeat appointments on a weekly, monthly, or yearly basis
  - Set alarms for appointments
  - Check your daily to-do list
  - Mark to-do items as completed and carry over past-due items automatically
  - Attach extra information as a note to an appointment or to-do item
  - Search for a word or phrase in the appointment book
  - Create multiple appointment books
  - Print your appointments or to-do items, for one day or a series of days, to a text file or printer
  - Consult a monthly calendar
  - Check the time locally or in any one of over 250 worldwide cities, including towns or locations that you have added to the city list
  - Use the HP 95LX as a timer or stopwatch

### Phone Book

- Phone book features let you:
- Access an alphabetical list of names and phone numbers
  - Find a name and number quickly by scrolling, searching for the name directly, or searching for the first letter or letters of the name
  - Keep, for each name, a card of information—such as an address, job title, birthday, or whatever you want
  - Search for a word or phrase in the phone book cards
  - Create a smaller phone book from an existing phone book
  - Print one or more names and numbers, with or without their information cards, to a text file or printer
  - Use the phone book's database capability to create additional useful lists, for example, a price list or inventory list

## HP 95LX Software Specifications

### Memo Editor

- Memo editor features let you:
- Create a memo, note, or letter
  - Edit ASCII-format documents or reports transferred from your PC to the HP 95LX—the display's right margin is adjustable and can accommodate a line width up to 240 characters
  - Use standard word processing features including:
    - Word wrap
    - Cut and paste
    - Copy and paste
    - Insert and overwrite
    - Tab and margin setting
    - Insertion of text from another file
    - Page break
  - Search for a word or phrase in your memo or document
  - Print all, or a portion, of your memo or document to a printer

### HP Financial Calculator

- HP financial calculator features let you:
- Do arithmetic and use general math functions including:
    - Percent
    - Square root
    - Reciprocal
  - Use an automatic constant
  - Store numbers directly to, or recall them from, a Lotus 1-2-3 worksheet with the STO@ and RCL@ functions
  - Keep a running total of a list of up to 100 numbers, with list review and editing capability
  - Perform these time-value-of-money calculations:
    - Compound interest
    - Amortization
    - Interest rate conversion
  - Send an amortization schedule directly to a Lotus 1-2-3 worksheet
  - Compute business percentages:
    - Percent change
    - Percent of total
    - Markup
    - Margin
  - Perform currency and other unit conversions:
    - Nine standard currencies or others of your own choosing
    - Length
    - Area
    - Volume
    - Mass
  - View the elements and progress of each calculation on the large HP 95LX display; see labeled variables, the contents of 10 storage registers, or the history stack
  - Use the HP Solve application to customize the calculator with often-used equations—solve for one variable in terms of the others without rewriting the equation
  - Store HP Solve equations to the Solve Catalog
  - Use Solve 1-2-3 to backsolve to a desired result in a Lotus 1-2-3 worksheet—calculate the value of one cell to achieve a desired value for another cell
  - Plot an equation or mathematical expression, zoom in on chosen areas of the graph, and calculate roots
  - Use technical math functions including:
    - Trigonometric functions
    - Polar/rectangular coordinate conversions
    - Exponential and logarithmic functions
    - Integer part, fractional part, and absolute value
    - Rounding a number
    - Random number generation
    - Permutations, combinations, and factorials
  - Choose your preferred form of data entry, either algebraic or RPN
  - Print to a printer any of the following:
    - Contents of the calc line
    - Contents of the history stack
    - Contents of the storage registers
    - All data in current calculator screen
    - An amortization table

### Data Communications

- The datacomm application in the HP 95LX lets you:
- Access information networks such as your company's electronic mail system
  - Access electronic information services such as CompuServe
  - Save information you receive in a capture file
  - Emulate a VT-100, ANSI, or tty terminal
  - Set data transmission speed to 300, 1200, 2400, 4800, 9600, or 19200 bps
  - Use the 40-column HP 95LX display as a window into an 80-column screen to communicate with systems that require a full 80-column screen
  - Wrap incoming data to 40 columns when communicating with a system that does not require use of all 80 columns
  - Choose among built-in configuration files, including ones to connect to CompuServe, Dow Jones News/Retrieval, or MCI Mail; or create and save your own
  - Automate login using a script file
  - Transfer files using Kermit or XMODEM protocols, or as straight ASCII text

Note: Datacomm requires either the HP 8222A serial interface cable to connect directly to a remote computer; or the cable, a modem, and a modem adapter to connect by phone to the remote computer. Direct connection also may require an optional cable adapter. The filer, described below, includes additional file transfer capability.

### Filer

- Filer features let you:
- Create, rename, and move among directories
  - View a listing of files in your directories
  - View the contents of a specific file
  - Rename a file
  - Copy, move, or delete one file or several files at once
  - Sort files by date, by extension, by size, or alphabetically by file name
  - Run a program from electronic RAM disk, from a plug-in RAM card, or from ROM
  - Execute MS-DOS commands available in the HP 95LX
  - Transfer files between one HP 95LX and another via infrared interface
  - Transfer files between an HP 95LX and an IBM-compatible PC, either through direct serial connection or via an optional modem, using the optional HP F1001A Connectivity Pack
  - Simplify file management tasks, especially file transfer, using the split-screen feature; lets you see two directories at once, making it easy to copy a file from one to the other
  - Print a file, set of files, or directory listing to a printer
  - Play TigerFox, a chase game with 45 different mazes (available only in the U.S. and international English versions of the HP 95LX)

### Setup Utility

- Setup utility features let you:
- Adjust display contrast, memory allocation, and beeper volume
  - View battery level
  - Set date and time formats
  - Specify punctuation, language, keyboard, and currency settings
  - Select or modify printer configuration
  - Create customized user keys that let you quickly recall a string of text or automatically execute a series of keystrokes to perform a specific task
  - Format a plug-in RAM card
  - Personalize the HP 95LX by filling in a business card display or adding your own customized graphics image

The HP95LX comes with an NEC V20H microprocessor (80C88-compatible, 5.4MHz), 512K of internal RAM memory (always on so you can store data and software there), 1MB of internal ROM for the built-in programs, and an industry-standard RAM /ROM card slot for extra software/file storage. Inside the 95LX a 2" x 2" motherboard, flanked by chips, is tucked neatly away under the right-hand side of the 95LX's keyboard.

The HP palmtop interfaces with printers and other peripherals via a standard 9-pin serial port or a two-way infrared interface (for communication with other 95LX's and HP calculators). If you want to transfer data between the 95LX and your desktop computer you'll have to purchase the optional HP95LX Connectivity Pack (\$99.95). Another way to move data is to connect a third-party RAM card reader to your PC and transfer files via the optional RAM card.

## IMPRESSIONS

**110** Yes! Yes! Yes! We like it!  
**P+** Finally HP is back in the game  
**PV** and from a first-glance perspective we think the 95LX is going  
**LS/12** to become THE major player in the pocket/palmtop computer field. Why do we like it?

- **QUALITY** — HP quality is legendary. The HP Corvallis site that is producing the 95LX produced the HP110, Portable Plus, and the line of HP calculators.
- **COMPATIBILITY** — The 110 and Portable Plus were not PC-compatible, which led to their relatively limited sales. Many other handheld computers are not PC compatible. The 95LX is fully PC-compatible and comes with an industry-standard RAM /ROM card slot. This will encourage the continued development of software for the 95LX.

## HP 95LX Hardware Specifications

### HP 95LX Palmtop PC Includes:

- Owner's Manual
- Quick Start Guide
- Two AA and one CR2032 batteries
- Engravable personal nameplate

### Physical Specifications

- Dimensions:  
16 x 8.64 x 2.54 cm (6.3 x 3.4 x 1 in) closed  
16 x 16 cm (6.3 x 6.3 in) open with height  
dependent on viewing angle
- Weight (with batteries):  
312 g (11 oz)

### Memory

- Built-in ROM size:  
1 Megabyte
- Software built into ROM:  
MS-DOS 3.22  
Lotus 1-2-3 Release 2.2  
Appointment book  
Phone book  
Memo editor  
HP financial calculator  
Data communications  
Filer
- Built-in RAM size:  
512 Kbytes with adjustable partitioning  
between system RAM and electronic  
RAM disk
- Built-in RAM availability:  
Because the built-in software executes from  
ROM and uses minimal RAM, most of the  
RAM is available for file creation and file  
storage.
- Expansion capability:  
Industry-standard plug-in card slot lets you  
increase electronic RAM disk, for file  
storage, or add ROM-based software appli-  
cations. The card slot is accessed as drive  
A: and conforms to PCMCIA 1.0 and JEIDA  
4.0 standards. Available RAM card sizes  
are 128 Kbytes (HP F1002A) and  
512 Kbytes (HP F1003A).

### Industry-standard PC Architecture and Central Processing Unit (CPU)

- IBM PC-XT architecture
- NEC V20H CPU (80C88-compatible)  
running at 5.37 MHz

### Display

- Type:  
Supertwist liquid crystal
- Size:  
40 columns x 16 rows
- Graphics resolution:  
240 x 128 dots
- MDA compatible
- Character size:  
5 x 7 dots

### Power

- Two 1.5-V AA main batteries
- One 3-V CR2032 coin cell backup battery
- Battery life for main batteries is 1 to 2 months  
of typical use, depending upon type of use. For  
example, the HP 95LX consumes more power  
when performing infrared or serial  
communication.
- Optional ac adapter (recommended for  
use with the HP F1001A Connectivity  
Pack to conserve HP 95LX main battery life).  
Adapters include:

HP 82241A	U.S./Canada	110 V, 50-60 Hz
HP 82241AU	U.K.	240V, 50 Hz
HP 82241AB	Europe	220 V, 50 Hz
HP 82241AJ	Japan	100 V, 50 Hz
HP 82241AG	Australia	240 V, 50 Hz

### Keyboard Layout

- Familiar typewriter-like QWERTY layout
- Separate numeric keypad
- 10 function keys (softkeys)
- 7 application keys providing one-key access to  
built-in software applications

### Beeper

- Audible warning of operator error
- Alarm feature in appointment book
- Adjustable volume

### Input/Output

- Built-in 3-wire serial interface for connection  
to RS-232 devices
- Built-in infrared transmitter/receiver for  
wireless HP 95LX to HP 95LX communication  
at 2400 bps with a separation distance  
up to 20.3 cm (8 in)
- Built-in data communication software  
including:  
VT-100 terminal emulation  
ANSI terminal emulation  
tty terminal emulation  
Kermit protocol  
XMODEM protocol
- Built-in printer driver sets supporting these  
printer types:  
HP LaserJet  
Epson FX-80  
IBM Proprinter  
(This lets you use a variety of printers. For  
example, the Kodak Diconix 150 Plus  
printer is compatible with Epson FX-80 and  
IBM Proprinter command sets.)
- Plug-in card slot
- Optional HP F1001A Connectivity Pack  
for file transfer between an HP 95LX and an  
IBM-compatible PC
- Optional modems from Touchbase  
Systems, Inc. As of January 28,  
1991, these modems are approved for  
use in the following countries:

WorldPort 2400	WorldPort 2400/MNP
Argentina	Austria
Austria	Canada
Canada	Columbia
Columbia	Holland
Denmark	Japan
Finland	Norway
Holland	Sweden
India	Switzerland
Japan	Turkey
New Zealand	United Kingdom
Norway	USA
Poland	
Sweden	
Switzerland	
USA	

Approval for WorldPort modems in  
Austria requires an acoustic coupler.

### Operating Requirements

- Operating temperature:  
0° to 45° C (32° to 113° F)
- Storage temperature:  
-20° to 60° C (-4° to 140° F)
- Data retention temperature (operating or  
storage):  
0° to 45° C (32° to 113° F)
- Humidity:  
90% relative humidity at 40° C (104° F) maximum

- **FUNCTIONALITY** — The 95LX has spreadsheet, personal organization, notepad, database, and communications abilities built in. In addition these applications are integrated with each other and pop up at the touch of a button. The 95LX is about the size of a fat checkbook and two AA batteries power it for up to 2 months. Slip it in your coat pocket and off you go.
- **AFFORDABILITY** — Suggest retail price of the 95LX and a RAM card is about \$900.

## PLACE IN THE MARKETPLACE

"Palmtops" fill the niche between calculators and notebook computers, providing the functionality of the latter with the portability and affordability of the former. According to industry projections there will be over 5,000,000 palmtops in use worldwide by the end of 1994.

The 95LX was a joint project between HP and Lotus, and it appears to be a marriage made in heaven. HP is the leader in handheld technology (calculators, instruments, etc.). Lotus 1-2-3 is the premier business application with over 14,000,000 users worldwide. Making 1-2-3 an integral part of HP's PC-compatible palmtop insured that the HP-95LX would be the palmtop of choice for the over 14 million 1-2-3 users worldwide and that Lotus-1-2-3 would be the spreadsheet of choice for those used to HP quality and service.

The 95LX comes in English, French, German, Italian, Spanish, and Portuguese versions and is going to be a big winner for HP, Lotus, and users around the world.

## THIRD PARTY PRODUCTS

**110** The fact that the 95LX is PC-compatible and comes with a serial port bodes very well for third-party producers of software and hardware. Modems and serial printers (like the ThinkJet and the Diconix Plus), should be able to connect directly to the 95LX. We are aware of a number of RAM/ROM card drives (like floppy disk drives) that will connect to your PC-compatible desktop computer and let you swap files with the 95LX using its industry-standard RAM card.

The 95LX comes with a Monochrome Display Adapter with no graphics emulation. Software programs designed for a standard 80-character by 25-line screen will work on the 95LX's 40-character by 16-line LCD screen. You will have to use the Alt-ARROW keys to view the 40 columns and 9 lines not visible at any given moment. Available soon are Personal Finance/MECA, ACT! (contact management), Globalink (foreign language translator), and a dictionary / thesaurus.

## ORDERING INFORMATION

Personalized Software will carry the HP95LX and its accessories, although we expect them to be in short supply for the first couple of months. We expect our first shipment towards the end of May and will sell them on a first-come, first-serve basis. Call 515-472-6330.

- 110**  
**P+**  
**PV**  
**LS**  
**12**
- **HP95LX Palmtop PC**  
(Comes with Lotus 1-2-3, version 2.2)  
Part #: PTCOM1, Retail: \$699.00, Subscriber price ..... \$629.00
  - **128K RAM Card**  
(Expands 95LX file storage capabilities)  
Part #: PTRAM1, Retail: \$199.95, Subscriber price ..... \$179.95
  - **512K RAM Card**  
(Expands 95LX file storage capabilities)  
Part #: PTRAM5, Retail: \$399.95, Subscriber price ..... \$359.95
  - **Connectivity Pack**  
(Lets you connect 95LX to PC-compatibles)  
Part #: PTCON1, Retail: \$99.95, Subscriber price ..... \$89.95
  - **Serial Interface Cable**  
(Connects between HP Handhelds and PC-compatibles)  
Part #: PTSIC1, Retail: \$35, Subscriber price ..... \$35.00
  - **Voltage 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 other pin configurations)  
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)  
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## Some Thoughts About the New HP Palmtop

By Hal Goldstein

I look forward to playing with and using the new HP95XL. Something about miniaturization has always fascinated me. With so many Lotus 1-2-3 users a "Lotus 1-2-3 Calculator" seems a real winner in the market place. The fact that it can be used to take notes and track appointments seems an extra plus.

The main question to be answered by the marketplace is how useable is the 95XL? Frankly, I have been surprised that the Poqet PC (another palmtop, see Vol.5, No.1, Pg.8) has not gained more wide-spread acceptance with its compact size, DOS compatibility, and long battery life. It is possible to touch type on its keyboard and the screen has 25 lines. In contrast, the HP95XL has a smaller keyboard

and a smaller screen than the Poqet.

I have addressed this useability issue with some of my contacts in Corvallis. Apparently, different techniques have already evolved for typing. (For example, the two-thumb method and the skinny-finger-touch-type approach. Richard, our Managing Editor, thinks we should make special thimbles with skinny tips.) Those of you with a Sharp Wizard or Casio Boss might have more to say.

Of course the HP95XL is not intended for writing dissertations or performing complex spreadsheet analysis. It's for those who need a Lotus/DOS machine readily available for notes and simple spreadsheets, wherever one happens to be.

## COMPARISON WITH THE HP110 AND PORTABLE PLUS

HP110 and Portable Plus users will have a head start on understanding how the Palmtop operates. Like both HP Portables (particularly the HP110) quite a bit of software comes built in — in ROM.

Like the Portable Plus with its ROM/RAM Drawers on the bottom, the HP95XL has expansion capability. The HP95XL has one slot for holding extra memory or software. Credit-card-sized ROM or RAM cards slip into this slot and let the 95LX user add file storage space, or run additional software.

Like the HP Portables, the 95LX has an automatic shut-off capability. In addition, you can use its Setup features to make part of the 512K of built-in RAM a "temporary" RAM disk to store data. The Palmtop never really has to be "turned off" so the RAM disk can be preserved. HP Portable users perform this same function by partitioning internal memory and RAM disk from f6 System Config.

RAM and ROM cards can be inserted and removed into the 95XL as easily as inserting floppies into a disk drive. Installing extra RAM and ROM in the Portable Plus requires more effort and adding extra RAM and ROM to the Portable Plus has a more permanent feeling, almost like you're adding hard disk. In contrast, adding more RAM or ROM in the HP95XL feels more like you're slipping a floppy into a disk drive. The Portable Plus is thus a more stable creature and the HP95XL more flexible.

The RAM card can be really made to act like a floppy disk if you equip your PC with a RAM/ROM card reader. These devices, available from a number of third-party vendors, look like an external disk drive connected to your PC. They let your desktop PC read from and write to the new RAM cards. With one of these devices and a RAM card, file transfer between the HP95XL and your desktop computer becomes a snap.

If you don't have a RAM card reader attached to your PC, then you can connect the serial port of the 95XL to the serial port of your desktop and use file transfer software to move files between the two. Many HP110 and Portable Plus owners use FormIBM from the 1988 Subscribers Disk to

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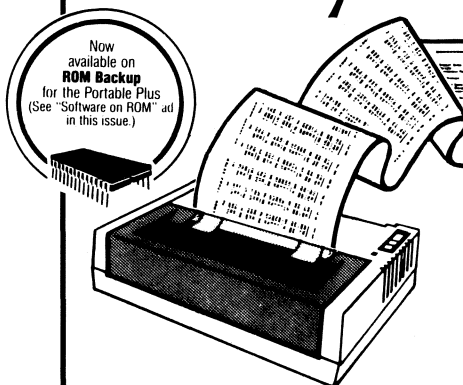
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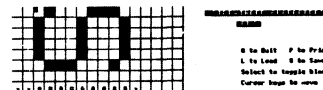
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allow them to use 3.5" floppies to transfer files between their HP Portable and a PC desktop. Plus users who are careful to use only IBM formatted disks can use the 3.5" disk as the medium of file transfer. Portable Plus users can also use our HPDuetto program to do serial transfer.

**110** The most obvious difference between the 95LX and the **P+** HP Portables is keyboard and screen size. The keyboards for the HP Portables are most useable. The 95LX keyboard **PV** is very small. As discussed above, we will see what **LS/12** techniques evolve to make the HP Palmtop keyboard useable. The 95LX has a 40-column by 16-line screen display, as compared to an 80-column by 25-line display for the Portable Plus and an 80-column by 16-line display for the HP110 Portable.

Software incompatibility is another common thread that must be examined in comparing these machines. The HP110 and Portable Plus are MS-DOS computers but not true compatibles. Some MS-DOS software can be made to work on the HP Portables. On the other hand the HP95XL is a true compatible. However, the small screen size and the lack of graphics emulation (i.e. no CGA) will make a great deal of software difficult or impossible to run. An entire 25 x 80 screen can be scrolled to on the HP95XL, but scrolling on a regular basis to run software would make the 95XL quite awkward to use at best.

Limited storage space, limited internal RAM, and a less powerful CPU are other common themes with all these HP machines. We are now in a time when most entry level desktop (and some portable) systems have a 386 microprocessor, 40 to 100 MB of storage and 1 to 4 MB of internal RAM. Compare this to the HP machines, using 8086/8088 technology with 100K to 1000K of storage and at most 512K of internal memory. This means that these machines must be used to run memory- and storage- efficient software that do not require high processing speed.

## IN CLOSING

For six years HP portable users have used *The Portable Paper* to share their common knowledge. They have helped create a solid support publication. Hopefully, a similar body of knowledge can be created with *The Palmtop Paper* (mentioned in the Publishers Message) to support the HP9XL.

## **P+** **110** **PV** Documentation for File Compare

**LS/12** By Richard Hall

FC.COM is a little file comparison utility that comes with the Portable Plus (on the ROM chip B drive). However, HP neglected to include instructions on how to use it. Thanks (again) to Frank Keresztes-Fischer for digging this information out of a more complete DOS manual.

FC compares two files, or two sets of files, and then displays the differences between them. The basic DOS syntax for the FC command is as follows:

### fc file1 file2

In the above command, file1 and file2 are the files you wish to compare. If they are in different subdirectories or on different drives, you must include that information with the filename (i.e. **fc a:\drive1\file1 b:\drive2\file2**).

There are also a number of "switches" that can be placed in the FC command line to change the way it compares files. (For more information see SWITCH OPTIONS in the next column.)

To test FC, I created two files, each with six lines. Lines 1,2,3,5, & 6 are the same in each file. Line 4 is different. The files were created on the electronic disk (C:\) and named FILE1 and FILE2 respectively.

### FILE1FILE2

```
aaaaaa
bbbbbb
cccccc
xxxooo
ddddd
eeeeee
```

Then, from the DOS prompt, I typed **fc file1 file2**. The following was displayed on the screen immediately below the prompt:

```
**** FILE1
ccc
xxx
ddd
**** FILE2
ccc
ooo
ddd
****
```

This differs somewhat from the DOS documentation.

*"FC reports differences between two files by displaying the first filename, followed by the lines that differ between the files, followed by the first line to match in both files. FC then displays the name of the second file, followed by the lines that are different, followed by the first line that matches."*

What appears to be happening is that after FC displays the first file name, it displays the last of any matching lines that precede an unmatching line. Then it displays the line(s) that do not match. Finally it ends with the next line that does match. FC will continue in the pattern until all unmatching lines are reported.

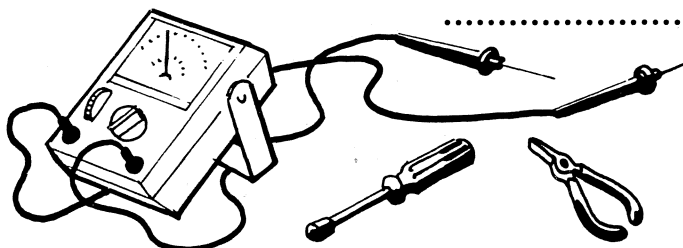


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When I compared identical files, I got the following message: **fc:no differences encountered.**

## SWITCH OPTIONS

**P+** As mentioned earlier, File Compare switches can be placed in the FC command line to change the way it compares files. Any, or all of the following nine switches can be placed in the command line after **fc** but before the first **path/filename**.

### Switch Function

**/a** Abbreviates the output of an ASCII comparison. Instead of displaying all the lines that are different, FC displays only the lines that begin and end each set of differences.

**/b** Forces a binary comparison of both files. FC compares the two files byte-by-byte, with no attempt to re-synchronize after a mismatch. Mismatches are printed in the following format:

**xxxxxxx: yy zz.**

The "xxxxxxx" above is the relative address from the beginning of the file of the pair of bytes. Addresses start at 00000000; **yy** and **zz** are the mis-

matched bytes from **path/filename1** and **path/filename2**, respectively. The **/b** switch is the default when you compare .EXE, .COM, .SYS, .OBJ, .LIB, or .BIN files.

**/c** Causes the matching process to ignore the case of letters. FC then considers all letters in the files as uppercase letters.

**//** (/L, not /"one") Compares the files in ASCII mode. This switch is the default when you compare files that do not have extensions of .EXE, .COM, .SYS, .OBJ, .LIB, or .BIN.

**/lb n** (/LB, not /"one"B) Sets the internal line buffer to "n" lines. The default length of the internal buffer is 100 lines. Files with more than this number of consecutive, differing lines abort the comparison.

**/n** Displays line numbers on an ASCII comparison.

**/t** Does not expand tabs to spaces. The default is to treat tabs as spaces to 8-column positions.

**/w** Causes FC to compress white space (tabs and spaces) during the comparison. If a line contains many spaces or tabs in a row, these characters are considered a single white space.

Note that although FC compresses white space, it does not ignore it. The two exceptions are beginning and ending white spaces in a line, which are ignored.

**/nnnn** Specifies the number of lines that must match after FC finds a difference between files. If the number of matching lines in files is less than this number, FC displays the matching lines as differences.

The DEFAULT VALUE for the number of lines to match between the files is 2. If you want to change this default, specify the number of lines with this switch.

FC uses a large amount of memory (enough to hold 100 lines) as a buffer storage space to hold the text files. If these files are larger than the available memory, FC compares what it can load into the buffer space. If FC does not find a match in those portions of the files in the buffer space, FC stops and displays the following:

**Resynch failed. Files are too different.**

For binary files larger than the available memory, FC compares both files completely, overlaying the portion in memory with the next portion from disk. All differences are output in the same manner as for those files that fit completely in memory.



## Printing from Lotus Eliminates Extra Lines Inserted by MemoMaker

By M.J. Snyder

**110** Since I first got an HP110 as part of the "course material" **P+** for an MBA program at UCLA I have become a computer junkie – in particular, a master about the idiosyncracies and foibles of the HP110. Some time later I obtained a Portable Plus and found that there were some differences between the two machines that caused me some difficulties. I solved most of them, but one continued to plague me: Why does MemoMaker automatically insert three extra lines when printing; what had I done wrong when I set the configuration for my Brother dot matrix printer?

Last night I finally thought about checking back issues of *The Portable Paper* to see if the printing and/or other problems had been discussed. I was pleased to learn from Dr. Bartold's article (Vol.1, No.2, Pg.20) that the printing problem belongs to the computer and is not caused by anything I have done, or failed to do. Unfortunately his solution will not work for those, like myself, without a copy of PrinterTalk, or without a disk drive. Fortunately I had already discovered another answer to the dilemma. You may want to pass it along to readers who lack the items mentioned above, but do have both MemoMaker and Lotus 1-2-3. The steps are as follows:

1. SAVE FILE WITH .PRN EXTENSION – If the file has already been saved without this extension, use the File Keys (**f1**), File Manager (**f5**) and Rename File (**f7**) keys to change the extension to .PRN.
2. Exit MemoMaker and go to Lotus 1-2-3; retrieve the file with the command: **/File Import Text**.
3. Follow the usual procedure for printing a file in Lotus 1-2-3 and the offensive extra rows will not be added.

I discovered an interesting anomaly. Despite the fact that three extra lines are inserted at the start of each page, the Skip Page (**f6**) key is still programmed for a full 9" of printed text (leaving 1" top and bottom margins). The extra lines are not included!

In order to expedite designating the Printer Range in Lotus 1-2-3, the first time I tried this procedure I used both Skip Page (**f6**) and Page Break (**f4**). That worked just fine ... except that in Lotus, the printer (a Brother dot matrix) did something it had never done with the HP110: it printed "10L" in the margin, even when the Page Break control code (.PA) was not part of the designated Range. Because of this, the the final revision to my procedure was as follows: after inserting the Page Break, I left the extra row but deleted the control code (**-Char**).

FINAL FOOTNOTE – Importing into Lotus 1-2-3 for printing is a compromise solution, and as is true of any compromise, it requires some give-and-take. In order to be able to print with neat top and bottom margins, you have to give up the ability to use the Enhance Block capability of MemoMaker. Lotus 1-2-3 totally ignores the control codes for Underline and Bold.



## Two Great Books for Desktop Publishing

By Richard Hall

**PV** We liked *LaserJet Unlimited Version II* and *DeskJet Unlimited*, two books from Peachpit Press that we reviewed in Vol.5, No.4, Pg.8 of *The Portable Paper*. **LS** We are also impressed with the two books reviewed below. Peachpit Press seems to be able to publish quality on a consistent basis.

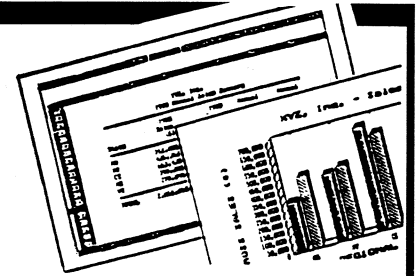
### TYPE STYLE

*TYPE Style* by Daniel Will-Harris is "... an entertaining and informative romp through desktop publishing. The author's advice is clear, sound, and practical."

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## MEMORY REQUIREMENTS

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- o Macro record/playback capability, single-stepping through macros
- o Full support of sub-directories and path names
- o Able to shell to DOS

and easy to read. And it is packed with simple, comprehensible desktop wisdom. It is particularly useful for those without extensive desktop publishing experience.

*TYPE Style* investigates the choice and use of type in desktop publishing design. What is the personality and emotional effect of different type styles? Which fonts work together and which don't? *TYPE Style* helps to answer these questions and give the reader a basis for the intelligent selection of type styles.

Perhaps the thing I like most about the book is that it is chocked full of examples. Will-Harris makes excellent use of Bitstream's ample font library to let the reader experience the points he's making and see the difference between text set in different fonts (i.e., **Cooper Black** is very different from *Zapf Chancery Medium Italic*).

## THE LASERJET FONT BOOK

Another useful book for desktop publishers using HP's LaserJet printer is *The LaserJet Font Book* by Katherine Shelly Pfeiffer. This book begins with a discussion of the classification and choice of type. The discussion is a little bit more historical than the discussion in the Will-Harris book, but it is interesting and useful nonetheless.

Most valuable to me are the font samples given in this book. Complete alphabet samples of almost all of the

fonts available on the LaserJet are given. In addition, text specimens are given for the fonts more commonly used in text.

The author follows the font sample section with her "Typeface Notes." This chapter gives some more historical background on individual typefaces as well as the author's views on what the specific typeface is good for and where it should be used.

*The LaserJet Font Book* shows you what the majority of LaserJet fonts look like and tells you where you can get them. It's a useful book and I'm glad I have it.

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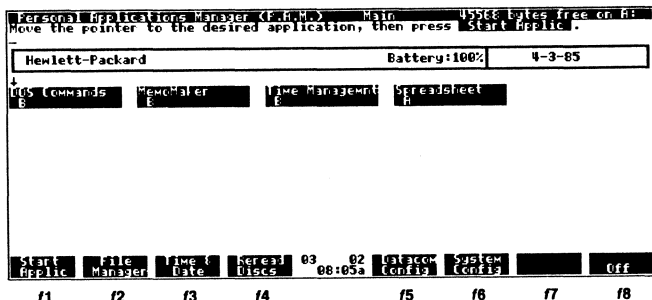
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## Personalizing the Portable Plus

**110** There are many ways that the Portable Plus can be customized to fit your individual needs. One of the easiest and most powerful methods is to personalize its behavior. This can be done quite easily by creating your own

entries on the Personal Applications Manager (PAM) Main screen. These entries are the inverse video boxes (called *applications labels*) displayed by PAM. They show which applications have been installed.

- 110** Applications labels aren't only for simply starting applications, they can also be used to conveniently perform common, or frequently repeated operations. For example, you can set up an applications label to back-up your Edisc, or to automatically bring a specific template into Memomaker for creating interoffice memos. When you combine an applications label with a batch file, the possibilities become practically unlimited.



## CUSTOMIZING PAM

Every time your computer is reset, and every time PAM is restarted (after an application or command terminates), the internal and external disks are scanned for PAM.MNU files. These files determine both the labels that appear on the main PAM screen, and the commands to be executed when that application is selected. The format for PAM.MNU file is as follows:

```
.
.
#Comment
Title
Command
#Comment
Title
Command
.
.
```

Where **Title** is the wording that will appear in the application label, and **Command** is the actual command to be executed. The line containing **Title** can be up to 80 characters long, but only the first 14 are displayed. Command can be up to 80 characters long also, and must be a valid DOS command line. If any line in the PAM.MNU file begins with the "#" character, that line is regarded as a comment and is ignored. Comment lines are optional, but they help to document your PAM.MNU file. The PAM.MNU file must be in the top-level directory of a disk or software module (ROM). For more information, refer to "Creating an Applications Menu Label" on pages 1-5 of *Using the Portable Plus* or pages 2-24 of *Using the HP110*.

## USING TEMPLATES

Many software applications today provide convenient mechanisms for automatically loading in specific data files that function as *templates*. These templates may be spreadsheets, database forms, or word processing overlays for form letters or interoffice memos. The following section describes how templates can be combined with PAM entries to create a friendly, one-button, approach to customization of applications.

There are basically two ways that applications can load templates when they start.

- 110** **COMMAND-LINE ARGUMENTS** -- Many programs allow *arguments* within the command line that starts the program. Whether this command is entered from the keyboard, or is part of a PAM.MNU file, arguments give the program additional information about what to do when it starts.

Memomaker (on the Portable Plus, NOT on the HP110) is an example of a program that makes use of command line arguments. When Memomaker starts, it examines the command line to see if a filename is present, and if so it loads that file automatically. For example, by putting a file name in the command line in PAM.MNU that starts Memomaker, you can have an application label that starts the program and loads a template for memos.

- P+** **AUTOSTART OR DEFAULT FILES** -- The other method employed by applications is triggered by the presence of a specific file existing on the default drive. This is the case for Executive Card Manager. Executive Card Manager (ECM) examines the default drive for a specific file. If that file is present, ECM will automatically load that database into memory when it starts. To use this method, you don't need to do anything with the command line that starts the program.

The following sections give some examples of both methods. By using these examples as guides, you can create your own "customized" applications.

## MEMOMAKER

- P+** Memomaker employs both methods of template management. It examines the command line to determine if a file should be loaded automatically. Also, it examines the default directory to see if a file named STARTUP.FMT exists. If so, it will load this format file. Using both methods, you can cause Memomaker to load both a text file and a format file.

The syntax of the command line for starting Memomaker with a default file on the Portable Plus is:

**memomakr filename**

where *filename* is the name of a Memomaker text file that you select. This works only on the Portable Plus.

Suppose that you want to create a label that will start Memomaker and display a template for an interoffice memo. Let's assume that you have already created a template for your interoffice memos under the filename of INTEROFF.TPL. To create a PAM label you must create, or modify, a PAM.MNU file that includes the following:

```
#Start PAM & load a memo template
InterOff Memo
memomakr interoff.tpl
```

The above lines instruct PAM to display the title **InterOff Memo** in a PAM label, and when Memomaker starts, to immediately get the file named INTEROFF.TPL and display it, ready for you to enter text.

### CREATE A BACKSPACE/DELETE KEY FOR MEMOMAKER ON THE HP110

**110** You can use the same procedure to create a "destructive backspace" delete key for the HP110 version of Memomaker. First you must create a small batch file that will assign the delete function to the key of your choice. For this example we'll assign the delete function to the **f7** key. Go into Memomaker and create a batch file with the following lines:

```
prompt $e&f0a7k0d4L$eD$eP
memomakr
prompt $h$t$h$h$h$h$h$h$h [Sp]:
```

Save this as the file MM.BAT. Then while still in Memomaker, create or modify the existing PAM.MNU file, to include the following two lines:

```
Memomake
mm
```

When you exit Memomaker, a box named "Memomake" will appear on your PAM screen. Move your pointer to this box and press Return. Memomaker will start up and you will find that the **f7** Help key has turned into a destructive backspace key. (For more on how the above batch file accomplishes this, see Vol.1, No.1, Pg.2.)

### REFLECTION 1™

**P+** REFLECTION 1 allows you to specify the type of terminal to emulate, what configuration to use, and the command file to execute. The command file can instruct REFLECTION 1 to automatically initiate a communications session, which can log on to a host, perform file transfers—or do practically any other data communications tasks. The syntax for the command that tells REFLECTION 1 to do this is:

```
reflect1[/[hv]][config filename] command filename
```

where *config filename* is the name of a file previously created by REFLECTION 1 that contains the data communications configuration information needed by the program. If this filename is not present, REFLECTION 1 will scan the default directory for REFLECT1.CNF to retrieve its configuration information. If REFLECT1.CNF is not present, default configuration information is assumed. The *command filename* specifies a simple text file that contains a sequence of commands for REFLECTION 1 to execute. Command files enable you to speed up your work in many ways. You can use command files to short-cut some data communications tasks, to do repetitive operations automatically, or to run programs to send and receive data..

A PAM.MNU file entry that would automatically load REFLECTION 1 and initiate a communications session with a host might contain the following lines:

```
#Start PAM & connect & logon to an HP3000
Host Logon
reflect1 /h reflect1.cnf logon.cmd
```

The applications label would be **Host Logon**. The command line instructs REFLECTION 1 to emulate an HP-2392 terminal, use the config. file called REFLECT1.CNF, and to execute the command file called LOGON.CMD.

### LOTUS 1-2-3

**110** Lotus 1-2-3 is a program that allows you to create an *autostart* file that automatically loads a specific worksheet. When 1-2-3 starts, it automatically scans the current working directory (the one specified in the 1-2-3 configuration file) for a worksheet named AUTO123.WKS. If that file exists, 1-2-3 automatically retrieves it.

If you had an expense report form in a file called EXPENSE.WKS and wanted to create a PAM entry that would automatically load it into 1-2-3, you would need to create a batch file called EXPENSE.BAT. The batch file would look like this:

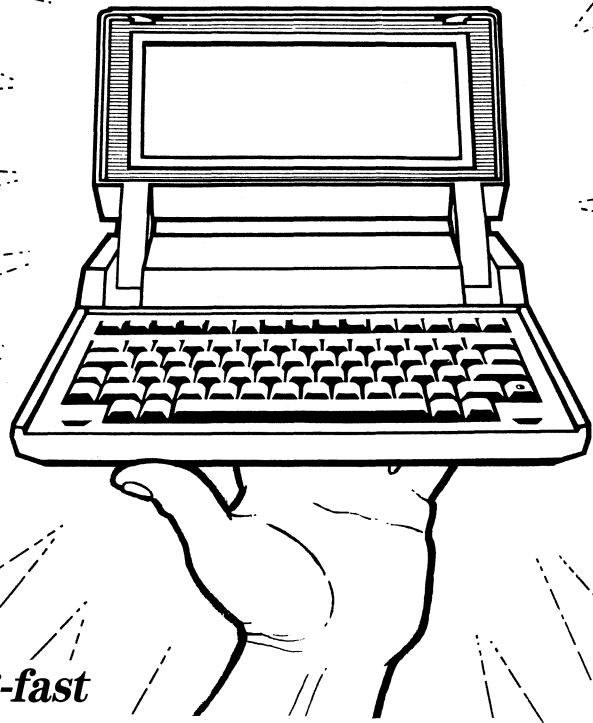
```
copy expense.wks auto123.wks
123
```

When it executes, this batch file will first copy the worksheet named EXPENSE.WKS into the auto-load worksheet file, AUTO123.WKS. It will then run Lotus 1-2-3 which would in turn automatically load AUTO123.WKS. To create a PAM applications label to run this batch file, the PAM.MNU file entry would be:

```
#Start PAM & load expense report form
Exp Report
expense.bat
```

(110% continued on page 25.)

# 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?

## **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.

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.



## 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
<b>NEW WORD PROCESSORS</b>						
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.
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).
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	
<b>WORD PROCESSING UTILITIES</b>						
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	
<b>SPREADSHEETS AND UTILITIES</b>						
Lotus 123,1A	LT12UR	495.00	295.00	HP	2	
Lotus 123,2.01	LT15UR	625.00	395.00 <sup>2</sup>	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).
<b>DATABASE PROGRAMS</b>						
Exec Card Manager	EC11UR	395.00	225.00	HP	2	(Lotus 1-2-3 can also be used as a database.)
<b>COMMUNICATIONS</b>						
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, Jetctrl, and other great utilities.
<b>PRODUCTIVITY BOOSTERS / GAMES</b>						
Best of DOS Tools	DT12NK	179.00	168.95	PS	2	Selected utilities from DOS Tools <sup>1</sup>
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
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	
<b>GRAPHICS</b>						
Sketch	SK12NK	175.00	170.95	PS	1	(Lotus 1-2-3 can also be used for graphics.)
<b>PROGRAMMING LANGUAGES</b>						
MSBasic	MS21UR	331.00	165.00	HP	1	This is not GWBASIC.
<b>NEW COMBINED ROMs</b>						
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 (5 programs on one chip): The Editor, Format110, MiniPrinterTalk, Shelp, Sidewinder	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.
The Writer's ROM (5 programs on two chips): The Editor, FormatPlus, FilePlus, Webster's Speller, Shelp	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.
Writer's ROM Part II (2 programs on one chip): RightWriter, OutlinePlus	WR12NK	350.00	299.00	PS	1	

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

PACK DUMP TY CYPIER RUNDIR WHEREIS TBE SDL FDATE LABEL DIRS TRANSLIT  
CLAN DIRALL ARCE MOVE OFF CHANGE ARCS20 MOVEALL TRIM SQPC SM  
VDL TMA TJETA PCOPY ASK PRNCONF WAIT FCREP XCOPY COPYNEW

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

<sup>2</sup>IMPORTANT: 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 and pricing on new HP ROMs if used ROMs unavailable.

# 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 <sup>1</sup>	PP36UC-P3	\$2795	\$995	
Reconditioned 512K P. Plus	PP16UC-P3	2795	795	
Reconditioned 128K P. Plus	PP12UC-P3	2590	395	
Reconditioned HP-110	PQ11UC-P3	3000	395	
HP-110 Manual/Software Kit	MA13UC-P3	64	64	
Like-new German Plus <sup>1</sup>	PP37UC-P3	2795	995	
German localiz. ROM	GE31UR-P3	150	99	(50)
Like-new Swiss/Fr. Plus <sup>1</sup>	PP34UC-P3	2795	995	
French localiz. ROM	FR31UR-P3	150	99	(50)
Like-new Swedish Plus <sup>1</sup>	PP40UC-P3	2795	995	
Like-new English Plus <sup>1</sup>	PP31UC-P3	2795	995	
Like-new Italian Plus <sup>1</sup>	PP38UC-P3	2795	995	
Italian localiz. ROM	IT31UR-P3	150	99	(50)

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

### SPECIAL HP110, PORTABLE PLUS BUNDLES

**Perfect Plus <sup>2</sup>	PE11UX-P3	\$4103	\$1295	
**Power Plus System <sup>3</sup>	PP11UX-P3	4135	995	
**Super Plus System <sup>4</sup>	SU11UX-P3	6282	1795	
**Terminal Plus System <sup>5</sup>	TE11UX-P3	5170	995	
Thrifty System <sup>6</sup>	TH12UX-P3	3330	395	
ThinkJet/Disk Drive Special <sup>7</sup>	TH11UX-P3	1290	295	

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

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

<sup>4</sup> 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.

<sup>5</sup> 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.

<sup>6</sup> SIX FREE BONUSES for Plus Systems include: "How to Use HP Portables" video, Norton Utilities 4.0 Advanced Edition, DOS Tools, GamesPlus, '91 Portable Paper Subscription and Subscribers Disk (all software on disk).

<sup>7</sup> THRIFTY SYSTEM — HP110 with "How to Use HP Portables" video, HP110 Productivity Pack, PrinterTalk, Format110, 1991 Portable Paper Subscription, & 1991 Subscribers disk.

<sup>8</sup> 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-P3	\$600	\$250	(167)
WorldPort Modem 1200	WM11NH-P3	199	179	
WorldPort Modem 2400	WM12NH-P3	359	319	(295)
WorldPort M. 2400/MNP	WM13NH-P3	499	425	
WorldPort serial cable	WM14NM-P3	30	20	
WP 1200 Upgrade kit	WM13NG-P3	199	179	
WP Acoustic coupler	WM16NH-P3	79	79	
HP9220SD Acoust. cplpr	AC11NC-P3	195	135	

### PRINTERS, PLOTTER (Reconditioned)

HP-IL ThinkJet Printer	TJ11UC-P3	\$495	\$199	(179)
ThinkJet (AC Powered)	TJ11UX-P3	545	249	(229)
Serial ThinkJet Printer	TJ14UC-P3	495	295	
DeskJet Printer, cable	DJ11UC-P3	837	395	(395)
DeskJet Plus, cable	DJ12UC-P3	995	450	
HP-IL 7470A Plotter	PL11UM-P3	1095	595	
PaintJet	PA12UC-P3	1395	CALL	
LaserJet 500 Plus	LA13UC-P3	4200	CALL	
LaserJet II	LA14UC-P3	2495	CALL	
LaserJet IID	LA12UC-P3	3795	CALL	
LaserJet IIP	LA15UC-P3	1495	CALL	

### DISK DRIVES (reconditioned)

HP9114A Disk Drive	DD11UC-P3	\$795	\$199	(179)
HP9114B Disk Drive	DD12UC-P3	795	249	(199)
HP9114B (AC Powered)	DJ11UX-P3	845	299	(249)
15MB Hard Drive	HD11UC-P3	2700	995	

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

### MEMORY, SOFTWARE DRAWERS (Reconditioned, P.Plus)

1 MB HP RAM Drawer	MM11NC-P3	\$1275	\$995	(795)
384K HP RAM Drawer	MM12UC-P3	982	295	
256K HP RAM Drawer	MM19UC-P3	709	225	(199)
128K HP RAM Drawer	MM13UC-P3	436	150	
128K HP Memory Card	MM14UC-P3	273	125	(99)

HP ROM Software Draw.	SW11UR-P3	195	99	(79)
1MB RAM/2MB Flash ROM	MR11NH-P3	1995	1695	

### ROM BURNING (Portable Plus)

ROM Burning kit	EP10NH-P3	\$695	\$595	(495)
(ROM burner & eraser, cable, 2 128K EPROMs, software, manual)				
128K byte EPROM	EP11NR-P3	69	59	(49)
(4) 128K byte EPROMs	EP12NX-P3	276	199	(179)
128K PROM (no erase)	EP18NR-P3	64	54	(44)
Four 128K PROMs (no erase)	EP19NX-P3	256	179	(159)
64K 27C512, EPROM	EP13NR-P3	25	22	(19)
ROM burning software	EP14NS-P3	250	195	
Custom 128K burning	EP15NE-P3	150	135	
Custom burning consult.	EP16NE-P3		75 per hour	

### INTERFACE CARDS (reconditioned)

HP-IL Card For IBM PC	IL11UC-P3	\$195	\$119	(99)
P.Plus Video Interface	VII4UC-P3	435	195	
P.Plus V. Intfct+Monitor	VM12UM-P3	750	275	
Composite monitor	VM11UC-P3	325	150	
HPIL/HPIB Interface	IL13UC-P3	395	235	
HPIL/Serial Interface	IL12UC-P3	295	179	

### INPUT DEVICES

Log.Mouse P.Plus System	MS15NM-P3	\$219	\$179	
P.Plus Mouse Sftwre	MS11NS-P3	70	60	
P.Plus Mouse Cable	MS13NM-P3	30	20	
Numeric Keypad, P.Plus	TS11NM-P3	139	135	

## THE PORTABLE PAPER

(Subscribers Disks Only Available With Subscriptions)

1991 Subscript. & Disk	PPN1PS-P3	\$55.00	(Free)	
All 1986-91 issues/disks	PL11PK-P3	159.00		
All 1986-90 issues/disks	PL14PB-P3	119.00		
Individual back issue	PP99PB-P3	9.20		
PP Binder Vol.6	PB16NM-P3	7.00		
PP Binder Vol.1-6	PB15NM-P3	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, SdWnder	SH13NK-P3	\$235	\$215	(139)	95*
SuperROM	SU11NK-P3	474	299	(199)	49*

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

### Communications

Advanced Mail	AD12UR-P3	\$295	\$150	(99)	
PC2622	PC13UR-P3	395	239	(99)	
Reflection	RF11UR-P3	525	295	(139)	
TermPlus	TE13NK-P3	195	175	(99)	95*

### Graphics

Sketch	SK12NK-P3	\$175	\$171		95*
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### Productivity Boosters / Games

**COMBO ROM	RO11NK-P3	\$499	\$299	(199)	
(2 ROMs: AsEasyAs, HP Duette, TermPlus Sidewinder, and TetPlus)					
DOS Tools	DT12NK-P3	\$179	\$169	129	
FilePlus	FE14NK-P3	165	155	(99)	95*
GamesPlus	GA11NK-P3	205	175	(159)	105*
HP Calculator	CL11NK-P3	95	95		
HP Duette	DU13NK-P3	195	185	(139)	95*
Norton Utilities (Adv.)	NU12NR-P3	249	199		99*
Shelp	SH12NK-P3	110	105		55*
**Squish Plus	SQ11NK-P3	264	199	(199)	99*
Typing Whiz	TW12NK-P3	145	135	(99)	95*

### Programming Languages

MSBasic	MS21UR-P3	\$331	\$165	(99)	
Turbo Pascal 3	TP13NK-P3		No longer published		95*

### Spreadsheets and Database

As-Easy-As+SideWinder	AS11NK-P3	\$215	\$195	(159)	115*
Exec. Card Mgr	EC11UR-P3	395	225	(199)	
Lotus 123.1A	LT14UR-P3	495	249	(199)	
Lotus 123.2.01	LT15UR-P3	625	395		
SideWinder	SW12NK-P3	135	125	(99)	

### Word Processors

Editor II	ED12NK-P3	\$195	\$175	(99)	95*
MemoMkr/TimeMgr	MM21UR-P3	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-P3	394	199		
MultiMate	MM20UR-P3	520	295	(199)	
**WordPerfect 5.0	WD11NK-P3	940	595	(495)	295*
**WordPerfect Speller	RO13NK-P3	525	199		
(3 ROMs; Also including: HPDuette, Shelp, FilePlus, Tetplus)					
**WordPerf.Thesaurus-3 ROMs	RO12NR-P3	250	147		
**Writer's ROM	WR11NK-P3	499	299	(199)	170*
(2 ROMs: Editor II, Webster's, FormatPlus, FilePlus, Shelp)					
**Writer's ROM II	WR12NK-P3	350	299	(199)	140*
(Includes RightWriter and Outline Plus)					

### Word Processing Utilities

FormatPlus	FP13NK-P3	\$175	\$165	(99)	95*
HPrint	HP12NK-P3	175	171		95*
OutlinePlus	OU11NK-P3	175	165		95*
RightWriter	RW11NK-P3	205	199		110*
Webster Speller	WB13NK-P3	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-P3	\$39.95	\$35.95	
Kermit	KE11NS-P3	19.00	19.00	
Relay Gold (Plus)	RG11NS-P3	295.00	279.00	
TermPlus	TE12NS-P3	99.95	79.95	(49)
Term110	TE11NS-P3	99.95	79.95	
YTERM	YT11UC-P3	135.00	49.95	

### Database/Accounting Software

Condor 3	CR11NS-P3	\$495.00	\$279.00	(249)
Condor Jr	CR13NS-P3	99.95	89.95	
Dac-Easy Accounting	DC11NS-P3	150.00	129.00	(99)
Used dBase II	DB11UC-P3	550.00	295.00	

### File Transfer

HPDuette for P.Plus	DU11NS-P3	\$99.95	\$89.95	
Link110	LK12NS-P3	90.00	85.95	
Link Plus	LK11NS-P3	90.00	85.95	
ReadHP	RD11NS-P3	79.95	69.95	

### Graphics

Log.Mouse P.Plus System	MS15NM-P3	219.00	179.95	
PrintMaster (Portable Plus)	PR11NS-P3	79.95	69.95	
Sketch	SK11NS-P3	80.00	75.95	
Sketch Halftone disk	SD11NS-P3	9.50	9.50	

### Learning Material for HP110, P.Plus

How to Use the HP				
Portables Video Tapes	VP11NM-P3	\$150.00	\$119.00	(99)

### Productivity Boosting Utilities / Games

BacTools	BC11NS-P3	\$49.95	\$39.95	
DOS Tools	DT11NS-P3	44.95	39.95	
FilePlus	FE12NS-P3	69.95	59.95	(49)
GamesPlus	GA11NS-P3	99.95	69.95	(49)
HP110 Utilities Disk	UD11NS-P3	20.00	20.00	(Free)
HP110 Productivity Disk	SB11NS-P3	35.00	35.00	(Free)
**Keefe Collection	KE12NS-P3	39.00	29.00	
Norton Utilities Adv.	NU12NS-P3	150.00	99.95	(99)
Norton Utilities	NU11NS-P3	99.95	79.95	(79)
Private File	PF11NS-P3	39.95	34.95	
Shelp	SH11NS-P3	55.00	49.95	(49)
Squish Plus (Portable Plus)	SQ11NS-P3	129.00	99.95	(79)
Tiger Fox	TF11NS-P3	32.95	29.95	
Time Manager (Included in HP110 Productivity Pack above.)				
Typing Whiz	TW11NS-P3	49.95	39.95	

### Programming

Compiled BASIC ( <i>USED</i> )	MS13UC-P3	\$425.00	\$225.00
FORTTRAN ( <i>USED</i> )	FO12UI-P3	395.00	250.00
MS BASIC ( <i>USED</i> )	MS11UC-P3	325.00	165.00
MS GW BASIC ( <i>USED</i> )	GW11UC-P3	425.00	250.00
Programmer's Tools ( <i>USED</i> )	PT11UC-P3	325.00	175.00
Turbo Pascal 5.5. P.Plus	TP52NX-P3	219.00	175.00
Upgrade for Plus, HP150	TP15NS-P3	69.00	69.00
<i>(must own IBM PC Turbo 5.5, honor license)</i>			
T.Pascal 3.0 Optimizer	TP17NS-P3	125.00	119.00

### Project Management

Milestone	ML11NS-P3	\$99.95	\$89.95	
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### SpreadSheet and Statistics

101 Macros	MC11NS-P3	\$69.95	\$62.95	
As-Easy-As	AS11NS-P3	99.95	79.95	(59)
Lotus 123, v2.01 / Symphony				
P.Plus Software Driver	LT14NS-P3	69.95	59.95	
SideWinder and Utilities	SW13NS-P3	79.95	69.95	
SideWinder	SW11NS-P3	69.95	59.95	(49)
Statistix 2.0	ST11NS-P3	169.00	159.00	

### Word Processors

The Editor II	ED11NS-P3	\$99.95	\$79.95	(49)
Editor Pack	FM16NX-P3	259.00	195.00	
(Editor II, FormatPlus, Webster Speller)				
Editor II/Formatter	ED13NX-P3	119.95	99.95	
PlusPerfect	WD14NS-P3	150.00	129.00	(99)
V1 (Unix-like editor)	V11NS-P3	195.00	169.00	
**WordPerfect 5.0 P. Plus	WD17NS-P3	645.00	395.00	(350)
(Includes PlusPerfect)				

### Word Processing Utilities

Format110	FM12NS-P3	\$39.95	\$35.95	
FormatPlus	FP11NS-P3	79.95	69.95	(49)
Formatter	FM11NS-P3	59.95	49.95	
HPrint	HP11NS-P3	80.00	75.95	
MemoMaker Pack	FM14NX-P3	159.90	125.00	
(Format Plus, Webster Spelling Checker)				
OutlinePlus	OU11NS-P3	89.95	69.95	
PrinterTalk	PT11NS-P3	49.95	44.95	
PrinterTalk, Format110	PT12NS-P3	89.90	59.95	(49)
RightWords Dict. Ext.	RW12NS-P3	29.95	29.95	
RightWriter	RW11NS-P3	95.00	89.00	(79)
Webster's Speller	WB11NS-P3	79.95	69.95	(49)

## ACCESSORIES, SUPPLIES

### BATTERIES

HP110 Battery*	BT12HC-P3	\$39.00	\$39.00	
HP9114 Battery	BT13HC-P3	69.00	69.00	
Portable Plus Battery*	BT11HC-P3	59.95	59.95	
**Refurb. ThinkJet Battery	BT12NG-P3	49.00	49.00	
**Refurb. 9114 Battery	BT11NG-P3	49.00	49.00	
ThinkJet Battery (new)	BT14HC-P3	65.00	65.00	
* Includes instructions, torx screwdriver, nut driver.				

### CABLES

92221M serial modem 110,+	CA13HC-P3	\$42.00	\$42.00	
HP92221P serial print 110,+	SC13HC-P3	42.00	42.00	
HP-IL Cable, 1 Meter	HP14UM-P3	8.00	8.00	
**HP-IL Cable, 1/2 Meter	HP12UM-P3	6.00	6.00	
HP-IL Cable, 5 Meters	HP11UM-P3	10.00	10.00	
Port-Mac DB 9-pin Cable	PO11NH-P3	59.95	59.95	
Port-Mac DIN 8-pin	PO12NH-P3	59.95	59.95	
(Port-Mac Cables connect 110, P.Plus to Apple Macintosh)				
Serial modem 110,Plus	WM14NM-P3	42.00	20.00	
Serial printer 110,Plus	SC13NM-P3	42.00	27.95	

### CARRYING CASES

HP vinyl 110, + (Like New)	BV11UC-P3	29.00	29.00	
HP leather 110,+ (Used)	CS11UC-P3	89.00	49.00	
HP fabric system (Used)	SC11UC-P3	110.00	59.95	
Targus leather system	TA11NM-P3	199.95	179.00	
Targus nylon system case	TA12NM-P3	99.95	89.95	

### POWER SUPPLIES, RECHARGERS

110, +, 9114, TJ charger	RC16UC-P3	\$20.00	\$20.00	
(European charger)	ER11HC-P3	25.00	25.00	
Empowerer II, HP9114	EM13NH-P3	119.00	95.00	
Empowerer II, ThinkJet	EM14NH-P3	119.00	95.00	
Mobile Recharger	PR11NM-P3	69.95	59.95	
Power Cube	PR13NM-P3	89.95	79.95	

### PRINTER and DISK SUPPLIES

3.5" disks (10), case	DS11NM-P3	\$44.90	\$29.95	
DeskJet ink cartridge	CT11HC-P3	20.95	20.95	
HP92261n inkjet 2500 z	TJ12HC-P3	69.95	69.95	
HP51630a inkjet 500 z	TJ13HC-P3	19.95	19.95	
TJ ink cartridge (HP)	TJ14HC-P3	11.95	11.95	
TJ ink cartridge (plain)	TJ15HC-P3	11.95	11.95	
TJ ink cartridge (red)	TJ17HC-P3	13.95	13.95	
TJ ink cartridge (blue)	TJ16HC-P3	13.95	13.95	
TJ ink cartridge (green)	TJ11HC-P3	13.95	13.95	
** TJ Printer stand (Used)	AC12HC-P3	49.00	19.00	

## UPGRADES / REPAIRS

256K to 512K Plus Upgrade	256KNG-P3	\$1100	\$395	
128K to 512K Plus Upgrade	128KNG-P3	1100	395	
FastPlus (CPU Upgrade)	FA11NG-P3	250	199	(159)
HP110 keyboard repl.	KE11UC-P3	225	195	
HP110 screen repl.	LC11UC-P3	435	195	
P.Plus screen upgrade/repl.	GO11NG-P3	350	195	
P.Plus keyboard replacement	KE12UC-P3	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
<b>LS/12 COMPUTERS</b>			
Used LS/12, 20MB Drive	LS11UM-P3	Call for \$, avail.	
Used LS/12, 40MB Drive	LS12UM-P3	Call for \$, avail.	

### LS/12 MEMORY

1 MB EMS Memory	EM11NH-P3	\$295	\$285
**4 MB EMS Memory	EM12NH-P3	1320	1220
(Price includes custom installation. Must send LS/12 to Personalized Software to upgrade memory.)			

### LS/12 INTERNAL MODEMS

HPD1502a 2400 Modem	IM11HL-P3	\$449	\$369
Holmes 2400 FAX/Modem	DA11HL-P3	699	469

### LS/12 DRIVES

Weltec 5.25" Drive	WE11NH-P3	\$349	\$299
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## ADDITIONAL LS/12 PRODUCTS

Expansion Chassis, Cable	EX11NH-P3	\$599	\$599
Numeric Keypad	NU11NH-P3	129	115
HPD1057A Battery	NB11HL-P3	299	179
HPD1058A Recharger	BC11HL-P3	109	99
80287 math coprocessor	MA11HL-P3	649	379
LS/12 Carrying Case	BC11HL-P3	59	59

## PORTABLE VECTRA CS SPECIFIC PRODUCTS

### PORTABLE VECTRA COMPUTERS

**Used Port.Vectra CS 20	VE17UC-P3	3595	895
**Used Port.Vectra CS	VE12UC-P3	2495	495

### INTERNAL MODEMS

HPD1003A 2400 Baud	VE16UC-P3	Call for \$, avail.	
HPD1002A 1200 Baud	MO11UC-P3	Call for \$, avail.	

### SERIAL CARD & EMS MEMORY

Dual serial/EMS Card	AD11HC-P3	\$250	\$198
1 MB EMS memory	EM11HC-P3	595	295

### OTHER VECTRA CS PRODUCTS

HP-IL Adapter Card	HP16NM-P3	\$245	\$235
HPD1007A Soft Case	CS12HC-P3	Call for \$, avail.	
Battery (HP D1001-60924)	BA11HC-P3	250	225
Recharger (HP 5061-4335)	VR11HC-P3	97.50	97.50

### MONITORS FOR VECTRA CS, LS/12

Monochrome Monitor	VI12HC-P3	\$129	\$119
CGA Monitor	MO12HC-P3	399	299
EGA Monitor	MO13HC-P3	599	479

## THE PORTABLE PAPER

(Subscribers Disks Only Available With Subscriptions)

Product	Part #	Price
1991 Subscription & Disk	PPNIPS-P3	\$55.00
For Vectra CS, 1988-91 issues, disks	VE11PK-P3	109.00
For Vectra CS 1988-90 issues, disks	PP15PB-P3	79.00
For LS/12 1989-91 issues, disks	LS11PK-P3	89.00
For LS/12 1989-90 issues, disk	PP12PK-P3	59.00
Individual back issue	PP99PB-P3	9.20
PP Binder Vol.3	PB13NM-P3	7.00
PP Binder Vol.4	PB14NM-P3	7.00
PP Binder Vol.5	PB16NM-P3	7.00

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

Product	Part Num.	Retail Price	Sub Price
New Diconix - parallel	DT11NH-P3	\$519	\$399
New Diconix - serial	DT12NH-P3	539	415
Serial HP2225D ThinkJet	TJ14UC-P3	495	295
Parallel HP2225C ThinkJet	TJ11U1-P3	495	295
DeskJet Printer, cable	DJ11UC-P3	837	395
DeskJet Plus, cable	DJ12UC-P3	995	450
PaintJet	PA12UC-P3	1395	CALL
LaserJet 500 Plus	LA13UC-P3	4200	CALL
LaserJet IID	LA12UC-P3	3795	CALL
Rugged Writer	RU11UC-P3	1695	CALL

## HP95LX PALMTOP PC COMPUTER

Product	Part #	\$ Retail	\$ Subscriber
**HP95LX Palmtop PC (Comes with Lotus 1-2-3, version 2.2)	PTCOM1-P3	\$699.00	\$629.00
**128K RAM Card	PTRAM1-P3	\$199.95	\$179.95
**512K RAM Card (Expands 95LX file storage capabilities)	PTRAM5-P3	\$399.95	\$359.95
**Connectivity Pack (Connect 95LX to PC-compatibles)	PTCON1-P3	\$99.95	\$89.95
**Serial Interface Cable	PTSIC1-P3	\$35.00	\$35.00
**Serial Cable Adapter Kit	PTSAK1-P3	\$15.00	\$15.00
**Voltage Adapter (For U.S./Canada, conserve batteries)	PTVOL1-P3	\$15.00	\$15.00
**Dictionary/Thesaurus Card (Adds 116,000 word dictionary, 500,000 thesaurus to your 95LX.)	PTDTC1-P3(available in late 1991)		

## PERIPHERALS for the LS/12, P.VECTRA CS

### PORTABLE MODEMS, FAX

WorldPort FAX/Modem	WF11NH-P3	\$699	\$599
WorldPort Modem 1200	WM11NH-P3	199	179
WorldPort Modem 2400	WM12NH-P3	359	319
WorldPort M. 2400/MNP	WM13NH-P3	499	425
WorldPort serial cable	WM14NM-P3	30	20
WP 1200 Upgrade kit	WM13NG-P3	199	179
WP Acoustic coupler	WM16NH-P3	79	79

### EXTERNAL DRIVES, TAPE BACKUP

Backpack (parallel port drives)			
5.25", 1.2MB Floppy Drv	BP11HC-P3	\$349	\$329
3.5", 2.8MB Floppy Drv	BP12HC-P3	\$425	\$395
Weltec Serial 20MB Hddsk	WE12NH-P3	\$1099	\$899
Valitek Serial and Parallel Port Tape backup units			
60 MB Valitek	VA11NH-P3	1695	1495
160 MB Valitek	VA12NH-P3	2395	1995

### OTHER LS/12, VECTRA PERIPHERALS

EtherNet Adapter	ET11NH-P3	\$695	\$629
Logitech Mouse	MS14NM-P3	119	99
Statpower PC100+ Inverter	ST11NH-P3	179	169

## SOFTWARE for the LS/12, PORTABLE VECTRA

The Editor II	ED11NS-P3	\$99.95	\$79.95
Condor 3 for IBM	CR11HM-P3	495.00	379.00
LapLink	LA11NS-P3	139.95	119.00
NoSquint II	NO11NS-P3	49.95	45.95
Squish Plus	SQ12NS-P3	99.95	89.95
REDline	RE11HC-P3	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-P3	\$10.95	\$10.95
TJ inkjet paper cartridge	TJ14HC-P3	10.95	10.95
HP92261n inkjet 2500 z	TJ12HC-P3	64.95	59.95
HP51630a inkjet 500 z	TJ13HC-P3	19.95	19.95
DeskJet ink cartridge	CT11HC-P3	19.95	19.95

### FLOPPY DISKS

10 3.5" disks and case	DS11NM-P3	\$44.90	\$29.95
10 3.5" 1.44M disks, case	DS12NM-P3	69.95	59.95

### CARRYING CASES

Targus leather system	TA11NM-P3	\$199.95	\$179.00
Targus nylon system case	TA12NM-P3	99.95	89.95

### CABLES

Standard Parallel Cable	PL11NM-P3	\$29.95	\$24.95
P.Vectra 25-pin serial prn	SE12HC-P3	29.95	24.95
9-pin AT serial prn cable	SE11HC-P3	29.95	24.95

(110% continued from page 19.)

When you select this PAM entry, the batch file named EXPENSE.BAT would be executed and 1-2-3 would eventually display the expense report form.

## EXECUTIVE CARD MANAGER

Executive Card Manager (ECM) is another application that provides for default files. When ECM first starts, it scans the current directory for a file called ECM.SAV. If this file is present, ECM loads it in this database.

If you wanted to create a PAM entry that would automatically load an address book database, a batch file would be required. The batch file (named GOADDR.BAT) would contain the following command lines:

```
copy address.sav ecm.sav
ecm
```

**P+** This would first copy ADDRESS.SAV to ECM.SAV, which would give ECM all of the information regarding the database called ADDRESS. ADDRESS.SAV would have been created earlier by copying the ECM.SAV file into it and modifying its contents to include the information needed. The batch file would then run ECM, which would in turn load the ADDRESS database. The PAM entry for this would be:

```
#PAM entry to load ADDRESS database
Address Book
goaddr.bat
```

When this PAM entry is selected, the ADDRESS.SAV file would be copied into the auto-start file, and then ECM would be started. Note that there is nothing special about the batch file name of GOADDR.BAT. Any name would do (as long as the BAT file extension was used), but it should be a name that is easily identified in a directory listing.

## OTHER CAPABILITIES

**110** The previous pages describe using PAM entries in conjunction with application software packages and specific user templates. There is a whole realm of possibilities available in the area of reusable keystroke procedures. For example, if you frequently back up your Edisc, and then PACK it, you may have a need for a PAM entry. Let's create a batch file and a PAM entry to perform this task. The batch file would look like this:

```
copy a:*. * c:\
pack
```

Let's name this batch file BACKUP.BAT and create a PAM.MNU entry to access it. The PAM entry would appear as follows:

```
#PAM entry to backup Edisc
*** BACKUP ***
backup.bat
```

When this entry is selected, PAM executes the batch file called BACKUP.BAT, which would in turn copy all of the files on Edisc to the external disk drive. The batch file would then PACK the Edisc.

This article contains only a few examples of what can be accomplished using applications labels. Combine a PAM entry with a batch file—and a little imagination—and the possibilities become almost unlimited.

[PACK.COM is built into the Portable Plus and is available for the HP110 through Personalized Software. Please order the HP110 Productivity Disk, product # SB11NS, subscriber price: \$35.]

## CONCLUSION

**110** Creating your own PAM applications labels is only one way to customize your Portable Plus. Two other basic methods are *configuration* and *custom software*.

■ **CONFIGURATION** — The Portable Plus and HP110 both have System and Datacom configuration menus that enable you to specify exactly how your system is configured. By varying memory size, choosing different ROM-based software applications, adding a modem, using an external disk drive, and connecting different printers, you can design the personalized portable computer system that best meets your needs.

■ **CUSTOM SOFTWARE APPLICATIONS** — There are several methods of obtaining custom ROM- or EPROM-based software applications for the Portable Plus. Personalized Software can supply much of its Portable Plus software on ROM or EPROM. You can create your own EPROM software using Personalized Software's ROMBO ROM Burning Kit with our 128K ROMs and EPROMs.

## Liquid Crystal Displays

**110** By Richard Hall

**P+** Liquid Crystal Displays (LCDs) are smaller, less expensive to produce, and consume much less power than a standard video monitor. For these reasons they are found on watch faces, handheld video games, calculators, and most portable computers, including the HP110, Portable Plus, Portable Vectra CS, and the LS/12.

## HOW AN LCD WORKS

An LCD is made up of two pieces of glass with a "liquid crystal" sandwiched between them — like an Oreo cookie. The liquid crystal is an organic compound with a very fine wire grid running through it. The pieces of glass that sandwich the liquid crystal are "polarized" to act as light filters allowing only certain kinds of light in and out.

A non-backlit LCD uses the light available in the environment. As light enters the front of the display it is filtered by the first piece of polarized glass, which only allows light waves striking the screen horizontally to go through. This "horizontal light" then passes through the liquid crystal.

The wire grid running through the LC is used to electrify very tiny sections of the liquid crystal. When electrified, these small sections of the liquid crystal twist the horizontal light 90 degrees, making it "vertical light." When not electrified, the liquid crystal does not affect the light and it remains horizontal.

The rear piece of polarized glass only allows vertical light to pass through it. In addition, the rear glass has a reflecting mirror on the back of it. If a specific point of the liquid crystal grid has been electrified, the horizontal light will become vertical. It will then pass, and be reflected back through the rear piece of glass. It then comes back through the liquid crystal where it is again twisted 90 degrees to become horizontal light so that it can pass back through the front piece of glass. You see that tiny spot on the screen as a light grey area.

If a specific point of the grid has not been electrified, the horizontal light is not twisted and never passes through the back piece of glass. That spot of the screen is seen as a dark, black area.

Each one of these little, discrete spots on the screen is known as a "pixel." The letters, lines, and shapes you see on the display are made up of thousands of these pixels. The computer display adapter controls which pixels are on and which are off at a given moment.

Non-backlit LCD use light coming in from the environment for this process to work. These kind of LCD displays don't work in the dark and are hard to see in dim light. But they use very little power and were chosen to maximize the battery life of the HP Portables. The HP110, Portable Plus, and the Vectra CS have non-backlit LCDs.

## BACKLIT LCDs

The LS/12 and most portables produced today have backlit screens.

Backlit LCDs have a light source behind the screen and don't have to rely on light from the environment. A thin, flat, fluorescent light shines from behind the screen, through the liquid crystal. There it is either transmitted or blocked by the liquid crystal material, forming dark or light pixels on the screen.

Backlit LCDs use more electrical power from the battery and reduce the battery life. But a backlit screen is much easier to read, especially in a room with dim light. Most laptops and portables manufactured today use backlit screens.

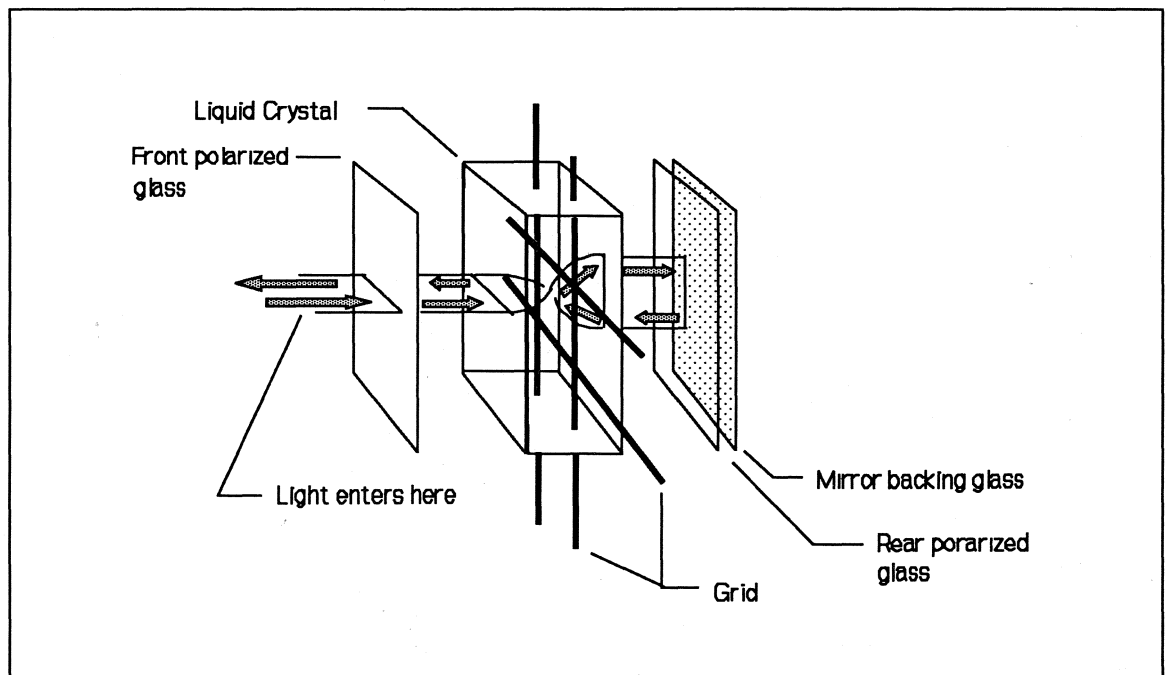
## FUTURE OF LCDs

LCD technology has greatly improved over the last few years. We are beginning to see higher-resolution and color LCDs. That, coupled with the fact that LCDs produce only a tiny fraction of the electromagnetic radiation emitted by standard CRT video monitors, may bring about the widespread use of LCD's with desktop computers as well.

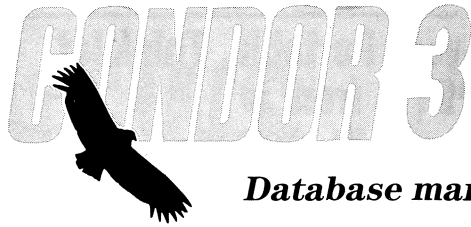
## Help Menu for the Editor

By Byron Rigby

Most Portable Paper subscribers are familiar with The Editor, Personalized Software's popular alternative word processor that works well on all HP Portables. The Editor has many of the features found in larger word processors, including the ability to use keyboard macros to automate







## 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

### 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 Pournelle, 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. CR11NS

**Condor, Jr.** ..... **\$99.00**

**\$89.95 for Portable Paper subscribers.**

PRODUCT NO. CR13NS

Condor 3  
Condor, Jr.

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

### 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.

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. DU11NS

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.

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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

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

many of its features. But it is sometimes difficult to remember what the macros are.

Here is a Help Menu for Macros I created using The Editor. The help menu is invoked by typing **Ctrl-A**, and removed by typing **Ctrl-B**. Because the help menu uses "Other File" and "2 Windows" functions, it cannot be invoked when "Other File" is already in use. The Macros controlling the Help menu and its removal are two lines added to the main macro file as follows on the next page:

```
<BEGDEF><CtrlA><ESC>W2<ESC>FOedhelp.txt<ENTER><ESC>WO<ENDDEF>
```

```
<BEGDEF><CtrlB><ESC>WO<ESC>FQ<ESC>W1<ENDDEF>
```

To support this function, an ASCII file called EDHELP.TXT must be made containing the following contents:

C Center	E Edit	G 2 Windows	F1 Def Mark
D Del Word	O Other File	Y Other Window	F2 Del Block
F Fill	U Update	R 1 Window	F4 Command
J Justify	S Save & Exit	W Write File	K-LKill/RestoreMac
I Insert	Q Quit	V Write Block	X/M Strip
N Copy	P Print	A-B Show/Hide Help	

This help screen tells me that to invoke a macro I type the function key (i.e. **f1** for Define Mark) or the Ctrl key and a letter (i.e. **Ctrl-s** Saves and Exits).

The macro files executing the functions listed in this help menu are named **d.d** and **e.e** as follows:

- **File d.d** -- In the main macro list there is a macro which allows you to disable the main macro list at the keystroke **Ctrl-K**. This is for use when you want to type control characters in search and replace, and you risk by this means invoking macros instead of the desired carriage return and line feed symbols etc. The following macro, in a file named **d.d**, allows you to type **Ctrl-L** to restore the main macro list after you have disabled it.

```
<BEGDEF><CtrlL><ESC>mle.e<ENTER><ENDDEF>
```

- **File e.e** -- Main macro list. This is a modification of a list supplied with the Editor program, and includes the macros for showing a help menu and for stripping files of double carriage returns and double spaces prior to uploading to another computer. It also includes the macro for disabling itself when you want to use control characters without unintentionally invoking macros.

```
<BEGDEF><ShiftF2><ENDDEF>
```

```
<BEGDEF><CtrlC><ESC>bb<ENDDEF>
```

```
<BEGDEF><CtrlE><ESC>fe<ENDDEF>
```

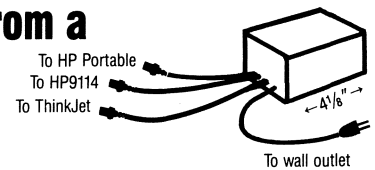
```
<BEGDEF><CtrlF><ESC>bf<ENDDEF>
```

```
<BEGDEF><CtrlD><CtrlRIGHT><CtrlLEFT><ESC>dm<CtrlRIGHT><ESC>bd<ENDDEF>
```

```
<BEGDEF><CtrlI><ESC>bi<ENDDEF>
```

```
<BEGDEF><CtrlJ><ESC>bj<ENDDEF>
```

## 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.).

The fourth is a conventional AC cord that plugs into the wall and powers the other three.

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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```
<BEGDEF><CtrlK><ESC>mld.d<ENTER><ENDDEF>
```

```
<BEGDEF><CtrlO><ESC>fo<ENDDEF>
```

```
<BEGDEF><CtrlP><ExtHOME><ESC>dm<ExtEND><ESC>bp<ENDDEF>
```

```
<BEGDEF><CtrlQ><ESC>fq<ENDDEF>
```

```
<BEGDEF><CtrlS><ESC>fs<ENDDEF>
```

```
<BEGDEF><CtrlU><ESC>fu<ENDDEF>
```

```
<BEGDEF><CtrlV><ESC>bw<ENDDEF>
```

```
<BEGDEF><CtrlW><ESC>fw<ENDDEF>
```

```
<BEGDEF><CtrlX><ESC>dp1,2000<ENTER><ExtHOME><ESC>dm<ExtEND><ESC>bf<ExtHOME><ESC>r[space][space]<ENTER>[space]<ENTER><ExtHOME><ESC>r<CtrlIM><CtrlJ><CtrlIM><CtrlJ><ENTER><CtrlIM><CtrlJ><ENTER>a<ENDDEF>
```

```
<BEGDEF><CtrlY><ESC>wo<ENDDEF>
```

```
<BEGDEF><CtrlG><ESC>w2<ENDDEF>
```

```
<BEGDEF><F1><ESC>dm<ENDDEF>
```

```
<BEGDEF><F2><ESC>bd<ENDDEF>
```

```
<BEGDEF><CtrlDsp><ESC>fc<ENDDEF>
```

```
<BEGDEF><CtrlR><ESC>w1<ESC>dwe<ENDDEF>
```

```
<BEGDEF><CtrlIM><ExtHOME><ESC>r[space][space]<ENTER>[space]<ENTER><ExtHOME><ESC>r<CtrlIM><CtrlJ><CtrlIM><CtrlJ><ENTER>$$<ENTER>a<ExtEND><ExtHOME><ESC>r<CtrlIM><CtrlJ><ENTER>[space]<ENTER>A<ExtHOME><ESC>R$$<ENTER><CtrlIM><CtrlJ><ENTER>A<ENDDEF>
```

```
<BEGDEF><CtrlA><ESC>W2<ESC>FOedhelp.txt<ENTER><ESC>WO<ENDDEF>
```

```
<BEGDEF><CtrlB><ESC>WO<ESC>FQ<ESC>W1<ENDDEF>
```

```
<BEGDEF><CtrlN><ESC>BC<ENDDEF>
```

Note: [space] indicates to leave a space at this point in the macro, using the space bar.

# NEWS FROM



## Personalized Software INC.

*Products that make HP Portables smarter*

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

By Hal Goldstein

### WORDPERFECT ALL IN ROM

**P+** A functional version of WordPerfect 5.0 is now available on ROM from Personalized Software using as few as four ROM chips. Here are the particulars:

The main WP.EXE and WP.FIL files along with several auxiliary files, including the Print Preview related files, come on four 128K ROMs. We used a compression program to squeeze WP.EXE down to 180K so that these key files could fit on four ROMs. The only negative associated with this is that Portable Plus users will have to wait a few seconds for WP.EXE to expand and load. Those Portable Plus users with a FastPlus CPU upgrade will hardly notice the extra wait.

We also include with WordPerfect on ROM the WordPerfect help files on a fifth optional ROM (it's there to install if you so choose). This ROM contains the Wordperfect help files; the ThinkJet, DeskJet, and Standard printer drivers; and several additional files that enable full keyboard macro capabilities.

In addition, users may also elect to purchase the three-ROM WordPerfect spelling checker or the three-ROM WordPerfect Thesaurus.

When we put the spelling checker on ROM we found we had 100K left over. Wasting 100K on ROM goes against my nature. So in that 100K we managed to cram a number of useful programs for WordPerfect users, and we will sell the extra programs below our cost.

### WHAT'S ON THE WORDPERFECT SPELLER ROM

The WordPerfect dictionary is fast, comprehensive, and easy to use. The main dictionary contains 115,000 words, and you can add words of your own to one or more auxiliary dictionaries. The Speller can also count the number of words in a document or in any block of text.

On the same ROMs as the WordPerfect dictionary we added HPDuette which lets you transfer your WordPerfect files back and forth between your Portable Plus and a

desktop (cabling and PC disk included). We also added Shelp so that you have pop-up calculator, notepad, and macro capability. Shelp also lets you turn WordPerfect off in the middle of WordPerfect: an important feature since the Portable Plus automatic shutoff feature does not work within WordPerfect.

Also included on WordPerfect Speller ROMs is FilePlus, our superb Portable Plus file manager. Use FilePlus to show two directories at once. Increase your Main Memory from the required 376K to 472K, then select a file from within FilePlus and press "e." You will be editing the file within WordPerfect.

Finally, for fun, we also include on the WordPerfect Speller ROM, Tetplus, the Tetris-like block falling game included on the 1991 Subscriber Disk.

### UPGRADES

Subscribers who already have WordPerfect on ROM may upgrade to our new ROM package as follows. In general we will upgrade the ROMs for \$49 a ROM (the price we charge for blank 128K PROMs). We add \$52 for all the extra software we add to the WordPerfect speller.

In order to sell these ROM upgrades at these prices and not violate our agreement with WordPerfect, you must send us back the ROMs in your system. To minimize logistical difficulty on everyone's side, 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 for an entire WordPerfect on ROM package (\$595).

Note that you may elect to keep your current WordPerfect Help ROMs (in most cases a 64K ROM pair) and order the four-ROM WordPerfect upgrade. The advantage of obtaining the new Help ROM is that it only occupies one ROM slot. (A few of the most recent orders went out with only 1 Help 128K ROM. Those customers do not need to replace the Help ROM).

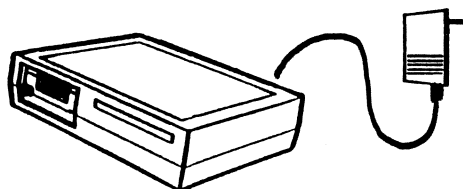
### ORDERING INFORMATION

#### UPGRADE PRICING:

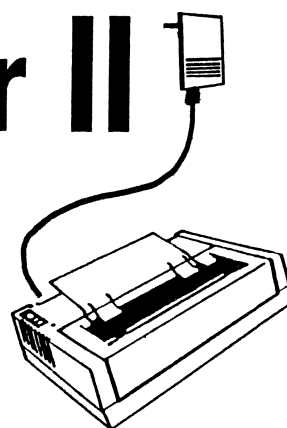
Product #	Description	# ROMs	Subscribers upgrade Price
WD13NR	WordPerfect Basic System	4	\$196
RO14NR	WordPerfect Help ROM	1	49
RO13NK	WordPerfect Speller with (with HPDuette, Shelp, FilePlus, and Tetplus)	3	199
RO12NR	WordPerfect Thesaurus	3	147

#### NEW PRODUCT PRICING

Product	Description	# ROMs	Retail Price	Subscriber Price
WD11NK	WordPerfect 5.0 (basic system with Help files)	5	\$940	\$595
RO13NK	WordPerfect Speller (with HPDuette, Shelp, FilePlus, Tetplus)	3	525	199
RO12NR	WordPerfect Thesaurus	3	250	147



# 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

### A FINAL NOTE

As of this writing the WordPerfect Basic System and the WordPerfect Help ROM are ready for shipping. By the time you receive this issue, we will be ready to send out the Speller package and the Thesaurus.

### 1 MB RAM/2 MB FLASH ROM DRAWER, NEW ROMBO SOFTWARE

**P+** Tremendous kudos go to engineer Rich Wilson who designed the 1 Meg RAM / 2 Meg Flash ROM drawer for the Portable Plus. In addition, he wrote software to transfer files from the Portable Plus electronic (or floppy) disk to the Flash ROM drawer.

Rich produced four drawers for us. We will keep one in house, have already sold two, and have only one remaining to sell. We will sell that drawer for \$1695 on a first-come, first-served basis. The drawers will be ready for shipping at the end of May. We would have to get orders for at least 10 more drawers to manufacture more.

We tested the Flash ROM drawer with an HP 384K drawer and later with a 1 MB RAM drawer. Then we replaced the RAM drawer with a ROM drawer full of ROMs. In both cases everything functioned as expected with a few relatively minor problems due to the Portable Plus's system limits.

We filled the Portable Plus Flash ROM drawer with the full version of WordPerfect 5.0 including Help, Speller, and Thesaurus. We added other ROM software so all 2 Megabytes of the Flash Drawer was used with ROMmed software and files. The Portable Plus worked flawlessly with a 384K RAM drawer. That 384K plus the 512K built in plus the 1024K RAM drawer created a 1.8 Megabyte Portable Plus. When we substituted a one Megabyte drawer for the 384K drawer, we had a 2.5 Megabyte Portable Plus.

The two limitations we experienced with the 2.5 Megabyte Plus are the same as if we had put two, 1 Megabyte drawers in a 512K Portable Plus. First of all, the only Main Memory / Edisk division allowable is 512K / 2048K. Secondly, the built-in HPLINK program does not function. Therefore, users accustomed to transferring files to a PC containing an HP-IL card will have to use their disk drive or HPDuetto to do the transferring.

The limit we experienced with an HP ROM drawer installed is the system 15 subdirectory limit. In other words, the 2 MB of Flash ROM and the 12 ROM slots in the ROM drawer cannot contain more than 15 subdirectories.

Even though Rich's software effectively allows users to bypass the 256K system limit, the system is not totally fooled. Every 256K occupied by the Flash ROM drawer

# 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 would 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
		PRODUCT NO. WM12NM
WorldPort Modem 2400/MNP	499.00	425.00
		WM13NH
WorldPort 1200 modem	199.00	179.00
(without software)		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	199.00	179.00
(includes Carbon Copy PLUS software)		WM13NM

#### 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 (7, exp. date, signature) to:  
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P.O. Box 869, Fairfield, IA 52506-513-172-6380

WorldPort 2400 and WorldPort 1200 are trademarks of Touchbase Systems, Inc. Hayes is a trademark of Hayes Microcomputer Products, Inc. Carbon Copy PLUS is a trademark of Meridian Technology, Inc.

counts as one subdirectory. Therefore, a full 2 Megabyte Flash ROM drawer can use as few as 8, 256K subdirectories. That leaves room for 7 subdirectories of ROM chips in the ROM drawer. The ROM drawer holds 12 chips (6 pairs). If each of the 6 pairs forms one 256K Fullbank subdirectory, it would be possible to fill up a ROM drawer and a Flash ROM drawer with files.

#### A 5 MEGABYTE PORTABLE PLUS!

A full ROM drawer (12 × 128K) and a full Flash ROM drawer (2 Megabytes) would mean it is possible to store 3584K of files in ROM. Add to that to 512K of internal memory and the 1 Megabyte of RAM that comes with the Flash ROM drawer and we have a 5120K (5 Megabyte) Portable Plus!

#### ROMBO AND FLASH ROM SOFTWARE

Rich's software is direct and takes care of the intermediate steps required in burning ROMs with ROMBO. In other words all the user has to do is put all the files to be Flash ROMmed in a subdirectory, start the program, wait half a minute and presto, the files are in ROM.

This software uses the trick sent to us by Herron computer of Germany outlined in last issue (Vol.6, No.2, Pg.17). That trick, in essence, does away with the 256K ROM subdirectory limit and enables us to offer all of WordPerfect on ROM. (For example, WordPerfect's Thesaurus is over 350K.) I asked Rich to add a feature to

his software that would create EVN, ODD, and HAF files so that ROMBO users could enjoy the benefits of his work.

Rich made the changes and the program works well if you want to burn an even number of EPROMs at a time (eg a 512K, 4 EPROM subdirectory). However, it is not yet possible to burn, say, 3 ROMs (required, for example, for the Thesaurus) from his software.

Rich told me he would look at the problem but that it might require a major rewrite. In one form or another we will eventually make the software available for a nominal fee to ROMBO users.

### PORTABLE BATTERY STRATEGIES

**110** Battery life for the HP Portables, HP9114, and HP ThinkJet is a critical issue. These portable units run directly off the battery (not off AC power). The same small black charger used for each unit only recharges the battery, it does not power the unit.

We have run a number of articles on battery life in past Portable Papers. However, here is a review of how to optimize battery life:

- **HP110, HP9114A, HP9114B** — Keep charged whenever possible. Do not let battery run lower than 60%.

- **HP ThinkJet** — Charge overnight only when battery runs down and yellow light begins to blink. Do not keep charging.
- **HP Portable Plus** — Charge the portable overnight and allow the battery charge to go down to 60% to 80% before recharging.

Following these rules means maximizing the battery life. Otherwise, the life of the battery shortens.

Battery health and life is especially critical to the HP9114's and to the ThinkJet. If the battery is low, these units will not function until the battery is sufficiently recharged.

### THE EMPOWERERS

Ron Chase, our resident former HP technician and ROMBO designer, came up with an elegant solution to HP9114 and HP ThinkJet woes. The HP9114 Empowerer II and the ThinkJet Empowerer II allow the HP9114 and ThinkJet to run directly off AC current. Ron creates these Empowerers by removing batteries from 9114 and ThinkJet battery cases. He replaces those batteries with different circuitry.

The user removes his current HP9114 or ThinkJet battery and replaces it with the modified battery case (no unscrewing, just pull out and push in the battery cases). He then plugs the Empowerer charger (about 30% larger than the normal charger) into the wall and connects that to the modified battery case. The HP9114 and ThinkJet now run off AC. To run off the battery, simply replace the modified Empowerer II battery case with a normal battery.

### AN EMPOWERER FOR THE PORTABLE PLUS - DO YOU WANT ONE?

Ron wants to create an Empowerer for the Portable Plus. Unlike the 9114 and HP ThinkJet Empowerers, the Portable Plus would still run off its own battery. This Empowerer would maximize the Portable Plus battery life.

Whenever an AC outlet is available you would use the Portable Plus Empowerer to charge the battery. Ron's Portable Plus Empowerer would make sure the battery gets charged at optimum times thus maximizing battery life.

Ron tells me that the simplest cleanest solution would involve using a Portable Plus video adapter part that replaces the battery door. Ron would put new circuitry in that part. Users would replace their battery door with this modified door. From then on it would be business as usual - plugging in the normal HP charger into the battery.

In order to produce the product we need two things. First, we need an inventory of HP60990 battery doors. (The retail price for the part is too high for us to purchase them directly. If any HP or other person knows how we can purchase a supply, please contact Brian Teitzman or myself). Secondly, we need to feel that we will sell, say, a minimum of 100 units at approximately \$79 apiece.

If you would be interested in such a product, please give any of our sales people your name.

### REFURBISHED BATTERIES: THE WAY TO GO

If you need a ThinkJet or HP9114 battery, you are probably better off purchasing refurbished rather than a new HP battery. There is no way of determining how long the new HP battery has sat in the shelf. When we refurbish a battery, we remove the old battery from the case and put in a new one at most a month before your order is placed.

The other advantage of a refurbished battery is price. A new ThinkJet battery costs \$65, a new HP9114 battery costs \$69. The refurbished prices are \$49 each for the ThinkJet battery and the HP9114 battery. (We no longer require you to send in your old battery for refurbishing as we found a supply of HP9114 and ThinkJet cases.)

### ORDERING INFORMATION - BATTERY RELATED PRODUCTS

#### BATTERIES

Product#	Description	Retail Price	Subscriber Price
BT12HC	HP110 Battery (Includes instructions, torx screwdriver, nut driver)	\$39.00	\$39.00
BT13HC	HP9114 Disc Drive Battery	69.00	69.00
BT11HC	Portable Plus Battery (Includes instructions, torx screwdriver, nut driver)	59.95	59.95
BT12NG	Refurbished ThinkJet Battery	49.00	49.00
BT11NG	Refurbished 9114 Battery	49.00	49.00
BT14HC	ThinkJet Battery (new)	65.00	65.00

#### POWER SUPPLIES, RECHARGERS

RC16UC	110, +, 9114, TJ charger	\$20.00	\$20.00
ER11HC	European TJ charger	25.00	25.00
EM13NH	Empowerer II, HP9114	119.00	95.00
EM14NH	Empowerer II, ThinkJet	119.00	95.00
PR11NM	Mobile Recharger (Recharge HP Portable, 9114, and ThinkJet from car cigarette lighter)	69.95	59.95
PR13NM	Power Cube (Adapter/recharger that connects to the HP Portable, 9114, and ThinkJet)	89.95	79.95

### COMBO ROM, WRITER'S ROM — \$299 EACH!

We have a new combination 2-ROM package which we will call COMBO ROM. COMBO ROM consists of:

1. AsEasyAs - a Lotus-like spreadsheet that can read and write Lotus version 1 (WKS) and version 2 (WK1) files.
2. HPDuette - which lets you transfer files via the serial port from a Portable Plus to a desktop.
3. TermPlus - an easy-to-use data communications program for sending and receiving files via the phone line and an internal or external modem.
4. SideWinder - a utility that lets you print your AsEasyAs files sideways to your ThinkJet.
5. TetPlus - An addictive game of falling blocks.



We are also reducing the price for Writer's ROM. This 2-ROM package consists of:

1. The Editor II - our powerful, popular word processor.
2. Webster's Spelling Checker - a speller with a 100,000-plus word dictionary.
3. Shelp - a pop-up program for instant access to a calculator, note pad, keyboard macros, and a function that will turn the unit off.
4. FilePlus - a great file manager that lets you view and manipulate files in two directories at once.
5. FormatPlus - a utility that lets you add headers, footers, and page numbers to your document.

Each of these ROM combinations will be sold to subscribers for \$299. Customers who already own some of the software or ROM chips can call and our salespeople may be able to arrange a trade-in.

#### ORDERING INFORMATION

Product#	Description	Retail Price	Subscriber Price
WR11NK	Writer's ROM (2 ROMs) (includes Webster, Shelp, FormatPlus, FilePlus, The Editor II)	\$499	\$299
RO11NK	COMBO ROM (2 ROMs) (includes AsEasyAs, HPDuette, TermPlus, SideWinder, TetPlus)	\$499	\$299

#### NORTON UTILITIES ADVANCED EDITION 4.0

**110** **P+** We bought out the remaining inventory of Norton Utilities Advanced Edition 4.0. This edition is the best suited one for the HP110, Portable Plus and HP150. Later versions of Norton Utilities do not work well on these HP machines.

The large buy allowed us to reduce the price of these crucial programs. I cannot tell you how many times these utilities have saved us countless hours of frustration. I highly recommend them to all HP Portable and PC compatible desktop users. I really believe these programs are a must for all users.

Portable Plus users should purchase the ROM package version so Norton is always available.

#### ORDERING INFORMATION

Product#	Description	Retail Price	Subscriber Price
NU12NR	Norton Utilities Adv. on ROM (\$99 if you already own Norton Utilities Adv.)	\$249.00	\$199.00
NU12NS	Norton Utilities Adv. on Disk	150.00	99.00



**PV** **LS/12** [Vectra Views contains information which specifically pertains to the Portable Vectra CS and Vectra LS/12 Laptop PC. In this column we note the latest developments in Portable Vectra and LS/12 products from Hewlett-Packard, Personalized Software, and other third parties, and include specific tips for Vectra and LS/12 users. Please feel free to contribute on disk or letter to Personalized Software, P.O. Box 869, Fairfield, IA 52556, call (515) 472-6330, or Fax (515) 472-1879.]

## Vectra Views Notes:

By Hal Goldstein

#### PARALLEL HARD DRIVES

We're testing the parallel hard drives discussed last issue (Vol.6, No.2, Pg.28). These drives connect to the parallel port of the LS/12 and Portable Vectra CS. Usually the drives include another parallel port so that you can print to a parallel printer while using the drive.

So far we have received and tested an Export T 20 MB hard drive and liked the unit. It was easy to install and ran quickly from a Portable Vectra CS. We will try out the 40 MB version and versions from other manufacturers of parallel hard drives. From our tests we will make a recommendation.

If you cannot wait, give us a call, and we'll track down pricing on 20 MB to 100 MB hard drives.

#### ONE MORE TRAVEL DISK LEFT

**PV** The people at Travel Disk custom-made an internal interface card for the Portable Vectra CS. With the interface card installed the Portable Vectra CS can access a portable, incredibly rugged Travel Disk. We have one 40 MB Travel Disk with interface card left in stock, and we will sell it at our cost - \$775. This Travel Disk will only work with a Portable Vectra CS, not with the hard drive CS 20 unit.

**LS/12 4 MBs OF LS/12 RAM TOO TIGHT A FIT**

It is possible to use 4 MBs of RAM in your LS/12. However, our technician, Ron Chase, has to make a modification to the 4 MB card and then install it. If you are still interested in the 4 MBs, the subscriber price is \$1220 including installation.

**LAPTAPE OFF PRICE LIST,  
CALL FOR AN ALTERNATIVE**

The Laptape 40MB tape backup unit for the LS/12 is no longer available. An 80MB tape backup alternative should work with the LS/12. Please call for pricing and availability.

**SCSI Adapter for Parallel  
Port on LS/12 or Vectra CS**

By Richard Hall

**PV**  
**LS/12** SCSI ports (Small Computer System Interface, pronounced "scuzzi") are standard on most Apple computers and allow the user to daisy-chain peripherals equipped with SCSI ports. The large array of peripherals developed for Apple computers has been, for the most part, unusable with the LS/12, Portable Vectra CS, and other PC-compatibles because serial and parallel ports cannot interface with SCSI. The T338 Mini-SCSI adapter by Trantor Systems changes things.

The Mini-SCSI adapter connects to the LS/12's, Portable Vectra's, or any PC-compatible's parallel port. Daisy-chain SCSI peripherals to the adapter and you're off and running. You don't lose the use of the parallel port for printing. While connected, parallel printer signals are passed transparently through the adapter.

Trantor Systems says the adapter does not interfere with printing or alter printer performance. However, performance of SCSI peripherals connected to the adapter is better if the adapter is connected directly to the system bus. Data transfer rates of between 75 and 150 kilobytes per second are typical.

Included with the adapter is the software required to format a variety of SCSI hard drives as well as the software supporting removable drives. A variety of CD ROM drives can be controlled by the Mini-SCSI adapter.

**ORDERING INFORMATION**

The 7338 Mini-SCSI adapter retails for \$179 and is available directly through Trantor Systems, Ltd. 5415 Randall Place, Fremont, CA 94538. For more information call 415-770-1400.

# 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-holds; HP82143 and HP82162 printer/plotters; HP82161 cassette drive; and rechargeable reserve battery packs for all these devices.

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**Ten-In-One Package Bundles  
Some Useful Productivity Software**

By Richard Hall

**PV**  
**LS/12** Utility programs greatly increase a portable's productivity, and can make your life a lot easier. They can help you backup a hard disk, make your cursor big enough to see, or help you recover files you shouldn't have erased.

A good collection of useful utilities is a delight to explore. Here's a package that's worth looking at.

**LAPPACK PRODUCTIVITY SOFTWARE**

This package bundles 10 software programs from seven different companies. Included are programs for file transfer, tracking your portable's battery life, switching between different programs, tracking clients/prospects, and more. Below is a listing of each program and what it would cost if purchased individually.

- **FastLynx** — a PC-to-PC file transfer utility that can move data between any two IBM-compatible PC's, even if one of the machines does not have FastLynx installed. A number of sources list FastLynx as the fastest, and one of the easiest to use file transfer programs. (Retail: \$149.95)
- **FastLock** — a locking utility for hard disks that prevents unauthorized access to the data stored on your hard drive by requiring a password when you boot up the computer. (Retail: \$69.95)
- **FastJuice** — A battery gauge for portable computers that keeps track of your battery and reminds you when your system battery has less than 15 minutes of charge left on it. (Retail: \$64.30)
- **Mergelt! PhoneList** — an address/telephone list utility built on the data transfer capabilities of FastLynx. (Retail: \$69.95)

# 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:	Term110	TermPlus
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 (#, exp. date, signature) to:

**Personalized Software**

P.O. Box 809, Fairfield, IA 52556 515/472-6330

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

- **Switch-It** — This utility lets you switch between different programs and files and transfer data between different programs. "Hot-keys" allow the user to switch instantly to different programs, and return to the same point. (Retail: \$99.95)
- **MS-DOS Software Pack** — includes everything necessary to interface with CompuServe, the world's largest on-line interactive computer information service. (Retail: \$40)
- **The Maximizer** — A contact management program which allows users to effectively track and follow-up business contacts (clients, customers, prospects, patients, associates). (Retail: \$295)
- **EZC Smart Cursor** — replaces a portable's hard-to-see underline cursor with any of five big, bold cursors. The EZC uses less than 50 bytes of internal RAM when installed — very small! (Retail: \$34.95)
- **SitBack** — A memory resident backup utility that automates the hard disk backup process. SitBack can perform its task while the system is unattended, or even while you are using another program. SitBack keeps your hard disk fully and currently backed up, without any intervention on your part. Automatic backups can be scheduled for pre-set times each day or for specific days of the week.

SitBack allows backup to any DOS-addressable storage device, including floppy or hard disks, tape backup units, optical drives, and LAN file servers or workstations. (Retail: \$99.95)

- **CO/Session** — is a communications program that lets you control a second, remotely-located PC from your portable or desktop computer. CO/Session also allows two personal computer users to work together on the same program. (Retail: \$125)

If purchased individually, these software programs would cost \$1,049. The bundled price is \$299.95.

The package looks good. It has the kinds of utilities you need to make a portable more productive, and the bundled price of \$299.95 is a bargain. We didn't test each program, so we can't give you a hands-on report. But we would expect each one to work more or less as described.

Has any subscriber tried any of these utilities? Write in and let us know how they work.

## ORDERING INFORMATION

FastLynx LapPack is marketed by RUPP Corporation, and retails for \$299.95. Subscribers may order it through Personalized Software at a 10% discount.



# Through the Looking Glass

By Ed Keefe

## SOFTWARE UPDATES TO KEEFE COLLECTION PROGRAMS

110  
P+  
PV  
LS 12

I've discovered a new corollary to Murphy's Law. It goes something like this: "The day after a software collection reaches the market, the authors of the software will issue updates, thereby making the collection out of date."

This has occurred more than once. It has happened with several of the Subscribers' Disk from Personalized Software. By the time the disks were mailed, some of the programs were superseded by newer versions.

## THE PROS AND CONS OF REGISTERING AND UPDATING

One of the benefits of registering software is being put on the software company's preferred customer mailing list. This usually means that you'll be notified of new updates to the software.

Usually the notification of updates is accompanied by an offer to get the new version at 50% to 75% off the list price of the software. Naturally, the company does its best to convince you that you should get the update. The advertising seems to be a variation on the old theme: "Be the first kid on your block to get the new secret decoder ring." It works, and I've always wanted to be the first kid on the block.

As a result I've become the first kid on the block to discover the woes and weals of updating.

Updates usually add new features to a program. If the new features make the program easier to use, that can be an advantage. On the other hand, it also means that you have to spend time unlearning the old-features and learning the new features. For example a lot of people still continue to use WordPerfect 4.2 because they don't want to spend the time learning the new features in WP 5.0 or WP 5.1.

A new version of a program usually means that you also have the existential pleasure of spending a weekend installing the new program on your computer. Often the installation is simple. On the other hand many programs have no way of saving data from the previous program and letting you use it with the new version.

Of course, new versions of software will contain several "bug fixes." That's good. On the other hand, new features will introduce several new bugs that will be fixed in the next update.

The Keefe Kollection was no sooner finished, and sent to the disk duplicator, than several of the programs became victims of "updatitis."

## DIET-110

DIET-1.02B is the latest version of a freeware, Japanese, file compression program.

An earlier version of the program, DIET-110, is on the Keefe Kollection disk available from Personalized Software. DIET-102B appeared on CompuServe about one week after the announcement of the Keefe Kollection. The updated version increased in size to such an extent that it would have meant redesigning the whole Kollection to include it.

However, the increase in size of the DIET program is not without merit. DIET 1.02B is quickly becoming my favorite file compressor.

DIET will compress ALL files with compression ratios that are equal to or better than those produced by PKZIP, PKLITE or LHARC. Decompression times are just a little bit longer with DIET than with files compressed in PKLITE or LZEXE.

DIET will compress both .COM and .EXE files in such a way that they are still executable. There is no need to change .COM files to .EXE files, as you must do with LZEXE. Granted, it takes time to compress files. But the time to decompress a file is relatively short: barely noticeable for files of 25000, or fewer, bytes. The decompression happens automatically just before a compressed program starts to run.

DIET also compresses text and data files. Unlike PKZIP and ARC, DIET does not put the compressed files in a .ZIP, .LZH, or .ARC file.

This means that there are no overhead bytes needed to manage the .ZIP file. Nor is there any need to run a program to find out what is in an archive file.

But wait, there's more. If you run DIET as a Terminate and Stay Resident program, it will automatically decompress text and data files when they are called by a DOS command or by a program. For example, I compressed a 15000 character text file with DIET and reduced its size to 6600 bytes. Then I loaded DIET with the -Z option. That made DIET stay resident in the computer. (It takes up about 17K bytes.) I issued the **type** command from DOS and, after a slight hesitation, the text appeared on the screen and scrolled just as quickly as usual. Then I ran Outline Plus and loaded the compressed file into the outliner. The text appeared quickly and everything seemed normal. The only problem occurred when I saved the file. It was restored to its original size. I even tried compressing and running a large batch file. The batch file did run. However it ran about four times as slowly. DIET expanded the batch file one line at a time, passing each line to COMMAND.COM for execution.

I even compressed the TURBO.TPL library file and then attempted to compile a large, compressed, Pascal program. The compilation worked, but rather slowly. The DIET program had to make repeated disk accesses to

read several parts of the TURBO.TPL file and expand them for use by the compiler.

Note that I tried all these experiments on the Portable Plus. That's right. DIET runs on the Portable Plus without any apparent problems. It doesn't even need the assistance of a PC emulator.

**110** There is only one word of caution. Beware compressing files that are have more bytes than your computer has memory. One of the best crashes I've seen in a long time happened when I tried to compress a 900K byte file on my desk top computer. The screen lit up with a patchwork of multicolored garbage and the computer had to be reset with the big, red switch.

Other than that mishap, DIET 102b worked flawlessly. It works on both a PC compatible and on the Portable Plus, and best of all, it's absolutely free.

### VDE VERSION 1.61

The Video Display Editor has also been updated. This time the version is numbered 1.61. There are several new features to the program but most of them are relevant only to users who run VDE with an EGA or VGA monitor.

With a high resolution color monitor, you can get VDE to display text in big or small characters that range from 17 lines per screen up to 57 lines per screen.

There are also two new editing modes: Unformatted (/U) and C language (/C) programming modes. The "C" mode works equally well for programming in Pascal or any structured programming language.

If you download VDE161.ZIP from CompuServe or a local bulletin board, be aware that it may not work on the Portable Plus. Check the downloaded archive file to see if it contains a file called HPP.VDI. If there is such a file, you can run the VINST.COM program and READ the HPP.VDI file into VDE.COM instead of choosing the Portable Plus installation option. The HPP.VDI file will let VDE run on the Portable Plus. The normal installation routine will create a version of VDE that will lock up your computer.

The documentation for VDE claims that the program will work in 128K of memory. There is also an option in the ANSI installation routine that allows setting the program to run with 16 lines per screen.

Here, then, is a question that I can't answer. Will this latest version of VDE work on the HP110? Anyone who uses an HP110 and is willing to test the VDE program on this machine should let me know.

### STEREO SHELL 3.20

My favorite file manager program, Stereo Shell, also went from version 3.12 to 3.20 immediately after the Keefe Kollektion hit the marketplace.

Emery Wooten, the author of Stereo Shell, maintains his own electronic bulletin board to support several of the programs that he has for sale. For a once a year charge of \$10 you can call his BBS and download the latest version of his programs.

Emery also is kind to computer users. He makes it easy to install updates. Stereo Shell keeps all its settings in a separate file called STS.CFG. It took me several hours to set up this configuration file the first time I used

Stereo Shell, but since then I've been able to use the same file for four different upgrades of the program.

I valiantly maintain that Stereo Shell works on my Portable Plus: trust me. However, I still get reports that it does not work on anyone else's Plus.

### LIST 75g

Several people have commented favorably on LIST, Vernon Buerge's shareware program. LIST 75f is available on the 1991 Subscribers Disk.

With the use of a PC emulator (P16.COM, 1991 Subscribers Disk) and the /B/Q command line options for LIST, you should be able to get LIST to run on the Portable Plus.

LIST 75f is now LIST 75g and still growing. The new version works on the Portable Plus and adds one new feature worth noting. Supposedly the new version will let you jump to a file by pressing the first letter in the file's name. The feature seems to work fine on my desktop but when I use it on the Portable Plus I get mixed results. On occasion the Plus has locked up when I pressed a letter for which there was no corresponding file.

Another feature of LIST that works on most desktops but not on the Plus is the Copy routine. Pressing the C key after LIST has displayed a list of file names, triggers the copy routine and displays a request for the destination path of the list you wish to copy. On the Portable Plus, filling in the prompt and pressing **Return** merely gets an "unknown error" message and the computer locks up. Vernon Buerge is not sure why this occurs. He promises to look into it.

### TURBO PASCAL 6.0

Turbo Pascal 6.0 has been available for almost four months. During that time I have been using it on my desktop. I've tried some of the new features such as a built-in assembler and the new Turbo Vision units.

Upgrading Turbo Pascal 6.0 to run on the Portable Plus meant that I had to wait until Borland shipped the Runtime Library (the source code for the CRT, SYSTEM, and PRINTER units, etc.).

The Runtime Library arrived and I spent the better part of a week wading through a mix of object-oriented Pascal code and assembler listings to try and figure out the modifications.

My main goal was to modify only those parts of the units that would let Turbo Pascal write to the screen of the Portable Plus quickly. That way I could use the WRITE(), Writeln(), and GOTOXY() functions and not have to resort to special routines for fast screen updating.

SOUND and NOSOUND were left unmodified. Don't use these functions on the Plus. It's a sure way to crash the computer. Instead use the TONE() function from the HP.TPU unit if you want to create different sounds other than the beep (bell: #7).

Another goal was to keep the size of the Turbo files small enough for all to fit on a single 128K EPROM. That was a challenge, but I think I've succeeded.

The new version of TURBO.TPL, including the modified CRT.TPU, is ready to ship as an upgrade to TurbPlus Integrator users from Personalized Software.

Sad to say, there are no modifications for the Turbo Vision units for the Portable Plus. Turbo Vision is Borland's attempt to mimic Windows 3.0 on a text screen. By using the Turbo Vision units a programmer can add pull-down menus, dialogue boxes, radio buttons and mouse capabilities to any program. I tried to use several of the TVision units on the Portable Plus and failed. They hung the computer high and dry.

I started to modify one of the units and found that it was dependent on several of the 17 other units in the set. Each unit is full of object-oriented Pascal and assembler code. The modifications are do-able but I'm not sure the results will be very satisfying to programmers or to end users of the Portable Plus. Without the use of a mouse, the interface produced by TVision is not easy to use. I prefer my own interface routines that use the Portable Plus's function keys.

Nonetheless, I added the task of modifying the TVision units to my "to-do list" and set a deadline of August, 1991 for completion of the task. The next day I received a flier announcing another update to Turbo Pascal. The new version does not use TVision units. Instead it lets programmers write programs that will run under Windows 3.0. The new program costs \$250. The update cost is \$100. At that point, I said "Enough is enough!" My desire to be the first kid on the block had already wasted \$100: I wasn't going to do that again!

The wastage occurred with Turbo C++. No sooner had I started to learn C++ when I received the usual update notice. This time Turbo C++ 1.0 had become Borland C++ 2.0. There was the usual announcement of "bug fixes" and new features. Naturally, I had to be the first kid on the block to get the latest version.

The update arrived and I started to install it on my computer. That's when I realized I had made a mistake. Borland C++ is meant to develop programs for use with Windows 3.0. It also prefers a fast computer with a '386 microprocessor and a VGA monitor. I don't have a '386 computer and I don't have Windows 3.0. I don't even care for Windows and don't own a mouse. I began to realize that it would take about \$3000 in new computer hardware to continue to be the first kid on the block. I declared a two year moratorium on all updates!

## EXPLORING DIRECTORY LISTINGS

If you received the 1991 Subscribers' Disk, I hope you've taken the time to explore the UDIR program. It's one of my favorite programs for producing lists of files on my desktop and Portable Plus.

Here's a one-line UDIR command that puts a list of all the new files on a disk into a file named "NEWFILES":

```
udir \ /ant > newfiles
```

This command tells UDIR to start at the root directory of a disk "I" and move through all the subdirectories producing a list of all files whose Archive bit is set "/a". The list can be sorted by file names "n" and the total number of bytes for each subdirectory should be added to the list "t".

Of course, if all you want to do is produce a list of file names for a single directory you could use the **dir > files** command. But, suppose you want the list to contain only

the filenames and their extensions. You could use the command **udir ! /1 > files**. However, here is a batch file that will do the same thing.

```
rem FLIST.BAT
echo off
if \%1==\ goto error
if \%2==\ goto error
if exist %2 del %2
echo Put a list of files that
echo match %1 in file %2.
echo If OK press a key otherwise
echo press ^C and Y
pause
for %%i in (%1) do echo %%i >> %2
goto exit
:error
echo off
echo USAGE: FLIST filemask outfilename
:exit
```

To use this batch file enter the command **flist \*.\* newfiles** from your DOS prompt. The critical line in the FLIST .BAT program is the 11th (the one containing the "for...in ...do" command). The "in (%1)" phrase in that line captures the filemask from the command line (e.g. " \*.\*") and expands it to include all file names that match the file mask. These names are then put in the file specified by the second argument on the command line (e.g. "newfiles"). To see how the file works, enter it into your computer using The Editor, or any ascii text editor, naming the file FLIST.BAT. Then enter **flist \*.\* newfiles** from the DOS prompt.

While we're at it, here's another clever use of the "for...in...do" command. Use a text editor to create the following one-line batch file, save it as PATHDIR.BAT.

```
for %%d in (%path%) do dir %%d
```

Then, at the DOS prompt, issue the command **PATHDIR** and press **Return**. You should get a listing of all the files in all the directories included in the PATH variable.

## ESCAPE SEQUENCES ON THE PLUS

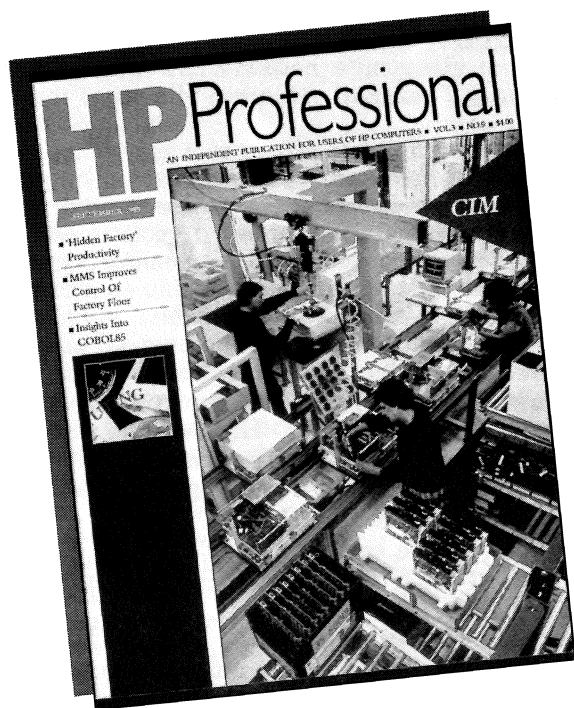
The Portable Plus uses a superset of the ANSI.SYS screen driver to perform many activities. Most of the commands to the screen driver begin with the ESCape character (#27 ASCII or 1B in hexadecimal). There is no simple way to generate the ESC character at the DOS prompt. To overcome this limitation, I wrote a very small assembler program that lets me use the # character in place of the escape character at the DOS prompt or in batch files.

To duplicate this small assembler program, you will need to use the DEBUG program that is in the B: drive (ROM drive) of the Portable Plus.

Begin by using your favorite text editor to type the following lines. Be sure to press the Return key at the end of each line, especially at the end of the last line. Save the file as ESC.HEX and leave the editor.



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# 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 desoldering 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. FA119G

(Be sure to call first to schedule an appointment.)

**Overnight return shipping . . \$35.**

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e 108 49 AC 3C 23 75 02 B0 1B  
e 110 92 B4 02 CD 21 E2 F2 C3  
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18AF:0111 B402 MOV AH,02  
18AF:0113 CD21 INT 21  
18AF:0115 E2F2 LOOP 0109  
18AF:0117 C3 RET

The first four hexadecimal digits in each line may be different on your computer. However the rest of the line should match your output. There may be additional lines after the one containing "RET". Ignore them. Press Q\ and Return to leave DEBUG.

Here are some sample uses of ESC.COM. They may be issued at the DOS prompt or included in batch files.

esc #[2J (clear the screen)  
esc #&k1#[11m (switch to alt mode on the Plus)  
esc #&k0#[10m (switch to HP mode and fonts )

Of course you could use the new ESC command to redirect escape sequences to a Jet printer and install a new font or pick a different paper bin. The trick is to use the ESC command in much the same way you would use the DOS ECHO command. Just substitute # wherever you would ordinarily put an escape character. To redirect the escape sequence to a printer you would use a command something like the following: **esc #sequence > prn.**

Until next time, Happy Porting.

[Ed Keefe is an author, programmer, and computer science instructor. He is the president of the Fast Aid Company, 314 SW Logan, Ankeney, IA 50021. Ed's CompuServe ID# is 73277,1064.]

Now, at the DOS prompt, issue the command: **DEBUG < P+ ESC.HEX** and press **Return**.

If all goes well, you should be able to issue the **DIR** command and see a new file on your disk: **ESC.COM**. It should be 24 bytes long. If you get an error message or if the resulting file is not 24 bytes, check your typing and make any corrections.

Before running the **ESC.COM** program, perform the following check. At the DOS prompt, issue the command **debug esc.com** and press **Return**.

You should see the **DEBUG** prompt "**-**". At that prompt, press **U** and **Return**. This will Unassemble the program and you should see the following lines of assembler code. If your listing matches the following, then you're ready to use **ESC.COM**. Otherwise re-cycle through the editing and **DEBUG** operations.

-U  
18AF:0100  
BE8200 MOV SI,0082  
18AF:0103 8A4CFE MOV CL,[SI-02]  
18AF:0106 E30F JCXZ 0117  
18AF:0108 49 DEC CX  
18AF:0109 AC LODSB  
18AF:010A 3C23 CMP AL,23  
18AF:010C 7502 JNZ 0110  
18AF:010E B01B MOV AL,1B  
18AF:0110 92 XCHG DX,AX

# THE SAVVY USER

By Tom Page

**110**  
**P+**  
**PV**  
**15/12**

A few weeks ago a number of my associates from a wide variety of departments were sitting in a conference room waiting for a meeting to begin. There was the usual compliment of semiprivate conversations. As I arrived I heard this wisp of conversation apparently concerning someone not especially computer literate, "... he thinks 1-2-3 is a video game."

From a far corner a computer jock with roots deep in the era of punch cards replied, "You mean its not!"

I think there is something instructive about this exchange. The analogy by which we view computers and computer applications affects the way we approach them. My downstairs neighbor is a Nintendo addict. After two years of hacking, and with help from some experts, she conquered the "Legend of Zelda" and bought a new game: "Legacy of the Wizard." As I watched her demonstrate this game and observed some of the techniques she used to learn about the game it occurred to me that treating 1-2-3 like a video game might be interesting.

Just as she experimented with each character to learn its strengths, weakness, and the way it moved, 1-2-3 users must learn how to effectively move about the spreadsheet and control the screen. 1-2-3 is an advanced video game without a script. The user supplies the script and writes equations to solve riddles. It is not at all unusual for a video game to contain riddles.

Since there is a limit to the size of spreadsheet I can visualize, I divide my spreadsheets into smaller spreadsheets and write macro menus to move quickly to different locations. Some video games are divided into rooms and often have shortcuts to get from one room to another. Actually, I visualize each of these smaller spreadsheets within a spreadsheet as pages rather than rooms. Generally, each one of these pages will print out on an 8.5- by 11-inch sheet of paper.

I was especially impressed by how, in the new game, extra distance could be gained by bouncing off critters that are normally dangerous. 1-2-3 doesn't have many deadly critters but it certainly allows setting up cursor moves that are beyond moving between adjacent cells. The trick is the END key. Pressing this key before pressing an arrow key will cause the cell pointer to move to the next intersection of filled and unfilled cells. I have a large spreadsheet that prints the error checks across the bottom of each page of my report. First I check the error check at the bottom of the total page. If it shows an error I can quickly locate the source by doing a series of END-LEFTs to view the error checks at the bottom of each supporting page. I generally avoid putting blank columns in a spreadsheet. I like to use the END key to zip from one side to the other of my data. Last week I

became extremely frustrated with a spreadsheet someone else worked up because it used blank columns to space data and I could not easily find the borders of the data. I kept END-LEFT and END-RIGHT to work like they do on my spreadsheets. I finally gave up and deleted the blank columns. Widening columns containing data restored the format of the spreadsheet.

Even if you are not ready to accept the hypothesis that 1-2-3 is a video game, don't take computing too seriously. Computers are the ultimate toy. An excessive attitude about these creative machines short circuits the creative process and reduces one's effectiveness in using a computer. More than once I have heard executives complain about people using the computer as a typewriter.

## DEBUGGING A BATCH FILE

One of the men who works for me came in my office with a batch file that was giving an error message that he could not figure the source of. I examined his batch file and I could not find an error in it. There was nothing complicated about the batch file. It sent a setup string to his LaserJet printer and then copied a number of print files to the printer. To avoid noise on the screen the batch file turned the echo off and preceded each COPY command with an IF EXIST command.

I guess we could have examined the output from the printer and determined in which copy statement the error was but I suggested another tack: sprinkle a few ECHO commands through the file to bracket the location of the error. These commands looked something like this:

### echo flag 1

We then executed the program and sure enough, the error message appeared between two of the flag messages we had inserted. A second inspection of the file showed an obvious bad command between the statements echoing the flag messages. The word "exist" was misspelled.

If I had not spotted the error on the second inspection, I would have added more echo commands between the two, bracketing the error. Readers who have spent some time in the military may recognize that this is the same procedure used by forward observers to direct artillery fire down upon "errors" of a military sort.

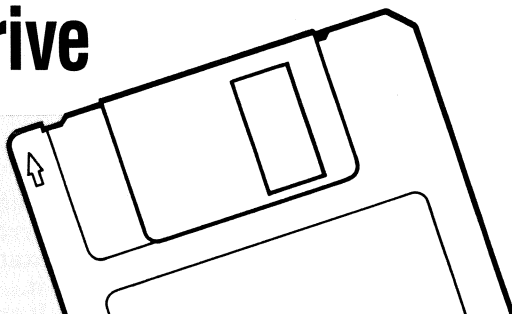
In complex batch files with several GOTO commands, echoing a message following each label in the batch file can be very helpful for debugging. This method is not limited to batch files. It will work with any language including the 1-2-3 macro language and the Reflection command language, as well as Basic and Pascal.

## A UNIQUE WAY TO PRINT 1-2-3 SPREADSHEETS

Often I print 1-2-3 spreadsheets to a file and then print the spreadsheet by copying the file to the printer. This may seem like unnecessary overhead but there are a number of advantages to this two step printing procedure. An electronic copy of the study that cannot be accidentally recalculated can be preserved. Although this ASCII copy of the spreadsheet may be in several files, it is generally much smaller than the original spreadsheet. Compressing these files into a ZIP eliminates the multiple files and saves even more disk space.

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## RECOMMENDED FOR:

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Portable Plus	•
Portable Vectra	•
HP150	•
IBM PC and compat.	•

Printing from DOS bypasses 1-2-3's limited space for a setup string and permits using more complex setup strings. The LaserJet has just about become the standard printer in spite of its potentially lengthy setup strings which permit very precise control of the printer. Without adding any fancy fonts a lot of data can be crammed on to a page. The trick is to select the LJ's smallest font and then reset the horizontal motion index (HMI) to print the characters even closer together. Also, lines can be printed closer together by resetting the vertical motion index (VMI). Try these two setup strings:

```
^[^&k2s6.521H^[&l4e92f5.333C^[&a10L
```

left margin  
VMI  
text length  
top margin  
HMI

```
^[^&k2S^[&l10^[&k6.521H^[&l4e61f5.333C^[&a10L
```

left margin  
VMI  
text length  
top margin  
HMI

Note the ^ symbol stands for the escape character, which can be created in The Editor by holding down the Ctrl key and pressing [.

Each string causes the printer to print 18.4 characters- and lines-per-inch. The first string causes portrait orientation and the second landscape. The font used here normally prints 16.67 characters per inch and is normally printed 8 lines-per inch. The extra compression produced with the non-standard HMI and VMI in the above setup strings is almost unnoticeable.

I must admit I have a problem synchronizing lines-per- page with the page length and have to use a form-

feed between each page rather than advancing the page by printing blank lines. I may be overlooking something very simple. Maybe there is an LJ guru out there who can improve my work.

The trick of resetting the HMI and VMI is not limited to LaserJets. It will work with a number of printers. I have used it with an old Diablo Daisy Wheel printer.

If you haven't figured it out, this process for printing spreadsheets is why my employee was writing a batch file to copy a bunch of files to the printer. Since he is using 1-2-3 Release 2 he often writes 1-2-3 macro code to execute these batch files. All the macro code required is: {system filename}. Those of us using release 1A must manually execute the system command or exit to DOS to execute the batch file.

Sending a setup string with a batch file is very easy if you are using an editor such as The Editor that can type the escape character. The line in the batch file will look something like this:

```
echo setup_string>prn
```

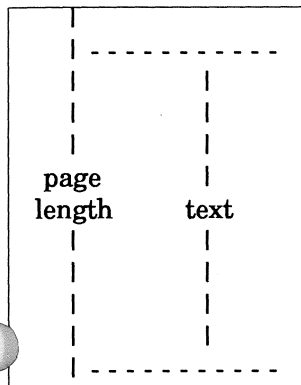
DOS I/O redirection is used with the ECHO command to send the string to the printer. By combining this technique with DOS command line parameters a very comprehensive printer setup utility can be developed and if you have the BATCOM batch language compiler mentioned in this column a number of times, you can convert such a batch file to a much faster .EXE file.

## THINKJET PRINTER

**110** When the Portable was introduced in 1984, its companion, the ThinkJet printer, was criticized by computer pundits for its complex setup strings. There were two things these experts did not realize. The ThinkJet has an alternate set of much simpler control codes, a subset of the Epson printer commands (the industry standard at the time). Unfortunately, the Portable was distributed without a method of enabling this alternate command set.

Fortunately, it was not long until a program named PRNCONF.COM was written to change command sets.

But most importantly, the pundits did not foresee the LaserJet revolution. The standard ThinkJet command set is a subset of PCL or Printer Control Language, the LaserJet command language. If there is an 'industry standard' for controlling a printer it is now PCL. This little fact makes it possible to maintain a high degree of compatibility with you Portable printer and the office printer. To do this it is necessary to understand a little about the way the ThinkJet and LaserJet count lines per page. The key terms are page length and text length. Page length is the number of lines from the first line on the page through the last line on the page. To avoid printing across perforations between sheet of paper the ThinkJets, like most printers, can be set to skip a few lines at the end of each page. Text length is the number of lines that may be printed on a page allowing for perforation skip. The following diagram demonstrates this concept:



There is one key difference between the LJ and the TJ. The TJ can print across the perforation between pages. The LJ cannot because it cannot use continuous form paper. The LJ must always have borders around the text on a page and therefore defaults to "perf skip on." This causes the LJ to skip a few lines at the bottom of the page. The TJ defaults to "perf skip off." The trick to maintaining compatibility

between printers (i.e. making sure the document you formatted for the TJ prints well on the LJ) is to turn on the TJ "perf skip on" (use PAM's f6 Systems Config to do so). If printing from 1-2-3 you must set the lines/page in 1-2-3 to equal the text length, not the page length.

The same rule is applicable if printing to a LaserJet. I know this technique will work, but at this time I have not worked out the exact mechanics.

## FORMAT PLUS

**P+** Format Plus (written by Ed Keefe, author of the *Through the Looking Glass* column) is a program I use now and then and I am quite happy to have the program. More often I manually format my documents. I admit this is a pain in the neck but the limited formatting options offered by Format Plus unfortunately force me to do this. Recently I used Format Plus to print a document that was just too big to manually format. I compromised and settled for the options permitted by Format Plus, but I started thinking about what I would like to have in a formatting program. I'll share my ideas, and perhaps Ed Keefe will modify Format Plus to meet my specifications.

My most important requirement is for the program to permit headers and footers of more than one line. Headers and footers on the first page different to those on subsequent pages should also be permitted. In addition, the program should have the ability to header and footer even and odd pages differently. Including page numbers is essential, but the program should also be able to pre-count pages and include total number of pages in headers and footers. "Old maid" suppression is desirable too. (An "old maid" is a single line of a paragraph at the bottom or top of a page.) Page breaks adjustment to avoid this.

The program should be capable of printing to a file as well as to the printer. A screen preview would be a nice feature but is not essential. I would like to create format files with my editor and, therefore, don't require any fancy screens for the program. In fact, I would be happy with a simple DOS command line interface of this form:

`format textfile.exe fmf1file.txt`

If anyone should know of a program meeting these specifications I would like to hear about it.

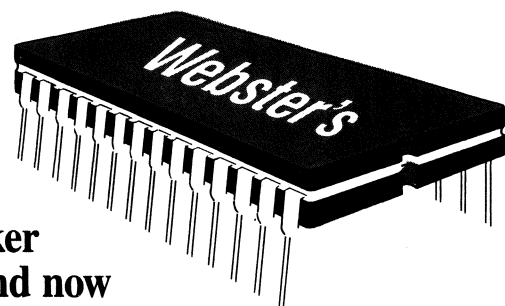
*[Tom works for a natural gas pipeline company in Houston, Texas, and was one of the first to use PC's in the natural gas industry. His excellent contributions to The Portable Paper have proved beyond a shadow of a doubt that he is truly "The Savvy User."]*



## HP110/HP110+ USER GROUPS

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# 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.

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*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:

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

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- Add the word to an auxiliary dictionary of frequently used words
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- 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.

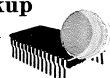
John Dvorak, writing in the *San Francisco Examiner*, called WEBSTER'S "the

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.

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# Erased your files? Get them back with The Norton Utilities!

## HOW TO RESTORE DELETED FILES

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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?

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- 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.
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- 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).

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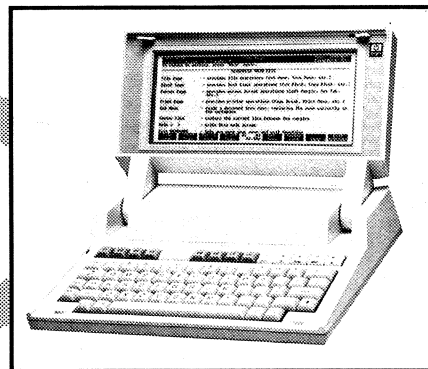
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— Ed Keefe  
Ankeny, IA

### Great computer

"My RAM/ROM laptop for the past three years has been a Hewlett-Packard Portable Plus, a personal computer that is the embodiment of technical elegance.

"HP's Portable Plus is a true laptop with 20 hours of battery life. It enjoys a high degree of user loyalty because it is an innovative and practical PC; its open architecture lets you configure

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— Frank Kereszles-Fischer  
Brighton, MI

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