

HP to Discontinue Portable Plus September 1st

New LS/12, Portable Vectra Products Squish Plus: Software to Increase Disk Space

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Personalized Software **Products and Services in Brief:**

WORD PROCESSING

110 P+ PV LS 150 The Editor II

The Editor II

Many features not in MemoMaker, including search/replace, editing 2 files at once, embedded printer codes, up to 255 columns per line and block centering and macros. Does word wrap, right justify. Easy to use. Uses less than 40 K. Versions for HP110,Plus,HP150 Vectra and IBM PC all on master disk.

P+ PV LS 150 Word Perfect 5.0 (and 4.2)

World's best-selling word processor, customized to Portable Plus. Dozens of advanced features, to rottable rules, integrated text and graphics, style sheets, document compare, text in columns, footnotes, tables of contents and indexes, 115,000 word speller, thesaurus, mail merging, and built-in math functions for creating a mini spreadsheet anywhere in your document. Portable Plus version comes with PlusPerfect, our own IBM PC emulator that allows WordPerfect to run on the Plus. Optional ROM Backup saves 384K of RAM.

WORD PROCESSING UTILITIES

110 P+ PV LS 150 The Formatter

Sophisticated text formatter for large reports. program documentation, etc. Multiline headers, footers, page numbers, table of contents, glossary capabilities, and more. Works with almost all printers. (Note manual is in draft form: no technical support available.)

P+ 150

Format Plus

An integrated word processing command center for the Portable Plus. Let's you run your word processor, spelling checker, and other applications from a single easy-to-use program. Also lets you do headers, footers, lines per page, automatic page numbering and more.

110 P+ 150 HPrint

Takes text (ASCII) files you've created with MemoMaker, The Editor, or other word processors and prints them on an HP Printer. Comes sors and prints them on an HP Printer. Comes with italic type font for ThinkJet. Also allows bold, underline, compressed, expanded, subscripts, superscripts, headers, footers, page numbering, double space, and much more- all of which you specify from a simple menu or by means of sensible control codes. HPrint also does mail merging, and it lets you create your own graphic characters. own graphic characters.

110 P+ 150

PrinterTalk and Format110: MemoMaker Enhancers

PrinterTalk lets you change type styles in middle of document, change number of copies and lines per page, do automatic page numbering and much more. Format110 lets you format headers, footers, and page numbers; chain or merge documents; compensate for "widow" and "orphan" lines and much more. 110 P+ PV LS 150 RightWriter

Flags errors in grammar, style, usage and punctuation, inserting comments directly into your document. Also, produces overall critique. Works with most word processors. Also avail-able: **RightWords** dictionary extension utility: it has 7 auxiliary dictionaries (business, computers, engineering, etc.), and also lets you add words of your own to RightWriter's built in dictionary.

P+ PV LS 150 Webster's Spelling Checker

webster's Spelling Checker
Rated Editor's choice by PC magazine, Webster's packs a 110,000 word dictionary into
207K of disk memory. webster's shows you
incorrect spellings in context and suggests
corrections, lets you preview questionable
words before you edit. Exceptionally easy to
use. Customized for the Plus and HP150.

The Word Plus

An excellent spelling checker with a choice of two dictionaries 45,000 words and 35,000 words- plus the ability to input additional words and abbreviations of your own. Also does word counts. Customized to the HP Port-

UTILITIES TO BOOST YOUR PRODUCTIVITY

BacTools Disk

Contains a wide range of utilities to help you back up files from a 1 Megabyte or larger Edisk onto floppy disks. Lets you back up selected files, automate the entire backup process, and more.

110 P+ PV LS 150

DOS Tools: Portable Utilities Disk, Vol 1

Well over 50 excellent public domain programs that enhance DOS, all tested on the Portables. Documentation has been rewritten for clarity for ease of use, and includes examples, index,

FilePlus: File Management

You can tag multiple files and perform actions (such as copy, delete, move, etc.) on all the tagged files at once, without having to use P.A.M. or DOS. Lists the files in two directories simultaneously.

110 P+ PV LS Link HP-IL

Link HP-IL

A software program that lets you transfer data
from any HP-IL device to any other Hp-Il
device. Now you can access your main computer(HP Portable, HP150, or IBM PC) its
unlimited storage capability, and all its peripherals from your HP41,71,75 or series 80
hand-held!

110 P+ PV LS 150 The Norton Utilities

Allow you to recover deleted Portable files and organize your electronic and external disks.

Peter Norton has authorized us to include an extra 3 1/2" disk (formerly only available on 5 1/4" disk). The disk includes The Norton Utilities, and instructions for running them on the Portables and the HP150. Version 4.0 and the advanced edition are now available.

110 P+ PV LS 150 1987 Subscriber's Disk

Includes (1) DISKPACK, a disk-packing utility whose commercial equivalent sells for \$ 50 (2) Time Manager's calendar utility. (3) HP Calculator program. (4) Game, Lotus templates.

110 P+ PV LS 150 1988 Subscriber's Disk

1988 Subscriber's Disk
Contains (1) Time Manger utilities including calendar program and mail-merge utility. (2)
Some of best public domain software and "shareware" for the Portable Vectra. (3) password program protect usage of the HP110 (4)
TERM xmodem program for the Portable Plus. (5) Lotus templates. (6) Games. (7)New DOS
Tools. (8) A file to toggle HP and Alternate mode from DOS. (9) Lots more.

110 P+ PV LS 150 1989 Subscriber's Disk

Features: (1) File manager utility that lets you Features: (1) File manager utility trait lets you tag files for mass copying and ideleting. (2) File compressor (3) New RAM-based Time Manager with Week-at-a-glance screen. (4) Compuserve Automation program. (5) A menu program easier to use than PAM. (6) Superfast file finder (7) Directory lister (8) Much more.

P+ PV LS PrintMaster

Allows you to use your HP Portable and Think-Jet to produce logos, invitatations, banners, and other graphics. Customized for Port. Plus.

110 P+ PV IS 150 Private File

Protects letters, documents, data files by scrambling your file. Your password unscrambles.

Shelp

From within almost any program, Shelp gives you immediate access to a notepad and calculator and lets you define up to 26 keyboard macros- that is, assign up to 31 character to a single keystroke. Written for Portable Plus.

P+ PV LS

Squish Plus Automatic file compression program that as much as much as doubles available disk space. If you know how to save and retrieve files

from your application, you know how to use Squish Plus. Available on ROM.

110 P+ PV LS Tiger Fox

A great video game of changing mazes and double pursuit designed for the Portables.

110 Time Manager

The highly acclaimed Portable Plus ROM-based Time Manager program in a 3 1/2 " disk version for the HP110 Portable. Does not run on Portable Plus. (Available to Portable Paper Subscribers only.)

110 P+ 150 Typing Whiz

Better than almost any typing tutor program on the market- designed specifically for The Portables and the HP150, Immediate numeric and graphic feedback or your progress.

FILE TRANSFER **MADE EASY**

PV LS

LapLink

Laplink
A software program for high speed transfer of files between your Vectra CS or LS/12 and IBM PC or compatible. Versatile (works with parallel and serial ports), easy to use (simple manual or automatice file tagging.

110 P+ PV LS 150

Disk Conversion Service

We will convert your data to and from single sided, double sided, high density 3 1/2 " and 5 1/4 inch formats at a reasonable cost.

P+ PV LS

HPDuette

A software program that lets you transfer files back and forth at high speed between your Portable Plus and an IBM PC or compatible desktop computer- without the need for HP-II card. Comes with proper serial cable.

110 P+ PV LS 150 Manzana Disk Drive

These are high-quality drives for IBM Compatibles system to access 3 1/2 " HP or IBM

formatted disks. 110 P+ PV LS 150

ReadHP This software program allows an IBM compatible computer with a 3 1/2" disk drive to

read and write to HP formatted disks.

SPREADSHEET ENHANCERS

110 P+ PV LS 150 101 Macros for Lotus 1-2-3

Useful in themselves and as learning tools for novice and experts alike. Includes: recalculating ranges, double spacing spreadsheet prior to printout, hiding notes next to data cells, ad-dressing form letters, and printing labels automatically. customized Lotus 1A and 2.01.

110 P+ PV LS 150 SideWinder

This program allows you to print your spread-sheets (or other text file) sideways on your Thinkjet. This means you can print your 60 column by 53 row spreadsheet Portable as one long printout without cutting or pasting.

P+

Lotus 123 in RAM Driver Utility allows you to run Lotus 1-2-3 or Symphony from RAM or disk rather than ROM.

PROJECT MNGMENT

110 P+ PV LS 150 2 Project Management Packages

Milestone is for small to medium projects bit awkward on HP110). Pertmaster: larger projects - specify which machine.

Statistics & Accounting



Dac-Easy Accounting

Dac-Easy Accounting
A popular (and powerful) accounting package
at an amazingly low price. General Ledger,
Accounts Receivable, Accounts Payable, Purchase Orders, Billing, Inventory, and Forecasting modules are all fully integrated. Easy-touse menu-driven system. Generates numerous
journals, aging reports, balance sheets, and
other hardcopy printouts. Version 1.0 (runs on
Portable Plus, HP150).



A comprehensive statistical package that's easy to learn and use. Runs on the HP110, Portable Plus, HP150, and IBM PC compatibles. Data can be entered from the keyboard or imported from spreadsheet or database files. Includes multiple regression, most standard parametric and non-parametric tests, p-values, plots, histograms, and much much more.

COMMUNICATIONS

110 P+ PV LS 150 CompuServe Starter Kit

Gets you started on the Electronic Information Service, CompuServe (which includes the HP Forum). Includes \$25 worth of free time and CompuServe's monthly magazine, Online Today.

P+ Relay Gold

Relay Gold
The only RAM-based communications package for the Portable Plus that handles file transfer and terminal emulation (for communicating with mainframe computers). This popular IBM PC program was modified by Relay Gold engineers to run on the Portable Plus. It is easier to use and more powerful than Reflection. Lets you access electronic bulletin boards, transfer files between computers even if one of them is unattended, and much more. It even them is unattended, and much more. It even supports distributed processing. Easy to learn even for beginners - yet powerful enough to handle the most sophisticated data transfer tasks. Version 2.0.

Term110, TermPlus

Exceptionally easy to use alternatives to Terminal for the HP110 and PC2622 / Reflection minal for the HP110 and PC2622 / Reflection for the Portable Plus. Both Term110 and TermPlus allow you to send and capture ASCII information. Both offer fast XMODEM transfer of programs, Lotus worksheets, and achive files. Both offer auto-logon, dialing directories, on-line help, ability to run other programs without severing phone connection.

110 P+ PV LS 150 WorldPort Portable Modems

The WorldPort 2400 is a battery pow-The **WOFIGPOPT 2400** is a battery powered, highly compact (4"x2"x1"), lightweight (6.5 oz), full featured external modem that transmits data at 300, 1200, and 2400 baud. Faster than HP's internal modems, the World-Port 2400 is fully compatible with the industry standard Hayes AT Command Set, and with both the CCIYY and Bell communications standards. The WorldPort 1200 modem transmits at 300 and 1200 baud.

DATA BASE

110 P+ PV LS 150 Condor 3 and Condor Jr.

Database programs customized for the HP Portables. Enter data, sort, search, manage files, and print address labels with ease. Condor, Jr. runs on the HP110 and Portable Vectra, and HP150. It allows limited

report writing, and is highly memory-efficient. **Condor 3** runs on the Plus, Portable Vectra, and HP150. It is a fully "relational" system, allowing you to combine data from two or more files. It includes advanced report generating capabilities, data transfer to and from Lotus 1-2-3, and more.

PROGRAMMING

Turbo Optimizer

Saves run time and storage space by making your Turbo Pascal programs 10-30% faster and 15-50% smaller. For Version 3.0 only.

Turbo Pascal 5.5 and TurbPlus Integrator

Turbo Pascal, the HP Portable programming language of choice, outstrips others in price, performance, compatibility, and memory consumption. Our TurbPlus Integrator adds value, serving as a Turbo Pascal command center for the Portable Plus. From within TurbPlus, you can call up your own text editor (for creating Turbo Pascal code), Turbo Pascal itself, the Turbo Optimizer, or whatever file management program you may have - each by means of a single keystroke.

GRAPHICS

P+ PV LS Flowcharting II+

This program creates profession-looking flow-charts and organizational charts using 26 flowchart symbols in 95 sizes. Wide variety of text fonts for creating labels. Easy to add and delete lines without disturbing the rest of the flowchart. " Shrink Screen " feature lets you view up to 14"x11" chart on 25 line screen. (Portable Plus only.)

P+ PV LS Logitech Mouse for Port. Plus

A three button mouse for the Portable Plus, bundled with our propriety Portable Mouse Software and special connecting cable. Using the mouse to move the screen cursor makes using your Plus easier and more fun. Logitech was rated Editor's choice by PC Magazine.

110 P+ Sketch

A graphics program for the HP Portables. Lets A graphics program for the HP Portables. Lets you draw free-form using cursor keys. Also draw lines, boxes, circles by pressing a single key. Five character sets can be displayed normally sideways, or even upside-down. Entire screen can be printed on ThinkJet at virtually any enlargement. Screens can be sawed for future use. Screens can also be imported into Sketch from Lotus and other programs. Only uses 44K of memory.

ACCESSORIES

110 P+ LS Portable and Peripherals Cases

Roomy, rugged, high quality, highly padded cases to protect our ThinkJet, HP9114, and HP Portable when traveling.

External Numeric Keypad

Allows fast numeric entry for Lotus and other applications. Attaches to Portable Plus via

HP9114 Empowerer

A hardware product that prevents the HP9114 disk drive from running out of juice in the middle of your work. Plug Empowerer into your HP9114 and into a normal wall outlet,

and you can run your HP9114 forever.

110 P+ Mobile Recharger

Lets you recharge your HP110, Portable Plus, ThinkJet, HP9114, Hp hand-held etc. from your cars cigarette lighter.

110 P+ PV LS

3 Ring Binders for Back Issues Handsome unprinted 3-Ring binders for back issues of The Portable Paper. Specify Volume number (1-4).

INTEGRATED PACKAGE

110 P+ PV LS 150 T/Master and T/Maker

T/Master is a fully integrated word processor, speller, relational database manager, and communications package. Also includes graph making. Runs on the Portable Plus and Portable Vectra without modification, and on HP150 with a PC emulator. T/Maker is an realier version; it runs on the HP100 Portable with an external disk drive, and does not include the communication module. Both programs are more integrated than any other package. Our reviewer says "I know of no other application that matches the power, thoroughness, and elegance of T/Master."

VECTRA CS AND LS/12 **PRODUCTS**

See discussion in this issue about LapTape, EtherNet adapter, Welteck 5.25" drive, NoSquint, Diaconix printer, Numeric keypad, Expansion chassis, LapLink

PV LS

LapLink

See in File Transfer section.

PV LS FloppyDRIVER

A software program for the Portable Vectra and LS/12 that makes all floppy disk access operations (loading and running programs, copying files, etc.) up to 10 times faster.

P+ PV **HP-IL Card for Portable Vectra**

Fits in Portable Vectra adapter slot. Functions exactly like IBM PC HP-IL card, allowing transfer of data to HP-IL devices like the HP9114, HP110, and Portable Plus.

MISCELLANEOUS

FastPlus

By installing a faster processor and increasing the clock speed of your Portable Plus, you can run Lotus 1-2-3 and other applications 60% faster than before. Our trained technicians perform this upgrade and can have your Plus back to you the next day. Call for appoint-

P+

Software on ROM

Many of our best-selling programs are available on ROM chips via our ROM Back-up service. (Portable Plus only.) Saves valuable electronic disk space, minimizes need for disk drive. **Custom ROMs** also available.

110 P+ PV LS 150 Used HP Portable Equipment The Portable Equipment Ex-

change, a division of Personalized Software, buys and sells used HP110s, Portable Plusses, HF9114s, HP ROMs, and RAM drawers for the Plus. Because of HP quality, used HP products

are a great buy. 30
-day return policy on all used equipment, plus one-year guarantee (parts and labor).

110 P+ PV LS 150 Volume Discounts

Corporate buyers, users' groups, and HP dealers: Order products and subscriptions from us in quantity and save.

TRAINING VIDEO

110 P+

Video: How to Use the HP110 and Portable Plus

5-hour set of 3 VHS videotapes gives you all the fundamentals of using the HP110 and Portable Plus. Saves countless hours learning on your own or training others. For novices and intermediate users.

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PRICE LIST . Center Spread

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

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

-Customized on 31/2" disk by special arrangement with Simon & Schuster, Inc.

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

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

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

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

RECOMMENDED FO	R			
HP110 Portable		Portable Vectra		
Portable Plus HP150				
IBM PC and compatibles				
Available on ROM Backup for the Portable Plus				

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

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

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

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

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

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

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

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

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

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

PV users: Please subtract \$10 from subscriber price (since we don't have to send you additional customized disks or extra documentation). Be sure to indicate "PORTABLE VECTRA" on your order.

Attention HP110 Users:

Order WordPlus for your

Spell-checking needs!

HP Portable users:

HP Portable users:

the 110;

the 110;

HP Portable users:

the 10;

the 110;

the 10;

the



Hal Goldstein

HP has decided to discontinue the Portable Plus, September 1, 1989. HP will continue selling accessories for the Portable Plus such a the Lotus 2.01 ROM, the 1 Megabyte RAM card, and the HP9114B for another year.

It's a sad time for those of us who have been enjoying the fruits of the HP engineering genius that went into creating the HP110 and Portable Plus. These machines were a few years ahead of their time. The Portable Plus

suffered internal HP portable computer strategy redirections, no real long-term HP committment to marketing the Plus, and RAM prices that unexectedly skyrocketed.

The Portable Plus is truly a diamond in the rough. It's too bad for all of us and the industry in general that HP apparently chose to throw away its pioneering technology.

Despite the fact that HP has given up on the HP110 and Portable Plus, we at Personalized Softwre haven't. As long as you continue to support us, we can continue to support you.

In this issue we begin an important discussion on file compression. File compression techniques are particularly important to portable computer users for whom disk space is precious. These techniques let you store more in the same amount of disk space usually at the expense of convenience or performance. For a nice overview see Ed Keefe's "Looking Glass" column.

In particular, Ed Keefe, Tom Page in "The Savvy User", and I in "News From Personalized Software" take a look at a truly important software file compression breakthrough for Portable Plus, Portable Vectra, and LS/12 users. The product, Squish Plus from Sundog Software, can as much as double the amount of electronic or hard disk space available for word processing, spreadsheet, and other data files

In this issue's Vectra Views we uncover a gold mine of products that expand the productivity of the LS/12 and Portable Vectra. Highlights include an LS/12 expansion chassis and the Xircom Pocket Ethernet Adapter that lets you plug your Portable Vectra or LS/12 into a Novell Ethernet Local Area Network using the printer port.

Many thanks goes to reader and Savvy User columnist Tom Page. Tom spent much time and his own resources to research his article on using the HP Portable with Cellular phone technology. It is possible to be anywhere in the world that supports cellular phones and log into another computer with your HP Portable without phone lines. In addition, I even more appreciate the work Tom did with Sundog Software. Tom and the Squish Plus authors were able to nail down and fix the problem that was impeding Squish Plus to work properly on the Portable Plus.

Finally, thanks again goes to our readership. We have become so backlogged with interesting, informative letters that we have greatly expanded the Letters section in this issue.



User Not Happy About Portable Plus Discontinuation

- Hewlett-Packard's decision to discontinue the Portable Plus is a very great disfavor to the customers, since this computer is by far the best portable machine ever on the market. As a portable the Vectra LS/12 is a poor replacement, even if it is
- LS/12 is a poor replacement, even if it is IBM compatible and has some excellent features you do not find in the Portable Plus. Here are my main reasons for saying so:
 - 1. When you travel a great deal, it is inevitable that the computer is exposed to some shock. The Portable Plus is virtually shock-proof. However, with the Vectra you have to be more careful than

with a sack of raw eggs because of the vulnerability of the disc drive.

- 2. With the Plus you have no problems with charging the battery. You plug it in, whenever you have an opportunity, and forget about it. With the Vectra LS/12 you have to be extremely careful following the instructions if you don't want to shorten the life span of the battery.
- 3. The fully charged battery of the Plus lasts twice as long as the one in the Vectra, which is very significant when you travel...
- 4. The Vectra is remarkably slow. Before it ever "wakes up", you have already done some work with the Plus. Also when you retrieve a program, it takes much longer before you are in business. At times I thought that it did not respond to a command from the keyboard and pushed the keys a second time.
- 5. The Portable has been in use for quite a few years. All the bugs it had have been taken out. With the Vectra we have

to wait and see.

I have been traveling for a full three years with the Portable Plus both in the U.S. and abroad. No problems at all. I could not imagine that things would have been nearly as comfortable with the Vectra. *Martin Koenig Sun City, Arizona, USA*

Another User Unhappy With Discontinuation of Portable Plus

- (This is a copy of letter sent to John Young, CEO, Hewlett-Packard)
- 110 Two and a half years ago I invested in a new HP Portable-Plus laptop computer,
- pv following my introduction to micros on an HP-110. I saw then, as I believe now, that truly portable computing is best implemented via the technology that the Portable-Plus embodies. For durability, ruggedness and therefore reliability it will

remain at the apex for some time to come, especially if one is to put it in the context of today's fragile laptop offerings. This letter is prompted by my extreme disappointment over the inept HP marketing support that this product has received, compounded by the unkept promise that this open architecture machine will be supported by HP beyond its introduction date. In recent days my local HP dealer told me that the PLUS is coming off the HP price list!!

Fortunately for those of us who have bought into HP's RAM-ROM laptop technology, Hal Goldstein's Personalized Software Company and "The Portable Paper" have been there as lifelines supporting us with modest hardware complements, and with a truly useful software catalog...many of them direct adaptations of up to-date IBM software such WorkPerfect-5, Lotus-2.1, (to allow add-ins), etc.

And what has HP done these past twoand-a-half years to support its installed base of the Portable-Plus? introduced a 1-megabyte RAM drawer, while a third party supplier brought to market a variety of RAM and RAM/ROM with maximum 2-megabytes drawers capacity.

HP has threatened to withhold services support for users daring to have their PLUS upgraded with the NEC-V30 processor (with circa 70 percent better performance than the current Harris 80C86 chip), instead of offering an HP upgrade path.

HP has ignored the potential benefit of enhancing the compatibility of the PLUS, thus denying us many software options. One can readily make this list longer without distortions. In short, HP has abandoned a group of users who believed HP's promises and committed their capital funds (totaling some \$8,000 in my case) to an HP system.

Yet if you asked me if I were willing to trade my Portable-Plus, free exchange, for the "LS/12" (HP's private labelled Zenith box), my response would likely be a long hesitation; I view my PLUS as inherently better...perhaps not as flashy, but definitely better.

And here is the rub, Mr. Young. With advances in chip technology over the past three years (e.g. more memory capacity in the same chip at comparable pricing), the PLUS is nowhere near oblivion...and is readily upgradable in several crucial aspects. These include larger capacity RAM drawers (drives) perhaps to 4 or even 8 MB maximum capacity), larger capacity ROM (firmware) drawer utilizing 32-pin technology (perhaps to 6 MB total capacity), more mainframe memory and therefore A-Drive capacity, CPU upgrades, and operating system and BIOS upgrades.

My voice is but one of many that have been seeking solutions to these range of upgrades. The problem is that we consider ourselves (I refer you to back issues of the Portable Paper's readers letters). deserted by the HP organization...and we are even now considered a thorn in HP's side as they are marketing the newest generation Zenith laptops (an unfortunate choice over in-house technology, but at least they are apparently American made).

Mr. Young, I would like to make a bold proposal to you. Don't take for granted that customers like me will be there for your next generation of information products. If our PLUS experience remains an unresolved specter, my next decision will be based on HP's deeds, not assurances. I have tried to communicate earlier with organization, without so much as receiving an acknowledgement of my letter. Yet, you can make a meaningful difference in one or more ways. First of all, please consider providing HP engineering support for a few of the strategic upgrades for the PLUS. Secondly, support us via a grant arrangement to one of the computer science schools (e.g. University of Michigan), and have them provide us, HP PLUS users, with the development work for such well defined upgrades. Sourcing support may then be either via HP directly, or by third parties via Personalized Software.

I urge you to consider this as a helpful input, and not miss an opportunity to heal HP's relation with a segment that like myself are serious business users of the PLUS. We are business people, medical and legal professionals and academics, working also in sales and service, in the US and abroad...and we have the capacity to influence and steer information-technology purchase decisions well beyond our numbers. Personally, my PLUS is like my AX card, I don't leave my office without it.

Frank Keresztes-Fischer, Brighton, Michigan

A Good Word For HP

110 I recently dealt with HP in Hawaii, and was pleased with the service. I needed P+ a new battery for my 110. I was advised with patience and courtesy. I was even asked to consider installing the battery myself. Instead, I decided to let them do it, and even took out a service contract.

As a personal user, and receiving no compensation at work or through taxes for the cost of my computing, I received good value from HP. And I believe it shall continue.

Brian Kim, Honolulu, Hawaii, USA

Some Questions And Suggestions

I have been a subscriber to your

THE PORTABLE PAPER Volume four/Number four July/August 1989

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publication "The Portable Paper" now for about one year and have greatly enjoyed the increased productivity that both my HP110+ and HP150 machines have experienced by employing your user tips and innovative software products.

I have several suggestions and questions that are of great interest to myself and probably to your readers as well.

1. One of the great advantages to the 110 and 110+ is their portability coupled with





the built-in acoustic modems. This permits the user to travel and keep in touch with his various information services with ease. Personally, I have need of stock/options quotes that are available via py the "Dow Jones News Retrieval service" which may be accessed using Crosstalk on $\stackrel{[S]}{\downarrow}_{12}$ the HP150 and Termplus on the 110+.

Recently, a company introduced the software package "Prodigy" for MS-Dos machines that GREATLY reduces the cost of using Dow Jones and other such services (including, I believe, Compuserve, a favorite service among 110+ users). The cost of the Prodigy program is about \$40.00 with free telephone service in most areas and a \$10.00/ month is MUCH cheaper than my Dow Jones Bill which charges a \$30.00/ month fee plus telephone charges plus by-the-minute user

I purchased the program and found that it would not run on the 150 or 110+. I hope that your publication, or one of its subscribers, can modify the program for use on these machines. The result would be reduced database access charges for your users. The Prodigy program unites many information sources ranging from electronic shopping to national weather forecasts and its incorporation into the Personalized Software "Library" would be welcomed by many of your subscribers.

2. I purchased the book light described by Ricardo Posada in the letters column in your last issue. I was unable to figure out how Mr. Posada mounted the light on his 110+ since the device (Itty Bitty Book Light) incoporates a large clip that cannot be affixed to the computer. However, I have found a good solution. HP makes a handsome all-leather briefcase (part no. 13269Z cost \$89.00) that carries the computer and some accessories. The lamp and its C-cell battery pack will both PV fit neatly into the zippered pocket in the briefcase. When one needs to light the computer, the user unzips the pocket and pulls out the "neck" of the lamp.

Mr. Posada is correct when he says that the lamp will easily light the portable and the surronding area, but I have found that regardless of the angle of the beam, a nasty glare is cast on the screen. This problem can be rectified by another technique described in Volume 1 Number 2 that involves the mounting of a non-glare piece of glass over the existing screen. The result of the combination of the booklight and the non-glare glass is very easy on the eyes and provides for greatly improved low-light use of the machine. I highly recommend it.

3. Would it be possible to include the addresses of the various users who write in to your "Letters" column so that the subscribers can contact the contributors

by mail for clarification/amplification on their respective contributions?

4. I am in the continuous process of developing a series of 1-2-3 Templates for highly accurate analysis of equity and commodity market instruments and am interested in corresponding with others who have need for such templates. Lotus Corp.'s financial macros are woefully inadequate, bordering on childish. Our templates will serve as an easy and inexpensive way to analyze investment opportunities using 1-2-3, a software package many of your readers already

I invite any readers who are interested in working with me on these templates to send their ideas to John W. Kercheval, III, Managing Director, Kercheval & Co., L.P, 1509 Hearst Ave., Suite 203, Berkeley, CA 94703 or by calling me at my residence at (415) 845-8393.

5. SOLAR POWERED 110/110+. I have developed a reasonably good 110+ Solar recharging system. My investment firm's 110's and 110+'s use it and we have found it to be reliable. It is quite difficult determine actual charging time particularly since time varies greatly with the amount of available light, but under bright roomlight our device can recharge a 110+ at the rate of about 10% per hour. The details are somewhat beyond the scope of this column (and probably beyond the length that Hal will publish) but interested parties may contact me at the above address for details.

J.W. Kercheval Berkeley, California

Hiding Files



Is there any way to make a file hidden? Also, I am working in MS-FORTRAN which P+ is a subset of the standard FORTRAN. Do you happen to know of any other FORTRAN that fits?

I don't have a ROM drawer, but I would like to have 123 from Lotus. Any chance?

One last question. I am trying to use the Break/Stop key when watching a file from DOS type or for looking at program output, but the results are different from time to time. Sometimes the scroll stops and sometimes it doesn't, even if I run the same program twice with the same data. Any explanation?

Eduardo Andrade, Oeiras, Portugal

[A program on our \$39.95 DOS Tools collection, Change, and our file manager, FilePlus, (\$59.95) allows you to hide and unhide files (so they don't show up in File Manager or from a DOS DIR.) I know of no other Fortran. Our Lotus 123 drivers for the Plus (\$69.95) will allow the IBM version of Lotus 123 to run out of RAM on the Plus. Maybe one of our readers knows about the inconsistency with the CTRL-S and Stop keys. -Hall

Environment Space and More

First a thank you for the excellent Portable Paper. I read every issue from cover to cover and mark things of interest in the margins for future exploration. I would also like to especially thank David Seagull for getting me out of many problems with his excellent phone support.

Being a semi-literate computer user, I have blown all my data at least a half a dozen times. Each time, though, I learn from the experience. Several things have become apparent (some found out the hard way):

- 1. Your "FilePlus" program is excellent, and has helped me learn MS-DOS better than anything else I have used in the past. It has also helped keep the files in the root directory to less than the magic maximum number of 64.
- 2. One of the things I learned the hard way was that if you have 64 files in your A drive on the plus, the PAM.MNU cannot be changed or added to, and a few of the other functions don't work well.
- 3. The program you have in your Jan/Feb 89 issue for increasing the environment space didn't work even with help from David on the phone. It simply locked up the computer and I had to delete the command.com program to get it to work again. This, of course, defeated the environmental space expansion.

The strangest problem I have had with my Portable Plus to date involves the environment space. To keep my files down to less than 64, I had been adding subdirectories to keep memos, Lotus work sheets, and utilities. After the last addition some months ago, I started getting the message "Out of environment space." As it did not seem to hurt anything, I didn't worry about it. But as I used different functions of the computer over the next few months, a few things became apparent. The following functions no longer worked:

- 1. Term (remote terminal)
- 2. Remote log on (reflections)
- 3. Direct dial to host computer (again reflections)
- 4. Security program did not function.

Again, after David Seagull helped me to increase the environment space by using a line shift command in the system configuration, all of the above functions worked great. (See Vol 4, No 3, P 26).

(continued on p.37)

Making More of Your HP Portable by Hal Goldstein

Portable Plus to be Discontinued September 1 - HP Will Continue to Sell Popular Accessories For Another Year

HP has made it official. They will stop selling the Portable Plus as of September 1, 1989 but will continue selling popular accessories such as Lotus 2.01, the HP9114, and the 1 Megabyte RAM drawer through September 1, 1990.

According to HP, "the old screen technology and the 16-bit 80C86 CMOS microprocessor has made the Portable Plus a less competitive product. The sales of the Portable Plus have been in steady decline due to the industry technological advances that have progressed well beyond the 5.33-MHz 80C86.

"Consequently, the Portable Plus and many of its low volume accessories will be discontinued on September 1, 1989. All of the remaining high volume accessories will be discontinued on September 1, 1990. The Portable Plus will enter into a 5-year support life to begin on September 1, 1989."

PRODUCTS TO BE REMOVED	DESCRIPTION	CPL REMOVAL DATE
45711E	U.S. PP with 1200 Internal Baud Modem	9/1/89
45711F	U.S. PP	9/1/89
45711FA	South African PP	9/1/89
45711FB	English, Europe PP	9/1/89
45711FD	German PP	9/1/89
45711FF	French PP	9/1/89
45711FG	Australian PP	9/1/89
45711FH	Dutch PP	9/1/89
445711FK	ICON PP	9/1/89
45711FN	Norwegian PP	9/1/89
45711FP	Swiss/German PP	9/1/89
45711FQ	Swiss/French PP	9/1/89
45711FS	Swedish PP	9/1/89
45711FU	United Kingdom PP	9/1/89
45711FW	Belgium PP	9/1/89
45711FY	Danish PP	9/1/89
45711FZ	Italian PP	9/1/89
ACCESSORIES:		ń
45.44.0.0	B 1 m 1	
45419C	Programer's Tool	9/1/89
45549K opt. 400	MicrosoftWord ROM	9/1/89
45554K opt. 400	Multimate ROM	9/1/89
45559K	Tech. Ref. Manual	9/1/89 9/1/89
82862K opt. 400	Programming Language ROM Terminal Emulation ROM	
82867K opt. 400	Advancemail ROM	9/1/89 9/1/89
82870A opt. 400	Advancemail W/o ROM	9/1/89
82870K opt. 400 82981A	128K Memory Drawer	9/1/89
82983A	300/1200 Baud Modem	9/1/89
82984A	128K Memory Card	9/1/89
82985A	Video Interface	9/1/89
82985AK	Video Interface with	9/1/89
	Multilingual Documentation	
9114B opt. 011	UK Recharger for 9114B	9/1/89
9114B opt. 012	Australian Recharger	9/1/89
9114B opt. 014	RSA Recharger	9/1/89

The following accessories will remain on the CPL until 9/1/90 due to the relatively high sales volumes and the fact that these accessories enable customers to significantly

expand the functionality of the Portable Plus.

PRODUCTS TO BE REMOVED	DESCRIPTION	CPL REMOVAL DATE
45504K opt. 400	Memomaker/Time	9/1/90
45539K opt. 400	Manager Lotus 1-2-3 ROM	9/1/90
		9/1/90
45555K opt. 400	Executive Card Manager	
82863K opt. 400	Reflections I	9/1/90
00066170 . 100	(ROM based data communications)	0.41.400
82866KD opt. 400	German Version-Executive	9/1/90
	Card Manager, Memomaker/Time	
	Manager and Reflections I ROM	
82866KF opt. 400	French Version-Executive	9/1/90
	Card Manager, Memomaker/Time	
	Manager and Reflections I ROM	
82866KZ opt. 400	Italian Version-Executive	9/1/90
	Card Manager, Memomaker/Time	
	Manager and Reflections I ROM	
82973A	HP-IL Interface Card	9/1/90
82982A	Software Drawer	9/1/90
82992A	1 MB Memory Drawer	9/1/90
9114B	Battery Powered Portable	9/1/90
,	Disk Drive (U.S. Recharger)	77 -77 -
9114B opt. 013	Battery Powered Portable	9/1/90
711 12 Opt. 010	Disk Drive (European Recharger)	7, 1, 70
	Disk Dire (Buropean Recharger)	

HP Raises Portable Prices

The following pricing is now in effect in the U.S. for HP Portable Plus and HP Vectra LS/12 Laptop PC related products.

V	Product	Old Price	New Price
12	512K Portable Plus W/Modem 512K Portable Plus 1 Meg RAM Drawer MemoMakr/Time Mgr ROM Lotus 123, Vs 2 ROM Exec Card Manager ROM Reflection ROM HP-IL Interface Card Portable Plus ROM Drawer	\$2700 2300 1075 195 525 341 395 165 165	\$3395 2795 1275 245 625 395 525 195
	HP9114B Disk Drive	645	795
	LS/12 Model 24 (20 Meg) LS/12 Model 44 (40 Meg) LS/12 EMS RAM (1 Meg)799999	4879 5479	4999 5559

Personalized Software Opposed to Restricting Portables in Air Travel

In the wake of the deplorable bombing of Pan Am Flight 103, the Department of Transportation is seriously considering banning portable computers from all air travel - as carry on or in luggage. In the case of the Pan Am flight the bomb was hidden in a radio/tape player. The rationale of the Transportation Department is that a similar bomb could be hidden in a portable computer and therefore, restrictions should be placed on them.

We at Personalized Software are opposed to such a ban. For a number of reasons.

Such a plan is more than inconvenient. Portables are becoming a way of life in many businesses. Access to a portable during travel has increased the efficiency of



ROM Backup for the Portable Plus for an additional \$95 'Software on ROM'

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)

NEW VERSION! INEVY VERGIUIV:
Now has line and block centering,
Now has line and block centering,
nowerful macros, and new
powerful macros,
powerful macros printed tutorial! Easy to upgrade from Version I. printed tutorial!

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 easyto-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:

- ${\bf 1.}\ THE\ EDITOR\ II's\ Lotus-like\ menus\ make\ it\ in$ credibly 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 FOR-MATTER 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 \$129.00 Portable Paper subscriber price . . . \$99.95 PRODUCT NO. EDILNS

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

PRODUCT NO. ED12PP

RECOMMENDED FOR:

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HP110 Portable

Portable Vectra

IBM PC and compat.

Available on ROM Backup for the Portable Plus

Portable Plus

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. EDI5NR

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

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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

Special combined offer— **SAVE \$30:**

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

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

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

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

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

Search and replace.

Just tell THE EDITOR II what word or phrase to look for, and it will display each occurrence and/or replace the occurences 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.

Yoù can spēcify the number of lines per page, using the control codes required by

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.

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 Goldite

journalists, salespeople, other business professionals and private individuals. If portable users and their equipment traveled seperately, coordinating this would become a monumental headache. Such a ban would be a giant step backwards in productivity.

And even the sturdiest portable is a fragile and expensive beast. There's a lot of us who don't like to letting it out of our sight on a trip.

But I think all of us could live with the inconvenience, diminished productivity and diminished security for our personal property if the plan produced the desired results but it won't!

Terrorists can simply, and very quickly, find a number of ways to smuggle bombs aboard airplanes. Some people have suggested 35mm cameras as a likely candidate for concealing a bomb. The proposal to ban portables from flights will not stop a determined terrorist.

The solution is to change people's hearts. However, it is much easier to pass a ineffective law that can be easily carried out. There is a good chance that this plan will take effect if we sit back and let it.

We suggest you write your U.S. senators, representative, or the Secretary of Transportation and let these people know how you feel. Your voice can help ground this poorly designed plan.

Samuel Skinner Secretary of Transportation, or Elaine Chao Deputy Secretary of Transportation U.S. Department of Transportation 400 7th St. S.W. Washington, D.C. 20590 (202) 366-1111

United States Senate Washington, D.C. 20510 (202) 789-2710

U.S. House of Representatives Washington, D.C. 20515 (202) 224-3121

Disconnecting Your Portable Plus Battery

Those of you who bought your Portable Plus new may remember an important instruction you had to carry out before you began using your computer - connecting the Though your manual doesn't mention it, a reverse operation - disconnecting the battery - can be a useful procedure to know about as well.

The reason is that batteries left idle for months can suffer permanent damage. If you're sure you won't be using your machine for two months upwards, follow the simple instructions below and you can be certain your batteries will remain in good shape. Please note that these instructions apply to the HP Plus, not the 110.

Backup your electronic disk before you do anything. Remember, when you disable the battery you loose everything on the disk.

Begin the disconnect by removing the battery cover from the back of the computer. You should then see a narrow transparent 'handle' (or flexible tab) emerging from the bottom of the battery unit. On either side of this you'll see the words 'ON' and 'OFF.' Pulling this handle out will disconnect the battery. You will then see three pins. The handle or tab you pulled out covers only two of these at any one time as it consists of only two female ports.

The two leftmost pins are the ON pins, the two rightmost pins the OFF pins. By installing the connector you have just removed on the two rightmost or OFF pins, you disconnect the battery (the charge will now be retained indefinitely).

To reconnect your batteries simply reverse this procedure. Remove the connector by pulling on the handle, then re-install it in the ON position, i.e. the two leftmost pins. THEN PRESS THE RESET BUTTON located on the lower left-hand corner of the battery compartment-just beside the edge of the cover. Use a pen or pencil to press

Now replace the cover. Usually a warning message appears on the screen when you press the reset button. It tells you to press **f1** to reformat drive A or the space bar to continue without reformatting. Press the f1 key and then restore the files your need from your HP9114.

Following this simple procedure could add years to your battery life.

Play InfoCom Games On Your HP110 and **Portable Plus**

Reader and strong HP110 user, Gary Goodman, has paved the way to running InfoCom games on the HP110 and P+ Portable Plus. InfoCom games that will run are classic mystery games such as the Zork series and SeaStocker. We will try to get an updated list of games tested on the HP110 and Portable Plus.

InfoCom has given permission to use Gary's program (which slightly modifies the actual game's program file. We will include Gary's program on the 1990 Portable Paper Subscribers disk. If you cannot wait, download HPINFOCM.ARC from the HP forum on CompuServe.

Lotus 2.2 For Portable Plus and HP150

Lotus intends to release two new versions of its popular spreadsheet program within the next few months. Of the HP Portables only the LS/12 (and maybe the Portable Vectra with EMS memory expansion) will be able to host version 3. Version 2.2 is expected to run on the same machines that ran version 2.01.

The person who wrote the software drivers that allow version 2.01 to be run from Portable Plus RAM reports that there is a good chance he will be able to supply drivers for Lotus 2.2 for the Portable Plus and HP150. It may even be possible to put Lotus 2.2 on ROM. Hopefully, we'll have more to report by next issue.

Format Safety Trick

110 HP110 and Portable Plus users, have you ever formatted your electronic, A disk, when you intended to format an external C drive floppy? Vectra users, have you ever formatted your C drive by mistake. Such an error could cost you many important files if you have not been diligent in backing up your work. Ironically, the error often occurs because in order to back up your work, you needed to format a floppy disk. Here is the preventive measure I take.

In my HP110 and Portable Plus I have a file (created in

MemoMaker or The Editor) containing the following line: **format c:** I name this (batch) file **fmtc.bat**. Whenever I want to format a new disk, I type **fmtc**.

On the Portable Vectra and LS/12 I take double precaution. First, I rename the DOS **format.com** file arbitrarily to **tamrof.com** - format spelled backward. (The format program is built into ROM on the HP110 and Portable Plus so it cannot be renamed). By renaming **format.com** I prevent someone from using my system and inadvertently formatting my hard disk. Then, as above, I create the batch file **fmta.bat**, which contains the line: **tamrof a:** To format my A disk, I type **fmta**.

Free Cartridge with Purchase of DeskJet

- HP has announced the following promotion good through September 30, 1989. If you purchase a DeskJet Plus, your
- dealer should give you a coupon good for a free Times
- Roman or Prestige Elite font cartridge. The DeskJet Plus works with all HP Portables and produces better than letter quality 300 x 300 dots per inch resolution. It retails for \$995 and is available from Personalized Software for \$795. See last Portable Paper, page 8, for more details.

Help With HP-IL Cards

An HP technical support number that might help some of our readers recently came to our attention. The HP calculator technical support folks provide HP-IL support. They might be able to help out with any problems concerning HP-IL cards and HP-IL ThinkJets and Disk drives. There number is (503) 753-2004.

Kodak Enhances Diconix 150 Portable Printer

Kodak introduced it's new Diconix 150 Plus portable printer at this year's Spring Comdex. The HP ThinkJet and the Diconix 150 have dominated the portable printer marketplace the past three years. The Diconix 150 Plus is an enhanced version of the Diconix 150, one of the industry's most popular portable printers. The new printer features improved quality for text and graphics, 20% faster output, and the ability to print on plain paper.

The Diconix 150 Plus weighs 3.7 lbs. (1.7 kilograms) with batteries. It measures 2" x 6.5" x 10.8" (about the size of a hardback dictionary). Tractor width is 8.65"- 9.2". Maximum single sheet width is 9". The 150 Plus prints single-sheet; continuous form, fan fold and ink-jet transparencies at speeds up to 180 cps (characters per second) in Draft mode (52 cps in NLQ (Near Letter Quality) and 36 cps in Quality). No thermal paper is needed. Print resolution is 192 dots per inch in NLQ and 96 DPI in Draft mode. Line length is seven inches.

Two new fonts were developed for this printer: Pica - 10-pitch, 70 cpl (characters per line) and Elite - 12-pitch, 85 cpl. These, combined with draft, near-letter quality, quality, condensed, superscript/subscript, underlining, italics, emphasized, proportional spacing, enlarged/condensed, double strike and double wide print modes offer more than 100 different font variations. Print modes may now be selected from the operator panel of the 150 Plus or controlled by software.

The 150 Plus utilizes 152 standard ASCII characters and symbols, 77 coded graphics characters and 33 country specific characters.

The Diconx 150 Plus can emulate the IBM Proprinter



or the Epson FX series printers with single, double and quad density graphics. Users choose normal graphics mode (which condenses image to fit seven inches printing area) or expanded graphics mode, which truncates one inch from the right side of the image.

The ink-jet cartridge is easily changed and each cartridge can print from 300-500 pages of text.

The 150 Plus uses five standard "C" size rechargeable batteries and will print about 150 pages or 50 minutes of continuous printing before needing recharging (which can be done in 10 hours). The 150 Plus, unlike the old 150, can be recharged while in use.

The Kodak Diconix 150 Plus is available with two interfaces, a Centronics 8 bit parallel or an RS232C 7/8 bit serial. Also included are a Printhead, AC Adapter, and User's Manual. Therefore, HP110 and Portable Plus users can use the Dioconix via the serial port, and Portable Vectra and LS/12 users will probably prefer the parallel port version.

ORDERING INFORMATION

The Diconix printer is available through authorized retailers for \$499 for the Parallel Interface and \$519 for the Serial Interface.

Subscriber to the Portable Paper may purchase the Diconix printer through Personalized software for \$399 for the Parallel Interface printer and \$415 for the Serial Interface.



Products that make HP Portables smarter

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

By Hal Goldstein

Squish Plus For Portable Plus and HP Vectras

In Vol 4, No 2, P 6 we briefly discussed a software product, Squish Plus, that could as much as double the PV amount of Portable Plus RAM disk space and of Vectra floppy and hard disk space. We are ready to strongly recommend Squish Plus for any HP Portable Plus, Portable Vectra, or LS/12 user who needs more disk space.

We will offer two versions of the program, the standard IBM PC version for the Vectra LS/12 and the Portable Vectra CS, and a customized version for Portable Plus users. Thanks goes to Portable Paper columnist, Tom Page, who worked diligently with Squish Plus publishers, Sundog Software so that we could have the special version for the Portable Plus. We loaned Sundog a Portable Plus and technical reference manual, and Sundog was able to make the necessary changes to this product so that it runs correctly on the Portable Plus.

USING SQUISH PLUS

Installing Squish Plus means using Squish Plus software to create a "Squish disk" -- an additional partition on your electronic disk or hard drive. The Squish disk acts as an additional disk drive (for example, a new D drive). Squish Plus automatically compresses and decompresses files when you save and retrieve files to and from the "Squish disk".

Once you have installed Squish Plus, the compression and decompression of files happens automatically, without the user thinking about the process. You can use your word processor, spreadsheet, data base, DOS, or any application to save and retrieve files from the D drive, Squish disk in the normal manner.

In addition when installing the "Squish disk", Squish Plus lets you optionally password protect the disk. That way you can you can make the "Squish disk" unusable to anyone not knowing the password.

HOW MUCH SPACE DO YOU SAVE?

Space savings vary, and there is some overhead. Sundog advertises that Squish Plus doubles the amount of disk space available. However, in practice a 50% savings seems to be closer to our experience. So 200K becomes 300K.

I did create several simple text and batch files and saved well over twice as much disk space. Squish Plus is especially efficient when it saves small batch files. In talking to Squish Plus authors, Alfred Delio and Kathryn Stone, the Squish disk is structured so that small files don't eat up a lot of space. For example, on a LS/12 a 60 byte batch file takes 2048 bytes of actual hard disk space. Such a batch file might occupy about 70% less space (a little over 600 bytes) on the Squish disk.

Note: there are two ways of looking at the space savings that caused me some confusion until I figured it out. If you save a 30K Lotus file onto a Squish disk the file might compress 33% or down to 20K. Therefore, that 20K on the Squish disk holds 50% more data since it stores a 30K Lotus file. The formula to translate between how much a file is compressed to how much disk space is increased is: I=C/(1-C) where C is the percent compression and I is the percent of disk space increase. So, if you obtain an average 40% compression per file, you would enjoy a 67% increase in available disk space. 300K would turn into 500K.

In general there is no direct way of telling exactly how much an individual file is compressed on a Squish disk. However, it was possible to determine the savings of all the files on the Squish disk using the INFO utility provided with Squish Plus.

In testing the program on the Portable Plus I saved several 5 to 20K Lotus files -- I saved 45%. Tom Page reported a savings of 30% when using rather dense Lotus files containing unusual characters. I currently store about four megabytes of WordPerfect, The Editor (ASCII), and batch files on my LS/12 Squish disk with a savings of 37%. I think it is fair to say that you can expect between a 30% to 45% savings on data files (files generated from word processing, spreadsheet, data base, and other applications).

The most gratifying results I enjoyed on my LS/12 were soft font savings. We download Bitstream soft fonts to the LaserJet to produce The Portable Paper and the Portable Equipment Exchange brochure. The problem with soft fonts is that they can occupy many megabytes of disk space. I received a 51% compression ratio. In other words I was able to halve the disk space needed to store font files.

You can also save program files (such as The WordPerfect, Condor, and so forth) on the Squish disk. However, depending on how compact the programs are, the savings can be minimal (typically between 0% and 20%). The authors recommend saving data rather than program files on the Squish and my experience bears this out. Squished program files take a little longer to execute and tend to fill up the preassigned Squish disk file size quickly. Portable Plus users should find this of little hinderance since many applications are in ROM.

HOW SOUISH PLUS WORKS

Squish Plus is a device driver. That means you must tell DOS about a new "device", the Squish disk. DOS already knows about built-in devices such as the Portable Plus electronic disk and the Vectra floppy and hard disks. To "teach" DOS about this new Squish Plus device simply add a line to the file on the root directory named CONFIG.SYS. If the file doesn't exist, create it. The line: device=sqplus.sys installs the Squish disk device when your portable is rebooted.

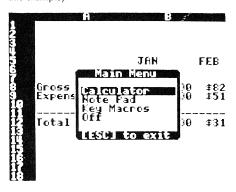
There are several more steps that must be taken after the Squish disk device driver is installed. First, you must "make" your squish disk using the Squish Plus MKDISK utility. When you make a Squish disk, you are actually creating a large file that resides on your home drive,

Shelp

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

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

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



SideKick and SuperKey are registered trademarks of Borland International, Inc.

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

"A great, easy-to-use productivity booster. If there's one program every Portable Plus owner should have, it's Shelp."—Hal Goldstein, Publisher, The Portable Paper

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

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

■ save results in ten different storage registers and retrieve them again with two quick keystrokes "paste" results at the cursor location in whatever application you were using when you invoked Shelp.

Choose **Notepad** and a "scratch pad" pops up on your screen. Type whatever you want into it, exit 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 "strips" of up to 31 typewriter characters 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."

To recall "United States," simply press [Ctrl] [Extend char], then [U]. Presto—"United States" appears at the cursor location in your application!

Choose **Off** and your Portable Plus turns off <u>without</u> having to return to P.A.M., and <u>without having to save your application file</u>. When you turn your computer back on, you'll be in the same place in the same application, with no data lost.

All the capabilities of IBM-PC programs like Borland's SideKick and SuperKey? Certainly not, but Shelp's the only such program for the Portable Plus. It's a clean, easy-to-use, and highly useful helper you'll want at your fingertips always.

Shelp runs on the Portable Plus only. It works with Time-Manager, MemoMaker, Reflection 1, Lotus, and any other non-graphics program. (Shelp does not run with MS Word.)

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

PRODUCT NO. SHIINS

Shelp\$55 (\$49.95 for Portable Paper subscribers)

60-day no-risk trial: If, after 60 days you are dissatisfied with this product for any reason, you may return it for a full refund. **To order,** use the postage-paid form at the back of this issue, or send check or credit card number to: Personalized Software, P.O. Box 869, Fairfield, IA 52556 515/472-6330 © Copyright 1987 Personalized Software

typically your Portable Plus electronic disk or your Vectra hard disk. Squish Plus software then "fools" DOS into thinking the large file is really a newly formatted disk on the D drive.

When you run MKDISK you are prompted for the name of your Squish file, a file size, and an optional password. Once created, the newly named Squish file resides on the Portable Plus RAM disk or the Vectra floppy or hard disk. You can make the file as small as 100K bytes. Currently, I have a Squish disk on my Portable Plus that takes up 100K (100,000 bytes) and one on my LS/12 hard disk that takes up 6 Megabytes (6,000,000 bytes). Upon "making" the Squish disk, you are asked if you want to password protect the disk, and if so, you are prompted for a password.

Finally, you must "attach" the Squish file to a disk drive letter so that you can read and write to the file. This is somewhat analogous to inserting a disk into a particular disk drive and leaving it there.

ATTACH, a program provided with Squish Plus, connects the Squish file to the logical drive (disk drive letter). My attach statement reads: **attach d: to sq.dsk** where "d" is the drive I attached the Squish disk to and "SQ.DSK" is the arbitrary name I gave to the Squish file I created when I ran MKDISK. This command effectively creates a D drive. When you save files to the D drive, you are actually saving a compressed version of the file into the larger file SQ.DSK.

Upon running the ATTACH program you are prompted for the password if you chose to give it one when you ran MKDISK.

The Squish file needs to be attached to the disk drive letter to become the Squish disk every time you turn on (or in the case of the Portable Plus, reboot) your system. To avoid having to type in the ATTACH command each time, simply add the ATTACH command line (like the one above) to the file name AUTOEXEC.BAT in your main directory.

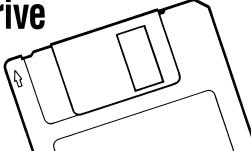
When you are finished using the Squish disk you can optionally "detach" it using the Squish Plus DETACH command. Detaching is like removing a floppy disk from a disk drive. You might want to detach the Squish disk for any of the following reasons:

- 1. You want to delete the Squish file. When a Squish disk is attached, the file becomes read-only and cannot be deleted.
- 2. You want to pack your electronic or hard disk. This is by far the most important reason for detaching the Squish disk. If you use the built-in Portable Plus **pack** program, or any of a number of commercially available hard disk pack routines, there is an excellent chance of losing data in the attached Squish Plus disk. In other words, never pack a disk when the Squish disk is attached.
- 3. If you have not detached your Squish disk when you turn your computer off (or reboot it), it can take a little time to attach it again. The time is not noticeable on the Plus. It takes about 20 seconds to attach my 6 Megabyte Squish disk on my LS/12 when the system restarts.
- 4. You might want to detach your squish disk for security reasons so no one can access any of your Squish disk files.

Now you can use **HP Portable or HP150 disks** (single or double sided)

in a 3½" IBM compatible disk drive

Volume **Pricing** Available



Even though your HP Portable/HP150 and the new IBM compatible computers both use 31/2 " disks, the disks are incompatible—HP disks can't be used in IBM machines.

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

ReadHP installs in an IBM PC or compatible in minutes, and is a cinch to use: You simply place a $3\,\%$ " HP disk (single or double sided) in the PC's disk drive, and press a few keys. Voila! The PC can read and write to the disk directly-without losing the ability to read and write to IBM disks.

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

Portable Paper subscriber price\$69.95

PRODUCT NO. RD11NS

60-DAY MONEY BACK GUARANTEE RECOMMENDED FOR: HP110 Portable TO ORDER se enclosed postage-paid order form send check or credit card information

• Portable Plus • Portable Vectra • (#, exp. date, signature) to: Personalized Software 869, Fairfield, IA 52556-515-472-6330 HP150 IBM PC and compat. .

LIMITATIONS

I am always running out of disk space whether I have 176K on my HP110, 1 Megabyte on my Portable Plus, or 20 Megabytes on my Vectra. I find a program such as Squish Plus, which saves me almost 40% of disk space with no extra effort to use, an absolute boon. However, I see some limitations:

1. The Squish Plus device drive takes up 36K of main memory. That means Vectra users have 36K less memory from their initial 640K of internal memory for programs and applications.

Portable Plus users may have to allocate 36K more of internal memory run Squish Plus. So, for example, suppose your Portable Plus Main memory / Edisc in PAM's f6 System Config is allocated as 160K/736K, and you need that 160K to run certain applications such as Websters. You would now need to add 36K to main memory changing the ratio to 196K/700K.

2. The Squish Plus software itself takes disk space. All the Squish Plus files take up around 142K. minimum you need the SQPLUS.SYS device driver (16K) and ATTACH.EXE (36K). Clever Portable Plus users who disable PAM can actually get away with no files on their electronic disk after initial installation from an HP9114 However, this procedure is not recommended unless an HP9114 drive is accessible in case you must reboot your system or return to PAM.

Fortunately, the most useful Squish Plus files (the ones discussed in this review) can fit on two 64K ROMs. Having a ROM version of Squish Plus is the ideal solution for Portable Plus users.

3. There is some performance degradation caused by the process of compressing and decompressing files. I cannot notice the degradation on my Portable Plus Squish disk except when retrieving large data files and executing program files such as The Editor. Even in those cases the

degradation is hardly noticeable.

Similarly, on my LS/12, the degradation usually is not Again, I notice a slight delay in large WordPerfect files. The most noticeable delay comes when I list and access one of my subdirectories on my Squish disk containing 225 files. Also, as I fill my 6 Megabyte Squish disk, delays do become more noticeable.

The most important limitation would come from potential data loss. The product has been well-tested and used by thousands of users for almost a year. There are two areas that users should be careful of when using Squish Plus. First, as described above, you must detach your Squish disk before packing your electronic, floppy, or hard disk. The second area may not occur to you but happened to me while testing Squish Plus trying to "break it". I would fill the Squish disk up with program files that do not compress well. In doing so I would get a "Squish Disk Full" message from Squish Plus and an "Abort, Retry, Ignore" message from DOS. Normally, if you fill up a Squish disk, you will get the same DOS "Insufficient disk space" error message that you would get if you tried to over fill any disk. However, if files in your Squish disk don't compress well, the DOS "Abort, Retry, Ignore" message can occur.

When I would get this message and run the DOS CHKDSK program, I would get a report that the Squish disk internal (FAT) directory was a little out of whack. As documented in the manual, the chkdsk /f DOS command will fix the problem.

In my discussions with program author Kathryn Stone about this problem, I received some good general advice. Whenever you get the "Abort, Retry, Ignore" DOS error message, immediately run chkdsk /f to fix any damage on the DOS disk.

5. Finally, the Squish disk does not dynamically change in size. That means you must commit ahead of time just how large you want to make a Squish disk. You give up that space as soon as you make your Squish disk. My experience is that this is not a severe limitation. It just causes me to plan ahead and decide how my electronic or PV artist has duplicated Gary's success. hard disk space is to be allocated.

PORTABLE PLUS ROM VERSION

To enjoy large disk space savings Portable Plus users will probably want to purchase the Squish Plus ROM backup package. The program is ideally suited for ROM backup. The backup package will include both the disk-based Squish Plus version for the Portable Plus along with two 64K ROM chips. The two 64K ROM chips will be available as a backup for those who originally purchase the disk version only.

HP110 VERSION?

Neither the IBM PC or Portable Plus version of Squish Plus works on the HP110. Even if it did work it would be of questionable utility. Of the 176K available for disk space 52K would have to be given up to hold the essential Squish Plus files and 36K would have to borrowed from the 176K to increase main memory.

Those HP110 users who would be willing to disable PAM and load Squish Plus initially from the HP9114 might experience a significant savings.

The program's authors are willing to investigate further if there is sufficient interest given these limitations cited here. Give us a call or drop us a note if you are interested.

CONCLUSION

I am really excited about this program. It offers an excellent opportunity to add to disk capacity for a relatively small performance penalty and dollar cost. Squish Plus on ROM is now a permanent fixture on my Portable Plus. Squish Plus on my LS/12 and Portable Vectra increases the capacity of my hard disk while giving up almost nothing.

ORDERING INFORMATION

Squish Plus is available through authorized dealers or through Personalized Software. Below is a price summary:

	Product/Product # Price	Retail Price	Subscriber
P+	Squish Plus For Vectra	#00.05	#00.05
PV	(# SQ12NS) Squish Plus for Portable	\$99.95	\$89.95
LS/ 12	Plus (#SQ11NS) Squish Plus, Portable Plus	\$129.00	\$99.95
	ROM Package (#SQ11NK) (Includes Squish Plus for	\$264.00	\$234.95
	Portable Plus and two 64K	ROM backu	ps)
	ROM backup only (# KSQ12NR)	\$135.00	2
	(2 64K ROMs. Must have Plus for Portable Plus from		

PrintMaster For Portable Plus

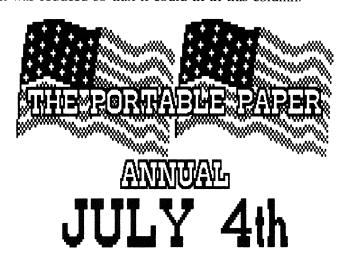
by Hal Goldstein and Rick Finnell

Gary Aldrich in his letter on page 4 of last issue told us about PrintMaster Plus and how he made it work on the

Portable Plus and the ThinkJet. Rick Finnell, our quality control and shipping expert, and also resident graphic

PrintMaster Plus from Unison World is a classic piece of software that has been around for years. You can use PrintMaster Plus to design posters, sideways banners, greeting cards, logos, flyers, invitations, stationary, and calendars.

The invitation below was created by Rick using PrintMaster on the Portable Plus and the ThinkJet printer. It was reduced so that it could fit in this column.





PrintMaster Plus requires 192K of internal memory to run. The master disk comes with about 345K worth of files. The main PM.EXE program is 94K. Most of the rest of the files are optional depending on what fonts and pictures you want to use. To run PrintMaster you need the PM.EXE and small PM.PRN and SET.UP printer and screen driver files along with the font and graphics files of your choosing. PM generates the driver files from larger files when you first install PrintMaster.

INSTALLING PRINTMASTER PLUS ONTO THE PORTABLE PLUS

To run PrintMaster Plus on the Portable Plus and ThinkJet you need several utilities supplied on the 1988 Portable Paper Subscribers disk, PRNCONF.COM and PCRUN.COM.

First, copy PRNCONF.COM and PCRUN.COM to your A drive. Then configure your ThinkJet to run in Epson mode by typing prnconf a from PAM or DOS. To run PrintMaster Plus, type pcrun pm.

The simplest procedure is to create a batch file named, say, PMHP.BAT that contains the follow two lines.

At last! IMUNICATIONS SOFTWA

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.

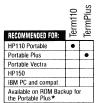
TermPlus was developed by Portable Paper contributer David Hughes from an earlier prototype. It runs on the Portable Plus. Both programs allow you to:

- 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



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Use enclosed postage-paid order form or send check or credit card information (#, exp. date, signature) to: Personalized Software PO Box 869, Fairfield, IA 52556-515-472-6330

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

prnconf a pcrun pm

If you want to run PrintMaster from PAM, add the following two lines to your PAM.MNU file on your A drive: **PrintMaster**

pmhp.bat

The first time you run PrintMaster, you'll be asked what screen type you have. You must respond that with number 1, non-compatible graphics card. PrintMaster menu system choose "Hardware Configure" to configure your printer. Thinklet is one of the choices under Hewlett Packard.

USING PRINTMASTER PLUS ON THE PORTABLE PLUS Here are Rick's comments on using PrintMaster Plus on the Portable Plus:

Printmaster Plus is menu driven. I found that a mouse really helped to speed up the process of going through the various menus. The mouse isn't essential though.

With PrintMaster Plus there are only three kinds of tasks that require you to type: entering a message for a picture or banner, selecting a date or enhancing a calendar, and naming graphics and designs files that you want to save or retrieve. The rest of the operation is simply choosing what you want from the appropriate

The biggest drawback for HP Portable Plus users is lack of graphics screen preview. What this means is that you are working blind when dealing with graphics. PrintMaster will not write any graphics to the HP Portable screen. You don't see your design layout until you print it out.

If you print out your design and don't like what you see you can easily go back and make various changes to your design, then print it out again. In practice I found it took about three tries to get what I want. With use this should improve, once you get a feeling for the ground rules.

EXAMPLE: when picking a graphic unit or picture from

the menu, PrintMaster gives you a menu list of all available graphic pictures. You can use the PrintMaster manual to look up the graphic you want to use and then use the programs menu to choose the graphic. It works fairly well.

Once you choose your graphic, positioning it is a little difficult if you decide you need to do it freehand. You can also pick several "automatic" positions such as BACKGROUND (repeats the graphic over the entire background), DIAGONAL (repeats the graphic in a checker board pattern over the entire background). If you overlap text and graphic the text always as far as I can tell, overwrites the graphic. Graphics come in three sizes, halfsize, regular, and doublesize.

Another problem for me was the printout time. It takes a LONG time to printout your masterpiece. Since this is the only way to view your project, making a banner or poster can take a long time. It took 11 minutes to print out the above graphic. The PrintMaster user's guide did suggest changing the printer buffer but I don't know if it can be done with the Portable Plus / ThinkJet system. When you do print, it is easy to abort if you get halfway through and don't like what you see. It seems to take about 15 minutes to print one page, maybe longer.

TO SUM UP This product works well with certain limitations. The graphics, fonts, and border libraries are limited and simple. PrintMaster sells additional libraries. I suspect that the majority of customers will be happy with the selection that comes with the product.

Despite the limitations noted, PrintMaster was easy to use and somewhat fun. If your purpose is to bang out a quick office party banner or poster this product will do nicely.

PERSONALIZED SOFTWARE PRINTMASTER PLUS PACKAGE When we sell PrintMaster Plus, we will include the original packaging that contains 3.5 inch and 5.25 inch disks and manual. In addition to the PrintMaster packaging we will include an extra disk. That disk will

include the following files mentioned in this article: PRNCONF.COM, PCRUN.COM, PMHP.BAT, PMHP.DOC, SET.UP, and PM.PRN. That latter two files preconfigures PrintMaster for the ThinkJet and the non-compatible graphics screen. PMHP.DOC contains this article.

To use PrintMaster on the Portable Plus, copy PRNCONF.COM, PCRUN.COM, PMHP.BAT, PMHP.DOC, SET.UP, and PM.PRN to the Portable Plus. Then copy PM.EXE from the PrintMaster disk and any other font, boarder, graphics files you think you might use. You'll have to experiment to see which is which if you don't copy all the files in. Typing **pmhp** from PAM or DOS starts the program. Be sure you turn your ThinkJet on and it is connected to the Plus before starting PrintMaster.

ORDERING INFORMATION

Personalized Software will be selling PrintMaster for the Portable Plus for \$79.95, \$69.95 to Portable Paper subscribers.

Condor 3 ROMs Soon to be Available For the Portable Plus

Reader and Portable Paper contributor has spent many hours developing the contents of Condor 3 ROMs. Condor 3 is an easy-to-use relational data base - the most powerful data base program available for the Portable Plus - reviewed by Rod Sharp in Vol 3, No 6, P26.

Condor 3 will reside on 4 64K ROMs. If our ongoing project proves successful, and we can create 128K EPROMs, then we will but Condor on two 128K EPROMs.

Check next issue for details.

Personalized Software to Ship Borland's Turbo Pascal 5.5

This is an embarrassing article to write. We have previously announced, but have not shipped, Turbo 4.0 and Turbo 5.0. We are now announcing (but not shipping) Turbo Pascal 5.5. We expect to be shipping by September (probably sooner). We will publish more details when we actually ship.

Turbo Pascal 5.5 includes object-oriented capabilities, the current rage in programming. Turbo Pascal 5.5 includes functional features from Apple's Object Pascal and extensions inspired by AT&T's C++ object-oriented C preprocessor.

An "object-oriented" approach more closely models the way we think. An "Object" is a data type that allows programmers to capture data and the procedures that manipulate the data in a single structure.

Borland bills 5.5 as "the object-oriented programming language for the rest of us." They claim the OOP extensions will help programmers reuse code modules, leading to increased productivity, more powerful software, and fewer bugs.

FEATURES

Turbo Pascal 5.5 features include:

inheritance; static & dynamic objects; constructors & destructors; object constants, compiles at > 34,000 lines/minute; new integrated environment tutorial; Hypertext Help with copy and paste; enhanced smart linker & overlay manager.

Numeric keypad speeds data entry on Portable Plus

If you enter lots of numbers into your Portable Plus via Lotus 1-2-3 or other applications, the Touchstone numeric keypad is for you.

Unlike, the 10-button numeric keypad on the Plus, this one doesn't disable the letter keys when you turn it on. Nor does it move the backslash from one part of the keyboard to another



The Touchstone keypad actually has 22 keys, including an over-size zero, oversize Enter key, 4 cursor keys, 4 math functions (+, -, *, /), decimal point, and backspace.

The unit weighs about a pound, plugs into your Plus's serial port, and has a firm, responsive key action.

For fast, convenient numerical data entry, order a Touchstone keypad today.

Touchstone numeric keypad\$139.
Portable Paper subscriber price\$135.
PRODUCT NO. TSHINM

See centerfold for guarantee and ordering information.

Note: The Touchstone keypad includes a shift key which lets you control the 10 function keys, home key, page up and down, and other keys on an IBM PC. The Touchstone shift key does not work properly with the Portable Plus, but this is no problem, since the corresponding keys are easily accessible on the Portable Plus keyboard.

TURBPLUS INTEGRATER

The Turbo Pascal editing environment does not work properly on the Portable Plus. To compensate Personalized Software will sell the TurbPlus Integrater that integrates the Pascal compiler and your Editor and File Manager.

ORDERING INFORMATION

Turbo Pascal 5.5 is available through authorized dealers or directly from Borland and retails at \$149.95. The Professional package, including a stand-alone debugger and assembler, sells for \$250 but will not work on the Portable Plus. Users of the current version 5.0 can upgrade to the new compiler for \$34.95 or the Professional package for \$99.95. Borland International is located at, P.O. Box 660001, Scotts Valley, CA 95066-0001. Phone: (800) 331-0877 or (408) 438-5300.

Portable Paper subscribers can order Turbo 5.5 through Personalized Software for \$135 and for \$165 with the TurboPlus Integrater. The TurbPlus Integrate retails for \$49.95, \$39.95 for subscribers.

Non-US Customers May Need to Special Order Video

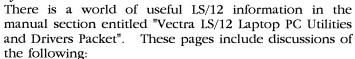
- Apparently there are a number of world-wide standards for VHS video tapes. The U.S. uses NTSC. If you use PAL
- or SECAM then we will have to special order a video tape for you and then charge you \$250 to cover our costs.



[Vectra Views contains information which specifically pertains to the Portable Vectra 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, PO Box 869, Fairfield, IA 52556, or call (515) 472-6330. You will also find a complete listing of the products discussed.]

Valuable Information for Intermediate and Advanced LS/12 Users

by Hal Goldstein



- 1) Setting up the HP Disk Cache program to speed up hard disk access;
- 2) using the HPMODE command to control many of the built-in capabilities of the LS/12;
- 3) using Battery Watch to monitor your LS/12 battery usage;
- 4) using the LIM.EMS driver to make use of extra expanded memory;
- 5) using the HP driver to read HP110, HP Portable Plus, and HP150 double sided disks.

The appendices in the "Setting Up Vectra LS/12" manual also contain important information for intermediate and advanced users including:

- A) Using the SETUP program to properly configure vour system:
- B) using Battery Watch to monitor your battery usage;
- C) using the Monotor program for diagnostics, system control, and programming capabilities;
- D) maintaining and servicing your LS/12;
- E) keyboard combinations that allow you more control over your system.

In the next article and in Portable Papers to follow we will examine some of these features and how you can use them to make your LS/12 more useful.

In & Out Of Trouble With The LS/12

COULDN'T START MY LS/12

Within minutes of receiving my LS/12, I managed to make it unusable. (In my defense, I had no manual or SETUP disk. HP had been kind enough to loan me a used unit and the manuals and system disks had not arrived.) I ran

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Each 3-ring binder holds a year's issues. "The Portable Paper" and a volume number (1, 2, 3, or 4) are imprinted on the spine.

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	Price	Product No.
Binders for The Portable Paper Vols. 1-4	\$25.	PB15NM
Binder for The Portable Paper Vol. 1	\$ 7.	PB11NM
Binder for The Portable Paper Vol. 2	\$ 7.	PB12NM
Binder for The Portable Paper Vol. 3	\$ 7.	PB13NM
Binder for The Portable Paper Vol. 4	\$ 7.	PB14NM

Be sure to specify volume numbers when

For guarantee and ordering information, see centerfold.

the SETUP program from my hard disk and started to experiment with different configuration options. not quite sure what I did, but soon I could no longer start my LS/12: When I exited SETUP and the system rebooted, it could no longer find DOS. It gave me a "bad or missing COMMAND.COM" message. (Any DOS-based system, which includes all the HP Portables, requires the main DOS command interpreter file COMMAND.COM to be on the start up disk.)

HP kindly provided me with the solution (documented in appendix E of the LS/12 manual). Holding down the Ctrl and Alt keys and pressing Enter results in some cryptic letters and a ---> prompt. Typing ? produces a help screen.

Typing config at the ---> prompt, results in a configuration screen. (The only item not self-evident on the configuration screen is the one labeled "Hard disk drive type". 20 MB LS/12 model 24 is type 6 and 40 MB LS/12 model 44 is type **44**). I reconfigured my system correctly telling it to look to the floppy for DOS, rather than the hard disk. I saved the new configuration information, the system rebooted, and I was back in business.

COULDN'T SEE MY LS/12

A few weeks later I took my LS/12 home so that I could work on The Portable Paper over the weekend. I decided to connect the LS/12 to a monochrome external monitor I keep at home for work with the Portable Vectra CS. To do so I ran the LS/12 SETUP program telling the system that I was using an external monitor. I then connected the monitor cable to the port in back of the LS/12 labeled "crt" and left SETUP. The LS/12 rebooted. As expected, nothing appeared on the LS/12 screen. unexpectedly, nothing appeared on my external monitor.

I tried the Ctrl Alt Enter trick (see above). I still couldn't see the screen to reconfigure it. Then I reasoned that all I had to do was pull the secondary battery that backs up the memory (CMOS RAM) that stores the configuration information. Such a battery exists since the system remembers configuration information even after it has no power. If I could remove the battery, then by default the LS/12 LCD screen should come up.

I turned over my LS/12 and could not find the battery storage spot. (I did, however, find the embedded carrying handle that I somehow had never noticed on the bottom of the unit.) It was time to consult the LS/12 manual.

USED HP PORTABLES AND PERIPHERALS

HP110 Portables
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HP9114 Disk Drives
HP9114 ThinkJets
HP-IL ThinkJets
HP-IL Converters
HP-IL Converters
HP Fortware
HP Software
HP ROMs
and more
(If you've bought a 1- or
2-megabyte RAM drawer,
we'll even buy your old RAM
drawer and extra memory!)

We buy them.

No longer using your HP Portable or peripherals? Turn them into cash through The Portable Equipment Exchange. Prices fluctuate, so call us for current figures.

We sell them.

Buying used HP equipment makes sense. You know HP quality! Even used HP machines can serve you well for years. Call for current prices.

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Any used item you buy from us can be returned within 30 days for a full refund. In addition \neg

ONE-YEAR GUARANTEE (parts and labor) on all used equipment!

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The Portable Equipment Exchange

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For good buys on used—and new—HP equipment, see our 4-page brochure enclosed with this issue.

My manual revealed (page D-13) that the backup battery is a 3.6 volt, AA-size, lithium battery that should last three to five years. The manual states "a new battery must be installed by your dealer or HP service representative". In the future we will discuss what it takes if you want to make the change yourself.

The first thing I did after arriving at the office was to connect my LS/12 to my EGA color monitor. The system came up in CGA text mode. (Apparently, unlike the Portable Vectra, the LS/12 will not work with a monochrome monitor or produce EGA text.)

Vowing to never let this catastrophe occur again, I looked through the LS/12 manual and discovered a trick. It is possible to save the configuration settings to a file and then tell the LS/12 to use the configuration settings from that file.

To save the current configuration to a file type **setup** /**sa** from DOS. Enter a new file name at the prompt (which saves the current configuration to that name). To use that configuration type **setup** /**r** followed by the new configuration file name at the prompt. Press **Enter** three times and the system restarts itself with the configuration information from that file.

I used the **setup** /**sa** command to save all my configuration information to a file named **cfg**. (My system is configured as having a 20MB hard drive, no EMS, a 5.25 floppy drive attached to the system, and backlight and hard drive automatic power down. And, of course, it is set for the normal LCD screen.)

I created a batch file named **cfg.bat** with one line: **setup /r**. Now if I ever get into a situation where I need to use my default configuration, I simply type **cfg** to execute the **setup /r** command and then **cfg** again to tell it that the configuration information is in file **cfg**. Then I press the **Enter** key three times and the system restarts using my configuration values.

SOLUTION TO LS/12-EXTERNAL MONITOR PROBLEM When I returned to the original problem, the solution

became obvious. The lettering at the bottom and front side of many keys indicate secondary values of those keys. The secondary value of the **F10** key is labeled **CRT/LCD**.

Pressing the **Fn** key activates the secondary values built into many of the keys. Sure enough, holding down **Fn** and typing **F10** was all I had to do to toggle between the external monitor and the built-in LCD screen.

In a future column we will be examining the LS/12 keyboard more closely.

Using HP Portable and HP150 Disks with the LS/12

If you want to read HP Portable and HP150 disks using the LS/12 disk drive, you must follow a simple installation procedure. With the HP setup disk in the A drive type a:35instal from DOS. This modifies the config.sys file on the root directory by adding the following two lines:

DEVICE = \INDSKBIO.SYS /D:0 DRIVPARM = /D:0 /F:7 /H:2 /S:18 /T:80

Now every time you restart your system the device driver INDSKBIO.SYS gets installed and your LS/12 can read HP150 and HP Portable Plus double sided disks. To read HP110 Portable disks, use your word processor (save as a text file) and add /HP110 to the DEVICE= line so that the line now reads:

DEVICE = \INDSKBIO.SYS /D:0 /HP110

If you want to read HP formatted single-sided disks, you need to purchase READHP from Personalized Software (that's us) for \$69.95.

The meaning of the DRIVPARM= line is not documented. However, I suspect you could adjust that line so the LS/12 could read various HP formats such as the Portable Plus **format** /**z** format that lets you pack more data on 3.5" disks. If anybody can shed more light, please drop us a note.

Fully Discharge Your LS/12 Battery

Remember, the LS/12 battery is a rechargeable nickelcadmium (NiCad) battery. That means you should always fully discharge the battery and fully recharge it. Otherwise, it will develop a "memory effect" which severely reduces its operating period. To rectify the situation use the HP-supplied Battery Watch utility and deep discharge your battery and recharge it right away. (See page 1-8, "Deep Discharging Your Battery", in the Battery Watch section of the manual entitled "Vectra LS/12 Laptop PC Utilities and Drivers Packet".)

Linking the Portable Vectra and LS/12 to an Ethernet Local Area Network

by Richard Hall and Peter Timaratz

We have just completed testing an innovative new product that will allow you to directly connect your LS/12 Laptop or Portable Vectra CS to your Ethernet local area network.

The Pocket Ethernet Adapter, recently released by Xircom, connects directly to the parallel printer port of the LS/12, Portable Vectra, or any IBM compatible PC, and allows you to connect to an Ethernet or IEEE 802.3 LAN. The Adapter is Novell Netware compatible and available in models appropriate for Thin Ethernet or external MAU applications including Thick Ethernet (10BASE-5) and Twisted Pair Ethernet (10BASE-T).

This product supports Novell NetWare Versions 2.0a and higher. Xircom tells us they are actively investigating versions of the adapter that will support 3Com, TCP/IP, Banyon, or 10BaseT.

The Pocket Ethernet Adapter is a little larger than a audio cassette tape holder (5.15" x 2.45" x .85") and weighs 5 oz. The Pocket Ethernet Adapter comes with an external 12 volt AC/DC wall mount adapter that connects to the unit through a six foot cord.

HARDWARE INSTALLATION

We tested the Pocket Ethernet Adapter with our own Novell system. It was simple and straight forward to install. First plug in the included 12 volt AC/DC adapter and connect to the Ethernet Adapter. Next connect the Ethernet Adapter to your computer's parallel port. Finally connect a standard Ethernet "T" to the Ethernet Adapter and the hardware connection is completed.

SOFTWARE INSTALLATION

If your network is running version 2.12 of Novell NetWare copies of pre-generated IPX and NET programs are included to simplify initial software installation. Choose the IPX file appropriate to your parallel port (LPT1:, LPT2:, or LPT3:) and the NET file appropriate to your version of DOS (2.*, 3.*, or 4.*) and use the DOS copy command to copy these files to the root directory of either your hard disk or network boot diskette. Then log on to you network. Files and installation procedures are also included for releases below 2.12.

The program worked flawlessly for us. Because the Xircom adapter does its Input/Output through the parallel port its throughput is somewhat slower than a standard Ethernet adapter.

We tested the adapter on a Portable Vectra, and an LS/12 and compared them to a desktop Vectra and a Compaq Deskpro with standard Ethernet cards. We used



Norton Utilities S.I.(Systems Information) to benchmark the relative computing speed of the four systems and tested the computational speed (in seconds) on four common functions: Loading file manager XTREE, Listing of an inventory, generating a shipping report, and looking up a record. Results are summarized below:

Machine Tested	S.I. Bench	Load XTREE	Inv. List	Ship Rpt.	Rec. Look	
Desktop Vectra(8 Mhz)	8.3	15	9	4	60	
Compaq Deskpro(XT)	1.7	20	25	15	65	
LS/12	13.4	20	11	5	60	
Portable Vectra	3.8	30	20	10	100	

We found that in tests involving extensive Input/Output, such as loading XTREE and record lookup, the LS/12 with the Xircom adapter and S.I. rating of 13.4 performed about the same as the Compaq with the network card and an S.I. rating of 1.7 (a considerable slow down). However, on the two tests involving far less I/O, the LS/12 with Xircom Adapter performed on par with the Desktop Vectra with the network card and S.I. rating of 8.3.

CONCLUSIONS

The Pocket Ethernet Adapter is simple to install and works without problems. It slows things down a bit, especially in I/O intensive programs, but does the job in a reasonable amount of time. If you want to connect your LS/12 or Portable Vectra to an Ethernet system, you currently have no other choice. We recommend the adapter.

ORDERING INFORMATION

The Pocket Ethernet Adapter was developed by Xircom, 22231 Mulholland Hwy., Suite 114, Woodland Hills, CA 91364. Phone: (818) 884-8755.

The Pocket Ethernet Adapter is priced at \$695 per unit.

Price to Portable Paper subscribers when ordered through Personalized Software is \$629.

External Expansion Chassis

If you're interested in increasing the capabilities of your LS/12 to include networking, video options, additional I/O ports, and expanded EMS memory, you'll want to take a look a the Zenith External Expansion Chassis.

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

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\$250. PRODUCT NO. FA11NG (Be sure to call first to schedule an appointment.)

Overnight return shipping ...\$35.

The Expansion Chassis is powered by an external AC power source and is designed to operate at either 115 or 230 VAC at 50/60 hertz. The power supply in the Expansion Chassis automatically switches to operate at the voltage level applied.

INSTALLING THE CHASSIS ON THE LS/12

The LS/12 requires the installation of a 68-pin connector before you can use the Expansion Chassis. This connector must be installed by an authorized Zenith technician. Personalized Software can install it for you.

Once a technician has installed the 68- pin connector it is a simple matter to install the expansion card or your choice into one of the Chassis' three expansion slots and connect the Expansion Chassis to your system via the 68pin connector. Turning the LS/12 on initializes the Expansion Chassis. Be sure the Chassis is powered up (using the external AC power source provided) before turning on the computer.

The Expansion Chassis is XT-compatible only and most XT-compatible cards should work.

EXCEPTIONS

EMS memory is supported externally and should work with the Expansion Chassis. However, any memory card requiring a "refresher cycle" will not work with the Chassis when attached to the LS/12.

Extended memory, supported internally by the LS/12, is AT-compatible only and cannot be used externally.

You cannot disable the floppy or hard disk controllers in the LS/12; therefore, external floppy or hard disk controller cards cannot be used.

ORDERING INFORMATION

The External Expansion Chassis, available through Zenith dealers, retails for \$499 plus installation.

Portable Paper subscribers can order the Chassis through Personalized Software for \$449 and we will install the 68pin connector free of charge. Please call to let us know when you want the installation done.

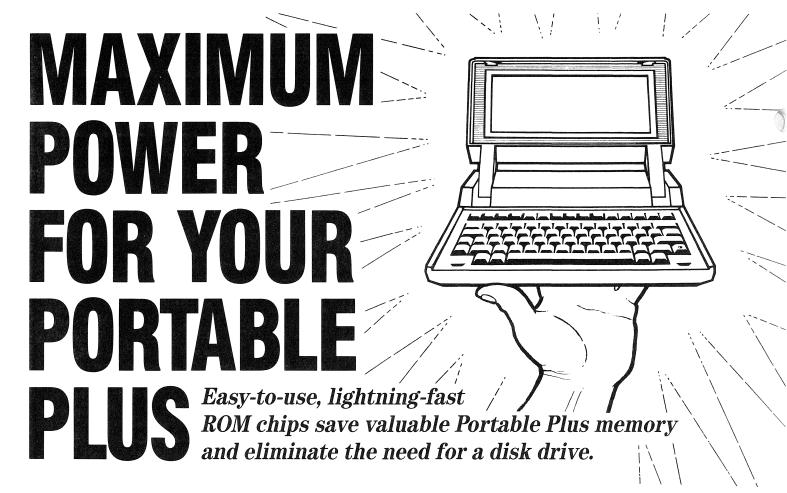
New 5.25" Floppy Drive by WELTEC

WELTEC Digital of Irvine, California has announced the introduction of their introductio introduction of their slimline 5.25" floppy disk drive compatible with the LS/12 Vectra Laptop PC. WELTEC has been supplying Zenith and other manufacturers 5.25" floppy drives for several years.

Configuring the WELTEC (or other compatible 5.25" drive) to the LS/12 is simple using the SETUP program. Run SETUP, choose 1, and when it asks you, choose the appropriate external 5.25" floppy. The WELTEC W525 allows the exchange of data from the 5.25" floppy to the LS/12 hard disk and 3.5" drive.

WELTEC supports both 360KB and 1.2 MB 5.25" disks. The drive has international dual voltage power supplies and can be easily transported if needed.

(continued on page 24)



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 fast-est**, **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 ROMbased 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

OUR EXCLUSIVE DOUBLE GUARANTEE

60-DAY GUARANTEE OF SATISFACTION

ON ROMS

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.

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

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

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

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

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

EASY TO INSTALL

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

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

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

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

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

HOW TO ORDER ROMS

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

IMPORTANT INFORMATION ABOUT OUR ROMS

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

Best of DOS Tools \$129.
The Editor 95.
HPDuette
HPrint
Shelp
SideWinder 55.
Shelp + SideWinder 95.
Sketch
Squish Plus 135.
SuperROM 49.
TermPlus 95.
Turbo Pascal 3 95.
Typing Whiz
Webster's Speller 179.
WordPerfect 295.

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 backup copy of the software, 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 defects 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 Number	Retail Price	Subscriber Price	Туре	No. of chips	Notes
WORD PROCESSOR WordPerfect 5	RS WD11NK	\$919.00	\$595.00	PS	6	384K of files includes PlusPerfect, main WP program, help files, printer drivers, etc. Does not include required 300K wp.fil file, spelling checker, or 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).
Editor II Upgrade	ED15NG	58.00	58.00	PS	1	For The Editor I ROM and SuperROM owners only.
MemoMaker	-	-	-	HP	-	Comes on same chip as Time Manager (see "Combined ROMs" below.)
MSWord	MS20UR	375.00	199.00	HP	1	
MultiMate	MM20UR	520.00	425.00 ²	HP	1	
WORD PROCESSIN Format110	G UTILITI	ES -		, PS	-	Comes as part of SuperROM (see "Combined ROMs")
FormatPlus	FP13NK	174.95	164.95	PS	1	
FormatPlus Upgrade	FP15NG	58.00	58.00	PS	1	For SuperROM owners only.
HPrint	HP12NK	175.00	170.95	PS	1	
Mini PrinterTalk	-	-	-	PS	-	Comes as part of SuperROM (see "Combined ROMs")
Webster Speller	WB13NK	258.95	248.95	PS	2	
SPREADSHEETS AN Lotus 123,1A	ND UTILIT	IES 495.00	295.00	HP	2	
Lotus 123,2.01 Lotus 123,2.01	LT15UR LT11HR	625.00 625.00	395.00 ² 495.00 ²	HP HP	3	3rd ROM containing help doesn't have to be installed. Pricing of NEW HP ROM if used ROM not available.
SideWinder	SW12NK	134.95	124.95	PS	1	Also available on a ROM with Shelp, and on our SuperROM chip (see "Combined ROMs" below).
DATABASE PROGR Exec Card Manager Exec Card Manager	AMS EC11UR EC11UR	395.00 395.00	$\frac{279.00^2}{339.00^2}$	HP HP	1	(Lotus 1-2-3 can also be used as a database.) Pricing of new ECM ROM if used ROM not available.
COMMUNICATIONS PC2622	S 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.
PRODUCTIVITY BO Best of DOS Tools	DOSTERS DT12NK	179.00	168.95	PS	2	Selected utilities from DOS Tools ¹
FilePlus	FE14NK	164.95	154.95	PS	1	
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
Shelp	SH12NK	110.00	104.95	PS	1	Includes note extraction program. Shelp also available on a 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: *NEW*	SQ11NK	264.00	234.95	PS	2	
GRAPHICS Sketch	SK12NK	175.00	170.95	PS	1	(Lotus 1-2-3 can also be used for graphics.)
PROGRAMMING LA MSBasic	ANGUAGES MS21UR	300.00	150.00	HP	1	This is not GWBASIC.
COMBINED ROMs MemoMaker/TimeMg	r 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, Mini PrinterTalk, Shelp, S	SU11NK Sidewinder	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. Shelp and SideWinder are the same versions as on the individual ROMs described above.
BUNDLES Editor Pack +	FM17NX	823.00	599.00	PS	5	(Editor II, Webster, FormatPlus, FilePlus)
Editor Pack	FM16NX	658.00	499.00	PS	4	(Editor II, Webster, FormatPlus)
_						

¹Utilities included in the Best of DOS Tools ROM backup Package are as follows. For program details, see catalog. PACK DUMP TY CYPHER RENDIR WHEREIS TEE SDL FDATE LABEL DIRS TRANSLIT CLEAN DIRALL ARCE MOVE OFF CHANGE ARC520 MOVEALLTRIM BEEP SQPC SM VDL. TMA TJETA FCOPY ASK PRNCONFWAIT FGREP XCOPY FDUMP COPYNEW Note: ARC520 is shareware; the author normally requests a \$35 contribution. However, we've already paid your user fee.

²IMPORTANT: All HP ROM prices given in this chart (unless othewise stated) are for used ROMs. Used HP ROMs (especially ECM, Lotus 2, and MultiMate) are sometimes not in stock. Call to verify availability of used HP ROMs and pricing on new HP ROMs if used ROMs unavailable.

Official Personalized Software Price List

(Every attempt is made to keep pricing stable. However, prices subject to change without notice.)

, ,	•			, ,		,	
THE POR	TABLE PAI	PER		WP Acoustic coupler	WM16NH	79.95	79.95
				Kermit	KE11NS	19.00	19.00
	Part	Retail	Subscr.	Relay Gold (Plus)	RG11NS	295.00	279.00
<u>Product</u>	Num.	<u>Price</u>	<u>Price</u>	TermPlus	TE12NS	99.95	79.95
The Po	rtable Paper			Term110	TE11NS	99.95	79.95
1 Yr Subscription	PPN1PS	\$55.00		<u>Productivity</u>	Boosting U	tilites	
2 Yr Subscription	PPN2PS	99.00		BacTools	BC11NS	49.95	39.95
1 Yr. Renewal	PPR1PS	55.00		Compuserve Starter Kit	CM11NS	39.95	35.95
2 Yr. Renewal	PPR2PS	99.00		DOS Tools	DT11NS	44.95	39.95
1986-8, 3 Yr back issues	PP13PB	99.00		FilePlus	FE12NS	69.95	59.95
1988 back issues	PP12PB	39.00		HP Duette	DU11NS	99.95	89.95
Individual Back issue	PP99PB	9.20		HP150 PC Emulator	PC11NS	19.95	19.95
1987 Subscriber Disk	SB12NS	115.00	9.50	HP9114 Empowerer Norton Uitilities Adv.	PR12NM NU12NS	99.95	89.95
1988 Subscriber Disk	SB13NS	115.00	9.50	Norton Utilitiess	NU12NS NU11NS	150.00 99.95	129.00 89.95
1989 Subscriber Disk PP Binder Vol.1	SB14NS PB11NM	115.00 7.00	9.50	PrintMaster (P.Plus)	PR11NS	79.95	69.95
PP Binder Vol.1 PP Binder Vol.2	PB11NM PB12NM	7.00		Private File	PF11NS	39.95	34.95
PP Binder Vol.3	PB13NM	7.00		ReadHP	RD11NS	79.95	69.95
PP Binder Vol.4	PB14NM	7.00		Shelp	SH11NS	55.00	49.95
PP Binder Vol.1-4	PB15NM	25.00		Squish Plus (P.Plus)	SQ11NS	129.00	99.95
				Squish Plus (Vectra)	SQ12NS	99.95	89.95
	Catalogs			Tiger Fox	TF11NS	32.95	29.95
HP Portable	CATPOR	0.00		Time Manager	SB11NS	9.50	9.50
HP150	CAT150	0.00		Typing Whiz	TW11NS	49.95	39.95
				G	raphics		
SOFTWARE A	ND ACCES	SODIES		Logitech Mouse	MS14NM	119.00	99.95
SOIT WAILE A	ND ACCES	JOILLS		Logitech Mouse		,	,,,,
<u>Word</u>	Processors			Portable Plus System	MS15NM	219.00	179.95
The Editor II	ED11NS	129.00	99.95	P.Plus Mouse Sftwre	MS11NS	70.00	60.00
Editor Pack	FM16NX	289.00	195.00	P.Plus Mouse Cable	MS13NM	30.00	20.00
(Editor II, FormatPlus, Webste				Sketch	SK11NS	80.00	75.95
Editor II Disk Upgrade	ED14NG	35.00	35.00	Sketch Halftone disk	SD11NS	9.50	9.50
The Editor II/Formatter	ED13NX	149.95	119.95	Flowcharting II+	FL11NS	232.00	209.00
WordPerft 4.2 ss HP150 WordPerft 4.2 ds HP150	WD12NS WD11NS	435.00 435.00	339.00 339.00	<u>SpreadShe</u>	et and Stati	<u>stics</u>	
WordPerft 5.0 ds HP150	WD11N3 WD13NS	495.00	395.00	101 Macros	MC11NS	69.95	62.95
WordPerfect 4.2 P. Plus	WD18NS	435.00	339.00	Lotus 123/Symphony P.Plus			
WordPerfect 5.0 P. Plus	WD17NS	645.00	395.00	Software Driver	LT14NS	69.95	59.95
(Includes PlusPerfect)				Lotus 123, Driver	LT11NS	495.00	435.00
PlusPerfect	WD14NS	150.00	129.00	SideWinder and Utilities SideWinder	SW13NS	79.95	69.95
Word Pro	cessing Utilit	ies		Statistix	SW11NS ST11NS	69.95 169.00	59.95 159.00
Format110	FM12NS	39.95	35.95			109.00	139.00
FormatPlus	FP11NS	79.95	69.95		<u>Transfer</u>		
FormatPlus Upgrade	FP14NG	35.00	35.00	HPDuette for P.Plus	DU11NS	99.95	89.95
MemoMaker Pack	FM14NX	159.90	125.00	LapLink	LA11NS	139.95	119.00
(Format Plus,Webster Spelling	g Checker)	4		Link Plus	LK11NS	90.00	85.95
Formatter	FM11NS	 5	49.95	ReadHP	RD11NS	79.95	69.95
HPrint	HP11NS	80.00	75.95	Prog	gramming		
PrinterTalk	PT11NS	49.95	44.95	Turbo Pascal 3 Optimizer	TP17NS	125.00	119.00
PrinterTalk, Format110	PT12NS	89.90	59.95	TuboPascal 5.0	TP50NS	150.00	135.00
RightWords Dictionary Ext.	RW12NS	29.95	29.95	TurbPlus Integrator	TP51NS	49.95	39.95
RightWriter Webster Speller	RW11NS	95.00	89.00	T.Pascal+Integrator	TP52NX	199.95	165.00
WordPlus Speller	WB11NS WP11NS	79.95	69.95	Pascal,Integrtr,EditorII	TP53NX	329.00	249.00
-		150.00	99.00	Project	Managemer	nt	
<u>Database/Ac</u>	counting Soft	ware		PertMaster for HP110	PR11NS	695.00	499.00
Condor 3	CR11NS	495.00	379.00	PertMaster for P.Plus	PR12NS	695.00	499.00
Condor Jr	CR13NS	99.95	89.95	PertMaster for HP150	PR13NS	695.00	499.00
Dac-Easy Accounting	DC11NS	150.00	129.00	PertMaster for Vectra	PR14NS	695.00	499.00
	nunications			Milestone	ML11NS	99.95	89.95
WorldPort Modem 1200	WM11NH	199.00	179.00	<u>Integra</u>	ted Package	<u>s</u>	
WorldPort Modem 2400	WM12NH	359.00	319.00	Symphony, P.Plus Driver	SY11NS	765.00	595.00
WorldPort cable	WM14NM	30.00	20.00	T/Maker (HP110)	TM11NS	99.95	95.00
WP 1200 Upgrade kit	WM13NG	199.00	179.00	T/Master (Plus, Vectra)	TM12NS	159.00	149.00
				1			

LS/12, Vectra Por	table-Specifi	c Products	
Diconix printer - parallel	DT11NH	499.00	349.00
Diconix printer - serial	DT12NH	519.00	415.00
EtherNet Adapter	ET11NH	695.00	629.00
Expansion Chassis (LS/12)	EX11NH	499.00	449.00
FloppyDriver	FD11NS	89.95	79.95
HP-IL Card-P. Vectra CS	HP16NM	245.00	235.00
LapLink	LA11NS	139.95	119.00
LapTape (LS/12)	LA11NH	795.00	695.00
NoSquint	NO11NS	39.95	37.95
Numeric Keypad (LS/12)	NU11NH	129.00	115.00
Squish Plus	SQ12NS	99.95	89.95
Weltec 5.25" Drive (LS/12)	WE11NH	349.00	319.00
<u>Per</u>	<u>ipherals</u>		
Manzana 1.44 Meg, 3.5"			
PC External Drive	MZ12NH	385.00	345.00
Manzana 1.44 Meg, 3.5"			
PC Internal Drive	MZ11NH	200.00	189.00
Manzana Controller	MZ13NM	95.00	89.00
Numeric Keypad for P.Plus	TS11NM	139.00	135.00
Acc	essories		
10 3.5" disks/case	DS11NM	64.90	29.95
10 1.44Meg 3.5" disks	DS12NM	99.95	69.95
Mobile Recharger	PR11NM	59.95	49.95
FieldPro Padded Laptop Case	CS12NM	99.95	89.95
FieldPro Padded Case for Thir	ıkJet or		
HP9114 Disk Drive	CS11NM	39.95	37.95
Learni	ng Material		
How to Use the HP			
Portables Video Tapes	VP11NM	150.00	119.00
Uı	ograde		
FastPlus (CPU upgrade)	FA11NG	250.00	250.00

USED PORTABLE EQUIPMENT

IMPORTANT NOTE TO USED EQUIPMENT BUYERS: Call for availability before placing order (especially Lotus 2.01, ECM). If used product unavailable, we'll get you new item at discount.

Used HP110 and Portable Plus Computers 512K Plus With Modem PP15UC \$3395 \$1595 128K Plus With Modem PP11UC 3190¹ 995 HP110 Portable PQ11UC 3000¹ 595 HP110, ThinkJet, HP9114 PP40UX 4300¹ 995 Used Printers For HP110, Portable Plus, Vectra HP-IL ThinkJet Printer TJ11UC \$ 495 \$ 250 New DeskJet Plus Printer DJ12HC 995 795 New DeskJet Printer DJ11HC 795 639 Used HP110/Portable Plus Disk Drives HP9114A Disk Drive DD11UC \$ 795¹ \$ 250 HP9114B Disk Drive DD12UC 795 350 Used HP Portable Plus Memory Drawers New HP 1 Mg RAM Drw. MM11NC \$1275 \$ 995 384K HP RAM Drawer MM12UC 982 295 128K HP RAM Drawer MM13UC 436 150 128K HP Memory Card MM14UC 273 125 HP ROM Software Drawer SW11	used product unavailable, we'll get you new item at discount.													
128K Plus With Modem	Used HP110 and Portable Plus Computers													
HP110 Portable PQ11UC 3000¹ 595 HP110,ThinkJet,HP9114 PP40UX 4300¹ 995 Used Printers For HP110, Portable Plus, Vectra HP-IL ThinkJet Printer TJ11UC \$ 495 \$ 250 New DeskJet Plus Printer DJ12HC 995 795 New DeskJet Printer DJ11HC 795 639 Used HP110/Portable Plus Disk Drives HP9114A Disk Drive DD11UC \$ 795¹ \$ 250 HP9114B Disk Drive DD12UC 795 350 Used HP Portable Plus Memory Drawers New HP 1 Mg RAM Drw. MM11NC \$1275 \$ 995 384K HP RAM Drawer MM12UC 982 295 128K HP RAM Drawer MM13UC 436 150 128K HP Memory Card MM14UC 273 125 HP ROM Software Drawer SW11UC 195 99 Miscellaneous Used HP Portable Peripherals HP-IL Card For IBM PC IL11UM 195 119 HP-IL 7470A Plotter PL11UM	512K Plus With Modem	PP15UC	\$3395	\$1595										
Used Printers For HP110, Portable HP-IL ThinkJet Printer TJ11UC \$ 495 \$ 250 New DeskJet Plus Printer DJ12HC 995 795 New DeskJet Printer DJ11HC 795 639 Used HP110/Portable Plus Disk Drives HP9114A Disk Drive DD11UC 795 \$ 250 HP9114B Disk Drive DD12UC 795 \$ 250 HP9114B Disk Drive DD12UC 795 \$ 250 HP9114B Disk Drive DD12UC 795 \$ 250 Weed HP Portable Plus Memory Drawers New HP 1 Mg RAM Drw. MM11NC \$1275 \$ 995 384K HP RAM Drawer MM12UC 982 295 128K HP RAM Drawer MM13UC 436 150 128K HP Memory Card MM14UC 273 125 HP ROM Software Drawer SW11UC 195 99 Miscellaneous Used HP Portable Peripherals HP-IL Card For IBM PC IL11UM 195 119 HP-IL 7470A Plotter PL11	128K Plus With Modem	PP11UC	3190^{1}	995										
Used Printers For HP110, Portable Plus, Vectra HP-IL ThinkJet Printer TJ11UC \$ 495 \$ 250 New DeskJet Plus Printer DJ12HC 995 795 New DeskJet Printer DJ11HC 795 639 Used HP110/Portable Plus Disk Drives HP9114A Disk Drive DD11UC \$ 795¹ \$ 250 HP9114B Disk Drive DD12UC 795 350 Used HP Portable Plus Memory Drawers New HP 1 Mg RAM Drw. MM11NC \$1275 \$ 995 384K HP RAM Drawer MM12UC 982 295 128K HP RAM Drawer MM13UC 436 150 128K HP Memory Card MM14UC 273 125 HP ROM Software Drawer SW11UC 195 99 Miscellaneous Used HP Portable Peripherals HP-IL Card For IBM PC IL11UM 195 119 HP-IL 7470A Plotter PL11UM 1095¹ 650 P.Plus V.Intfce+Monitor VM12UM 750¹ 275 ¹Denotes products no longer manufacture	HP110 Portable	PQ11UC	3000^{1}	595										
HP-IL ThinkJet Printer TJ11UC \$ 495 \$ 250 New DeskJet Plus Printer DJ12HC 995 795 New DeskJet Printer DJ11HC 795 639 Used HP110/Portable Plus Disk Drives HP9114A Disk Drive DD11UC \$ 795¹ \$ 250 HP9114B Disk Drive DD12UC 795 350 Used HP Portable Plus Memory Drawers New HP 1 Mg RAM Drw. MM11NC \$ 1275 \$ 995 384K HP RAM Drawer MM12UC 982 295 128K HP RAM Drawer MM13UC 436 150 128K HP Memory Card MM14UC 273 125 HP ROM Software Drawer SW11UC 195 99 Miscellaneous Used HP Portable Peripherals HP-IL Card For IBM PC IL11UM 195 119 HP-IL 7470A Plotter PL11UM 1095¹ 650 P.Plus V.Intfce+Monitor VM12UM 750¹ 275 ¹Denotes products no longer manufactured. The "Retail	HP110,ThinkJet,HP9114	PP40UX	4300^{1}	995										
New DeskJet Plus Printer DJ12HC 995 795 New DeskJet Printer DJ11HC 795 639 Used HP110/Portable Plus Disk Drives HP9114A Disk Drive DD11UC \$ 795¹ \$ 250 HP9114B Disk Drive DD12UC 795 350 Used HP Portable Plus Memory Drawers New HP 1 Mg RAM Drw. MM11NC \$1275 \$ 995 384K HP RAM Drawer MM12UC 982 295 128K HP RAM Drawer MM13UC 436 150 128K HP Memory Card MM14UC 273 125 HP ROM Software Drawer SW11UC 195 99 Miscellaneous Used HP Portable Peripherals HP-IL Card For IBM PC IL11UM 195 119 HP-IL 7470A Plotter PL11UM 1095¹ 650 P.Plus V.Intfce+Monitor VM12UM 750¹ 275 ¹Denotes products no longer manufactured. The "Retail														
New DeskJet Printer DJ11HC 795 639 Used HP110/Portable Plus Disk Drives HP9114A Disk Drive DD11UC \$ 795¹ \$ 250 HP9114B Disk Drive DD12UC 795 350 Used HP Portable Plus Memory Drawers New HP 1 Mg RAM Drw. MM11NC \$ 1275 \$ 995 384K HP RAM Drawer MM12UC 982 295 128K HP RAM Drawer MM13UC 436 150 128K HP Memory Card MM14UC 273 125 HP ROM Software Drawer SW11UC 195 99 Miscellaneous Used HP Portable Peripherals HP-IL Card For IBM PC IL11UM 195 119 HP-IL 7470A Plotter PL11UM 1095¹ 650 P.Plus V.Intfce+Monitor VM12UM 750¹ 275 ¹Denotes products no longer manufactured. The "Retail	HP-IL ThinkJet Printer	TJ11UC	\$ 495	\$ 250										
Used HP110/Portable Plus Disk Drives HP9114A Disk Drive DD11UC \$ 795¹ \$ 250 HP9114B Disk Drive DD12UC 795 350 Used HP Portable Plus Memory Drawers New HP 1 Mg RAM Drw. MM11NC \$1275 \$ 995 384K HP RAM Drawer MM12UC 982 295 128K HP RAM Drawer MM13UC 436 150 128K HP Memory Card MM14UC 273 125 HP ROM Software Drawer SW11UC 195 99 Miscellaneous Used HP Portable Peripherals HP-IL Card For IBM PC IL11UM 195 119 HP-IL 7470A Plotter PL11UM 1095¹ 650 P.Plus V.Intfce+Monitor VM12UM 750¹ 275 ¹Denotes products no longer manufactured. The "Retail	New DeskJet Plus Printer	DJ12HC	995	795										
HP9114A Disk Drive DD11UC \$ 795¹ \$ 250 HP9114B Disk Drive DD12UC 795⁻ 350 Used HP Portable Plus Memory Drawers New HP 1 Mg RAM Drw. MM11NC \$1275⁻ \$ 995 384K HP RAM Drawer MM12UC 982 295 128K HP RAM Drawer MM13UC 436 150 128K HP Memory Card MM14UC 273 125 HP ROM Software Drawer SW11UC 195 99 Miscellaneous Used HP Portable Peripherals HP-IL Card For IBM PC IL11UM 195 119 HP-IL 7470A Plotter PL11UM 1095¹ 650 P.Plus V.Intfce+Monitor VM12UM 750¹ 275 ¹Denotes products no longer manufactured. The "Retail	New DeskJet Printer	DJ11HC	795	639										
HP9114B Disk Drive DD12UC 795 350 Used HP Portable Plus Memory Drawers New HP 1 Mg RAM Drw. MM11NC \$1275 \$995 384K HP RAM Drawer MM12UC 982 295 128K HP RAM Drawer MM13UC 436 150 128K HP Memory Card MM14UC 273 125 HP ROM Software Drawer SW11UC 195 99 Miscellaneous Used HP Portable Peripherals HP-IL Card For IBM PC IL11UM 195 119 HP-IL 7470A Plotter PL11UM 1095¹ 650 P.Plus V.Intfce+Monitor VM12UM 750¹ 275 ¹Denotes products no longer manufactured. The "Retail	Used HP110/Po	rtable Plus Di	sk Drives											
Used HP Portable Plus Memory Drawers New HP 1 Mg RAM Drw. MM11NC \$1275 \$ 995 384K HP RAM Drawer MM12UC 982 295 128K HP RAM Drawer MM13UC 436 150 128K HP Memory Card MM14UC 273 125 HP ROM Software Drawer SW11UC 195 99 Miscellaneous Used HP Portable Peripherals HP-IL Card For IBM PC IL11UM 195 119 HP-IL 7470A Plotter PL11UM 1095¹ 650 P.Plus V.Intfce+Monitor VM12UM 750¹ 275 ¹Denotes products no longer manufactured. The "Retail	HP9114A Disk Drive	DD11UC	\$ 795 ¹	\$ 250										
New HP 1 Mg RAM Drw. MM11NC \$1275 \$ 995 384K HP RAM Drawer MM12UC 982 295 128K HP RAM Drawer MM13UC 436 150 128K HP Memory Card MM14UC 273 125 HP ROM Software Drawer SW11UC 195 99 Miscellaneous Used HP Portable Peripherals HP-IL Card For IBM PC IL11UM 195 119 HP-IL 7470A Plotter PL11UM 1095¹ 650 P.Plus V.Intfce+Monitor VM12UM 750¹ 275 ¹Denotes products no longer manufactured. The "Retail	HP9114B Disk Drive	DD12UC	795	350										
384K HP RAM Drawer 128K HP RAM Drawer 128K HP RAM Drawer MM13UC 436 150 128K HP Memory Card MM14UC 273 125 HP ROM Software Drawer SW11UC 195 99 Miscellaneous Used HP Portable Peripherals HP-IL Card For IBM PC IL11UM 195 119 HP-IL 7470A Plotter PL11UM 1095 P.Plus V.Intfce+Monitor VM12UM 750 275 1Denotes products no longer manufactured. The "Retail	<u>Used HP Portable</u>	e Plus Memor	y Drawers											
128K HP RAM Drawer MM13UC 436 150 128K HP Memory Card MM14UC 273 125 HP ROM Software Drawer SW11UC 195 99 Miscellaneous Used HP Portable Peripherals HP-IL Card For IBM PC IL11UM 195 119 HP-IL 7470A Plotter PL11UM 1095¹ 650 P.Plus V.Intfce+Monitor VM12UM 750¹ 275 ¹Denotes products no longer manufactured. The "Retail	New HP 1 Mg RAM Drw.	MM11NC	\$1275	\$ 995										
128K HP Memory Card MM14UC 273 125 HP ROM Software Drawer SW11UC 195 99 $\frac{\text{Miscellaneous Used HP Portable Peripherals}}{\text{MP-IL Card For IBM PC}}$ IL11UM 195 119 HP-IL 7470A Plotter PL11UM 1095 650 P.Plus V.Intfce+Monitor VM12UM 750 275 1Denotes products no longer manufactured. The "Retail	384K HP RAM Drawer	MM12UC	982	295										
HP ROM Software Drawer SW11UC 195 99 Miscellaneous Used HP Portable Peripherals HP-IL Card For IBM PC IL11UM 195 119 HP-IL 7470A Plotter PL11UM 1095¹ 650 P.Plus V.Intfce+Monitor VM12UM 750¹ 275 ¹Denotes products no longer manufactured. The "Retail	128K HP RAM Drawer	MM13UC	436	150										
Miscellaneous Used HP Portable Peripherals HP-IL Card For IBM PC IL11UM 195 119 HP-IL 7470A Plotter PL11UM 1095 650 P.Plus V.Intfce+Monitor VM12UM 750 275 Denotes products no longer manufactured. The "Retail	128K HP Memory Card	MM14UC	273	125										
HP-IL Card For IBM PC IL11UM 195 119 HP-IL 7470A Plotter PL11UM 1095^1 650 P.Plus V.Intfce+Monitor VM12UM 750^1 275 1 Denotes products no longer manufactured. The "Retail	HP ROM Software Drawer	SW11UC	195	99										
HP-IL 7470A Plotter PL11UM 1095¹ 650 P.Plus V.Intfce+Monitor VM12UM 750¹ 275 ¹Denotes products no longer manufactured. The "Retail	Miscellaneous Use	d HP Portable	Peripherals											
P.Plus V.Intfce+Monitor VM12UM 750 ¹ 275 ¹Denotes products no longer manufactured. The "Retail	HP-IL Card For IBM PC	IL11UM	195	119										
¹ Denotes products no longer manufactured. The "Retail	HP-IL 7470A Plotter	PL11UM	1095^{1}	650										
	P.Plus V.Intfce+Monitor	VM12UM	750^{1}	275										
Price" of these items was the price at the time of discontinuance.														
m1 11 11		price at the tir	me of discont	inuance.										

These items are excellent buys.

PORTABLE PLUS SOFTWARE ON ROM

If the product number ends with "UR", it is a used HP ROM. If it ends with "NK", it is a new Personalized Software disk plus ROM backup. The price in the "Backup Price" column is valid only for those who already own the software disk.

those who already own the so	oftware disk.		•	,
	Part	Retail	SubsBac	ckup
Product	Num.	<u>Price</u>	<u>Price</u> I	Price
Word	Processors			
WordPerfect 5	WD11NK	940.00	595.00	295
The Editor II	ED12NK	224.00	194.95	95
MMkr/TmMgr	MM21UR	245.00	119.00	,,,
MSWord	MS20UR	375.00	199.00	
MultiMate	MM20UR	520.00	425.00	
Editor Pack +	FM17NX	823.00	599.00	
(Editor II, Webster, FormatPlu			.,,	
Editor Pack	FM16NX	658.00	499.00	
(Editor II, Webster, FormatPlu			,,,,,,,	
Editor II ROM upgrade	ED15NG			58
	agging IItil	ition		
	cessing Util		16405	0.5
FormatPlus	FP13NK	174.95	164.95	95
HPrint	HP12NK	175.00	170.95	95
Wbster Speller	WB13NK	258.95	248.95	179
FormatPlus ROM upgr	FM15NG			58
<u>Spreadshee</u>	ets and Data	<u>abase</u>		
Lotus 123,1A	LT12UR	495.00	295.00	
Lotus 123,2.01	LT15UR	625.00	395.00	
Exec Crd Mgr	EC11UR	395.00	279.00	
SideWinder	SW12PP	134.95	124.95	
New ROM: Lotus 123, 2.01	LT11HR	625.00	495.00	
New ROM: Exec Crd Mgr	EX11HR	395.00	339.00	
Comp	nunications			
PC2622	PC13UR	395.00	239.00	
Reflection	RF11UR	525.00	295.00	
TermPlus	TE13NK	194.95	174.95	95
			1, 11,0	,,,
	ivity Booste		4 (0 0 =	
DOS Tools	DT12NK	179.00	168.95	129
FilePlus	FE14NK	164.95	154.95	95
HP Calculator	CL11NK	95.00	95.00	
HP Duette	DU13NK	194.95	184.95	95
Shelp	SH12NK	110.00	104.95	55
Squish Plus	SQ11 K	144.95	134.95	95
Typing Whiz	TW12NK	144.95	134.95	95
<u>G</u>	raphics			
Sketch	SK12NK	175.00	170.95	95
Programn	ning Langua	ισες		
MSBasic	MS21UR	300.00	150.00	
Turbo Pascal 3	TP13NK No			95
		- 10118C1 F	Joining	,,
	ined ROMs			
Shelp,SdWndr	SH13NK			95
SuperROM	SU11NK			49
(Editor I, Format110, Printer	raik, Shelp, S	sideWinde	er)	
NEW BATTERIES, INK	CADTRI	CEC A	VD CA	ייים
IVEVV DALLEKIES. IVK	UMBLKID	TED AI	VII CAI	DI.F.

NEW BATTERIES, INK CARTRIDGES AND CABLE

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	Standard Parallel Cable	PL11NM	29.9	5 2	4.95	
	Serial printer cable (110,Plus)	SC13HC	42.0	00 2	7.95	
	HP92221P ser.prn cab 110,P+	SC13HC	42.0	00 4	2.00	
	Portable Plus Battery	BT11NM	49.9	95 4	9.95	
	ThinkJet Battery	BT14NM	47.0	00 4	7.00	
	HP110 Battery	BT12NM	29.0	00 2	9.00	
	HP9114 Battery	BT13NM	65.0	00 6	5.00	
	ThinkJet plain paper cartridge		10.9	95 1	0.95	
	ThinkJet inkjet paper cartridge	TJ14HC	10.9	95 1	0.95	
	HP92261N inkjet 2500 zfold	TJ12HC	59.9	95 5	9.95	

(Continued from p.19) OTHER DRIVES

There are a number of other 5.25" drives that should work well with the LS/12.

The LTD ZSS1 External 360 KB is available through Pacific Rim Systems, 2570 Barrington Court, Hayward, California 94545. Phone: (415) 782-1017.

The PLF360 (360MG) and PLF 1200 (1.2KB)

We tested the WELTECK and Pacific RIM and both systems worked fine. We will recommend and carry the WELTECK drive since it has been in the business of producing 5.25" drives for portables for a long time and because manufacturers such as Zenith have chosen WELTECK to built their 5.25" drives. Also, the Pacific Rim has a bulky power supply and WELTECK uses a normal power cord.

ORDERING INFORMATION

The drive was developed by WELTEC digital, inc. 17981 Sky Park Circle, Suite M, Irvine, CA 92714 Phone: (800) 333-5155 or FAX:(714)-250-1964. The price of the WELTEC W525 is \$349.

Price to Portable Paper subscribers when ordered through Personalized Software is \$319.

LS/12 Tape Backup Unit From Tallgrass

TALLGRASS technologies produces a tape back up unit call LapTape for the HP Vectra LS/12 Laptop PC. According to a Tallgrass official, HP liked the unit so much that the LS/12 lab purchased the unit they evaluated.

According to Tallgrass, "Along with laptops added convenience of portability comes an increased risk of data loss due to hard disk failure, not to mention theft.

"LapTape provides a simple, straightforward solution for protecting your portable's valuable data. Using the industry's most reliable media for data protection, Laptape offers from 40 to 60 megabytes of convenient, archived data storage. New data compression software will allow the tape drive to back up 120 megabytes of information. It's also a great way of off-loading less critical information or historical files, freeing up valuable hard disk space.

"Ideally suited for quick stops back at the office, simply 🔀 want to take a look at No-Squint by Ski Soft. plug in LapTape and you'll have a failsafe copy of your latest updates within seconds. LapTape connects in a snap via your portable's floppy diskette connector.

"In addition, LapTape comes with its own wall-plug power adapter, eliminating additional power connections and extra drain on battery life."

LapTape comes in a small-footprint external cabinet, complete with detached wall-plug power adapter, and connects to the LS/12 external drive port via a customized diskette cable connector.

Completely menu-driven screens enhance ease-of-use and lead even unsophisticated users through all backup Included is a selective file and restore operations. backup and modified file backup option which backs up only specified files or only those files that have been changed since the previous backup, saving backup time and media. A high-speed search feature can locate any file on tape in less than 20 seconds for quick and convenient file restoration.

LapTape supports both 250kb/sec. and 500kb/sec. floppy transfer rates via a unique autoselect feature, providing maximum performance and

compatibility. A 20 megabyte hard disk can be completely archived in less than nine minutes. By utilizing the industry standard QIC 40 tape format, LapTape guarantees data or file interchange between any comparable tape system, creating a direct link to desktop personal computer.

You can share LapTape between several laptops or take advantage of DC2000 minicartridge convenience to shuttle tape across the country to other members of your organization.

ORDERING INFORMATION

LapTape is manufactured by Tallgrass Technologies, 11100 West 82nd, Overland Park, Kansas 66214, call 1 (800) TAL-Gras.LapTape has a suggested list price of \$795 which includes a Tallgrass 3-year extended warranty. Subscribers to The Portable Paper can obtain LapTape form Personalized Software for \$695.

Numeric Keypad For LS/12

Zenith data systems provides an excellent numeric keypad for the LS/12. Installation consists of simply inserting the numeric keypad connector into the keypad port on the right side of the LS/12.

The numeric keypad consists of an adding machine style numeric entry pad with numbers and arithmetic operation keys. Along with useful editing keys such as page up, page down, end, home, scroll lock, num lock, Ins, Del, f11, and f12.

The keypad has a solid feel and is useful for anyone doing a lot of numeric entry.

ORDERING INFORMATION

This detachable 24-key numeric keyboard retails for \$129. Subscribers to The Portable Paper may purchase the keyboard from Personalized Software for \$115.

No-Squint Makes Vectra Cursor Visible by Hal Goldstein

If you're like me and have a hard time seeing the cursor on your LS/12 or Portable Vectra LCD displays then you'll

No-Squint is an inexpensive software solution to an annoying hardware constraint. Occupying just 1.4K of RAM this program makes the cursor bigger and allows you to choose the rate at which it blinks.

The visiblitiy problem stems from the hardware cursor controller in your portable. It tries to turn the cursor pixels on and off so fast that the cursor never fully achieves either state and all you see is a blur.

No-Squint lets you bypass the cursor control hardware and lets you make the cursor bigger and slow it down. This makes it more visible.

The program comes on a single 3.5-inch disk and is not copy-protected. Copy to a bootup disk or subdirectory of your hard disk. and load the program by typing LCD.

To change the blink rate from very slow to very fast you could type as follows: lcd very slow, lcd normal, or lcd very fast. Or type LCD followed by any number from 1 to 9, 1=very slow, 9=very fast. lcd off and lcd on turn the program off and on.

If you wish No-Squint activated automatically you must include the appropriate command at the beginning of your AUTOEXEC.BAT file. For example, LCD SLOW at the

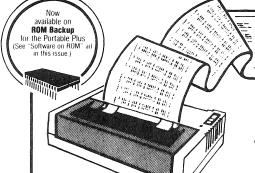
No more cutting and pasting-Now you can print it sideways!

RECOMMENDED FOR:

Available on ROM Backup for the Portable Plus

Portable Vectra

HP150



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/	12	3:	ΞE	St	32	22	R£	B:	2=	32	Z.E	X.F	:27	6.0	2:	ΞΞ	80	#t	==	rs	82	22	22	ΞE		:22	8.5	32	::	RE.	32	2.5	22	R=	2=	31	EE :	3.5	PE	82	32	22	BC :	at :	22 2	5
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SIDEWINDER

SideWinder is published by Southern Software

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

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

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

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

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

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

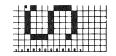
SideWinder\$69.95 \$59.95 for Portable Paper subscribers

PRODUCT NO. SW11NS

SideWinder 1.01 owners may upgrade to current version 2.01, which supports 8 chars/inch, by sending Personalized Software \$7.50 or by mailing a self-addressed \$.39 stamped envelope and the SideWinder master disk.

OPTIONAL EXTRAS: Southern Software of New Orleans, creators of SideWinder, have also created two companion utilities that work only on The HP Portables:

SideChar lets you create your own sideways characters.



Simply fill in a grid on your Portable to modify SideWinder's builtin characters...create italics...Hebrew letters...integral signs... whatever sideways characters you wish.

Sketch & Print lets you make line drawings on your screen using the cursor and function keys.







It's a lot like those Etch/Sketch toys you played with as a child. (Actually, it's even better because you can draw not just horizontal and vertical lines, but also *diagonals* with a single key.) Sketch & Print also lets you print - and save - anything you draw on the screen.

\$10 for both utilities when purchased with SideWinder



For a *complete* graphics software program, see ad for "Sketch" in this issue.

Order form and guarantee are on inside back cover or send check or credit card number to Personalized Software, PO Box 869, Fairfield IA 52556 (515) 472-6330.

*105 rows for QuietJet Printer

C Copyright 1987 Personalized Software

beginning of your AUTOEXEC.BAT file will give you a large, slowly blinking cursor.

No-Squint 1.0 was released in September of 1988 and was a hit with users from the first. It has been well reviewed and minor bugs found in the initial release have been corrected. The current release, 1.1, gives a "Visible Mode" feature which lets you tell the insert or overstrike mode on certain word processors.

USING NO-SQUINT ON LS/12 &D PORTABLE VECTRA At first I found the blinking large box cursor somewhat obnoxious. Whether I had the cursor blink slowly or quickly, the blinking bothered me. However, I got used to it quickly and in practice, it sure beats searching for my cursor in my word processing file.

The program works well on both the LS/12 and Portable Vectra, and I would recommend it for both systems. If you use the Portable Vectra LCD screen for any length of time, No-squint is a must.

ORDERING INFORMATION

No-Squint 1.1 is a product of SkiSoft Publishing Corporation, 1644 Massachusetts Ave., Suite 79 Lexington, MA 02173, (617)863-1876. It retails for \$39.95

Portable Paper subscribers may order No-Squint from Personalized Software for \$37.95. Our phone number is (515) 472-6330.

Linking your LS/12 or Portable Vectra to a Desktop

With the new release III of LapLink; the first, most popular, and probably most powerful of the file transfer programs, we can finally recommend it for HP Vectra users. Produced by Traveling Software, LapLink transfers files, directories or entire hard disks between laptops and desktop computers.

A major new feature is that the new LapLink provides serial and parallel transfer in one package. Previously LapLink performed only serial transfers. previously recommended Direct Link to do HP Portable Vectra file transfer tasks since it was one of the few programs that offered both parallel and serial transfer. Many Portable Vectra users do not have a serial port so parallel transfer is required. In addition parallel transfer adds convenience. It gives the user more flexibility to find the free or easiest accessible port, be it serial or parallel.

LapLink works by connecting two computers (usually a laptop and a desktop) with a cable joining either the parallel (printer) ports or serial ports of the two computers. LapLink comes with a single cable sporting a nine-pin and twenty five-pin serial and a standard parallel connector on each end. The single cable and one program provided can be used with both serial and parallel transfer modes. Speed of transfer is over 200,000 baud using serial, and over 500,000 baud using parallel. That's over 3 megabytes per minute!

When LapLink runs, the split screen makes it easy to follow what's going on. Two windows show the files on both computers at the same time, so you know exactly which files you're working with.

Another important new feature is the remote installation capability. This complicated-sounding term means you can automatically send the LapLink program to the remote computer (i.e. the one you're transferring to) if it doesn't already have it. So no need to worry if you can't find your LapLink disks.

Other nice features of LapLink include selectivity about what you transfer. "Tagging" files or subdirectories means you can select groups of files which are new or updated i.e. you end up transferring only those which have changed. Automatic batch transfer allows you to easily move those files you transfer on a regular basis.

The device driver option on LapLink permits printer sharing similar to a computer network. And it's direct disk access means you can run a program that's resident on the remote computer.

The LapLink package includes both 3.5" and 5.25" disks and the universal cable.

We used LapLink to transfer files between the LS/12 and Portable Vectra CS hard disks via the parallel ports, and LapLink performed flawlessly and quickly. program was so simple to use with online help available that we never had to consult the manual.

ORDERING INFORMATION

LapLink is produced by Traveling Software, 18702 North Creek Parkway, Bothell, Washington 98011. Phone: (800) 343-8080 or (206) 483-8088. The retail price is \$139.95.

Portable Paper subscribers can order LapLink through Personalized Software for only \$119.

ANSWERS PLUS

-comments from Personalized Software's phone sales/support staff

Tips & Tricks by Joseph Gerace



HP-IL CARD NEEDS ADDRESS IN CONFIG.SYS FILE When most of you call regarding HP-IL cards, you don't remember to put the card address on the end of the device driver line in your config.sys file.

Remember that you need the file in your root directory or reference a path to the HP-IL system files in another directory. Suppose your HP-IL address is C100. An example of the path reference would be:

device=C:\yourname\hpil.sys A/C100 This assumes that you have the HP-IL drivers in the *yourname* subdirectory on the c drive. The config.sys will look in this directory to set the adress on the card be sure that the card address and the reference address are the same.

WARPED DISK DIRVES SHORTEN BATTERY LIFE

I was speaking to one of the techs at HP the other day about the battery life of the 9114A or B. The weight of even one other disk drive or a ThinkJet printer stacked on top of the disk drive will warp the 9114 enough to make the drive work a little harder to spin the disk. This will have an adverse effect on the battery life of your drive.

LOGGING ON TERM PLUS

In order to get Term Plus to log on to the disk hit F6 (download from) and then pick F1, F2 or F3 to choose the kind of transfere protocol you want. The Plus will ask you to name the download file by displaying "Download File:" in the command bar at the top of the screen. Type any file name, "myfile.log," for example. The entire session will be stored in a file called myfile.log. for future use.

STRANGE THINGS HAPPEN LATE AT NIGHT!

While working late one night at Personalized Software I noticed something interesting happening with my Time Manager program. At midnight the plus said "Please wait while I prepare for a new day." It then transfered all of the todo files to the new day.

Which Disk Goes With Which Machine?

by David Seagull

Did you know the Portable Plus can read and write IBM double-sided, double-density disks? This and other useful information await you in the talble below.

The top of the table lists the computers. The side of the table describes how the disk was formatted (i.e. "150, Single" refers to a disk formatted on the HP150, singlesided). The key at the bottom explains the codes used in the table. FormIBM in the table refers to whether an HP110 or HP Portable Plus formatted a disk in an HP9114

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

"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

HOW TO RESTORE DELETED FILES

It happens to the best of us. One slip of a finger and a whole week's worth of text or data is past history. But not if you have THE NORTON UTILITIES!

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

HERE'S HOW IT WORKS

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



the first place. When you delete a file, all that actually gets erased is part of the file's directory entry. (That's why it only takes an instant to delete an entire file.) Without a directory

entry, DOS can't find the file, but THE NORTON UTILITIES can.

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

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

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

- 1. Speed Disk: Packs the files on a floppy, electronic, or hard disk more efficiently. This reduces disk head wear and significantly reduces the time it takes to save or retrieve a file.
- **2.** Advanced "NU" Program: Undeletes blocks of text from disks that have become "corrupted" (unreadable by DOS). Also lets you access and modify the DOS directory and F.A.T. table.
- **3. Format/recover:** Restores all the files on a hard disk if you have accidentally reformatted it. (Note: this feature does not work on the HP150 or Portable Plus.)

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

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

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

"Indispensible."
—PC Magazine

"**You'll bless this disk.**"
—Peter McWilliams
(The Personal Computer Book)

"Don't compute without it."
—The New York Times

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

POWERFUL FILE MANAGEMENT COMMANDS

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

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

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

Or let's say you can't remember which subdirectory you put a given file into. Instead of hunting for the file manually, just type **ff** (find file) and specify the name of the file and the directories to search through. The program does the rest.

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

CUSTOMIZED TO YOUR COMPUTER

Because of their great helpfulness and ease of use, THE NORTON UTILITIES are a best-seller in the IBM PC market. Personalized Software is authorized to distribute them on $3\frac{1}{2}$ " disk for users of the HP150, HP110 and Portable Plus. (All it takes is a few keystrokes to customize THE NORTON UTILITIES to your machine; just follow the simple customization instructions included on the disk.) Also included in our package are the standard $5\frac{1}{4}$ " disk sold by Peter Norton for IBM PCs.

THE NORTON UTILITIES are a timesaver for you and a life-saver for your



data. Use them just once and you'll wonder how you ever did without them. Order your copy at no risk today.

DATA RECOVERY

DISK MANAGEMENT

THE NORTON UTILITIES 4.0 . . \$99.95 Portable Paper Subscriber Price . . . \$89.95 PRODUCT NO. NU11NS

THE NORTON UTILITIES
ADVANCED EDITION \$150.00
(includes Version 4.0)
Portable Paper Subscriber Price . . \$129.00

PRODUCT NO. NU12NS

RECOMMENDED FOR:									
HP110 Portable		Portable Vectra	•						
Portable Plus		HP150							
IBM PC and comp	atible	S							

drive using the 1988 Subscribers Disk FormIBM program. Note that the only way a disk can be read from an HP110, Portable Plus, and IBM PC is if FormIBM was used from the HP110.

150B> refers to 150B or greater machines and the 150B> 3.2 refers to the 150B with 3.2 DOS.

Computer:	Port. Plus	110 Port.	150A	150B>	150B> 3.2	Vectra CS	Vectra LS/12
Format:							
HP Plus Single Double FormIBM	R/W R/W R/W	R/W R/W	R/W - -	R/W R/W	R/W R/W R/W	** R/W R/W	** R/W R/W
HP 110 Single Double FormIBM	R/W R/W R/W	R/W R/W R/W	R/W - -	R/W R/W	R/W R/W R/W	** R/W R/W	** R/W R/W
HP150<3.2 Single Double	R/W R/W	R/W R/W	R/W	R/W R/W	R/W R/W	** R/W	** R/W
IBM 1.44M 720K	- R/W	-	-		- R/W	R/W R/W	R/W R/W

Key:

R/W= Computer will read and write to this disk. -= Computer will not read or write to this disk.

** =Computer will read and write, only if using ReadHP, from Personalized Software.

SAVY §

by Thomas R. Page

Review Of The Bridge Modem From Spectrum Cellular And The Cellular Connection From Motorola



Those of us who have used portable computers for some time know that among their most useful capabilities is the ability to communicate with other computers using a modem and the telephone system. Today's rapidly expanding cellular telephone network makes telephone service almost as portable as my HP Portable Plus. A portable telephone is an obvious companion to a portable computer.

For a few days I had the privilege of using a Motorola

transportable cellular telephone and two devices for connecting this telephone to my Portable, "The Bridge" modem made by Spectrum Cellular and "The Cellular Connection" made by Motorola.

(Spectrum Cellular is located at 2710 Stemmons Freeway, 800 North Tower, Dallas, TX 75207, (800) 233-2119, Fax: (214) 630-3225. See Vol 4, No 1, P19 for more information.)

The Bridge modem is a complete modem designed especially for use with cellular telephones. The Cellular Connection is not a modem but a device that connects to a cellular phone and emulates Ma Bell type dial tone service. Standard telephone equipment such as autodialers, answering machines, ordinary telephones (even rotary dial phones), and the Portable's internal modem may be plugged in to the RJ-11 jack on the end of The Cellular Connection and be expected to work as if plugged into a telephone jack in your home or office.

THE CELLULAR TELEPHONE SYSTEM

Cellular telephones are low powered (3 watts max) radio transceivers that vary in size from just larger than a standard telephone handset (portable or hand held), to shoe box size (transportable), to vehicle mounted (mobile). Actually all these types of telephones are mobile telephones but the above terms are often used to denote different equipment configurations. Mobile units are supported by a network of fixed transceivers which relay communications from the mobile units to other mobile units or to the traditional land line telephone system. If the mobile unit moves out of range of its host transceiver the call is "turned over" or "handed off" to another base station.

The area covered by each base station is called a cell. These base stations carry the exciting nomenclature, "cell cite unit". It is not unusual to see a cellular telephone system diagramed as a honeycomb of carefully placed hexagonal cells but in reality each cell is circular or fan shaped depending on the type of antennas used at the cell cite. To insure compete area coverage there obviously must be significant overlap of cells within a cellular telephone system.

Cell size is dependent on the number of mobile units operating in an area. In high traffic areas cellular operators configure the system into smaller cells. Cell size is controlled by varying transceiver power. Computers at the cell cite control the power of the mobile unit. Adjacent and overlapping cells operate on different frequencies. Because cellular telephones provide full duplex service, separate frequencies are used for transmit and receive. Mobile units transmit on frequencies in the range of 824,040 MHz to 848,970 MHz and receive on a frequency 45 MHz higher in the range of 869,040 MHz to 893,970 MHz. Channel spacing is 30 KHz per channel. The latest model mobile telephones can operate on up to 832 channels.

Cellular telephone service is not a new concept. The idea traces back to the 1940's but only recently have electronic and computer technology developed sufficiently to make cellular telephone service feasible. The key concept of cellular telephone service is reuse of radio frequencies and low power is what make this possible.

Just like land line telephone systems, cellular telephone systems have a central office. This central switch

called the mobile telephone switching office (MTSO) provides the link to the local telephone company and controls the cellular system. As mobile units move from cell to cell the MTSO determines the position of the mobile units and arranges hand offs between various cells. A hand off may be ordered even when a mobile unit is stationary. These directed hand offs are normally made to reduce load within a cell.

Comparing a cellular telephone system to a land line system is like comparing a jalapeno to a banana. We have all experienced some pretty lousy telephone connections but the problems associated with transmitting data over copper wire are nothing when compared to trying to transmit data using low power radios. An airplane flying over my house has never caused the telephone system to fail. In one instance of using The Bridge modem I lost carrier just as an airplane flew over the house. The airplane took the blame even if it was not at fault.

Radio communications are subject to all sorts of noise and interference: lightning, buildings, other radio equipment, electrical equipment, sunspots, etc. In a cellular system, hand offs are a source of trouble. Hand offs are fast but not instantaneous. In a voice link the short drop out caused by a hand off may not be noticed but it can be deadly to data communications. Modems disconnect if carrier is lost for too long. The time before disconnect is controlled by the value in the modem's register 10. Increasing the value in this register can improve data communication over poor quality telephone links--land lines as well as cellular connections.

THE BRIDGE MODEM

Increasing the value in register 10 will reduce accidental disconnects but it does not eliminate errors (noise) in data communication. The Bridge modem goes a step further. When communicating with another Bridge modem or Span modem, error free communications can be achieved by using the SPCL adverse environment protocol. SPCL protocol on is the default mode for The Bridge modem. I was told by two separate sources that The Bridge modem could only communicate with an SPCL modem. This is not true. Placing a 0 in the modem's register 32 turns the protocol off and The Bridge is completely Bell 212A compatible.

I tested the SPCL operation by calling a CompuServe node in Dallas (214 220 1237) equipped with a Span modem. As promised, data transmission was error free. There was a noticeable reduction in rate of data thruput compared to a normal 1200 baud link. Occasionally an unusual pause, probably to retransmit, was spotted. Or it could have simply been on of those CompuServe pauses that occur from time to time.

The SPCL protocol is entirely contained within the modem and is totally invisible to the computer's communications program and operator. No special software is required to use the protocol.

SPAN NET

In the ideal world every host would be equipped with a Span modem but for both economic and practical reasons they are not. There is, however, a way for a mobile unit equipped with The Bridge modem to take advantage of the SPCL protocol when the host is equipped with an ordinary modem. Cellular operators are installing Span

nets which can receive protocol transmission from a mobile unit equipped with a Bridge modem, then relay data received to the host computer via ordinary modem.

I called CompuServe in Houston using Houston Cellular's Span net. The results were not a good as going directly to the Span modem in Dallas. I spotted a few data errors and thruput seemed even slower..

Using the Span net was quiet easy. I simply dialed the special access number (*3282 [*DATA]). Upon connection I had to answer a few questions from the net controller. The controller first asked for baud rate. All Span net links are made at 1200 baud but the relay can adjust the baud rate down to 300 baud if required by the host. Next it asked if the host required XON/XOFF and finally it asked for the telephone number of the host. After I supplied the telephone number the call was completed and the CompuServe session proceeded normally.

USING THE BRIDGE MODEM WITHOUT SPCL PROTOCOL When the SPCL protocol is turned off. The Bridge Modem works pretty much like any other modem. The only difficulty I encountered was quickly solved. I was expecting to see modem commands as I typed. Unlike the Portable's internal modem or the WorldPort 1200, The Bridge does not normally echo commands. I suspected this might be the problem. A check of the well organized instruction manual indicated this was true and revealed the command for turning echo on. As in all AT (Hayes compatible) modems the command to is E1. Another slight problem resulted from trying to reuse a Reflection command file subroutine to configure the serial port and WorldPort 1200 modem. I kept getting an ERROR message because X4 in not a valid command for The Bridge. To make a long story short, the final command string I used with the Bridge modem was:

ATE1X1S32 = 0S7 = 100

Let me explain. All modem commands begin with "AT" which stands for "attention". The Bridge like most other modems will accept commands up to 40 characters. The other elements in this command string are:

E1	Echo commands
X1	Extended results codes
S32 = 0	No SPCL protocol
S7 = 100	Wait 100 seconds for carrier detect

It takes longer to complete a call in a cellular system than over land lines. Default wait for carrier detect for the Potable's internal modem and the WorldPort 1200 is 30 seconds. For the Bridge the default is 45 seconds. Even this was not sufficient for some calls that I placed, so I increased the time to 100 seconds which may on the long side but my call got through.

Without the protocol, communications were more noisy than over a standard telephone hookup, but usable. Occasionally I did get hit with a burst of noise that would cause my Portable to lock up. I have had junk on land line links lock up the computer too.

Using this setup I was able transfer files in both directions between my Portable and the T3100 at my office. In addition I successfully downloaded files from CompuServe.

USING THE CELLULAR CONNECTION

The cellular connection definitely makes a cellular telephone transparent. After connecting this device to the cellular telephone, just for grins I plugged my Sony IT-A600 integrated telephone/answering machine into the RJ-11 jack of The Cellular Connection and gave the mobile telephone a call from another telephone in my home. The call was answered just as if it had come over a land line. I then tried calling the home number from the Sony telephone connected to the mobile phone. It worked just as well as if it had been plugged into a wall jack although it seemed I needed to be a little more careful pressing the keys to avoid dialing errors. I then selected pulse dialing on the Sony phone and dialed a number. The Cellular Connection handled it perfectly.

Next I attached my WorldPort 1200 modem to my Portable and plugged the modem into The Cellular Connection and tried to call the computer at my office. My first attempts were disappointing, the call went through, the modems connected and before I could get logged on, carrier was lost. Even though I had not changed location it is likely that the carrier was lost as a result of the cellular system handing off to another cell. I understand that a hand off shortly after connection is common.

I was about to give up on using the WorldPort with a cellular telephone but I got smart and adjusted the modem setup command to increase the time to disconnect considerable after carrier loss. This produced improvement. I was now able to get logged on and transfer files. Noise was experienced but it could be coped with. I also was able to use this arrangement to download files from CompuServe. The following setup command should configure the WorldPort to work fairly well when used with The Cellular Connection:

ATX4S7=60S10=20

The elements of this command string are:

X4 Enable dial tone and busy signal

detection

S7 = 60Wait 60 second for carrier

S10 = 20Wait 20/10 seconds after loss of carrier

before disconnecting (this is the same as

The Bridge default value)

Another modem register you should be awarê of is register nine. This register controls the time the carrier must be present before the carrier is detected. The purpose of this register is to keep the modem from thinking line noise is carrier and connecting prematurely. The default value for this register in The Bridge is 7/10 seconds and in the WorldPort it is 6/10 seconds. The actual time carrier can be lost without disconnecting is the difference between the values in register 10 and register 9.

To see how The Cellular Connection would work with a host system I plugged the modem on the T3100 at my office into The Cellular Connection, loaded my bulletin board (RBBS-PC), swiveled around in my chair and gave the bulletin board a call from my Portable which was on my desk. Except for dialing a different number and taking longer to connect there was no difference to speak of as compared to a call to the BBS when plugged into its normal telephone line. I did not have any noise problems but I did not use this setup long enough to get a good feel for what noise problems might be present.

A WORD OF CAUTION

The testing I did with this equipment was limited. I was able to make it do most anything that I tried but I cannot be sure that using a different cellular telephone system would not affect the results. For no reason better than a listing in the Yellow Pages I subscribed to service from Houston Cellular Telephone Company. I cannot verify this, but I was later told by one of Spectrum's representatives that Houston Cellular has one of the more modern systems. During the week I had the equipment the weather was generally good so I cannot comment on the effect of adverse weather. I did not try using any of the equipment in a moving vehicle and neither did I get a chance to check using The Bridge modem as a host. As usual I had to squeeze these tests in between several other activities. Since I was using borrowed equipment and also had a deadline from Hal, I was limited to about one week's time.

One equipment glitch caused some problem. The cellular telephone I used apparently had a weak battery or I accidentally left the phone on for too long and discharged the battery. Anyway the telephone battery went dead twice and delayed some testing. If you are contemplating a cellular telephone to use with your portable computer, ask questions about the power supply and be sure to select one that has powerful batteries.

This is leading edge technology and there are few experts in the business. If you buy the equipment you will probably have to be your own expert, but it is an excellent opportunity to get you hacker's license validated. The people at First Cellular Superstore in Houston were very helpful. They programmed the cellular telephone and gave me much useful information. In addition they were kind enough to furnish The Cellular Connection. They were aware of The Bridge modem but they did not have a working computer and cellular modem in the store. Spectrum Cellular's technical representative was extremely knowledgeable and helpful, however I solved my problem before he returned my call.

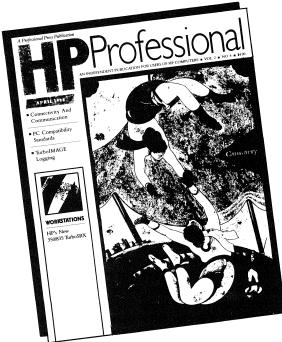
THE TEST EQUIPMENT

The cellular telephone used in this evaluation was a bottom of the line Motorola transportable unit. It weighed about 9 pounds and was mounted in a padded cloth case with a side pocket for accessories. Excluding antenna and carrying strap but including side pocket, it measured approximately 11.5" x 5.75" x 8.5" Although toting this and a Portable made a pretty hefty load, slinging the two over my shoulder was not too uncomfortable. My neighbor pointed out that the combination was not complimentary to my new suit. She was right. Perhaps I should buy the leather carrying case for my Portable.

The Bridge modem weighs about one pound and is housed in a standard plastic electronics case that measures $7.5" \times 4" \times 1.125"$. It fit perfectly into the side pocket of the telephone carrying case. Electronically The Bridge is impressive. It has a Z-80 processor, a 16K control program and 8K of RAM. 6K of RAM is used as I/O buffers.

The Cellular Connection is about the size of two packs of regular cigarettes and weighs just a few ounces. It is

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useless for data communications unless a modem is attached. As indicated I used my WorldPort 1200 as the companion modem.

IT WORKS BUT WHAT IS IT GOOD FOR?

Actually I considered this equipment interesting toys. Personally I have no use for a cellular telephone much less a cellular modem. Using these products, like using other computer products, requires some imagination. Some jobs are obvious. A salesman equipped with a portable computer and modem could take orders and then transmit them to the office while on the way to his next call. Survey and engineering crews could be kept in the field longer by using a pc/modem setup to send data back to the office. I read that one of the major New York law firms is making an effort to computerize and is equipping its lawyers with Toshiba computers to take to court. The article indicated that there was unfortunately no way to communicate with the office. A cellular telephone and modem would certainly communication with the office possible. I hope the judges ban this use. Some things are proper only when done the old fashioned way.

One use I found interesting. A retired man traveling around the country in a motor home has equipped his personal computer with a Bridge modem so he can call CompuServe. This would be a very good way to stay in contact with the family.

A large number of bridge modems are used for remote telemetering. I was surprised to discover the cellular telephone network completely covers the Gulf of Mexico from Texas to Florida. Many telemetering units on the oil and gas facilities in the Gulf use cellular telephones. Although the rates are high it is cheaper than the alternative.

CONNECTION

Since The Bridge Modem and The Cellular Connection must be connected between the mobile telephone's handset and transceiver, they can be used only with transportable or vehicle mounted telephones. Hand held telephones are single piece units that do not have a connection between the handset and transceiver that can be broken for connecting accessories.

The Cellular Connection, being a Motorola product, will probably only work with Motorola phones. The Bridge Modem will work with telephones from a number different manufacturers. However since manufacturer uses a different protocol for communication between the handset and the transceiver and perhaps configured for the telephone it will be used with.

The test modem was equipped with two RJ-45 jacks at one end. An RJ-45 connector works just like a standard RJ-11 telephone connector except it wider and connects 8 wires rather than four. The telephone handset plugs into the jack marked "To:H/S" and a jumper cable is run from the jack marked "To:XCVR" to the handset jack on the transceiver. Power for The Bridge is supplied by the transceiver. The serial RS-232 cable connects internally. The test unit was equipped with a standard 25 pin (DB-25) female connector at the end of 26" of cable. This mated perfectly with my Portable's 9221M modem cable. Although connected internally, the modem cable connects

with a simple plug making it possible to have a custom cable made that will mate directly with the HP Portable's serial port, an AT type serial port or any other serial port configuration. Since most communications programs do not use the all the pins in the RS-232 standard, lighting up only the required pins could result in a much more manageable cable. Actually The Bridge Modem is an ideal product for connecting on the HP-IL, but don't hold your breath waiting for an HP-IL model.

Connecting the Cellular Connection was similar to connecting The Bridge. The Cellular Connection has a permanently attached pigtail approximately six inches long with an RJ-45 plug that plugged into the handset plug of the transceiver. The handset then plugged into and RJ-45. Modems and other telephone equipment are plugged into the RJ-11 jack on The Cellular Connection. Like The Bridge, The Cellular Connection is powered by the telephone.

WHAT TO BUY?

Deciding what to buy is a tough call. The Cellular Connection gives the option of attaching other products such as fax machines or a modem using either no error correcting protocol or a modem using another error correcting protocol. I am not aware of any portable error correcting modems other than The Bridge. The Cellular Connection is slightly less expensive than The Bridge Modem. (\$450 vs \$595 to \$635 depending on telephone). I was told Spectrum Cellular will soon be producing a similar device. In addition I have a flyer for a Motorola cellular telephone that indicates an accessory RS-232 modem is available. I have not seen this product and neither do I have any specifications for it.

At this time I would choose The Bridge modem because of the SPCL protocol but I would look at any other product that my dealer might suggest.

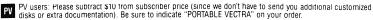
MAKING THE BEST OF NOISY TELEPHONE SERVICE A little care can improve your ability to transfer data when using a less than ideal data link. Should you be using a cellular telephone you might try moving to a different location. I am told that sometimes a move of just a few feet can make a difference. If possible try to find a location were there are not obvious impediments such as large buildings or electrical equipment.

Compression Programs: PKPAK and Squish Plus

110 A trick that can help with any kind of data link is to keep transmissions short. Compress data with a file compression different connectors, the modem must be factory utility such as the Phil Katz PKPAK (Archive) program. When using this program don't pack all files into one big archive. Create an archive for each file.

Phil's per file.

Phil's new file compression and archiving utility, PKZIP, is now available. I have not seen this program. I called Phil to get some information on it and he tells me that it compresses files 10-20% more than PKARC. In addition he indicated that ZIP files are more reliable that ARC files. I forgot to verify this with Phil but I understand the new program can create compressed executable file similar to System Enhancement Associates AXE program. I will let you know what I think about these programs next issue.





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.TO.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. in-

cludes 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."

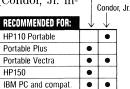
 Jerry Pournelle, InfoWorld

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. CRIINS



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.

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

SQUISH PLUS

I have been using SQUISH on my Plus for several weeks. It is the most convenient of all file compression programs available for the Plus. All I have to do to compress a file is to save it onto the D drive. This can be done from within any program or by copying the file directly to the D drive.

The D drive is actually a special file on the Portable Plus electronic or Vectra hard disk that is accessed through a device driver, a special type of program that is loaded when the computer is booted.

SQUISH is not free. There is considerable overhead associated with the program. When active the device driver uses 37K of main memory. Also 53K of disk is required to store the minimum of Squish programs. To break even almost 220K of electronic disk must be allocated to the Squish disk. If the Squish programs are ROMmed the break even point is reduced to slightly less than 90K. These calculations are based on the assumption that files will compress about 30% when saved on a Squish disk and also that the Squish disk will be filled.

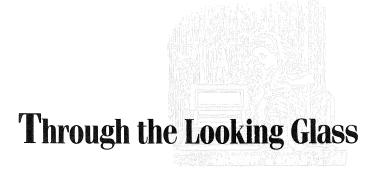
The Squish Plus INFO utility indicated that my worksheet and text files were reduced about 30% when saved on the Squish disk. I compressed a random sampling of COM files and EXE files The compression rate was 20% and 22% respectively.

Another disadvantage of a SQUISH disk is that it is not dynamically allocated. It always occupies the same space on the electronic or hard disk whether it is full or empty. Also, the SQUISH disk is a little slower than the electronic drive since files must be compressed and decompressed. Finally, If you occasionally create very large worksheets you may have to deinstall the Squish device driver to make RAM available for the worksheet. When this is done files stored on the Squish disk are not available.

Squish Plus is a good, trouble-free program. Its greatest advantage is its invisibility. Also, since files are compressed as they are saved no disk space is lost to intermediate and temporary files as with the ARChive and ZIP programs. This means that when the disk is nearly full it may be possible to compress and save a file with SQUISH that could not be saved without SQUISH much less compressed with ZIP or ARC because of the necessity of creating intermediate files.

To get the maximum advantage from Squish, the Squish disk should be made as large as possible and the Squish Plus program should be on ROM. An effective way to use Squish would be to make Squish disks for various projects and to transfer these files to and from the A drive as needed.

[Tom works for Natural Gas Pipeline in Houston, Texas and was one of the first to 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."]



By Ed Keefe

More Memory For Less (More or less)

There's a computer maxim that says "Everyone who uses a computer wants three times as much memory as they currently have." To this I say: "too true." To this, the keeper of our household budget replies: "no way! not at

today's memory prices!

The solution to this contention is to compromise --Spend a small amount of money for a software solution to the problem rather than a lot of money for a hardware solution.

The compromise is compression. File compression software lets you turn a one megabyte electronic disk into the equivalent of a 1.5 to 2.0 megabyte Edisk. Fortunately, most of the file compression programs work well on all the HP Portables including the HP110.

Most of us have been using such file compression software for a couple of years. This is nothing new. Such programs as System Enhancement Associate's ARC program and Phil Katz's PKARC and PKXARC programs are familiar to anyone who has ever downloaded software from a bulletin board.

What is new is the proliferation of such file compression programs. They seem to have gotten faster and more reliable in direct proportion to the escalating prices of computer memory. Now, instead of seeing compressed files that end with the extension .ARC, you're just as likely to see such files with the extensions, .PAK, .ZIP, .ZOO, .LZH, .SQZ, with the promise of more to come.

LOSING BY INTIMIDATION

Until recently there were only two major players in the file compression market: System Enhancement Associates and Phil Katz.

SEA set the standards and, by most accounts, Phil Katz's PKARC program exceeded these standards. However, Phil Katz ran afoul of the law. He used the three letters "ARC" in his program. SEA contended that those letters were part of their trademark and copyright. So they sued Phil Katz. Phil lost the battle but is apparently winning the war. He has totally rewritten his own compression programs and is marketing them with the title PKZIP and PKUNZIP. Most bulletin board operators have switched from the ARC format to the ZIP format for the files on their boards. This effectively has shut out the widespread use of SEA compressed files. SEA

has lost by intimidating the wrong people.

Both ARC522.EXE and the last version of PKARK/PKXARC (PK361.EXE) have been distributed, as shareware, on the Subscribers' Disks from Personalized Software in the past couple of years. Shareware implies that, if you continue to use the program, after testing it for a couple of weeks, you must pay for it.

One more file compression program has entered the market in the past couple of months: LHARC.EXE. It was written by a Japanese programmer who has, apparently, donated the program to the public domain. That means the program is free. The version of the program, as of this writing, is 1.13. LHARC has drawn rave reviews, even from the authors of ARC522. It will compress a file 5% to 15% more than either ARC522 or PKZIP. Version 1.13 of the program has a manual on disk. It still remains in the public domain: free. It can be found in the IBMSYS forum on CompuServe. It will also be on the 1990 Subscribers disk.

ALIKE BUT DIFFERENT

All file compression programs do essentially the same thing. They turn repeated characters into abbreviated code. They may also turn commonly used words into numbers that point to these words in a look up table. (One of my brighter students used this latter method to squeeze the New Testament onto three disks with his Atari 800 computer.) How these compression programs differ is in the speed with which they operate and the compression ratios they achieve.

For speed of compression and decompression, PKZIP is the fastest. For the best compression ratios, LHARC wins. However, LHARC is moderately slow in doing its work. PKARC/PKXARC and ARC522 have speeds and compression ratios that fall in between.

If anyone is really interested in exact test results, I have available a 124K byte file showing what tests were done and how each of these programs fared.

GAIN AND LOSS

What you gain, by using a file compression program, is the ability to store more data in the same amount of disk space. For example, if you use your computer for word processing and spreadsheet applications, you'll find that compressed files take up 50% to 60% less disk space.

What you lose with a file compression scheme is immediate access to a reduced file. Most of the file compression programs also place the compressed files in a library file. Such a file will have the extension ARC or .ZIP or .LZH. Once you've tucked a worksheet or report in an archive (library) file, and have erased the original from the disk, its name will no longer appear in a directory listing. If you're like me, you may soon forget where you've put the files.

NSWP TO THE RESCUE

There are times when I've wanted to view the contents of an archived file, before deciding to extract it from its library file. Neither PKARC nor ARC let me do this. However, the NSWP program, distributed on the 1989 Subscriber's Disk from Personalized Software, does.

NSWP has the ability to Zoom into a compressed, ARC file, and show the names of the files contained in it. It

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 stuckor at least you were until now.

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

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

RECOMMENDED I	OR:	
HP110 Portable		Portable Vectra
Portable Plus	•	HP150
IBM PC and compa	atible	s •

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.

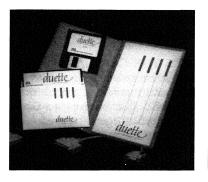
HPDuette is easy to use too. Simple menus and easy-to-understand help screens are available at all times.

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. DUIINS

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



HP*duette* 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.

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will even let you VIEW the contents of text files contained in the library. Beyond that it will extract (decompress or uncompress) any files in these libraries. NSWP is a very worthwhile program to have on an Edisk. It works with ARC type files: not with .ZIP or .LZH compressed files.

NSWP has its own method of compression, called squeezing. Such squeezing is not as effective or as fast as PKARK. It reduces text files by only 25% to 30%.

UNUSUAL FILE COMPRESSION PROGRAMS

There are a couple of compression programs designed to reduce the size of executable files. (Executable files are those that end with .EXE or .COM.)

Two such programs are SpaceMaker and AXE. SpaceMaker (SM.COM on the '87 Subscribers' Disk) will convert some .EXE files to smaller .COM files with anywhere between 10% and 30% reduction in the size of the program. I have had some luck with SM.COM. It has reduced some of my larger .EXE programs by about 20%. Squish uses a unique type of file compression scheme. I The programs still work.

AXE.EXE is another program like SM.COM. available from Systems Enhancement Associates. Unlike SM.COM, AXE.EXE will work with .EXE files that are larger than 64K bytes. In my estimation, the jury is still out on this program.

I tried AXE on all of the executable files on my Edisk. It did reduce some of the programs. Most notably, it trimmed 20K bytes from the Norton NU.EXE program. AXE tells you if the file cannot be compressed. Most of the files of less than 20K bytes were uncompressable. EXE files created by Turbo Pascal 5.0 could not be reduced by AXE.EXE.

After having tried AXE on everything in sight, I noticed that my Edisk was not working properly. I ran CHKDKSK /F and found that I had a corrupted disk. Letting CHKDSK /F run to completion generated a 43K byte, FILE0000.CHK file that was full of error messages and other odds and ends from the AXE program. I immediately retired AXE.EXE to the bit bucket.

There is one warning when using either SM.COM or AXE.EXE. Don't try to compress an .EXE or .COM file that is meant to be modified or patched by another program. For example, my favorite word processor, VDE.COM, has a companion program, VINST.COM, which changes the assignments of the function keys and modifies the printer configurations in the VDE program. Using AXE on the VDE.COM program prevents VINST from making any such modifications to VDE.

THE LATEST IN COMPRESSION: SQUISH PLUS

just received a copy of this package for testing on the HP It is Portable Plus. It comes from Sundog Software Co.

Squish, on the HP Portable Plus, is like having a second Edisk. However, this new Edisk has been given some magic properties. Every file that is saved to this new Edisk is automatically compressed.

When a file is loaded from the Squish disk to working memory it is automatically decompressed. compression, for text files and for worksheet files is about 50%. The speed for such compression and decompression is more than acceptable. For example, loading or saving a three page document from or to the Squish disk takes about a half second longer for The Editor to do.

With Squish, one megabyte of memory begins to look and feel like two megabytes. That's a saving of about \$800 in hardware.

WHAT'S THE CATCH?

Squish seems to work as advertised but it may or may not be the solution to the problem. If you use your computer mostly for document preparation and spreadsheet analysis, then you would get the greatest benefit from Squish Plus. However, if most of your work involves running programs that generate only small amounts of data, you may not see any advantage to using Squish.

Squish compresses EXE and COM files by only 25% to 30%. As a matter of fact, the owner's manual for Squish recommends not compressing such files. If you keep a lot of EXE and COM files on your disk, you won't save as much space and you will degrade the performance of the EXE files.

Furthermore, Squish adds about 37K bytes of code to the operating system of the computer. Thus, on a Portable Plus, with PAM, DOS and Squish running, you will wind up having, at most, 430K bytes of working memory. This assumes that you configure the Plus for the maximum 512K memory.

430K of memory seems like it should be enough. It is until you try to load an extremely large spreadsheet. It is never enough when you try to compile a large C program.

Squish comes with a battery of utility programs that let you temporarily disable the Squishing. However, to keep these utility programs on your Edisk results in an overhead of almost 60K bytes. Naturally, having Squish on ROM cuts down significantly on the overhead.

Somewhere in all of this, Squish reaches a point of diminishing returns. For me, the program reached that point very quickly since I use my Plus for programming purposes. On the other hand, if you use your computer to run MemoMaker, The Editor, or WordPerfect, or to manipulate spreadsheets and keep to-do lists, Squish Plus may, indeed, give you more for less.

TURBO PASCAL UPGRADE

I finally found time to make Turbo-Chess and Go-Moku, from the Borland GamesWork Package, run on the Portable Plus. This would not have been possible without the use of Turbo Pascal 5.0. It will probably be the last time that I use this version of Turbo Pascal. Personalized Software will make these programs along with other games available in September.

By the time you read this, Borland International will have, once again, upgraded Turbo Pascal: this time to version 5.5. This is not a major upgrade. Rather it is an enhancement. Turbo Pascal 5.5 now features something called an Object Oriented Programming System (OOPS). I have had an occasional encounter with OOPS before. It's a different approach to programming a computer: one that may appeal to people who have previously disliked programming. In future columns I'll probably have more to say about OOPS. HP is using this programming technology in the design of its New Wave program which runs on the Vectra line of computers.

The biggest question I had about Turbo Pascal 5.5 was whether it would work on the Portable Plus and HP-150.

Preliminary tests indicate that it does. I was even able to set the Portable Plus for 256K of memory and still had Also works on the

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. "Point and Shoot"

You don't have to wade 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. You use the same "Point and Shoot" 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 in a single step.

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 them at a glance or change them in a flash.

8. Backup only if changed

FilePlus allows you back up just those files that have been changed since the last backup.

FilePlus will save you time and effort, boost your productivity, and increase your enjoyment of your Portable Plus. Once you try FilePlus, you won't want to be

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enough memory left to compile an 800 line program without any complaints from the computer.

FASTER IS BETTER: SOMETIMES

In the past couple of months I've had Personalized Software perform brain surgery on my Portable Plus.

The highly qualified technicians at Personalized Software excised the venerable 80C86 microprocessor and replaced it with an NEC V30 microprocessor. As far as I can tell, the only difference is that the computer performs all internal operations about twice as fast. It does not, of course speed up the 9114 disk drive.

Twice as fast is twice as good when it comes to compiling C and Pascal programs. However, twice as fast is detrimental to sanity when it comes to playing Tigerfox on the Plus.

Prior to the computer speed up, I could barely manage to capture the fox and not get eaten by the tiger. Now I get eaten almost as soon as the game starts. I guess I'll stick with FastMind and Go-moku.

Until next time, happy porting.

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



by The Wizard, Cliff Looyenga

WordPerfect Thinkjet Driver

For this issue I decided to take the time to put together a decent ThinkJet printer driver for WordPerfect. I ordered a manual from WordPerfect for the PTR program (a program to design or modify a printer definition), and a copy of the latest ThinkJet printer driver.

The first thing I did was install the ThinkJet printer driver to see how much they had implemented. The original ThinkJet drive I received from WordPerfect a year ago had no graphics ability at all! I created a file with the default font being the ThinkJets standard font that goes 80 characters per line. I then tried a number of different sizes and attributes using the WordPerfect Ctrl f8 Size and Appearence commands and got the following results:

Bold: I got bold. Underline: I got underline.

Large:I got the expanded compressed mode. Very Large:Expanded mode. Extra Large:Expanded mode. Small:Compressed mode.

So far everything worked well. I decided to try some graphics on the left and on the right side. I also snaked some text around the graphics and printed it. The output was better than I expected. The graphics and text looked fine, the only thing was the graphics was closer to the text than I'd want, but that can easily be adjusted with the graphics margins. I soon came to the conclusion that there wasn't really anything I could do to the printer driver that would significantly improve on it.

I did notice, however, that printing graphics was pretty slow. Usually, the ThinkJet will store 12 lines of graphics before actually printing once across, but using this printer driver it printed with every line of graphics characters. This kept the printer real busy, but the paper moved extremely slow.

More On Wordperfect in Portable Plus ROM

The only other technical thing I looked at this past month was the possibility of putting a larger file than 256K into Portable Plus ROM. Accomplishing this would allow larger applications like WordPerfect to be put almost completely into ROM. I sat down with my Portable plus technical reference manual and began reading.

The directory for the ROMs are calculated on the fly every time DOS requests something out of the directory or FAT (file allocation table). It does this based on the ROMs it finds installed. The problem arises in that the ROM driver only reserves space in each subdirectory for 256k of data clusters. To fix this, the basic ROM driver would have to be rewritten or modified if someone could get the original code. Rewriting the driver would take quite an extensive effort so I suspect a solution will come from a different approach.

One possibility is splitting large files into smaller ones that would fit into the subdirectories. That's the easy part. The technical challenge would then be to write some software that would trap the DOS file functions so that the application would appear to see a single large file when accessing it.

There are likely other approaches to this ongoing problem and I suspect a solution will come in time... hopefully not too long.

[Cliff Looyenga provides technical support for HP PC's and HP 3000's, and in those circles he is known as "The Wizard." He has developed a number of HP110 Portable and Portable Plus utilities. Cliff's CompuServe ID # is 75106,2130].

(Letters Continued from p.5)

The Plus really is portable. I do not pound on the keyboard constantly while on trips, but do such things as keep up expense reports on Lotus, write memos, keep running log of flights and appointments in Time Manager, and keep

a card file of customer visits and update it on trips.

For trips of one week or less I don't even carry a charger with me anymore. The battery stays above 60% for this amount of time. For longer trips of two weeks, the charger comes along and the battery is kept above 80%.

Some things I will be looking for in the future is more of your software consolidated on ROM (my ROM drawer is full), Editor II included on the Super ROM, and a relatively simple personal finance package such as "Quicken" that will run on the Portable Plus. I also look forward to your subscriber disk every year

and utilize a surprising amount of the programs on the disk.

Again, thank you for an excellent magazine and for the support from all of your people. I have found them all first rate and professional in all my contacts with you.

Richard Aal, Hewlett Packard Co.

Reflection Hints, Subscribers Disks, WordPerfect on Plus

For some time I have intended to write you with a tiny contribution to the collective experience with Personalized Software products. This represents one small step in that direction.

First of all I found the CompuServe logon on the Reflection1 letter Vol 3, No 6, P40 helpful. However, I made a few improvements on some of the lines that were causing some difficulty. Here is my logon that works without a hitch:

Transmit "ATDT2321072 ^ M" wait 0:0:20 for "ECT" if not found stop endif wait 0:0:1 Transmit "^M" wait 0:0:5 for "ame:" if not found stop endif Transmit "CIS ^ M" wait 0:1:0 for "ID:" if not found stop endif wait 0:0:1 Transmit "73517,9999 ^ M" wait 0:0:30 for "ord:" if not found stop endif wait 0:0:1 Transmit "password ^ M" stop

Am I correct in concluding that TermPlus has no scripting function even though Term110 supports scripting?

Next is the subject of instructions for easy use of the Subscriber's discs. These are surely goldmines that have allowed useful features on the HP110 and Portable Plus to evolve. It is interesting to see some of the DOS disc functions and early Subscriber disc functions used as building blocks for the later Subscriber discs and

However, to encourage creativity to be developed to tangible programs by more readers, user explanations would One of the most useful be helpful. additions to future Portable Papers would be an explanation of the Subscriber Disc Several of them are very Programs.

briefly explained, and are of little use to many of us. Despite the investment of several hours in some of them, many questions remain.

In particular we find DW on the 1989 Disk frustrating because it appears to be a most useful desktop tool for office productivity. We need to know what all the options and menu choices mean. For some games [QIX, LANDMINE, YAHTZE], there are those of us who do not precisely know the rules, and the PP EDITOR II on the LS/12? Bill Vesely's computer version may vary from what might be found in a book.

A column or two for each of the major programs on each Subscriber Disc would be most useful for everyone concerned. For the important learning possible by studying these programs, understanding what they are supposed to do is crucial. When enough users master what has already been done, new refinements are likely to appear.

I have begun the first steps to make such a guide for my own use that I call UtilHelp. This text file is on each of my Portables to allow me to remember what the utility is for and what variables and special conditions I need to be aware of. Because the utilities themselves are mostly grouped on discs, I also keep track of work disc and source disc. I'll send along my humble beginnings if you are interested.

WordPerfect 5.0 is running in ROM on the Pluses in our office, and this can only be described as a major transformation for the Plus and the way we can use it. With the RAM/ROM speed now finally given a chance to excel, there is renewed justification for selecting the Plus for most managers, professionals, and salesmen that are not tied to a desk. Thus, most executives might want to use a Plus and keep it always with them while their secretaries use desktops to produce high volume of transcription and finish work and laserjet printing. We now can have the choice of Editor II or the feature-loaded WP5 to complement each other, and miss no bets. I hope we can get programs like ATO and RefMan running on the Plus, and that HP will soon rediscover that the Portables are valuable products introduced far enough ahead of competing laptops that the Plus is a pioneer product worthy of great refinement and evolution.

Kent Hermsmeyer, Portland, Oregon, USA

[TermPlus and Term110 are easy-touse communications packages for the Portable Plus and HP110 written by Portable independently contributors David Hughes and Cliff Looyenga. Term110 does have a scripting language, TermPlus does not.

If you (or any other reader) would

like to work on a column containing belpful information on making more use of the subscribers disks give me a call. Whenever possible I'll put you in contact with the program's author or discoverer. Please send us any help file you develop for the subscribers disk. -Hal]

FAX Questions, Editor Trick, **Modem Adapter**

Is there a way to get a box cursor in box generator (PP 4:2-11) works well and the box persists in FilePlus, but the Editor II seems to reset the cursor to a blinking underline.

Several FAX questions:

- Is there any possibility that the WorldPort 2496 Fax/Modem can be made to work on the PPlus?
- 2. Have you talked with CompuServe about adding a FAX receive facility to its EMail FAX send facility?
- 3. Do you know of any other online service which provides for receiving FAX?

Now for the tips. The first is based on a note in the November 29, 1988, issue of PC Magazine, but has a wrinkle added because the PC routine caused me to run out of environment space. I frequently shell out of EDITOR and sometimes lose material by forgetting to exit and store when I've finished the shell operation. The following ED.BAT file modifies the prompt temporarily to show a reminder during a shell operation to

echo off cls Set DUMMY=%PROMPT% SET PROMPT=E (to exit Shell) %PROMPT% set edconfig=a:\s edplus %1 /ms\edmac set edconfig= SET PROMPT=%DUMMY% DUMMY=abcdefghijklmnopqrstuvwxyzab cdefghijklmnopqrstuvwxyz

In the 5th line, the s should be replaced by the name of the subdirectory where the macro and profiles are located. On the LS/12, edibm and edmacibm should be used.

Since the variables are quite long, it will be necessary to expand the environment space on either the Portable Plus or the LS/12. On the PPlus, this is done by including:

DUMMY=abcdefghijklmnopqrstuvwxyzab cdefghijklmnopgrstuvwxyz in PAM.ENV (see PP 2:5-41 & 2:6-40).

On the LS/12, use Set: DUMMY=abcdefghijklmnopqrstuvwxyzab cdefghijklmnopqrstuvwxyz as the first command, after ECHO OFF, in the AUTOEXEC.BAT file.



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- Teaches you how to get the most out of your HP110 or Portable Plus



HOW TO USE THE HP PORTABLES is based on Hal's more than five years of experience using the HP Portables and publishing *The Portable Paper*.

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This 5-hour set of three VHS video tapes gives all the fundamentals of using both the HP 110 Portable and the Portable Plus. HOW TO USE THE HP PORTABLES will save you countless hours of learning on your own. It will also save time and effort in training an employee, spouse, child, or friend.

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Watching Hal demonstrate everything in a logical sequence right on your TV screen is a far better way to learn than wading through the HP Portable user's manuals—especially since the tapes include many important details that are either obscure or simply not covered in the manuals.

(Once you've seen the tapes, you'll find that the user's manuals make excellent reference sources.)

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However, HOW TO USE THE HP PORTABLES is only \$45 if purchased along with any used HP110 or Portable Plus system from The Portable Equipment Exchange (a division of Personalized Software).

Used HP Portables make great gifts.
HOW TO USE THE HP PORTABLES makes them even greater—because the tapes eliminate much of the struggle and time spent in learning how to use the machines.

See the latest Portable Equipment Exchange brochure for current prices on used Portables. Or call (515) 472-6330. We'll help you select a used HP Portable system that best meets your needs.

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 Brief demonstration of what an HP Portable can do: word processing, spreadsheet, database management, communications, time management

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 Portables' RAM and ROM technology
 —Includes demonstration of how to
 install ROM chips in the Portable Plus
- Maximizing screen readability
- Maximizing battery life
- Making full use of the HP Portable keyboard
- The back of the HP Portables: interfacing with other devices
- PAM, the home screen
 —Managing files and starting
- programs
 —Using PAM's System Config to

best meet your needs
—Partitioning RAM into main
memory and "Edisc" storage

Part 3: Using ROM-based software

- Tutorials on DOS, MemoMaker, Lotus 1-2-3 as a spreadsheet, Lotus 1-2-3 as a database, and data communications using the Terminal or TERM
 - These tutorials get you started and give you most of what you need to know about using these programs.

Part 4: Connecting the HP Portables to Peripherals

- Connecting to ThinkJet printer, HP9114 disk drive
- Connecting to IBM compatible computers with HPLink
- Connecting to HP DeskJet and other serial printers

Partial list of contents

Part 5: Demonstrations of Products That Enhance the HP Portables

- SideWinder (prints speadsheets sideways)
- Shelp (pop-up notepad, calculator, etc.)
- Webster's Spelling Checker
- lacktriangle The Editor (word processor)
- The Norton Utilities (quick unerase, disk sort)
- Portable modems

All this and more in an informationpacked 5-hour presentation by Hal Goldstein, president of Personalized Software and leading expert on the HP Portables.

Hal has packed these tapes with useful information. You'll save hours of poring over manuals and trying to figure things out for yourself.

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The second tip deals with a modem adaptor which is a valuable addition for a portable. Unlimited Systems (Mr. PV Gutzer) 619/277-3300, FAX 619/277-3305, makes the Konexx adaptor. It is a small box, about 1"x1.5"x3.5" with a modular jack to receive the modem cord. If the phone has a handset which plugs into the base with a modular plug, the Konexx is plugged in between the base and the handset. Most older phones not having a modular handset do have a mouthpiece which can be unscrewed, exposing two spring contacts. An adaptor (a phone jack with alligator clips) is available from Unlimited Systems which will allow the Konexx to be connected to the spring contacts. In addition to being easy to connect, the Konexx offers the substantial

advantage of working with digital phone systems as well as analog systems and it can be used to connect FAX machines. I have used it on the Rolm and AT&T digital systems, as well as a number of different kinds of hotel and multiple line office phones, and it works like a charm.

The PPlus internal modem requires a loop current (owners' manual 3-9) and the model 107 Konexx provides that current. It sells for about \$120. Some FAX machines also require a loop current. Modems such as the LS/12 internal do not need a loop current and the model 106 Konexx, which is about \$20 cheaper, is satisfactory.

J. D. Fleming, Jr., Atlanta, Georgia, USA

[The WorldPort people have expressed

interest in working with us to get their Portable Fax to work with the Portable Plus. However, we still are awaiting a unit for testing. Maybe other readers can help with your FAX questions. See the Vectra Views article on No-Squint for the best box cursor solution. -Hal]

NEC Ultralite, PS Video

I looked at, played with, the NEC Ultralite yesterday: 1.5 meg chipdisk, backlit screen, DOS compatible, communicates with PC's through laplink. I was nervous about the machine; thought it was expensive for something that relies on a battery and has a short-life – I would run out of battery on most plane trips.

There was too little discussion of upgrades. The package reminded me too

much of the original 110. A good machine Is I have waited years for HP to come up but no way to make it better. The 4 lb with a Portable Computer like the IS/12 but no way to make it better. The 4 lb weight is a big bonus and the case is beautiful

I decided to wait a bit to see what develops. Your discussion of a new backlit upgrade for the 110+ is interesting and I hope you can bring it in at reasonable cost. Same for Wordperfect on ROM or the development of a bigger ROM drawer. If you can have 1 meg ram, why not ROM?

I can see the enormous effort it took to put the "How to use Your HP Portable" video album together. I think they would be extremely useful to anyone not familiar

I am reasonably familiar with both and found the tapes to be a good refresher. And I learned about the f6/extend character combination which I did not know about before.

with the HP110 or Portable Plus.

I hesitate to critique such an effort, but you asked me once for my feedback: My overall impression of the tapes is STATIC. Maybe the New York pace is just too fast, but I kept wanting to say to Hal, "hurry up".

The section that works best, although it could be a little faster, is that of your Director of Operations, Larry Baldozier. While he was speaking, the camera was focused on his hands, on how he was holding the machine, on actually taking it apart. Hal's best bit was bouncing the 110 on the floor. From time to time you had closeups of the 110 screen, showing various operations. Sometimes the screen was very clear, and sometimes it was difficult to read.

I thought the word processing discussion was a bit difficult, mostly because it was difficult to see what was happening on the screen and link it to the key strokes.

The Lotus section was very useful. I liked the examples and would like to have seen more.

I did not like the text/summary session in which a voice read what was on the screen. It irritated me, although in retrospect it may have worked to reinforce the message.

I do not suppose there is any way to index the video. The beginning of each tape has what amounts to a table of contents, but there is no way for the user to zip forward to the session that he is most interested in.

I think Larry Baldozier's section could be expanded - common bugs, replacing batteries, things never to do, tips, cleaning the unit, what to do after getting caught in a downpour with the 110, airport x-ray problems, upgrades to the screen, cleaning the ThinkJet ports, etc.

Thomas Vitullo-Martin, New York City

Dissatisfied With LS/12 Carrying Case

with a Portable Computer like the LS/12 Laptop. As soon as it came out on the market I purchased it in early March.

The LS/12 weighs in a 10.5 lbs. and with the battery pack attached it is up to 14.6 lbs. Therefore it needs a sturdy, well cushioned carrying case to protect the unit.

Just about the 15th time I needed to use the case, I put in my LS/12 with the battery attached, two reference books, twenty diskettes and some notes into the case. The books and diskettes weighed 5 lbs. and bag itself about 2 lbs. The total 110 weight on my shoulder strap was as follows:

LS/12 with battery:14.60 lbs. 2 books & 20 diskettes:5.00 lbs. Case itself:2.00 lbs.

Totals:21.60 lbs.

As I exited my vehicle and attempted to put the strap on my shoulder I found the case with the computer in it crashing to my feet! One of the plastic hinges failed (i.e. snapped) causing the strap to slip off my shoulder like "spaghetti with oil and garlic sauce." With my LS/12 back at my desk I found that on the outside, the LS/12 showed no damage to its case. Although the back light would not come, I could boot it and run my Norton Utilities. I discovered that I had many bad clusters on my hard disk. That was almost to be expected after falling two feet onto cement.

The problem is that the high tech plastic After examining the hinge snapped. broken section, the plastic showed defects in manufacturing and/or design. The lining on the case is also so thin and soft that it is merely enough to prevent scratches on the case of the computer. It has little or no shock absorbing qualities.

The strap itself is strong enough to tow a car but it is an overkill compared to the hinges. My recommendation to your readers who are considering this HP carrying case is not to purchase it. It is better to go to a fine leather goods store and have one made with extra insulation on all sides (especially the bottom). Make sure that the strap hinges are solid brass and are at the very least stronger than the strap. Otherwise, you may regret it like I did. I should have used my better judgement when I first saw the case, and just returned it.

M. Nabi Israfil, New York City

Editor II and FormatPlus

The Editor II is excellent! It is one of P+ those very rare programs that strikes the proper balance between ease of use and proper features. It does 99% of what you $\frac{1}{2}$ need to do 99% of the time, with a very simple, logical command structure.

With 38 years Congratulations! experience in the computer industry, my number one rule is: "The real world is two sigma wide."

FormatPlus is also very good, the especially print-to-screen previewing documents, and ability store formats.

Al Collins, San Diego, California, USA

ThinkJet and 9144 Disk **Drive Batteries**

Re: Alexander J Banach's letter in May-June, I have checked my dead Thinkjet battery and can find no sign of the small fuse he noticed. All the cells were directly wired by small flat bits of metal. I will shortly find out where the problems were, as I am about to put new cells into this battery.

I have done a similar cheap battery replacement on my 9144 Disk drive. Opening the battery I found the cell was a National lead-acid battery LCR-226E. This has (SV, 2.4 Ah/20HR). Checking with the local Matsushita Electric people I found this cell is used mostly in burglar alarms and other security items, and is sold through Security Services. The cell was \$11.90 versus over \$100.00 for a replacement HP unit. I recently had to replace the first cell (after 2 years use) and found I had to buy a 12 volt LCR-226P which is two of the previous cells glued together and soldered together at the center leads. It was simple to separate the two cells. At \$23.00 it still is a big improvement on buying a HP unit.

Fitting the cells into the HP battery is very simple as the leads are designed so they only fit one way. I keep my spare cell in my first HP battery which I keep charged as a spare unit.

John F Ross, Australia

Recipe Manager

Keep up the good work! I just received my Portable Plus from your special February deal and I am very happy for the opportunity to upgrade from my 110.

As I was posting the addresses to the address list of Time Manager a thought came to mind. Being retired, I like to cook once in a while and have become somewhat of an amateur gourmet. How wonderful it would be to have a recipe file similar to the address file of Time Manager.

There would be a master index to call up the recipe desired and the 25 line screen of the Plus could easily handle a field for the name of the recipe, list and quantities of ingredients and cooking instructions. The automatic alphabetical sorting of the recipe by name is desirable.

Perhaps someone of your staff could work on this project and include it in the 1990 Subscribers Disk.

2400 baud portable modem for your HP Portable costs less than HP's internal modems, is faster, and can be used

with more than one computer. For example, the WorldPort 2400 has auto-dial, Weighs only 6½ ounces!

If you do data comunications 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 wher-

ever 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 World-Port1200—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.)

auto-answer, and both pulse and tone operation. It comes with a standard modular phone plug for connecting with the telephone line. It offers nonvolatile 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 (includes Carbon Copy PLUS software) PRODUCT NO. WM13NM adapter. The WorldPort 2400 draws no power from your Portable's battery.

RECOMMENDED FOR:

IBM PC and compatibles

HP150

.

HP110 Portable

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 portablility, reliability, well-designed features, and ease of use. Order yours, risk-free, today. Subscriber

	Price Price	
WorldPort 2400 modem with Carbon Copy PLUS so		
WorldPort 1200 modem (without software)	199.00 179.00 PRODUCT NO. WM11NH	
Cable to connect modem to HP Portables	PRODUCT NO. WM14NM	
9-volt AC adapter	FREE with modem7.957.95 PRODUCT NO. WM15NM	
Acoustic coupler (300/1200 baud)	PRODUCT NO. WM16NH	
Upgrade kit: WorldPort120 WorldPort2400	199.00179.00	

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

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.

I have seen two articles about laptops lately: one in Business Week and one somewhere else. Each article profiled five or so laptops including NEC, Toshiba, and Zenith - neither article even mentioned HP, much less profiled it. How do you explain this omission? Perhaps you could answer this in Letter to Editor response.

As one of your original subscribers, I continue to enjoy and appreciate the Portable Paper. Keep up the good work. Donald Hinman, Lansing, Michigan,

[Three programs available for the Portable Plus will allow you to keep track of recipes and sort by the field of your choice. If you use Lotus as a data base, each column can represent a field. The /Data Sort command lets you sort.

ECM, a ROM-based file manager/Rolodex-type program, should also let you accomplish the task. Finally, for maximum flexibility and power, Condor 3 would do the trick. There are a number of reasons why articles on computer portables do not include Hewlett-Packard. Without getting on my soapbox, I think the main reason is that HP has no coherent strategy developing and marketing its portable products. That lack of clear direction reflects itself in lack of visibility in both

the business and computer press. -Hall

Sold On The HP110

I am a new customer of yours, having already ordered around \$200 of stuff. I am extremely impressed with your Portable Paper - its clarity, presentation, helpfulness, layout, level of enthusiasm, etc. Also, although tempting laptops of various brands keep coming out offering 110 more and more speed, I am quite happy with my Portable 110 and am saving money for a Macintosh.

I am an artist and inventor and work at a metropolitan newspaper as an editorial artist. The only laptop I am going to use is this portable and so I am delighted to find a serious company such as yours which, for relatively reasonable prices, provides software that I will need for word processing and other relatively complex endeavors.

Brian, over the phone, said that Personalized Software, Inc. could generate a copy of the utilities disc for me if I mailed a copy of the cover of the HP 110 Portable Computer Owner's manual (enclosed), and would charge \$9.50 for the service. My built-in Lotus 123 manual also refers to my need for it, but it was not inside the plastic sleeve at the back of the Portable manual.

Steven Johnson, Carmichael. California, USA

[We will be happy to reproduce the HP110 Utilities disk that came with the original HP110 as a service to any of our customers for \$9.50. Be sure to ask for "HP110 Utilities Disk" -Hall

HP110 Terminal & Pulse Dialing

Enclosed is a workaround to an HP110 Terminal problem to share with the HP110 community. At work, the telephone system is pulse and does not tolerate the HP110's 20 pulse per second dialing, hence it is unusable in that mode. The unit is OK; the system check shows it to work properly and it does dial correctly at 10 pulses per second. The Tone mode also works, as does the TERMINAL.

The workaround requires both a pulse dial telephone and the HP110 connected to the same phone line at the same time (I use a dual-to-single phone line connector on the telephone). The HP110 is in TERMINAL mode. On the line for entry of the telephone number to dial, I type the single letter O (as in Originate). Next, I use the pulse telephone to dial the computer and I wait until the remote computer answers and issues its carrier signal. At that point, I press the soft key on the HP110 for DIAL and wait a few seconds (the HP110 shows the line, "Waiting for Carrier" or something

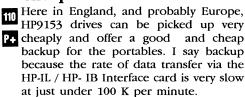
Copyright 1988 Personalized Software

similar). It may be necessary to push RETURN key once or twice, but usually before the remote computer hangs up, I CONNECT, meaning I have successfully communicated with the remote computer and can proceed to log-on normally.

I expect one could hang up the handset on the phone, although I haven't actually tried that. In any event I now have a means to use my HP110 as a terminal to our mainframe computer on a pulse dial system.

Fred Lipschultz, Storrs, Connecticut,

Cheap Drives For The Plus



On the 20MB drives the Portables can only access 16MB. Care should be taken not to exceed 15MB, as earlier files could be overwritten without warning. Also, in common with the HP150, it is not possible to use the multiple volume

Unfortunately it does not seem possible to use the even cheaper 9142 tape drive. I tried to set up the drive using the HP150 driver with predictably disastrous results requiring a hard reset on the Portable Plus. Has anybody any better ideas?

Colin Crowther, London, England

Suggestions To Improve Personalized Software's **Customer Service**

As your Mr. Teitzman can inform you, I have been a customer of your companyfor about six months. Prior to that, I was a generally satisfied user of HP portable equipment (HP110, disc drive, printer) for over 4 1/2 years. I have been generally satisfied with the service provided by your company, and I would like to draw your attention to the few unfavorable exceptions.

Your staff appears to be young, bright, courteous and helpful. Unfortunately, they are not always as careful and thorough as they could be, and this has caused me problems on several occasions, not to mention considerable expense international communications.

The first problem to arise is related to the non-availability of the Lotus version 2.01 ROM when I ordered my Portable Plus from you in December. un-availability of the Lotus may not have been the fault of your company, so I cannot blame your staff for the very late arrival of this item. However, eventually two units were sent; due, I imagine, to a breakdown in coordination among your staff. This is a costly mistake for you, and of course I must arrange to return the item to you, which is not necessarily a simple task.

The second problem relates to the replacement of a faulty 384K RAM drawer. Again, some confusion seems to have occurred. Although the unit began to fail some time ago, the promised replacement was only recently shipped. This delay was apparently due to an over-hasty check of your shipping files which showed that a unit had already been shipped. Unfortunately, the shipping data related to the original unit which was shipped in January. Now I am extremely worried that the replacement unit may not arrive before I must depart on another extended overseas assignment.

Basically, I am very happy with your firm, and your services are indispensable to me because I fully intend to stay with HP portable products. They are without doubt the most suitable products for my needs and working conditions.

I hope your little problems can be worked out, and I look forward to a continued pleasant association.

R. Campbell Ledbury, Herefordshire England

[We greatly appreciate your feedback and will strive to do better. -Hall

A Word For MSWord

Every time I read your ads for Word Perfect and compare features with what we WORD 1.1 owners have, I don't see what I am missing. Just add Webster's and Paul Grimmer's HPop and you make up for most of what WORD lacks - for less money and less memory! Its too bad you can't keep WORD 1.1 ROMs in stock. (At least I am assuming you can't).

SKETCH owners can capture WORD screens to SKETCH files. You can't do that with most word processors. advantage is that one can compose text for a graphics screen using all of WORD's on-screen editing capabilities. You even get, smallcaps, bold and italics right on the screen.

For what it's worth I'm enclosing a copy of a letter I sent to Paul Grimmer about SKETCH. It says what I like about it and what I wish it had.

Keep up the good work! I like being informed. The Portable Paper is the only 'user group' I have access to here in the Philippines.

Has anyone succeded in configuring Webster's Speller to work on normal MSWord files?

Rob Scebold, The Philippines

Satisfied SKETCH User

(Copy of a letter to Paul Grimmer) "Yet another satisfied SKETCH customer writes his review..." I'm with SIL working in the Philippines. My work here involves promoting literacy and developing teaching materials for a small indigenous group living in rural Luzon.

SKETCH has been a fun tool for the past few projects I've been trying out. My most involved effort has been creating large print character sets for word game cards.

WHAT I REALLY LIKE ABOUT SKETCH The most used functions are the "partial screen save" and the "overlay file" commands. I simply create and save the building blocks of my picture and then place them precisely where I want them. This has saved a lot of repetition on my part.

I also like the precision I have in positioning graphics on my Thinkjet page. (+1/64" horizontally and +12/16" vertically). Not typeset standard but good enough (and the right price!) for me.

I've ordered HPrint and look forward to trying it out. If I can get it to position text and graphics in relation to each other with at least the above accuracy I will be happy. I use MSWORD on ROM almost exclusively. I am hoping to find ways to get the best of both worlds: use of full featured word processing incorporating graphics.

WHAT I REALLY WANT IN AN UPGRADE All the changes in SKETCH you mentioned in your letter to the Portable Paper (Vol. 2, #6, p. 18) sound great! Especially the ability to move partial screen areas around in the drawing.

Along these lines I would also like to see a rotate function by which a partial screen could be rotated about a set point. Perhaps the point could be set like the memory point and the image rotated by pressing shft-dwn or shft-up while in rotate mode.

Also, I would like to see more erase functions. Using the Whole command in erase mode is great for getting rid of stuff with vertical and horizontal edges. But it isn't efficient for erasing stuff around curves or diagonals. Perhaps a command that turns off all the dots inside a circle could be added. And what about another function that would erase everything inside a triangle defined by two points and the cursor?

Finally, I have wished many times for a 'dot' button which would toggle the dot at the cursor position on or off. (When I want to mark the center of a circle before moving the memory point for example.) As it is I must put the pen down, move the cursor one dot then pick the pen up.

ADDITIONAL THINGS THAT WOULD BE

How about a memory for memory points? At times I've wished I could pop back to a previous memory point. If we could define memory points, (labeled m1, m2, etc.) and use them with the Goto command this would be possible.

A mirror image function would be fun. Define the partial screen and the edge to nirror across and hit the button. Some interesting bookmatch images could be crated this way.

In closing, thanks for filling the void for Plus owners in the area of graphics and print utilities. I am looking forward to trying your Pop-up program when it reaches the market.

Rob Scebold, The Philippines

[We do have MSWord ROMs available. Websters will not be able to work with formatted MSWord files. -Hal]

Connecting Plus To Ethernet

You may recall that last year I asked you whether there is any interface device that would allow connecting the HP Portable Plus to an Ethernet Local Area Network. The purpose is to send/receive files to/from other computers (in my case MACs) in the Local Area Network and also to a laser printer (Laserwriter).

I found an issue of The Portable Paper that makes reference to an interface card (Vol.2, NO. 2 March/April 1987, page 4, Portable to the Mac"); however, in the case of the Portable Plus, I think what would be required is an interface device outside the Portable, rather than an information about this?

Jose Costa,Ottawa, Canada

[Anybody with ideas? My one thought is to use a serial to parallel converter and then attach the Xircom adapter reviewed in the Vectra Views section of this issue. It would be slow but might work. We will probably have a chance to try it out and we will report any success.-Hal]

PC Emulator Lets User Run Genealogy Program

You asked me on the phone to let you know what the genealogy program is that I got to work on my Portable Plus. It's called Roots II (there is an update out now called Roots III) and is sold by Commsoft, 2257 Old Middlefield Way, Mountain View, CA 94043. obtainable for about \$200. I bought the 5 1/4" floppy and had a CE friend of mine, using Advance Link, copy it over to a 3 1/2" floppy. Then in order to get it to work on the Plus he had to go into the program and remove a "bug" Commsoft had put there. literature from Commsoft indicates that Roots III is "clean". I cannot use the regular keyboard keys for things like the cursor, quitting, etc. but you get use to that. I have to use CTRL alot.

Now if only you could come up with the backlit screen for my Plus, I'd be in 7th heaven.

Audrey Germain, Sacramento, California, USA

Plus User Wants Comparison of File **Management Programs**

I'm confused, maybe other readers are too. It would be great if someone could compare and contrast what's available in file management products for the Portable interface card. Can you provide more PV Plus. I want to manage my files more efficiently. What should I buy:

- FilePlus
- Norton Utilities
- BacTools
- DOS Tools

How do these compare with utilities on your subscriber's disks or with other public domain software? There is so

much out there! I would like to seesomeone tie it all together and help us consumers make decisions on what to buy.

Rob Scebold, The Philippines

[All the programs you mention do different things. We try to give a brief summary in our "Products In Brief" section towards the center of the newsletter. However, it is difficult to summarize a program in one paragraph. To really find out which programs aur for you, check out past issues of The Portable Paper via the index for a complete review of the product.

Here bowever is a summary.

FilePlus - A true file manager that replaces DOS. Two directories can be listed at once. Tag multiple files for fast copying, moving, deletion.

Norton Utilities - Undeletes deleted files. Norton has many file management utilities that extend DOS. One of my favorites physically resorts directories and another finds files by a text phrase. See ad in this issue.

BacTools - These are a series of utilities that expedite backing up your electronic disk, especially useful if you have a 1 megabyte drawer.

DOS Tools and Subscribers Disks - A number of useful public domain utilities that work on the HP110 and Plus. SWP on the 1989 Subscriber disk is an especially good file management program for the HP110.

I think all the programs are of value. However, I think every MS DOS user should possess a copy or The Norton Utilites or some program that can recover inadvertently lost and damaged files. Also, I find FilePlus invaluable for quickly manipulating my Portable Plus files. -Hall

HP110/HP110+ GROUPS

Thanks to so many of you who are willing to help organize local users groups. Users groups give an opportunity to share tips, answer questions, discuss other products, trade free software and Lotus templates, and meet other professionals. As you will notice, some areas have more than one contact person and some major areas have none. If you are in a "missing" area and would like to organize a group, contact us. If your groups

combine, also tell us. We will publish this column each issue, keeping it up to date. Write: Local Users Groups, Box 869, Fairfield, IA 52556 515-472-6330. California, Southern California We meet 2nd Thur 7-9 at HP sales office, 5161 Lankershim Blvd, North Hollywood. Request PORTOVEC Notes Newsletter, Dave Mark, 818-794-4969. San Diego Steven L. Eyre 619-452-8530, Dan Butterfield, 619-470-3551. San Mateo, Santa Clara Counties, San Francisco Bay Area, BAYCHHU, HP Laptops & Handhelds, meet 2nd Sat of the month, Contact Jim Horn, 707-523-4890 eve, or Michael Felsenstein, 415-564-8279 eve. Sunnyvale Interex Int'l Hewlett Packard Users Group, 640 Almanor Ave, 408-738-4848. Colorado, Colorado Springs Dan Ritt, 303-528-8080. Denver call Bob Pressey, 303-777-0326. Hawaii, Honolulu Rodney Y. Fukuya if interested, 808-945-3111. Indiana, Indianapolis, Bob Glass, 317-638-2326. **Iowa**, *Mid Iowa* Ed Keefe D: 515-964-6644 E: 515-964-7064, *SouthEast Iowa*, Hal Goldstein,

515-472-6330. Minnesota, Minneapolis/St. Paul, John Ferman, 612-822-1372. Maine, Yarmouth, Every last Tues 6:30, US route One, Yarmouth, ME 04096, 846-5497. North Carolina, Charlotte and Surrounding Area, John Jacob, 704-334-3468. Texas, Houston, Thomas R. Page D: 713-759-4259 E: 713-528-7138. Utah, Utah County, Donna Hoover D: 378-4421,E: 375-4812. Washington, Eastern Washington, Northern Idaho, Western Montana, and possibly Western Washington, Bob Sandberg, 509-466-4999. Eastern Washington, Stephen S. Warner, D: 509-534-1588, E:509-535-3322. Western Washington, Portable Plus, 150 and Vectra users meet first Thurs 7-9 pm, HP sales office, Bellevue, Pete Ross, 206-342-8875. Portable, 40 & 50 Series: 7-9pm second Wed., U.Wash. computer center, Seattle, Bob Moore, 206-543-7879. Washington D.C., Greater Washington D.C. area, 8:00 pm, Third Monday of each month, Ballston Tower #1 800 N. Quincy St., Room 519. Call to confirm and say Hi. William F. Cross, D:202-696-4112, E:703-845-9508. Australia, 8 Avoca St. S. Yarra, Victoria, Australia. Nigel S. Ball. 03-267-8344. Central America, I would be happy to form a users group, either Spanish or English, Apartado Postal 1587, Tegucigalpa, Honduras. England, Tralfalgar House, Grenville Place, Mill Hill, London, NW7 3SA England, Tim Cullis, (01) 959-4359. HP Computer Users Association, The Twenty One Bldg, 21 Pinner Rd., Harrow, Middlesex, England HA1 4LH 01-4275200, FAX: 01-4278252. Japan, I would like to help start a users' group. Michael Lazarin, 26-26-502 Moto Ujina; Minami-ku, Hiroshima 734 Netherlands, Mr. R.M. Franquiner, Menthenbergseweg 13, NL-6816 PR, Arnhem, The Netherlands. Spain, Club de usarios HP 110, Pont Reyes S.A., A la atencion de D. Enrique Serra, Ronda Universidad, 15, 08007, Espana. Sweden, Stokholm, first Thurs each month 6:30 pm, call to confirm. Jens Pettersson, 08-713-1710. Telex 149 70 gentel S

WordPerfect 5.0 (and 4.2) for

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!

P.S. We even have a Portable Plus version that's partly on ROM!

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

WordPerfect not only performs all the usual functions you would expect from a full-featured word processor, such as:

- search and replace
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- headers and footers
- bold, underline, compressed, expanded, italic
- superscripts and subscripts
- automatic hyphenation
- right justification
- undeleting of deleted text
- and more,

but it also offers a carload of advanced features—such as:

- Text in Columns
- Footnotes, Tables of Contents, and Indexes
- 115,000-word Speller
- Thesaurus
- Mail-Merging
- And built-in Math functions for creating a mini spreadsheet anywhere in your document.

Best of all, you can run the complete WordPerfect on your Portable Plus or HP150 Touchscreen. (Depending on the kind of Portable Plus or HP150 you have, you can use either WordPerfect 4.2 or the new 5.0.)

To learn more about the world's most advanced word processor—and how to use it on your HP computer—read the information on these two pages. Better still, try our Portable Plus or HP150 version of Word-Perfect for yourself at our risk.

Order WordPerfect today, and put it through its paces.

Use it to format documents in a fraction of the time it took you before.

Use it to track down spelling errors and typos in a flash.

Use it for footnotes, mail merging, database sorting, or any of its other advanced features.

Use it for your daily correspondence or for generating the most complex reports you can think of, complete with numerical tabulations and text in columns.

If, within 60 days, you feel that Word-Perfect isn't everything we say it is—or if you are dissatisfied with Word-Perfect for any other reason—simply return it and we'll send you a full refund.

Product Number	Retail Price	Subscriber Price
WD17NS	\$645	\$395
WD14NS	\$150	\$129
WD11NK	\$940	\$595
WD12NR	\$295	\$295
WD14NS	\$435	\$339
WD13NS	\$495	\$395
WD12NS	\$435	\$339
WD11NS	\$435	\$339
	WD17NS WD14NS WD11NK WD12NR WD14NS WD13NS WD12NS	Number Price WD17NS \$645 WD14NS \$150 WD11NK \$940 WD12NR \$295 WD14NS \$435 WD13NS \$495 WD12NS \$435

WordPerfect Upgrade Kit (Upgrades Personalized Software Portable Plus or HP150 version 4.2 to 5.0)

..... Call us for pricing and other details.

* Requires proof of purchase of WordPerfect 5.0 and PlusPerfect, and written confirmation that you will honor the WordPerfect license agreement.

Here's What You Get

Here's what you receive when you order the Portable Plus or HP150 version of WordPerfect (published exclusively by us). Note: See box below to determine whether you should buy WordPerfect 4.2 or 5.0.

1. Complete WordPerfect software and Users Manual

The entire IBM PC version of WordPerfect (on 3½" disks) and the standard WordPerfect users

2. Special utility programs

Our versions of WordPerfect 4.2 and 5.0 both come with an IBM PC emulator program that allows WordPerfect to run on your HP computer. (The Portable Plus version of this emulator is called PlusPerfect.) Our disks also include "batch" files that allow you to run Word-Perfect automatically.

3. (Optional) ROM Backup for Portable Plus 6 ROM chips containing PlusPerfect and a significant portion of WordPerfect 5.0. (You can use 4 or 6 of these ROMs, depending on the amount of space available in your ROM drawer.)

Although you'll still need to store a 300K Word-Perfect file on your disk and set main memory to 376K, this ROM Backup saves you up to 384K of RAM.

To purchase the ROM Backup, you must already own (or order) WordPerfect 5.0 and PlusPerfect on disk.

4. Instruction booklet

In addition to the comprehensive WordPerfect users manual, we supply our own instruction booklet. It tells you, step-by-step, how to get started, what to ignore in the users manual, and how to use WordPerfect on your HP computer.

5. Keyboard template

We also include a convenient 4-color keyboard template that we've designed specifically for the unique keyboard layout of your Portable Plus or HP150. The template shows you, at a glance, which keys to press to execute each of Word-Perfect's functions.

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



the Portable Plus and HP150

Frequently Asked Questions

(If you have additional questions, don't hesitate to call us!)

Q. Are the Portable Plus and HP150 versions of WordPerfect identical to the IBM PC version?

A. WordPerfect 5.0 and 4.2 are identical on all three machines, except:

- a.) the on-line tutorial does not run on the Portable Plus or HP150. (However, the "learning" section of the users manual covers the same material as the tutorial.) b.) the "Preview Document" feature (which shows special fonts and graphics as they will appear on printing) functions in a limited
- c.) Some extra, unessential utilities that come with WordPerfect do not run on the HP150 or Portable Plus.

With both 5.0 and 4.2, if you already know how to use WordPerfect on an IBM PC, you can use the HP version right out of the box.

O. Can I transfer WordPerfect files back and forth between different versions of Word-Perfect and between my HP computer and an IBM PC?

A. Yes to both.

WordPerfect 5.0 has a built-in transfer utility that makes sharing files between versions of 4.2 and 5.0 easy.

Moreover, WordPerfect produces identical files on an IBM PC, Portable Plus, and HP150. The only difficulty that may arise in transferring files between these machines is that HP and IBM computers use different formats. If you don't already have the ability to accomplish the transfer, you can either use our Disk Conversion Service or a variety of hardware or software solutions, depending on your system. For details, see "File Transfer Made Easy," in our product listings in this issue.

Q. Where can I get assistance in using Word-Perfect on my HP150 or Portable Plus?

A. If you have a problem related to the HP150 or Portable Plus—or if you're not sure where the problem lies—call us. If you have a question about how to use a WordPerfect feature, call WordPerfect Corporation. They are famous for the calibre of their customer support, and you can call them toll-free

Q. Will the HP version of WordPerfect work with my printer?

A. Our instruction booklet tells you how to run WordPerfect with all printers that work with your Portable Plus or HP150, including serial, parallel (Centronix), HP-IB, and HP-IL.

WordPerfect in Brief

Here are some of the advanced features that have made WordPerfect the world's numberone selling word processor. (These features are common to WordPerfect 4.2 and 5.0).

Speller

WordPerfect's built-in spell-checker is fast, thorough, 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 also counts the number of words in a document or in any block of text.

File merging and mail merging

With WordPerfect, it's easy to produce personalized form letters (mail merging), and to assemble reports, proposals, and contracts from pre-written components.

Thesaurus

WordPerfect's Thesaurus helps you find the right word when you need it. Synonyms are grouped by noun, verb, and adjective, and at the touch of a key, you can look at second and third levels of alternatives.

Columns

WordPerfect's Columns feature is ideal for writing a newsletter, glossary, script, or any text that requires columnar format. Up to 24 columns can formatted in either newspaper style (snaking) or parallel style (side-by-side). The columns appear on the screen exactly as they will print on the page.

Footnotes and endnotes

WordPerfect streamlines the task of creating and editing footnotes and endnotes. Just enter information at the appropriate spot, and Word-Perfect takes care of numbering and formating—including allowing just the right amount of space at the bottom of the page. If you later add or delete a note, WordPerfect will automatically renumber the others.

Table of contents

Mark portions of your text, specify a format, and WordPerfect will automatically generate a Table of Contents and an Index for your document.

Math

WordPerfect lets you use 4-function math for calculations across columns and for subtotals, totals, and grand totals down columns, anywhere in your document. Whenever you change a number, WordPerfect updates the totals. It's like having a mini spreadsheet at your fingertips—without leaving WordPerfect.

Sort

You can sort lines, paragraphs—even external database records—from within WordPerfect. You can apply logical rules to the sort: It's easy, for example, to generate an alphabetized list of all customers in California who have purchased more than \$100 worth of merchandise within the last 6 months.

WordPerfect's Newest Version

Here are the main features that have been added to WordPerfect in upgrading it from Version 4.2 to 5.0:

Fonts and printing

WordPerfect 5.0 lets you set margins, tabs, etc. using inches, centimeters, and points. Fonts may be freely mixed and changed without affecting margins, tabs, or column definitions.

Integrated text and graphics

WordPerfect 5.0 lets you insert graphic images from most graphics programs directly into your text. You can enlarge, reduce, move, and rotate most images to your specifications.

Styles

You can combine text and codes to create a specific "style," or format, that you can then use over and over again (for chapter headings, subheadings, etc.).

Document compare

WordPerfect 5.0 will compare the on-screen document to an existing document on disk. Text that has been added will be "red-lined" (marked with a vertical bar in the left margin), and text that has been deleted will be shown in "strike-out."

Keyboard redefinition and macros

WordPerfect 5.0 lets you store any sequence of keystrokes so that those keystrokes will be executed upon the press of a single key. This "macro" feature allows easy entry of repeated text and commands. One way to use macros is to change the key assignments for Word-Perfect's features. There is no limit to the number of different keyboard layouts you can thus define.

WordPerfect 4.2 or 5.0— Which Should You Buy?

To determine which version of WordPerfect to buy—4.2 or the new 5.0—follow these steps:

Step 1. Assess your needs.

Please see the column, "WordPerfect's Newest Version" (at top right) to learn about the features that are unique to Version 5.0. If you need these features, then 5.0 is the version for you, provided your machine can run it (see below).

Step 2. Check your memory size.

Portable Plus:

To comfortably run Version 5.0, you'll need a machine with 896K of RAM (e.g., a 512K Portable Plus with a 384K RAM drawer, or a 128K Portable Plus with two 384K RAM drawers).

To comfortably run Version 4.2, you'll need a machine with 640K of RAM.

You can run either version of WordPerfect with just 512K of RAM if you're willing to do a lot of disk access from your HP9114.

Note: You might consider purchasing a 1 Megabyte RAM drawer for your Portable Plus. This would let you bring the superb WordPerfect speller module wherever you go without having to load it in from an external disk drive. And with a megabyte of extra RAM, you'd have lots of room left over for text files.

HP150:

To run Version 5.0, you'll need 512K of memory and a double-sided disk drive.

To run Version 4.2, you'll need 256K of internal memory and either a double-sided or single-sided disk drive. (Note: If your HP150 uses **single-sided** disks, you'll also need a hard disk drive to run Version 4.2. Neither version of WordPerfect will run on a dual-floppy single-sided HP150 system.)

Our recommendations:

In general: Choose WordPerfect 4.2 if: (a) your machine demands it, or (b) you're already using 4.2 on other machines and don't intend to upgrade, or (c) you wish to save some money and don't need the new features in WordPerfect 5.0

On the other hand, if you want those new features and your machine can handle it, WordPerfect 5.0 is the one you should get. If you use a Portable Plus, you'll tie up the least amount of RAM if you purchase our ROM Backup version of WordPerfect 5.0.

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 Squish Plus compresses them automatically. When you retrieve a compressed file, Squish Plus automatically expands it to its normal

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 com-

pressed 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-

RECOMMENDED FO	R:
HP110 Portable	
Portable Plus	•
Portable Vectra	
HP150	•
IBM PC and compat.	•
Available on ROM Back for the Portable Plus	up

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

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

BULK RATE

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YOUR DISK BEFORE SQUISH PLUS YOUR DISK AFTER SQUISH 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 Subscriber Price Price Squish Plus for

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Portable Plus \$129.00 \$99.95 PRODUCT NO. SQ11NS

Rom Backup Package (includes Squish Plus for Portable Plus on disk and two 64K Backup ROMs)

\$264.00 \$234.95 PRODUCT NO. SQ11NR

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

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IMPORTANT MESSAGE FOR PORTABLE PLUS USERS

Special Portable Plus version

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

Buy Squish Plus on ROM!

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

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

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

The Portable Paper Personalized Software P.O. Box 869 Fairfield, Iowa 52556