



THE Portable Paper

Special Feature: Data Base Software for Portable Plus

Wiz gets WordPerfect 5.0 Working on Plus

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110%

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MAXIMUM POWER FOR YOUR PORTABLE PLUS

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



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

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

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

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

YOUR SOFTWARE DRAWER WAS MEANT TO BE FULL

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

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

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

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

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

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

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

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

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

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

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

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.

OUR EXCLUSIVE DOUBLE GUARANTEE ON ROMS

60-DAY GUARANTEE OF SATISFACTION

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

2-YEAR GUARANTEE AGAINST DEFECTS:

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

PUBLISHER'S MESSAGE



Hal Goldstein

This issue completes our third year of publication. You are our stockholders: It is time for our annual report.

On the surface it seems preposterous that we should be successful. We focus our efforts on supporting one vendor's out-of-the-mainstream portable computers. We do so with a research and development staff which consists of me and (at times) one other person.

Yet we produce this useful journal, publish scores of unique products, and sell used equipment which we guarantee for a year. We make a reasonable profit, have no long term debt, and employee fourteen people.

Our success in large part comes from our unusual relationship with you, our customer. The normal boundaries which exist between producer and consumer are not apparent in our relationship with you—these boundaries are somewhat "blurred." In many ways, *you are us*, and *we are you*.

One has only to look through this issue to see that in fact, *you are us*. Extraordinary software and knowledge contributions from readers/regular columnists Ed Keefe, Cliff Looyenga, and Paul Grimmer permeate this issue. The letters in this issue come from (among other places),

Belgium, Switzerland, Saudi Arabia, Sweden, and Ohio. Small business consultant Rod Sharp writes about Condor 3, Peter Leye tells us about Clipper, accountant Jerry Warshaw looks at an external numeric keypad for the Portable Plus, and one of the Portable Vectra developers gives us his insights. You are our Research and Development staff.

And, in many ways, *we* at Personalized Software *are you*. We use HP Portables, we look forward to each issue of *The Portable Paper*, we use our products, and we share your enthusiasm for HP Portable computers.

Personalized Software is the hub where HP Portable users worldwide share knowledge and expertise. We organize that knowledge and disseminate it in the form of HP Portable-related products and services.

You have kept Personalized Software healthy these past three years by the dual nature of your support. First, you feed us with your knowledge, with the software that you develop or discover, and with the portable equipment you sell or trade to us. We structure your contribution by first creating useful products and then communicating the value of those products through our marketing efforts. You then support us by purchasing our newsletter, software, and hardware.

Thank you, thank us.

Letters

110 **P+** Grateful For Finally Renewing

I let my subscription to *The Portable Paper* lapse a few issues earlier this year. Around that same time I became desperate for a utility which would let me read IBM-formatted 3 1/2-inch disks from the 9114 disk drive into the IBM PC. Nowhere had I seen this mentioned, but the need was acute. When in New York the last time I contacted everybody who could possibly know of such a utility and got nowhere.

I renewed my subscription, received my missing 1988 issues, and lo and behold, there was the solution and for only \$7.50! Without *The Portable Paper* I was essentially held under water (HP water), and could not breathe the fresh air of Portable activity going on around me. Like others who have written to *The Portable Paper*, I would like to add my thanks for your existence and support.

You recently printed a letter from someone who expressed annoyance at those \$99.95-type prices. It is a strange psychological trick which we Americans must play on ourselves in order to buy

something. You are not doing anything which requires justification. If the price is going to be \$99.95, make it that, but justifying it unfortunately exposes the childishness of the practice. Better to just do it or don't.

Fred Kurz, Jeddah, Saudi Arabia

110 **P+** Questions From Portugal

Thank you for answering my questions, and for publishing my letter. Your answers to my and others' questions were very helpful.

I have a few more questions:

1) In *The Portable Paper*, Vol. 3, No. 4, p. 8, you wrote that we may soon see a true graphics product for the Portable Plus. Is there any more recent news on this subject?

2) In the same article you refer to the possibilities of a commercial firm developing a hard disk which fits into the space left by one of the drawers. Any news?

3) I would like to know if HP continues to sell the Portable Plus in good numbers, and how many 110's and Portable Pluses has HP sold around the world?

4) Do you expect that the price of 2Meg cards will rise or fall (assuming the dollar holds constant) in the near future?

I would be grateful for your reply.

Eduardo Andrade, Oeiras, Portugal

[No news about a graphic product or hard disk for the Portable Plus. HP continues to sell the Portable Plus, but slowly, since they are in no way promoting it. My guess is that there are around 20,000 HP110's and 30,000 Portable Pluses in use. However, that is just a guess. The price of 2 Meg cards will stay very high until world-wide memory prices come down.—Hal]

110 **P+** Patch File For MemoMaker?

Thank you for your prompt response in sending all of the first year's publication of *The Portable Paper*. It has already been a great help to me. You see, I acquired my HP110 late, after HP had discontinued it. I am hoping to purchase a disk drive for it soon as I currently am operating with an HP-82161A cassette drive while on the road. I have the HP-IL board for an IBM at work, and I use its 5 1/4-inch disk drive and 10Meg hard drive whenever possible.

I have learned that Mountain View Press, Inc. still has the MVP-Forth Programmer's Kit for the HP110 for \$195. Has anyone there tried it? How well does it work on the Portable? The price surprises me since MVP-Forth for the IBM is Public Domain software. I have ordered a copy from the PC-SIG Library (disk #31) for \$6.

FormatPlus

An integrated word processing command center for the Portable Plus

Now you can format your text* and run your word processor, spelling checker, and other applications from a single easy-to-use program.

* Headers, footers, lines per page, automatic page numbering, and more!

FormatPlus is two valuable programs in one. Each is a great addition to MemoMaker or The Editor.

First, FormatPlus is an easy-to-use **text formatter** that lets you create headers and footers, specify the number of lines per page, number your pages automatically, convert MemoMaker files to ASCII format, and more.

Second, it's a time-saving **Command Center** that allows you to move back and forth between your text editor, spelling checker, and other applications without having to use P.A.M..

Add FormatPlus, FilePlus, and Webster's Spelling Checker to MemoMaker or The Editor, and you'll have virtually every word processing capability you could ever need—right at your fingertips.

TEXT FORMATTING MADE EASY

In its text-formatting mode, FormatPlus gives you numerous features that are simply

unavailable with either MemoMaker or The Editor. These features make excellent use of your Portable Plus's function keys.

For example, let's say you've created a document with MemoMaker or The Editor and you want to print a header on top of each page.

All you have to do is press the function key labelled "header" in the FormatPlus main menu, then type the wording of your header. When you print your document, the header will get printed along with it.

Almost all of FormatPlus's text formatting features can be accessed in this same way using your Plus's function keys. (See list of features at the right.)

If you prefer, instead of using the function keys to specify your formatting options, you can imbed simple FormatPlus commands directly into your text (using MemoMaker or The Editor), then use FormatPlus to print your document. The commands will cause your printer to produce the desired formatting automatically.

HOW THE COMMAND CENTER WORKS

Text formatting, however, is only part of what FormatPlus offers.

In its Command Center mode, FormatPlus lets you run MemoMaker, The Editor, FilePlus, or Webster's Spelling Checker at the touch of a function key. (You can also customize the Command Center so you can run RightWriter or any other program you wish without leaving FormatPlus.)

Being able to run word processing programs from within FormatPlus is a great time-saver, because you can move back and forth between text editing, text formatting, spell-checking, etc. without having to bother with P.A.M..

For example, let's say that you've written a document using MemoMaker, and have used FormatPlus's Preview feature to see how the document will look when you print it. Suppose you discover that there's a widow line.

With FormatPlus, you simply press the function key labelled "MemoMaker." Instantly, you're in MemoMaker, where you can edit your text to compensate for the widow line. When you leave MemoMaker, you're back in FormatPlus automatically!

COMPLETE WORD-PROCESSING ENVIRONMENT

There is no better way to expand the capabilities of MemoMaker or The Editor than with FormatPlus. It turns your Portable Plus into a complete, easy-to-use word processing

FORMATPLUS AT A GLANCE

- **One-line headers and footers.** Headers and footers can be centered, or shifted left or right on the page, or shifted left and right alternately for even and odd pages respectively.
- **Automatic page numbering.**
- **User-specified line spacing, lines per page, and number of copies.**
- **Chaining and merging of documents.** You can even create a file containing nothing but merge commands, and use it to print a series of documents while your computer is unattended.
- **Change attributes within document.** You can insert simple WordStar-like "dot" commands in your text to change print attributes (e.g., normal to bold to underline) at any point in your document.
- **Save document on disk.** You can send your formatted document to a disk file. Useful if you want to print your document in the "background" (using the DOS Print command) while you're using your computer for something else.
- **Format saving.** FormatPlus lets you store frequently used formats (e.g., for half-page memos or legal-size reports). Once you've created these formats, you never have to enter them again.
- **On-screen preview** - lets you quickly see what your documents will look like *before* you print them.
- **Works with any printer.**
- **Accepts any ASCII files.**
- **Word processing Command Center** - lets you run MemoMaker, FilePlus, The Editor, or Webster's Spelling Checker at the press of a function key (and run other programs using simple DOS commands) without leaving FormatPlus.

WORD PROCESSING SPECIALS

If you use MemoMaker or The Editor and do any amount of writing at all, we recommend not only FormatPlus, but Webster's Spelling Checker as well. (Even if you're a good speller, Webster's will save you from those hard-to-spot typos that can cause embarrassment or worse.)

Here are our special package prices. (Note: The Editor does everything MemoMaker does, plus: search and replace, easy file merging, editing two files at once, and more. For details about The Editor and Webster's Spelling Checker with its 115,000 word dictionary, see ads elsewhere in this issue.)

	<i>If sold separately</i>		
	<i>Suggested Retail Price</i>	<i>Our Price</i>	<i>Price of Package</i>
Editor Pack			
The Editor	\$99.95	\$79.95	
FormatPlus	79.95	69.95	
Webster's Spelling Checker	79.95	69.95	
	\$259.85	\$219.85	\$195.00
			PRODUCT NO. FM15PP
MemoMaker Pack			
FormatPlus	\$79.95	\$69.95	
Webster's Spelling Checker	79.95	69.95	
	\$159.90	\$139.90	\$125.00
			PRODUCT NO. FM14PP

BONUS! Buy our **FilePlus** file management program along with either of the above specials, and save \$20 on FilePlus (\$39.95 instead of \$59.95). For details, see FilePlus ad in this issue.

Word Processing ROM Bundle (Portable Plus Only)

—The following programs on ROMs and disks:

The Editor II	\$185.00	\$174.95	
Webster's Spelling Checker	259.00	248.95	
FormatPlus	175.00	164.95	
FilePlus	165.00	154.95	
	\$784.00	\$743.80	\$599.00
			PRODUCT NO. FM17PP
(without FilePlus)			\$499.00
			PRODUCT NO. FM16PP

environment. Order FormatPlus at our risk today.

Better yet, order one of our Word Processing Specials and save. (See prices in box at left.)

FormatPlus on disk \$79.95
Portable Paper subscriber price . \$69.95
PRODUCT NO. FP11NS
ROM Backup version \$164.95
PRODUCT NO. FP12NR

110%

Making More of Your HP Portable

by Hal Goldstein

110 P+ PV 1989 Subscribers' Disk Keeps Getting Better

As described last issue in this column, we have compiled some excellent programs and utilities for the 1989 Subscribers' disk. In the past few weeks we have obtained a number of additional programs which are at least as useful as the ones described in the last issue of *The Portable Paper*. The 1989 Subscribers' disk is going to be the best Subscribers' disk yet.

First, we've received two programs which were written for the Portable Plus by an HP engineer. We understand that these programs have become popular within HP. The first is a RAM-based Time Manager program which offers most of the same functions as the ROM-based Portable Plus version. However, its main screen contains a two week, week-at-a-glance appointment schedule.

Owners of the Time Manager ROM will find the two Time Manager programs work well together, since they use the same files. Others can use this new Time Manager program as a stand-alone product. This product overcomes the final limitation in making the all-RAM no-ROM Portable Pluses practical. Lotus can be run from RAM using the Personalized Software Lotus 1-2-3 driver. TermPlus or possibly Relay Gold (see below) can be used for communications software. Time Manager was the last popular ROM-only product.

The second product from HP is a directory lister. It can list all of a directory's files on a single screen and also provide Portable Plus-specific information such as battery percentage used, printer configured, Edisc space left, etc.

We are also including a program which turns the Portable Vectra's cursor from an underline to a box. (See this issue's Vectra Views column.)

For those who don't like to use PAM, the 1989 Subscribers' disk will include YAMS (Yet Another Menu System). YAMS was written by Ed Keefe and is discussed in his Looking Glass column, this issue.

Finally, as discussed later in this column, Paul Grimmer's PDL program is included. When the the HP-IL card for IBM PC compatibles is in use, PDL gives more flexibility when using HP-IL printers and plotters from an IBM PC. PDL lets you call the HP-IL device LPT3 (or whatever) so that common software can recognize the HP-IL printer or Plotter.

We will probably also be able to include Revision E of the HP-IL software. Revision E permits users to read IBM PC 3 1/2-inch 720K disks using their PC, the HP-IL card, and an HP9114 disk drive.

If, as of Sept 30, 1988 your subscription included the Nov/Dec. 1989 issue (Volume 4, number 6), you will receive the disk free with your Jan/Feb. 1989 issue. Otherwise, you may purchase the disk for \$9.50 as long as your subscription includes at least one 1989 issue. (For non-subscribers, the cost is \$115—how's that for an incentive to subscribe?)

110 P+ PV The Latest On The HP-Zenith

It is our understanding that HP plans to have its version of the 286 Zenith Supersport on its price list and ready to ship by January 1, 1989. (See the lead story in the July/August 1988 issue of *The Portable Paper*.)

Shortages of the Zenith SuperSport and HP's high quality-control standards have delayed the introduction slightly, but HP should still be ready to ship in accord with its announced plans.

The new unit will be called the Vectra LS/12. "LS" stands for "Laptop System." The 12 refers to the 12 Megahertz speed of the central processor.

HP's pricing for this unit will be the same as Zenith's. For distribution and support, the Vectra LS/12 will be treated in the same manner as other HP Vectra models.

We should have quite a bit more news beginning with the next issue of *The Portable Paper*.

P+ New ROM Drawer For Plus A Possibility

As many of our readers know, 64K byte is the largest (and currently the most practical) size of EPROM's being made for use in the Portable Plus. It would be a better use of ROM drawer space if we could create 128K byte EPROM's. As we get larger applications such as WordPerfect 5, Condor 3, and Dac-Easy to run on the Plus, this becomes a more important issue.

Dave Conklin of Firmware in Corvallis, Oregon discussed a possible solution with me. If we had sufficient interest, he could design and build a ROM drawer at comparable cost to the HP ROM drawer that would take 32-pin, 128K byte EPROM's. 256K EPROM's are also an eventual possibility. The drawer would be designed so that it could also use current HP 28-pin ROM's such as Lotus and Memo-Maker/Time Manager.

If you are interested, let us know so we can have an idea as to whether or not to go ahead with the project.

110 P+ Any Good Tax Programs For The HP110 Or Portable Plus?

Does anyone know of good tax preparation software (maybe Lotus templates) which runs on the HP110 and/or Portable Plus? If you are satisfied with a package, give me a call at (515) 472-6330 so we can share your findings with other readers in time for the tax season.

P+ Dac-Easy Accounting On The Plus

As reported in the last issue by Frank Keresztes-Fisher, version 1 of the best-selling IBM PC accounting package Dac-Easy runs quite well on the Portable Plus.

I contacted Dac-Easy, who sent Frank the current version (3) of the product. Frank reports that it does not work. I then talked to the head programmer at Dac-Easy, and it became clear that neither version 2 nor 3 will work.

Currently, Dac-Easy is considering whether to sell

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

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,

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

*Hal Goldstein, Publisher
The Portable Paper*

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

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

CUSTOMIZED TO YOUR COMPUTER

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

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



**THE NORTON
UTILITIES**
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 compatibles			•

version 1 of their accounting package through us. If we can offer this product, Frank will send us a review of Dac-Easy version 1 for the next issue.

110 Alternative Mode On The Portables

P+ The first thing any HP110 or Portable Plus user should do when trying to run IBM PC software is put the Portables in **Alternate** mode. This is best accomplished by making the change from PAM's **f6 System Config**. (HP110 users will want to change both Modes to **Alt** from **HP**.)

Remember—once you are in **Alt** mode the **Menu** key becomes **f9** and **User System** becomes **f10**. Programs like Webster's Spelling Checker, FilePlus, and WordPerfect (for example) run in **Alt** and make use of this feature.

110 The DeskJet And The Portables

P+ I think the DeskJet is a great printer. As reviewed in *The Portable Paper* Vol. 3, No. 2, p. 7, the DeskJet makes an excellent letter-quality companion for the Portable Vectra, Portable Plus, and HP110. It weighs fourteen pounds and produces virtually the same quality output as the HP LaserJet series—300 dots per inch. (The LaserJet prints three times faster, is more rugged, and more easily expandable). The DeskJet retails for \$995, can be purchased from Personalized Software (with a copy of the instructions given below) for \$795, and can often be had for even less from some mail-order outlets.

I have a DeskJet at my desk in the office, and another at home which my wife and I share. The one in the office connects to my Portable Vectra; my wife uses the DeskJet for high quality output with her Portable Plus.

Overall, the DeskJet manual is pretty good. For some reason, however, it complicates its explanation of how to connect to an HP110 or Portable Plus. The manual unnecessarily directs Portable users to change the factory dipswitch setting on the printer. We've had several users call us for help.

Here's how to make the connection without changing any dipswitches: First you need an HP92221P cable (or its equivalent). From PAM enter **f6 System Config**. Set **Printer Interface** to **Serial** using the **f3 Next Choice** key. (The **Datacom Interface** should be set to **Modem**.)

Now exit and from PAM enter **f5 Datacom Config**. (By the way, the name of the **f5** key should properly be **Serial Config**). Under the **Serial** column Set **Baud (Transmission) rate** to **9600**, **Word length (Bits)** to **8**, **Stop bits** to **1** and **Parity** to **None**. The rest you can leave as default.

Connect the DeskJet and the Portable with the cable, making sure the connections are good. You can now print from any program (in the same way you normally print to the ThinkJet or other printer).

110 Extra Portable Screen Memory

P+ I forget this trick too often. When in DOS I often give the **dir** command and the file listing scrolls off the screen. However, all is not lost. Unlike most IBM PC compatibles including the Portable Vectra, you can just move the up-arrow key or press **Extend char up-arrow**, and you'll discover the "lost" information has scrolled back on the screen.

110 Inexpensive ThinkJet/HP9114 Case

P+ From Ed Keefe: check out the WalMart electronics section for an audio cassette carrying case made by LEBO. It looks

like this might make a good tote bag for the ThinkJet and HP9114.

110 Squeeze Program

P+ Many readers expressed their enthusiasm for programs like ARC and SQPC which compress (squeeze) files as much as 80%. (See, for example, Tom Page's article on getting organized in Vol. 3, No. 2, p. 21 of *The Portable Paper*). The value of such programs is obvious to HP110 and Portable Plus users for whom Edisc space is a valuable commodity. However, unless you set a batch file system for automatic squeezing and unsqueezing as discussed in Tom's article, the practice can be cumbersome.

Steve Kiel, a reader in New York, gave us a call to tell us of his success using a commercial file squeeze program called Cubit on the Portable Plus. I called SoftLogic, the program's publisher, and they sent me a copy for testing.

If all of Cubit worked, it would be a wonderful program for the Plus. The memory-resident part of the program squeezes and unsqueezes files as you save and retrieve them from an application. If I install Cubit on an IBM PC compatible and save my Lotus file, the Lotus file automatically gets squeezed and takes up about 40% of the space it would normally occupy. When I retrieve it as a worksheet, the Lotus file is unsqueezed. The little extra time it takes for Cubit to do its work would be well worth the Edisc space it saves.

In testing Cubit on the Plus I was actually able to squeeze and unsqueeze once or twice from Lotus. However, the Portable Plus soon froze, and the file had to be unsqueezed from the non-memory-resident mode.

Cubit works fine in non-memory-resident mode. However, in comparison testing, ARC520 (on the DOS Tools disk and ROM) and PKARC (on the 1989 Subscribers' disk) do almost as good a job of squeezing and unsqueezing. The SQPC squeeze program on the DOS Tools disk did not fare as well.

I did not do rigorous testing. I thought readers might be interested, however, in how I tested CUBIT vs. SQPC vs. ARC520, along with my preliminary results.

I took advantage of my DOS Tools ROM (available from Personalized Software) installed in my Plus. I created the following batch file to compare how well ARC520, CUBIT, and SQPC squeezed Lotus **wks** files, ASCII **txt** files, and executable **com** files.

To run the batch file I give the DOS command:

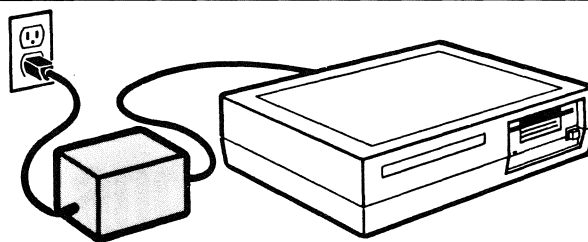
test filename ext

where **filename** was the file name of the file to be squeezed by the three programs, and **ext** its extension. In the example below I gave it the following three commands: **test marketin txt**, **test pex wks**, and **test te com**.

Here is the batch file with comments to explain how it works:

```
rem %1 is file name to be squeezed, %2, the extension
rem Squeeze file using CUBIT, creating filename.cub
cubit %1.%2 %1.cub
rem Squeeze file using ARC creating filename.arc
arc a %1 %1.%2
rem Squeeze file using SQPC creating filename.yqz
rem Using DOS Tools ROM: the "x" invokes the command
x sqpc %1.%2
rem Using DOS Tools SDL to sort the four files by size
x sdl %1.* /s
```

THE HP9114 EMPOWERER



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

THE PROBLEM:

The charge on your HP9114 battery doesn't last long enough for you to do all you'd like to. For that matter, in some cases it doesn't last long enough to do half of what you'd like to.

According to Hewlett-Packard, you get up to 40 minutes of continuous usage before the battery dies. We've never gotten more than 20. Just formatting disks, transferring files, or running disk-intensive software and getting it to work can be a major triumph.

How many times have you wished you had a second external disk drive?

The Portable Equipment Exchange, a division of Personalized Software, is selling HP9114A units including power supply at a substantial discount. See enclosed four-page brochure for details.

Plugging in the HP9114 doesn't help, either. That only recharges the battery—it doesn't let you keep working.

WE HAVE THE SOLUTION:

The official HP suggestion is to buy another battery pack and keep both plugged in. When one loses power, replace it with the other. This seems clumsy to us. What if you want to do several hours of disk intensive work? At Personalized Software we have a better solution—the HP9114 Empowerer.

The Empowerer is special power supply that will allow your HP9114 disk drive to run forever. Just remove the battery pack,

and plug The Empowerer into the open slot and into your wall outlet. It's that easy!

To run your HP9114 to your heart's content, order your HP9114 Empowerer today.

HP9114 Empowerer \$99.95
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RECOMMENDED FOR:	
HP110 Portable	•
Portable Plus	•
Portable Vectra	
HP150	
IBM PC and compat.	

rem Append file DIREC with latest SDL results.

x sdl %l.* /s >> direc

rem check results, then delete squeezed files

type direc

pause

del %l.arc

del %l.?q?

del %l.cub

Here are the results. The original **txt**, **wks**, and **com** file given is the last (largest) file. The winner is the first file.

Filename .Ext Bytes
ASCII file

MARKET.ARC	7398
MARKET.CUB	7634
MARKET.TQT	8873
MARKET.TXT	13969

Lotus WKS file

PEX .CUB	4188
PEX .ARC	4948
PEX .WQS	7284
PEX .WKS	12416

COM file

TE .ARC	18955
TE .CUB	19857
TE .CQM	21278
TE .COM	24274

The Best Of The CompuServe HP Forum

Once again I encourage active HP Portable users to join the CompuServe HP forum. Many of the past issues of *The Portable Paper* contain information about using Compu-

Serve and the HP forum. Portable experts from all around the world, HP system operators, as well as novice and intermediate users participate in the forum.

The rest of this issue's 110% column consists of information recently gleaned from the forum. Where appropriate I have added my comments.

P+ Relay Gold For Plus

From: Jim Scheef [76137,757]

Somewhat by accident I discovered that Relay Communications, Inc. (aka: VM Personal Computing) has produced a version of Relay Gold for the Portable Plus. Relay Gold is the best thing going for communicating with IBM mainframes. Relay emulates a 3179 (as well as several other terminals) for use with several different protocol converters (VT100, IBM 3101, IBM 7171, PCI, etc.). The VT100 emulation would suffice for light-duty use on a VAX.

When communicating with an IBM 370 host, Relay talks to a host program for protocol file transfers. Relay has an extensive script language (supports random read/write to disk files!) which even allows the use of custom panels, cooperative processing between PC and host, and host control of almost all PC functions.

Relay Communications has released two versions of the program. The first is a normal port of the complete system (a full 720K diskette) to the Portable Plus. There is also a cut-down version which can be burned into an EPROM.

The port was completed for an un-named company which was willing to commit for many copies. I believe the list price of Relay Gold is in the \$200 range. This would be a bargain if your company has the mainframe software

(continued on page 40)



Products that make HP Portables smarter

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

By Hal Goldstein

110 P+ PV The Editor II: New Version Features Tutorial, Macros, And Centering

Ed Gilbert's new version of The Editor (called The Editor II) satisfies most users' enhancement requests with two new features: block centering and macro definition. In addition, Personalized Software has created a supplementary manual which doubles as a tutorial for novice and intermediate users, and which contains a reference manual for the new macro and centering features.

THE NEW EDITOR TUTORIAL

The manual which accompanied the original version of The Editor is complete and well-written. However, since it is a reference manual, some novice and intermediate users have found The Editor difficult to learn and use. In fact, The Editor is elegant in its simplicity. The new tutorial will get any user up and running in less than an hour. (Current Editor users who do not wish to upgrade can purchase this supplementary manual containing the tutorial from Personalized Software for \$5).

CENTERING

Many users of The Editor have wished that the program could include a line-centering feature. The new **ESC Block Balance** feature allows you to center a line or a block of lines.

MACROS

However, the truly exciting new feature of The Editor II is its ability to assign macros, that is, a sequence of characters to one key. As you will see, this opens up a world of possibilities.

The macro feature lets you customize your keyboard and command structure in any way you like. You can use this macro capability to create new features such as to delete a word. For example, you could assign to function key **f1** the ability to turn on **wordwrap** and set margins (**Define Paragraph**).

You can assign a macro to a keystroke combination like **CTRL n**. You might want to assign commonly-used phrases (like your name and address) to such a keystroke combination. There is even an autoexecute capability which lets The Editor II begin executing a macro as soon as it is loaded.

THE SIX NEW MACRO COMMANDS

The Editor II comes with six new "macro" commands in-

voked by typing the new **ESC** macro command. **ESC macro define** lets you start recording a sequence of keystrokes. The **ESC macro end** command ends the recording and prompts you to assign that sequence of keystrokes to a key. That key can be almost any key or a key pressed simultaneously with **Ctrl**, **Shift**, **Extend char** (HP110, Portable Plus users), or **Alt** (Portable Vectra users). Certain keys peculiar to the Portables such as **Menu** and **User System** cannot be used.

I assigned the **ESC file** command sequence to the **f4** key. I also assigned the sequence of keystrokes it takes to print a file to **Ctrl p**. Now, whenever I press the **f4** key the **ESC file** command key executes, and I go to DOS. When I hold down the **Ctrl** key and press **p** the cursor jumps to the start of the file to define the start of the block (**ESC define marker**) and then to the end of the file to print the block (**ESC Block print**).

The other four Editor macro commands let you save and manipulate your macro definitions. **ESC macro kill** deletes any current macro definitions from memory. **ESC macro load** loads a macro definition file of your choice. **ESC macro merge** lets you merge several macro files. Finally, **ESC macro save** saves the macros you have defined to a file name of your choice.

THE FILE CONTAINING THE MACROS

The file which you save containing macro definitions can be edited and modified within The Editor. The form of the file with macro definitions, defined in the new The Editor II supplementary manual, is straightforward and learned most easily by examining a saved macro file.

Certain macro definitions can only be created by editing the macro file directly. For example, I assigned **ESC file save** to **Ctrl s** in The Editor. It would have been impossible to record that macro because executing the command would have put me out of The Editor.

AUTOMATIC LOADING OF A MACRO FILE

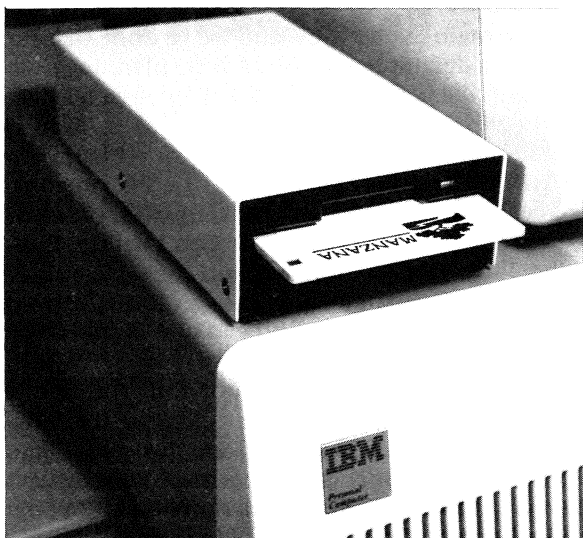
If you start The Editor with the command **editplus textfile /mmacros**, The Editor starts as normal, editing the file **textfile**. However, the option **/m** loads a macro file—in this case named **macros**. Further, it automatically executes the first macro in file **macros**.

I included over two dozen macros in a macro file on the new The Editor II master disk. That file gets automatically loaded when you load The Editor II. You can easily modify or delete these macros to suit your requirements. Having this macro file should prove a great time-saver since the work of setting up the macros has been done for you. Modifying an existing macro file either by editing the macro file directly or by recording new macros on the fly is much faster and easier than starting from scratch.

EXAMPLES OF USEFUL MACROS

To give a flavor of this new macro feature of The Editor, here are a few more examples of macros I've set up, most of which will be on The Editor II disk. I am looking forward to the clever ideas of our readers.

I have always wished that The Editor included a feature (common to many word processors), to delete the word at the cursor. I created this feature using macros and



How to transfer files back and forth between 3 1/2 " HP disks and 5 1/4 " IBM disks effortlessly

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**Manzana 3 1/2 " disk drives let you share files
(WordPerfect, Lotus 1-2-3, ASCII, etc.) between
your HP computer and an IBM PC compatible
with 5 1/4 " disk drives.**

(Bonus: The drives also let you use 3 1/2 " IBM disks with a 5 1/4 " IBM compatible system)

Manzana was the first company to offer 3 1/2 " disk drives for IBM PCs (1985), and has been the industry leader ever since.

Manzana 3 1/2 " disk drives are the best choice for HP users who also have 5 1/4 " IBM compatibles, for two reasons:

1. **Quality.** Manzana drives are well made and reliable. PC Magazine (July, 1987) has said, "[Manzana's] software and packaging are first rate, and, although 3 1/2-inch disk drives are available for less from mail-order houses, the quality makes Manzana's drives worth that little bit extra."

2. **Compatibility.** We were able to locate only one other brand of IBM PC compatible drives that can read HP disks. When we checked this brand out, we found that Manzana's product quality and documentation are superior.

4-WAY CHOICE

There are four kinds of Manzana drives to choose from: You can choose either an internal or external drive, and for each of these you can choose between 720K or 1.44mb capacity.

As the names imply, an internal drive installs directly into your IBM PC or compatible, while an external drive sits on or near your PC, connected to it with cables.

INTERNAL DRIVES

An internal Manzana drive fits into a 5 1/4 " half-height drive slot, and works with an external floppy disk controller that is already built into your PC. (If you have an IBM AT with two internal floppies, call us about Manzana's "3rd Internal.")

EXTERNAL DRIVES

An external Manzana drive comes with a "MUX" card that fits into either a short or standard expansion slot inside your PC. The MUX card serves as an interface between the drive and the computer; it does not affect the use of existing, built-in drives.

External Manzana drives get their power from the host computer. (If you have an early model IBM PC, it may require a self-powered external drive. Manzana makes those too. Call us for pricing.)

EASY TO USE

When you buy a Manzana disk drive, you also get Manzana's "3Five" software. 3Five is a "device driver" that enables your PC to read and write HP single and double sided disks and 3 1/2 " IBM disks.

Manzana disk drives and software are easy to use. The software assigns a letter of the alphabet to the new

drive—M, let's say—without affecting the existing drives. Then you treat the new drive the same way you treat any other.

(For example, if you use DOS, you could copy Lotus worksheets from the M drive to a 5 1/4 " IBM disk by issuing the command: copy m: *wks a: *wks)

WHICH KIND TO GET?

If you only need to access HP disks or 720K IBM disks, and have an IBM AT compatible, get a 720K Manzana drive.

If you also need to access high-density, 1.44mb disks, get a 1.44mb drive.

If you have space in your computer for an additional drive, you probably should get an internal drive. It will save you money, desk space, and an expansion slot (because you won't need a MUX card).

If you don't have space inside your PC for a second internal floppy drive, or if you prefer the look and feel of an external unit, get an external drive.

Whichever kind you choose, we think you'll be impressed with Manzana quality.

To enjoy the convenience of accessing your HP formatted disks from your 5 1/4 " IBM compatible, order a Manzana disk drive today.

	Suggested Retail Price	Subscriber Price
Manzana internal disk drive, 720K	\$235.	\$219.
PRODUCT NO. MZI2NM		
Manzana internal disk drive, 1.44mb*	\$290.	\$275.
*Requires AT compatible	PRODUCT NO. MZI1NM	
Manzana external disk drive, 720K	\$395.	\$369.
PRODUCT NO. MZI3NM		
Manzana external disk drive, 1.44mb*	\$475.	\$439.
*Requires AT compatible	PRODUCT NO. MZI4NM	

MANZANA DISK DRIVES

	Internal	External
Height	41.3mm (1.625")	42mm (1.63")
Width	148mm (5.82")	106mm (4.17")
Length (not incl. cable)	191mm (7.5")	191mm (7.5")
Weight	1.0Kg (2.2 lbs)	1.1Kg (2.4 lbs)
Power draw from host computer	4 watts avg., 8 watts peak	4 watts avg., 8 watts peak
Signal cable	N.A.	Attached FCC shielded
Access time	100 millise. avg.	100 millise. avg.

RECOMMENDED FOR:

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

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the following scheme. Assuming the cursor is somewhere on the word I want to delete, **Ctrl Right Arrow** followed by **Ctrl Left Arrow** puts me at the start of that word. Next I use **ESC** define marker at my current position, (the start of the word). I once again issue **Ctrl Right Arrow** to move me to the start of the next word. Now I type **ESC** block delete and I have deleted the word. I assigned this sequence of commands to **Ctrl Backspace**, and I have a delete word command. My new delete word command works fine and is only slightly slower than other normal Editor commands. If I want to un-delete the word I press **Ctrl i**, the macro which I assigned to **ESC** block insert.

My **Ctrl I** command (not on the disk) creates a template for a letter. It types my name and address, "Dear," "Sincerely, Hal Goldstein," and "1988" each in its correct spot, with the cursor placed to finish the date.

The macro file which gets loaded automatically with The Editor II includes an auto-executing macro. This first macro in the macro file executes each time The Editor II begins. Literally, that macro is listed in the macro file as follows:

```
<BEGDEF> <ShiftF2>ed<ENTER> <ESC>dwe  
<BKS> <BKS> <BKS> <ENDDEF>
```

I am not going to describe the syntax of the macro file, but listing the line should give you an idea of the contents of the macro file. This macro assigns to **Shift f2** the automatic loading macro. In other words, this macro gets invoked whenever you load The Editor II and whenever you press **Shift f2**.

As you may recall, if you do not give The Editor a file name, it prompts you for a name. In my macro I give it a default "work file" name, **ed**, in the same way HP110's MemoMaker uses **nameless** and Plus' MemoMaker uses **tempmemo**. Then I enable the wordwrap. (Like many users, I am not fond of the clever but at times cumbersome method of setting the environment to enable wordwrap and other default settings.) The "**<BKS> <BKS> <BKS>**" is in the macro to handle the case where you invoke The Editor II from DOS with a file name. In that instance the letters "e" and "d" get typed in your file and then backspaced away.

You can set up your favorite defaults such as word wrap and margins, using this automatic macro load feature.

Here is another short macro you might try, but which is not included on The Editor II master disk. Assign the / symbol to be **ESC**. That way you press the same / key to invoke the Lotus and The Editor menu. I tried this for a while but found it too annoying when I really needed the / symbol (which in turn you could assign to another key).

There are many other possible uses for The Editor II macro capability. A user could create a Dvorak keyboard. Also, Epson or long HP printer codes could be assigned to one key. I am really looking forward to hearing from readers on how you use this macro feature.

LIMITATIONS OF THIS NEW MACRO FEATURE

The new macro feature is consistent with the compactness, simplicity, and elegance of The Editor, and significantly adds to its power. However, this is in no way a full-featured macro program. There is no pausing or macro nesting. The process of macro creation can be a little clumsy and frustrating even after you get used to it. However, you only have to do most of the work once, in

setting up your main macro file—and we've done that for you by creating a default macro file. A little planning as to your key assignments and keystrokes makes the task easier as you proceed in creating macros.

There are a few idiosyncrasies among the HP110, Portable Plus, HP150, and Portable Vectra/IBM PC versions, since the keyboards differ. I could not, for some reason, assign sequences to **Extend Char u** or **Ctrl I** on the Plus. Also on the Plus, five of the function keys (**f3** and **f5** through **f8**) have important meanings (e.g., **f7** toggle from **Replace** mode to **Insert** mode), and can't or shouldn't be reassigned.

By the way, many users of The Editor don't realize that you do not need to press **Extend char** to activate the function key functions such as **f6 Delete Line**: just press **f6** to delete a line. In fact, in this latest version, if you haven't assigned macros to **Extend char** and a function key, you'll get beeped when you press that combination.

THE EDITOR II SIZE AND COST

Ed Gilbert used a new optimizing compiler to compile The Editor II.

This means that even with these two new features The Editor II still remains around 40K.

As before, The Editor II master disk contains versions of The Editor II (and associated macro files) for the HP110, Portable Plus, HP150, and Portable Vectra/IBM PC. We included all four versions on the same master disk as a convenience to the many who use more than one of these computers. In return, we ask that you respect U.S. copyright laws and not make unauthorized duplications of the disk. Our license agreement states that you can use The Editor on more than one computer as long as you are the only user. That is, if there is a chance that two people would be using The Editor at the same time, you need to purchase a second copy of The Editor.

I am certain that most users of The Editor will want this upgrade. The cost for The Editor disk upgrade is \$35. The Editor disk and ROM upgrade is \$58. SuperROM owners may also obtain The Editor II disk and ROM for \$58 or disk only for \$35.

The Editor II retails for \$129 and costs \$99.95 to subscribers.

P+ Format110 Is Upgraded To FormatPlus

By Ed Keefe

As one of my summer projects at Personalized Software, I re-wrote the Format110 program: this time using Turbo Pascal 4. What was once a 26K utility program, written in Turbo Pascal 3.01, has now become a 33K productivity tool called FormatPlus for the Portable Plus and Format150 for the HP150.

The original FMT110 program runs on the HP110 and Portable Plus and enables users of MemoMaker or The Editor to add page numbers, footers and headers, and other enhancements to their printed documents.

FormatPlus now provides a text-editing environment. It still retains all the capabilities of Format110, but goes beyond this to let you run other programs, such as a text editor, file manager, and spelling checker from within the FormatPlus program. Once you start a word processing session with FormatPlus, you will not need to leave it until the session is completely finished. The ability to work

T/Master—it may be the only program you'll ever need.

And it may be the most "comfortable" program you've ever used!

It may sound strange to call a computer program "comfortable", but that's the best way we've found to describe T/Master. And the other part is true also: T/Master may be the only program you'll ever need.

That's because T/Master has within it virtually every business application you can think of, including word processor, spelling checker, file manager, spreadsheet, database manager, numerical scratchpad, graph making, data communications, desktop publishing, and even more.

There are, of course, other "integrated" programs on the market that combine a number of applications in one. T/Master, however, is the only integrated program that runs on an HP Portable. In terms of capabilities, T/Master also happens to be one of the best. But that isn't what makes it so special.

You see, T/Master isn't just a very good program. It is an entirely *unique* program. It's one you simply must get your hands on before you can appreciate its incredible richness and elegance—and the sheer thoughtfulness that went into its creation.

THE HEART OF THE SYSTEM

As with most integrated programs, T/Master lets you share data between applications—for example, you can insert a spreadsheet into a report you're typing, or can take information from a database and move it into a spreadsheet—all without leaving the program.

However, with most other integrated programs, you have to exit the module you're in (e.g., word processor), load another module (e.g.,

spreadsheet), work in the second module, then "import" the result back into the first module. In addition, each module presents you with different commands, a different environment, and often a different "feel".

Not so with T/Master.

T/Master doesn't have modules in the usual sense. Instead, *almost everything is done using the word processor*; it's the heart of the system. T/Master's different functions (spreadsheet, database, etc.) are, in effect, *aspects of the word processor* that have special powers. Instead of leaving the word processor to create a spreadsheet that you then have to import, you simply create a spreadsheet (with all the computational power you need) right where you are.

Same for a database. Using virtually the same commands as for typing ordinary text, you can set up the structure of the database, enter data, sort, search, generate a report, and insert that report into your document.

And that's why T/Master is so *comfortable*. You always interact with it in the *same* mode, which is basically just to type. And what you type is ordinary text, or numbers, or simple English-like instructions. With T/Master, you're always on familiar territory.

SPECIAL FEATURES

Here are just a few of T/Master's most special features:

The **word processor** includes over 100 different functions. You activate these either from menus or by means of simple typed commands. On-line help is available at all times.

Highly suitable for desktop publishing, T/Master's word processor handles text in columns, and lets you view reduced-size layouts of entire pages.

The **spreadsheet** is different from any other. With most spreadsheets, the

columns are of a fixed, predetermined width, and the formulas for calculating each "cell" can only be viewed one cell at a time.

With T/Master, *you* specify the column widths and locations, and you type the formulas at the edges of the spreadsheet where you can

"No other application that I know of matches the power, thoroughness, and simple elegance of T/Master."

-David Hughes, Contributing Editor, The Portable Paper

see them at all times. (Very helpful in getting your spreadsheets to work!)

Also, unlike other spreadsheets, you can imbed explanatory text anywhere you like—another benefit of T/Master's text-oriented approach to program integration.

T/Master's relational **database manager** competes with database-only products like dBase III. It's easy to select and combine data from two or more files, set up cross-tabulations from data on disk, and generate ad hoc reports.

T/Master's **data communications** capabilities include many you would expect to find in sophisticated stand-alone communications programs. Yet they're easy to use even if you've never done data communications before. (Note: our version of T/Master has its data communications portion customized to the Portable Plus.)

T/Master includes a **"DO" command** that lets you string other commands together and execute them sequentially (in "batch" mode) without intervention.

It is surprisingly simple, for example, to set up a DO command that will perform the following functions at the end of every month: Compile data from selected databases, construct a bar graph, insert the bar graph into a monthly report, and address copies of the report to a selected list of recipients.

When you realize that you can orchestrate all this by means of a single DO command *entirely automatically*, you begin to see the incredible productivity and power that T/Master offers. At only \$295 for the entire package (or even less if you're a Portable Paper subscriber), T/Master is easily the best software value available.

HOW COME I HAVEN'T HEARD OF IT?

The T/Maker Company, developer of T/Master, chooses to remain small. They do not advertise, but prefer to let T/Master be known by word of mouth. This has worked well because of the high level of user satisfaction: According to a recent survey, 12 out of every 13 T/Master users "highly prefer" the program over other integrated packages they're familiar with.

T/Master is widely distributed in Europe and the Far East, where it is bundled with IBM PC compatible computer systems.

NOT FOR EVERYONE

T/Master is not for everyone. The T/Maker Company has told us that their most satisfied users are computer-oriented people for whom increased productivity is important (as opposed to casual computer users who might not appreciate the time and effort T/Master can save them, let alone its elegance).

If your computer is an important part of your work life, and if you're willing to learn a new—and much easier—way of functioning, then we urge you to try T/Master for yourself. If, within 60 days, you feel T/Master is not for you, simply return it for a full refund.

But remember, T/Master must be *experienced*. It has a unique way of doing things and a "feel" that's all its own. Order T/Master today. It may change the way you use your computer.

T/Master
(For Portable Plus, Portable Vectra, HP150).....**\$295.00**
~~\$279.95~~ for Portable Paper subscribers

T/Maker
(HP110 Portable).....**\$295.00**
~~\$199.95~~ for Portable Paper subscribers

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.

PORTABLE PLUS USERS

You'll need 296K of main memory to run T/Master, plus 135K Edisc space for the core system, plus the following amounts for storage of the various parts: word processor: 53K; speller: 151K; database and spreadsheet: 135K; data communications: 35K; chart making: 52K; misc. utilities: 60K. You can, if you wish, run the various parts of T/Master off your external disk drive.

HP110 USERS

T/Maker, an earlier version of T/Master, runs on the HP110 Portable with an external disk drive. The program runs beautifully. T/Maker doesn't support data communications, but it does include word processor, spelling checker, database, spreadsheet, scratchpad, and simple bar charts. It is easily the most comprehensive program available for the HP110.

RECOMMENDED FOR:		T/Master	T/Maker
HP110 Portable		•	•
Portable Plus		•	•
Portable Vectra		•	•
HP150		•	•
IBM PC and compat.		•	•

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

with FilePlus, The Editor, MemoMaker, and Webster's Spelling Checker is built into FormatPlus. However, it is a simple matter to change these defaults or be able to call up to seven programs directly from FormatPlus.

If, for example, while previewing a formatted document on the screen, you happen to see a word whose spelling is questionable, you can stop the preview and call up a spelling checker and make the correction. After the correctly spelled word has been inserted into the document, you can press another key and enter a text editor which will let you re-block the document. Then, with the flick of a finger, you can return to previewing the newly-formatted document.

The nice thing about FormatPlus is that it does NOT contain its own, built-in editor, spell checker or file manager. You can use the programs you already have for your Plus. You save time by not having to learn several new commands. You don't have to use up Edisc space with programs which perform the same function. FormatPlus will even let you hook other word processing support programs (e.g., Right Writer) into it.

FormatPlus comes with a printed manual. The manual contains a full set of instructions for using the program and for customizing it for use with your favorite text editor, spell-checker, and file manager.

FormatPlus retails for \$79.95 and costs \$69.95 to subscribers. Format110 for HP110 users costs \$39.95 (\$35.95 for subscribers) or may be obtained by subscribers with PrinterTalk for \$59.95.

The backup FormatPlus Eprom costs \$95, so the entire ROM backup package (disk and ROM) costs \$164.95.

Since FormatPlus has been designed to work with the Webster spelling checker, The Editor II, and FilePlus, we are offering special disk-based bundles. Subscribers can order FormatPlus, Webster, and The Editor II on disk for \$195 (normal subscriber price: \$239.85). Add \$39.95 for FilePlus rather than \$59.95.

Alternatively, you may order ROM packaged versions of Webster, FormatPlus, and The Editor II for \$499 (regularly, \$608.85). For \$599, add FilePlus (regularly, \$763.80).

Many Format110 users will want this upgrade. The cost for The FormatPlus disk upgrade is \$35. The FormatPlus disk and ROM upgrade is \$58. SuperROM owners may also obtain The FormatPlus II disk and ROM for \$58 or disk only for \$35. (The ROM will be available by the end of November).

P+ Touchstone 3 Numeric Key-Pad For Portable Plus

by Jerry Warshaw

I am an accountant, and have a client who originally owned an HP110. This client wanted me to own and use the same machine he had, but I objected because the 110 did not have a ten-key pad. When he bought the Portable Plus with the embedded ten-key pad, I ran out of excuses and had to buy it. With my Portable Plus, I primarily use Lotus 2, Memomaker, SHELP and Sidewinder.

While the Portable Plus embedded ten-key pad is helpful for loading numbers into Lotus, it is a pain for any other purpose. The aggravation occurs when the numbers are turned on, and you can not access the letters under the numbers. To access the letters (as in @sum), you must turn

the numbers off. The other silly thing that HP did was to move the backslash (/) from the lower right corner to the upper right corner when the numbers are turned on.

I recently saw an advertisement for the Touchstone 3 auxiliary ten-key pad for portable computers. The Touchstone 3 was originally designed for MS-DOS machines, but they had a large order for Portable Pluses and re-worked it accordingly. I apparently received the prototype, before their large order was cancelled.

The Touchstone 3 is the same shade of beige as the Portable Plus, weighs almost one pound, comes with a three foot cord and plugs into the serial port. The generic serial plug has screw ears on both sides, but came without screws. Accordingly, if you move the machine or ten-key pad, there is a great tendency for the plug to fall out.

This is not a major problem, because you can plug it right back in and it still works fine. The instructions for creating and auto-executing the **hpkey** program are not entirely clear, so I have the program in my A drive and start Lotus with DOS after loading **hpkey**. If you go to Lotus first, and try to load the program through the accessing system in Lotus 2.01, you can not re-enter Lotus.

The ten-key pad has 22 keys with 43 functions. Besides the ten digits (with an oversize zero), it has an oversize enter key, 4 cursor keys, 4 math functions (+ — * /), decimal point and back space. By using the shift key, you are supposed to have access to ten **f** keys (F1—F10), left and right brackets, home, percent sign, tab left and right, page up and down, escape and a comma key.

I am delighted that this ten-key pad was created. I can now leave my num-lock off and have ready access to the digit keys. I rarely use any of the Touchstone numeric keypad shifted keys as they are a little awkward to use and some don't work, (as described below). By creating a Lotus macro for move down or move right, I can load the numbers as quickly as if I had an adding machine.

Several of the shifted keys do not work as intended. Accessing the **f9** key gives you a backslash rather than a recalculation. **f10** turns on **end** rather than the graph. **pg up** and **pg dn** do not work at all. While it properly tabs right, the tab left key also makes the cursor tab right. Also, the home key responds the same as the left cursor and does not go home.

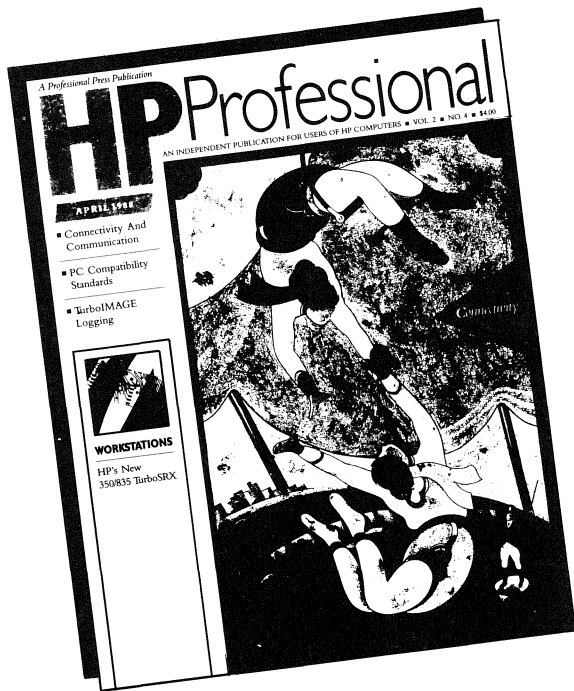
In general, however, the Touchstone 3 Auxiliary Key Pad is a very useful accessory, especially for work which involves loading a lot of numbers into Lotus worksheets.

*[We received a Touchstone 3 numeric keypad and software for testing. The keypad functions exactly as Jerry describes. All the basic numeric keys work fine, but some of the shifted keys do not work properly. In practice this should not prove inconvenient to users since the Portable Plus keyboard is available for page up and down and **f9** (Shift **f1**) and **f10** (Shift **f10**). The keypad itself is well constructed, and the keys' action is better than that on the Portables—firm and responsive.]*

We talked to Touchstone 3 President Bob Elliott and will send him technical documentation which might help enable his staff to fix the keypad problem. However, if you order the Touchstone 3 numeric keypad, expect some of the Shifted keys not to work properly.

The Touchstone 3 software is memory-resident. It therefore needs to be re-invoked every time the system returns to PAM. Probably the most convenient way for PAM

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users to run the software is to create a batch file containing the Touchstone software command and 123 for invoking Lotus. That batch file could be easily run from PAM.

The disk which comes with the Touchstone 3 numeric keypad contains software for standard IBM PC's and the Portable Plus. The manual refers to the IBM PC version. A readme file on the disk describes the Portable Plus version. However, little documentation is needed.

The Touchstone 3 numeric keypad and software for the Portable Plus will retail for \$139. Subscribers can obtain the numeric keypad (with instructions for PAM installation) from Personalized Software for \$135. See photograph on p. 44—Ed]

110 P+ PV Three-Ring Binders For The Portable Paper

For the past two years readers have urged me to create custom binders for *The Portable Paper*. Glen Frank, who triples as our bookkeeper, graphic artist, and administrative assistant came to the rescue and finally had some made. They are tan, vinyl, stiff covered, three-ring binders with a pocket inside each cover for storing catalogs, Portable Equipment Exchange brochures or whatever. *The Portable Paper's* front cover Portable graphic is printed on the binder's front cover along with the Personalized Software logo.

"The Portable Paper" and volume number (1, 2, 3, or 4) is imprinted on the binder's spine. Each binder is large enough to comfortably hold a year's worth of issues. You can order the binders for \$5 each or a set of four for \$18. Be sure to specify which volumes when you order.

110 P+ PV Dramatic Price Reductions In T/Maker and T/Master

For those tempted to try the integrated environment offered by T/Maker for the HP110 and T/Master for the Portable Plus, now is the time.

These products consist of a word processor, spelling checker, spreadsheet, graphics, data base, and in the case of T/Master, communications.

Included with T/Master is a disk full of examples. There's a system for invoicing, bookkeeping, mailouts, monthly statements—even one for a sports pool! Use one or two of the examples and you've already justified the purchase price.

T/Master is now available for Portable Plus users at \$159 (\$149 to subscribers). T/Maker for the HP110 retails for \$99.95, \$95 to subscribers.

110 P+ Turbo Pascal On The Portables: Past And Future

For HP110 users and Plus users wishing to conserve memory space, we still have about a dozen copies of Turbo Pascal version 3.0 left. Once these go, it will be impossible to purchase a new shipment of this version.

We were about ready to ship our modified version of Turbo Pascal 4.0 when Borland announced version 5.0. Ed Keefe and Paul Grimmer report that the differences for Plus users are minimal, except that it costs an extra \$50. We hope to announce a shipping date in the next issue of *The Portable Paper*.

Meanwhile, if you own Turbo 3 or 4 and want to upgrade to Turbo 5, you'll have to do so through Borland.

With proof of upgrade, we'll be able to send you our disks customized for the Plus at a minimal cost. To upgrade Turbo, send \$49.95 plus \$5 shipping to Turbo Update, Borland International, 1800 Greenhills Rd., Scotts Valley, CA 95066. Include the serial number of your current version. If you don't mind being put on hold, you can call (408) 439-1229. The toll-free call means a longer wait: (800) 543-7543.

110 P+ PV 48 Hour Shipping, No Items Back-Ordered

When I order a product from a mail order company, I am most satisfied when the product is of high quality, the shipment and billing are correct, and the product arrives quickly. Consequently, I have always wanted Personalized Software to deliver high quality products, quickly, and with no mistakes.

In terms of quality, the Personalized Software 60-day money-back guarantee policy arose from our belief that a company must demonstrate the quality and value of its products in a meaningful way. Since we at Personalized Software know the value of our products, we decided to remove our customers from financial risk with the 60-day return policy. Based upon your feedback and the low number of returns, our products overall are of good quality and value.

Rick Finnell in quality control and Larry Baldozier, director of operations, are fanatical about getting your order right. This is no simple task, given the variety of products we sell at low volume and that most of our products take some combination of extra disks, manuals, and letters.

Although we believe we have done a good job in terms of quality and correctness of orders, timeliness in getting orders out has been a major "snafu" since the company started. Sometimes we have been able to ship your order immediately. However, more often than I would like to admit, we have gotten as much as three weeks (and more) behind in filling orders. The variety of products, the small volume per product, the significant growth of our company in the last year, problems with suppliers, and a less-than-perfect computer system have contributed to this difficulty.

Everybody—our phone sales people David and Brian, our conscientious shipping personnel, and most importantly, you, the customer—feels the burden when we get behind. We finally realized that everyone in the company had a part to play if we were to realize our goal of shipping the order within 48 hours after we receive it. For the past several weeks we have been meeting our goal despite a steady increase in volume.

Without going into much detail, it turned out that several of my policies were a major factor in perpetuating the difficulty.

In particular, back-ordered items cause endless headaches and expense for our customers and Personalized Software. It turned out that most of the back-ordered items were new products which I had announced in *The Portable Paper* but were not quite ready for shipping.

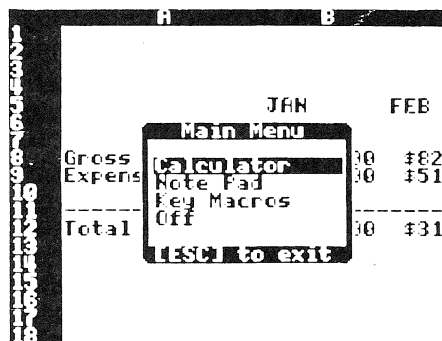
When I announce a product in *The Portable Paper*, I know the product works and has been well-tested. I also know there is a four-to-six-week period between the time I write about a product and when you receive *The Portable Paper*. However, completing the manual, preparing the

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 non-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):



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 without having to return to P.A.M., and without having to save your application file. 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. SH11NS

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

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master disk for easy installation, and final testing always seem to take at least four times longer than I think they possibly could or should take.

To show my commitment to changing this pattern of announcing products before they are ready for shipping, I painfully agreed with our staff not to send out 11,000 new catalogs (of HP150 products) until we were really ready to ship every product advertised in the catalog.

In the next section of this column, you'll see a status report of products announced or hinted at in the *The Portable Paper* which are not yet ready to be shipped.

The changes which need to be made to maintain our 48-hour shipping policy may represent a slight inconvenience to some of our customers. For one, we request that you no longer order or ask to check the status of your order through CompuServe. We ask this for two reasons: First, I will sometimes go for as long as two weeks without checking my CompuServe EMail. Second, when you order through CompuServe, I become involved in the order processing system. Past experience has demonstrated that this is not a help for your order or for our shipping people.

The other change we must make is that we can no longer put software on formatted disks sent to us in a self-addressed stamped envelope. Until now the policy on any of our "free disk" specials (such as Subscribers' disks or software discussed in one of our columns) was to give you the option of sending a formatted disk and self-addressed stamped envelope or simply sending \$9.50.

We have finally concluded, however, that putting software on your formatted disk ends up taking too much time. There are well over a dozen such disks from past issues. Digging out the master disk on a one-time basis and

making the copy takes long enough. Many times, however, the disk sent to us is not formatted or contains the wrong disk format. Often, not enough return postage is sent or the return envelope is not addressed.

We will now have to apply a standard charge of \$9.50 for these disks—the rough equivalent of our cost of making a proper master disk, copying it, and shipping it.

As many of you who have placed orders recently have noticed, we finally started using a computer for order processing this past spring. We are moderately pleased with the system, but it is far from ideal. We use a 286 IBM PC compatible which we soon will network. We run Account-Mate software which we have customized, using a dBASE III compatible program called Foxbase. It is our feeling now that if we had a better software system more suited to our needs, we could be a lot more efficient. If anyone has suggestions for a better software/hardware combination which can easily be installed and doesn't cost a small fortune (I can dream, can't I?), please give me a call at (515) 472-6330.

Personalized Software continues to grow and prosper thanks to your support. In return for your patronage, trust, and good will we will do everything in our power to increase the quality of our products and the timeliness of our service.

110 P+ PV Status Of Personalized Software Products Not Ready To Ship As Of October 6, 1988

What follows is a description of the status of products which we have announced or discussed in *The Portable Paper* but which are not ready to be shipped as of October 6, 1988. In addition, we now have a strong inventory

of used HP Portable equipment. Naturally, we don't have complete control of what we are able to buy, so some used (especially uncommon) items will invariably be back-ordered. All other items not mentioned below should be available for immediate shipping.

110 READHP

P+

PV

The master disk is ready, and the ReadHP manual is being pasted up this week. All orders should be filled by the time you read this. We had a very strong initial response for this product, which lets you read HP150 or HP Portable-formatted 3 1/2-inch disks on IBM PC-compatible 3 1/2-inch disk drives.

P+ FILEPLUS

PV

The master disk and manual are close to their final form but are still being completed. Minor changes (such as the help screen) in the program itself may still have to be made. We should be shipping FilePlus by November 1.

The delay is partly the result of the addition of new features which keep getting added to this Portable Plus file manager. I am really excited about the final result. The "last" new feature is most useful. You can tell FilePlus the name of your word processor (e.g., The Editor, Memo-Maker, MSWord) before entering FilePlus. When in FilePlus, put the cursor on the file you wish to edit and press the **Menu** key. Voila, you are in your word processor editing the file.

P+ FORMATPLUS

The master disk and manual are being completed. Very minor changes in the program may still have to be made. We should be shipping this product by November 15.

P+ FILEPLUS ON ROM

As soon as the master disk is complete, we will start work on the ROM. Not much engineering needs to be done to prepare the ROM. We should be shipping by November 30 or earlier.

P+ FORMATPLUS ON ROM

As soon as the master disk is complete, we will start work on the ROM. Some testing needs to be done to prepare the ROM. We should be shipping by November 30.

110 THE EDITOR II

P+

PV

The master disk is ready and the additional manual goes for printing this week. We should be shipping by October 15.

P+ THE EDITOR II ON ROM

Some testing needs to be done to prepare the ROM. We should be shipping by November 15.

110 1989 SUBSCRIBERS' DISK

P+

PV

We have collected the programs and associated documentation as discussed in this and the previous issue of *The Portable Paper*. We have not yet re-tested the programs, edited the documentation or put the collection together in a coherent fashion (all of which will take someone at least a week). We should be able to meet our promise of shipping the disk with the January/February 1989 issue to those who renewed early or paid for the disk.

P+ WORDPERFECT 5.0 FOR THE PORTABLE PLUS

In his Wizardry column, Cliff Looyenga describes his progress in getting WordPerfect 5.0 to work on the Portable Plus. Details on memory requirements and product availability will be announced in the January, 1989 issue. We should be ready for shipping January 1, 1989.

Those customers who use WordPerfect 4.2 for the Portable Plus can in the meantime upgrade to a regular IBM PC (3 1/2-inch disk) version of 5.0 for \$60 through the WordPerfect Corporation in Orem, Utah. In January we will publish details about the Portable Plus upgrade.

WORDPERFECT 5.0 FOR THE HP150

This has been my pet project, but it has gotten delayed when other deadlines (such as writing *The Portable Paper*) come first. The testing is done and the extra customizing files have been created. The documentation is mostly done but has yet to be integrated. It is a high priority—the most important item in the HP150 catalog. We should be able to start shipping by November 15, 1988.

Thanks to the input of Jules Levine of Commack, New York, the HP150 version is in some ways better than the IBM PC version of WordPerfect 5.0. Among several advantages, through some tricks, HP150 users get six extra keys. The WordPerfect 5.0 HP150 user need press only one key to Retrieve a file, Reveal Codes, Block, Switch to a second file, Spell check, or use the Thesaurus. Advanced users will be able to assign a macro to any or all of these six additional keys.

P+ BACKLIT SCREEN UPGRADE FOR THE PORTABLE PLUS

We hope to be able to upgrade existing Portable Pluses and sell new Portable Pluses with backlit screens. However, final details have not been arranged with HP, who may yet decide to offer the upgrade or new backlit Pluses themselves. We should be able to make an announcement in the January/February 1989 *The Portable Paper*. (See the lead story in the last issue of *The Portable Paper* for more details on the backlit Plus.)

I had the opportunity to use a backlit Plus on the road and at the office for about three weeks. The more I used it, the more I liked it. Lighting conditions never made it difficult to read the screen and battery life was sufficient. It took me several days to readjust to the normal screen after giving up my backlit version. I was surprised at how poor the readability of the normal screen seemed after working with the backlit Plus.

We showed the backlit screen at the Hewlett Packard international users conference (Interex) in Orlando in August, where it sat next to a Plus with a normal screen. The contrast between the two machines under the particular lighting conditions at our booth was most noticeable.

It was a delight to watch Portable Plus users' reactions to the backlit screen as they walked by. They knew something was different but weren't always able to identify what it was until they stopped. I was surprised at how well received the backlit screen was at the show.

110 INDEX TO 1986-1988 PORTABLE PAPER

P+

PV

We have not yet started indexing the 1988 issues. We plan on working on this project in November, so that we can ship the index with the January/February 1989 issue.

P+ **TURBO PASCAL 4.0/5.0**
We were close to being able to ship Turbo Pascal 4.0 for the Portable Plus when Borland announced Turbo 5.0. From the Portable Plus user's point of view there is not much difference in the versions except an extra \$50. Ed Keefe promises to send us update disks and make any manual changes when he receives his version of Turbo 5. We hope to be able to ship by January 1, 1989.

P+ **DRIVERS TO RUN LOTUS 1-2-3 FROM RAM IN THE PLUS**
Ed Keefe and another of our readers have tested the product, and it seems to work fine. (See Ed Keefe's Looking Glass column). Documentation and the master disk still have to be prepared. We would like to ship by November 15, 1988, if not earlier.

110 **FASTER PROCESSOR UPGRADE FOR THE PORTABLE PLUS AND HP110**

P+ We would like to announce both the screen upgrade and the CPU upgrade (as described in the January/February 1988) issue at the same time. We hope that this announcement will also come in the January/February 1989 *The Portable Paper*.

P+ **SOFTWARE 1 MEG RAM/ROM CARDS AND 2 MEG RAM CARDS**

David Burch reports that RAM prices for the cards have gone into the stratosphere. The retail price for a 2 Meg card is now somewhere in excess of \$5000. We'll keep you informed as to when prices may drop and we can start offering them again.

P+ **TOUCHSTONE NUMERIC KEYPAD**

We assume that we will have no problem obtaining these from the supplier. However, there sometimes are little "kinks" when we first start to order a product. In addition we will probably add our own additional documentation. The product should be ready by November 15.

110 **THREE-RING PORTABLE PAPER BINDERS**

P+ We have ordered the binders and expect to have them ready for shipping by November 1, 1988.

PV

110 **MOBILE RECHARGERS**

P+ We never know when we will receive a shipment. Call and check or send in your order and be prepared to wait.

PORTABLE VECTRA VIEWS

By Hal Goldstein

[Vectra Views contains information which specifically pertains to the Portable Vectra. In this column we note the latest developments on Portable Vectra products from Hewlett Packard, Personalized Software, and other third parties, and include specific tips for the Portable Vectra. Please feel free to contribute on disk or letter to Personalized Software, PO Box 869, Fairfield, IA 52556, or call (515) 472-6330. At the end of this column you will find a complete listing of products discussed.]

110 **The State Of The Portable Vectra**

P+ It's been a year since the Portable Vectra was introduced. Unfortunately it hasn't taken the world by storm. The Portable Vectra seems fated to join the HP150, HP110, and Portable Plus as a brilliantly engineered (and also slightly flawed), not-quite-in-the-mainstream computer system.

PV Its lack of acceptance by the media, the relatively poor screen quality, and the significant shakeup within the HP Portable Division have all contributed to making the Portable Vectra the newest HP-orphaned computer. It's ironic that the Portable Vectra has been reduced to this state, because HP's intent in building the Portable Vectra and dropping their wonderful RAM/ROM Portable Plus line was to put HP in the mainstream. HP is now approach-

ing the mainstream from a different angle, and seems to have let go of its past portable computer engineering efforts and focussed its resources into making one of its competitors, the Zenith SuperSport, an HP product.

As I have mentioned in past columns, I like my 20 Megabyte CS Portable Vectra. I use it with an external monitor as a rugged, 20 Megabyte, IBM PC compatible computer, with a great, no-compromise keyboard which I can easily take home from the office.

As I will discuss later in this column, the machine has recently become even more useful to me, with the addition of expanded memory, and because its internal 2400-baud modem and the twenty-five-pin serial port are now functioning correctly.

What follows is a letter from an HP Corvallis engineer who helped design the Portable Vectra. He has been helpful in supplying us with information useful in past columns. He is very busy on another assignment and prefers that his name not be used.

I hope that publishing his letter will inspire him and others familiar with the Portable Vectra to supply us with information useful to Portable Vectra users. From the letter that follows it is obvious that the potential of the Portable Vectra has barely been tapped. As mentioned in my Publisher's message we must depend on you, our readership for the majority of the knowledge and information which is shared in this publication.

PV **Portable Vectra Design Engineer Comments**

As you may recall I am one of the HP engineers who designed the Portable computers. When the Portable Vectra came out we spoke on the phone about the **setup** and **pal** programs, and I sent you some information describing how to use them. Thank you for passing this information on to your readers. (Vol. 3, No. 3, p. 8).

The September/October issue of *The Portable Paper* arrived yesterday and I was disappointed with some

parts and pleased with others. I would like to share my comments.

First, your piece on page 42 entitled "HP Portables, The Press, And The Mainstream" was first-rate! The biggest problem with the HP Portables is that they are not regarded objectively, but are often compared to "miniature desktops." I compliment you most highly on this article. I hope you will consider writing an article like this for industry magazines with wider distribution.

I was disappointed to see that you had no reply to Mr. Johnson's letter on pages 3 and 4, in which he expressed a negative and somewhat inaccurate view of the Portable Vectra. His contention that the Portable Vectra cannot emulate the IBM Monochrome Display Adapter (MDA) and that it doesn't really support 640x400 graphics is actually false. It is just that these features of the video card (as well as several others) were not described in the Portable Vectra Owner's Manual. You have to look to the Technical Reference Manual to find out about them.

I wish that you or someone at *The Portable Paper* would become more familiar with the material in the Technical Reference Manual, and would start sharing the wealth of additional capabilities with your readers.

I also wish I had time to write some articles for you, but I do not. I would like to point out some features for you to explore and find ways of sharing with your readers via articles and utilities, though.

For a start, I refer you to page 13.7 of the Portable Vectra CS Technical Reference Manual. As you can see from the bottom of page 13.7 and the top of 13.8, the Display/Printer Adapter not only supports all the modes of a CGA Adapter but also can be configured to be a Monochrome Display Adapter, a Hercules Graphics Card, and even support the 640x400 dot graphics modes found on HP's Multimode card for the desktop Vectras. As explained on page 13.9, MDA emulation can be selected with the tiny rotary switch which can be seen when the Portable Vectra's battery is removed. The Setup program can still be used to switch between the LCD and a Monochrome monitor.

One page of Hercules graphics emulation can be enabled by writing a utility to turn on bit 6 of the PCDC Bank register 3Dh bit 6 (see page 13.42). To effectively use Hercules graphics on the LCD however, a memory-resident utility would need to be written to use keys to dynamically change the PCDC Bank register 39h which can scroll the 720 column-wide Hercules graphics back and forth on the 640 column-wide LCD (see footnote on bottom of page 13-7).

Appendix B tells all about three extended graphics modes, two of which are 400-line resolution. Some HP software for the Portable Vectra uses these modes. These modes are also available on HP's Multimode card for the desktop Vectras.

Some other special features of the Display/Printer Adapter are that it not only supports the IBM-8 font (see Appendix A). These also happen to be soft fonts, so that they can be modified or replaced. All these features are available to a program using BIOS Interrupt 10 Function 11h. You may read about it on page 7.25.

I took about 5 minutes to write a program which will generate a large box cursor on any Portable Vectra screen (it also works on any IBM compatible) since some of your readers requested this. It is called **box.com**. Unfortunately,

ly, there is no way to prevent another program from modifying the cursor to another size. You may include this program on your 1989 Subscribers' disk.

I hope this information is helpful.

PV The Wrong Port

Has anyone else done this? I frequently take my Portable Vectra home with me and then back to the office. Upon returning to the office I re-connect my Portable Vectra to my DeskJet. Only this time I couldn't make the connection. As I have carefully trained my staff, when a computer doesn't talk to its peripherals, 90 percent of the time some simple connection is bad (wrong cable, not plugged in, not properly connected).

Normally, I don't bother tightening the screws of the cable into the printer port. With my new dilemma I tightened the screws. No results.

I then examined the connection to the DeskJet via the parallel port. (This is my least favorite thing about the DeskJet). I turned the DeskJet on its side. I pulled the parallel cable out and forced the parallel cable all the way back in, and re-clamped it. (This is always a struggle for me).

It still didn't work.

The DeskJet self-test performed flawlessly.

I gave up for a few minutes.

In my desperation I remembered an old saw we used when I worked for HP in HP150 support. If all else fails, pull the battery. Maybe some strange configuration information got stored in the Portable Vectra's non-volatile RAM!

No luck.

Finally, I saw the problem. The parallel cable fit perfectly into the 25-pin female serial Portable Vectra port. I connected the parallel cable to the parallel port and all worked well again.

Normally, PC users do not have this problem since the standard 25-pin port on most IBM PC compatibles is male, not female. My theory on why the port is female is that HP3000 terminals normally sport female ports. I'm sure someone will correct me if I am wrong.

PV Setting Time And Date

I admit it. I don't like PAM. I don't claim this makes complete sense, and I understand that Vectra implementations of PAM are more advanced than older HP Portable implementations. I just don't use PAM. I go right to DOS.

Pulling the battery as described above caused another problem. When I re-started the system, I found that I had broken the time barrier and was back in 1980. I reset the date and time using the DOS **date** and **time** commands. However, I returned to 1980 whenever I restarted my system.

I finally (correctly) decided that I should call up PAM and set the time and date from PAM. Later I realized that I also could have reset the time and date from the Portable Vectra setup program.

PV Modem/Serial Port Problems

My internal HP 2400 Baud modem had not worked since I installed it several months ago. Neither had my nine-pin serial port. I suspected some conflict between the two, but never made the time to take off the back cover and examine the serial card and modem card with documenta-

tion in hand. Furthermore I never received a modem manual.

The 25-pin serial port does work, and I connected it to one of our WorldPort 2400 Baud modems to meet my communications needs.

It turns out that HP did not include the modem manual with some of the modems it sent out. (If you did not get a modem manual contact your dealer who should be able to get one for you. If you are absolutely desperate, contact us, and we'll see if we can get you a manual.)

There are only two significant HP-specific items I found in the manual. First of all, you can plug your phone line into either of the two jacks on the modem card. Second, the modem comes set from the factory as communications port COM1. The only other possible setting is COM2.

There's the rub. The 9-pin serial port also comes set to COM1. In practical terms, if you have two devices assigned to the same port, at least one of the devices will not work. In my case neither the modem nor the 9-pin serial port worked.

My expanded memory for the Vectra CS also just arrived. I now had all the motivation I needed to open my system (takes less than 10 minutes). My plan was to install 1 Meg of Expanded memory on the serial card and change the 9-pin serial setting to COM3, leaving the 25 pin serial port at COM2.

I was successful in all but getting the 9-pin serial port to work. The EMS (Expanded Memory) and the 2400 Baud modem now work fine. (More next time.) However, the 9-pin serial port is still useless to me. Rather than elaborate now on what doesn't work, I'll wait until I get the whole system working properly. The Dual-Serial/EMS Adapter Owner's Manual is not always that clear. I hope we'll soon be able to fill in the missing points.

PV More On Backing Up Your Files

By Richard Burmeister

The article on backing up files which appeared in *The Portable Paper*, Vol. 3, No. 5, p. 14 contains some good advice for computer users. However, the article failed to explain how to best use **xcopy**. As was pointed out, the **/m** option instructs **xcopy** to copy all files whose archive bit is set, and then to reset (delete) the archive bit from each file after it has been copied. This makes it easy to use **xcopy** to copy more files than will fit on a single disk. All you have to do is to insert a new disk, then reissue the same **xcopy** command. (This works unless a single file is too large to fit on the disk. Then you have to use BACKUP or Fastback or Corefast, etc., to back up the file, or use an archive program such as PKARC to shrink it before backup.)

For example, after issuing the command **xcopy c:\wpdata a:\wpdata /m**, DOS will display the message "Insufficient disk space" if all the files don't fit on the A disk. However, the archive bit will be turned off for all files that were copied. All you have to do is to insert another disk in drive A, then reissue the **xcopy c:\wpdata a:\wpdata /m** command.

The following batch file automates this technique:

```
echo off
if %1 = / goto finis
:start
xcopy c:%1 a:%1 /m
if errorlevel 1 goto again
```

```
goto finis
:again
echo *****
echo Insert another disk in drive A, and
pause
goto start
:finis
```

Save the file as, say, **backup.bat**. To back up the sub-directory, **wpdata**, you would type the command **backup wpdata**. If there is not enough room on disk A, the batch file will prompt you to put another disk in drive A.

I hope your readers will find this information useful.

A final note: After writing the above, I read the article, "The BacTools Collection," by Ed Keefe. It is important to note that Ed is referring to the version of **xcopy** that appeared in the DOS TOOLS collection. This version does not support the **/m** option, so it cannot be used in the manner described above.

PV HP Now Shipping MSDOS 3.3

All Vectras are now being shipped with MSDOS 3.3. HP is reportedly working on the more significant MSDOS 4.0 upgrade, but it should be a while before 4.0 is ready to be shipped.

Of the changes from DOS 3.2 to DOS 3.3, I found two new commands and two changes to existing commands which might be of interest to Portable Vectra users. The new MSDOS **append** command sets search paths to data files. It is similar in function to the **path** command, which sets search paths to program files. The new **call** command is a batch file command which allows one batch file to be called from another batch file without terminating execution of the first batch file.

New options were added to the **backup** and **restore** commands. You can now back up files based on the time of day and can format target disks directly from the **backup** command. You can also now **restore** backed-up files modified before or after a specific date or time.

There is no direct program for upgrading. If you want the new DOS, it costs \$120 and is part number 45951D for 3½-inch disk.

PV Optimizing Battery Use In The Portable Vectra CS

by Bruce Gordon

There are two basic types of batteries used in portable computers today: nickel-cadmium (known as "ni-cad"), and lead acid. Hewlett Packard has chosen to use a lead acid battery in the Portable Vectra CS. Each type of battery has its advantages and disadvantages, but lead acid batteries have a strong advantage in that they do not develop "memory." A memory problem occurs in ni-cad batteries when the battery has not discharged fully, and is recharged. Let's say your battery is 50 percent discharged, then fully charged. This only needs to happen a few times, and the ni-cad "remembers" that 50 percent is all that can be discharged. In this way you have reduced the battery use time by half, from, say, 4 to 2 hours.

With a lead acid battery there is no memory problem. But a user must be sure not to "deep discharge" the battery, as lead acid batteries do not tolerate this, and can be damaged by it. The best procedure is to use the Portable Vectra CS on battery power for whatever length of time is necessary, but be sure to connect the charger as soon as the

unit indicates a "low battery" condition. If you only use the Portable Vectra for a short period of time, simply connect the charger at your earliest convenience.

The common question "How many hours can I run my portable on battery power?" cannot be given a specific answer because there are too many variables. When you read a specification for battery use, take it as a generalization. The two main drains on battery power are mechanical (disk drive use) and memory (computation in RAM). Of the two, mechanical use drains the battery at a greater rate. If you use a program which is said to be "disk-intensive" (such as WordStar), the battery will need charging sooner than if you use a program that is "RAM-intensive" (such as Lotus 1-2-3). One way to discover if your program will tend to be disk-intensive is to look at the program files. Files that have the **ovl** extension are overlay files which the program needs to access continually from the disk, and load into memory. Such constant disk access will reduce the battery's charge.

If you use programs which initially load most of the needed files into memory, your system will have to access memory rather than the disk, and your computing time (before needing to recharge the battery) will be greater. Word Perfect Executive is a good example of this kind of program. WP Executive integrates a word processor, spreadsheet, calendar, etc. and fits on a single 720K 3 1/2-inch disk.

There is a way to make any program totally memory-intensive, and therefore maximize battery use. It is one of the options available for the Portable Vectra CS: a dual/serial EMS board. By installing this board, which contains 2 Meg of memory, you can use part of the memory (say, 1 Meg) as a large RAM disk. Then, write a simple batch file which will 1) copy all the program files to the RAM disk, 2) move control to the RAM disk, and 3) run the program from the RAM disk. Using the WordStar example, and assuming you keep all necessary files in subdirectory **c:\ws**, your file might look like this:

```
cd\ws change to WordStar directory
copy ** d: copy all files to RAM
d: move control to the RAM disk
ws begin WordStar
```

Note: So that the RAM disk will be initialized each time the computer is started, you must have the appropriate line in your **config.sys** file. You can read about setting a portion of the memory as a RAM disk in the documentation which came with the board.

By using this method you will optimize battery use, and, incidentally, you should see an increase in the speed at which your program operates.

If you save any data files on the RAM disk, however, be absolutely sure you copy them to either a floppy or hard disk before you turn off the machine, or they will be lost. A good rule of thumb is to never have any more data in RAM (which is not copied to another disk) than you are willing to re-create, as any interruption to the power will cause the loss of all data in RAM.

Still Hope For Portable Vectra Recharger

Prototypes for Portable Vectra cigarette-lighter chargers have been built. These units have been designed to meet the specifications set forth by Hewlett-Packard. We planned to sell these to subscribers for \$69.95 (\$79.95 retail). However, we need a minimum order of 15 to 20 to pro-

Also works on the
HP150.

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.

4. Sort files

FilePlus can list the files in a directory by name, extension, size, or date. (An alphabetical listing by name helps you locate files in a hurry. A listing by size is useful in determining which files to erase in order to free up any needed amount of disk space.)

5. Single-step "Move" command

To move a file from one directory to another, you no longer have to copy the file first then delete the original. FilePlus lets you do it with a single "Move" command—and you enter the command with one keystroke!

6. Protect your files

You can protect your files (make them "Read-Only") to guard against accidental deletion. FilePlus even lets you do this with entire directories! You can unprotect the files whenever you wish.

7. Show attributes (Read-Only, Hidden, Archive)

FilePlus displays the attributes of all the files in a directory so you can view 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 without it.

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HP110 Portable	Portable Vectra
Portable Plus	HP150
IBM PC and compatibles	

duce a batch.

If you are interested give us a call.

PV Adjustable Cursor Contrast

If the box cursor program on the 1989 Subscribers' disk does not suit your needs, you might try Ski Soft Publishing's "No-Squint Laptop Cursor." We have not tried it, but according to reports, it is intended for users of laptop computers who sometimes lose sight of the cursor on a low-contrast LCD display. The memory-resident program uses less than 1K of RAM. Users can specify size, shade, and frequency of blinking for their cursor. *1644 Massachusetts Ave., Suite 79, Lexington, MA 02173, (617) 863-1876.*

SPECIAL FEATURE:

Data Base Software for Portable Plus

110 Introduction

P+ *By Hal Goldstein*

PV We owe thanks to readers Rod Sharp and Peter Leye for this issue's Special Feature on Data Base programs for The Portable Plus. A database is a structured collection of information. For example, a rolodex containing names, addresses, phone numbers, and comments is a simple ("Flat File") data base.

Many HP110 and Portable Plus users have learned to use Lotus 1-2-3 to satisfy their simple data base needs.

As your needs grow on the Portable Plus, you may wish to consider an alternative. The ECM ROM from Hewlett Packard lets you design and manipulate Rolodex-type cards for easy storing and access of simple flat-file lists, like one containing names and addresses.

Alternatively, you might consider either Condor 3 or Clipper, which are both discussed in this special features section.

In the first article (on Condor) Rod Sharp has outdone himself. In it Rod first gives examples of the types of data base you might set up, explaining the difference between a "flat file" and "Relational" data base. Then he goes on to describe the advantages, limitations, and specifications of running Condor on the Portable Plus.

The second article, about Clipper, was submitted by Peter Leye. He assumes that you know something about the dBASE III environment. dBase III, like Lotus 1-2-3 in the spreadsheet world, is more or less the standard data base program. dBase III is actually best conceptualized as a programming language which specializes in producing data bases. dBase III is in fact an interpreter. That is, in order to make use of a data base created by dBase III, you must have a copy of dBase III present. On the other hand, if you use a dBase III compiler such as Clipper, once you have created the data base and related program files compiled by Clipper, you no longer need Clipper present to run the application.

Compilers and interpreters have their advantages and disadvantages. In the Portable Plus environment however, the differences are academic. There is no dBase III-compatible interpreter which runs well on the Portable Plus, so if you need a dBase-compatible program to run on the Plus, you have no choice. Peter Leye gives a complete description of how to run Clipper on the Plus and compares it to dBase II and dBase III on the Plus.

110 Condor 3

P+ *by Rodman A. Sharp*

PV INTRODUCTION: A FEW INFORMAL NOTES

I really didn't feel that I could begin writing my review of CONDOR 3 until I'd used it enough to probe its outer limits and find out if I really enjoyed living with it. I do. It's a superb product and I'm using it regularly for business and personal needs.

Now that I've found out how difficult and time-consuming it is to try to do a good job on a software review (my first), I have a much deeper appreciation for the dedication to providing first-class material which *The Portable Paper's* contributors have consistently demonstrated. In *The Portable Paper*, we have excellent material in abundance, and I personally have benefited enormously from this journal.

In my consulting practice with small businesses I often help out with software selection. I've found it very difficult to get across the distinction between flat file and relational databases without getting into detailed examples, so I've gone that far in this review to help people understand why they should buy Condor.

One thing should be made clear about the versatility of the Portable Plus version of Condor 3. If you buy the Portable Plus version of Condor 3 you can copy the program and tutorial files over to your IBM-AT (and, I presume, PC- and XT-) compatible and run Condor 3 without any changes other than modifying the startup batch file.

Almost no one is going to pay twice to buy Condor so they can run it in the field today on their Portable Plus and then use it again tomorrow to massage the same data files on their office Vectra or AT. It's certainly within the "treat it like a book" philosophy of software licensing to use one copy of Condor in both of these ways. If you do use Condor 3 on two machines, you are already stretching the license agreement, so make sure there is no possibility that two people could be using Condor at the same time.

WHAT IS CONDOR 3?

Condor 3 is a relational database which is well-suited to the Portable Plus. It is a rare bird—a well-conceived program (based upon a deep understanding of the application), which is easy to begin using. This is due to Condor's excellent menu interface (with in-context help screens) and fine tutorial. Once you gain a little experience you can switch from the menu system to command mode and save Edisc space.

Condor 3 is tightly coded, manages its memory superbly, and includes capabilities sufficient for anything a single user is likely to want to do with a database. With over 250,000 copies sold and more than a decade on the market, Condor 3 is well polished and (in my experience) bug-free.

CONDOR 3



and CONDOR, JR.

Database management made easy!

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

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

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

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

AND COMPUTE TOT SALES.TOT.DATE.

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

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

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

WHAT THE EXPERTS SAY:

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

—Jim Morgan, Data Base Advisor

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

—James Perotti, PC Magazine

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

—Jerry Pournelle, InfoWorld

and other files not created by Condor.

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

Condor 3 \$495.00

\$379.00 for Portable Paper subscribers

PRODUCT NO. CR11NS

Condor, Jr. \$99.00

\$89.95 for Portable Paper subscribers.

PRODUCT NO. CR13NS

Condor 3
Condor, Jr.

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

MEMORY REQUIREMENTS

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

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

WHAT'S A RELATIONAL DATABASE AND WHY MIGHT YOU NEED ONE?

Maybe you don't.

If all you want to do is keep track of a few hundred records, each one rather short (only a few categories or "fields" per record and no more than 100-200 characters of information per record), and sort them occasionally by one or two fields, and now and then view or print out all or a contiguous block of records in tabular format, your needs can probably best be served by using the "database" capabilities of Lotus 1-2-3.

Many computer owners use 1-2-3 as their only database software. A database listing the contents (for example) of a 200-bottle wine cellar by vineyard, year, variety, cost, when bought, where bought, and taste rating could be handled nicely this way. ("For tonight, Dear, what do we have in Chardonnays over 3 years old that we can offload on this bunch before they go bad?")

If you become expert at writing 1-2-3 macros, you can accomplish very complex database manipulations, but most people who push 1-2-3 that far would be better off using a true database product.

Moving up from 1-2-3 to a relational database will allow you to use data entry **forms**, a faster and more accurate way to enter data. You can build automatic data checking into the form via minimum/maximum acceptable values, allowing numbers only for parts descriptions, insisting on a minimum/maximum number of characters per entry, etc. And there's plenty of room on the form to add instructions on how to fill in the data.

The biggest advantages, however, of using a REAL database (instead of 1-2-3) are its abilities to handle much larger collections of data and to extract needed informa-

tion with much greater flexibility and speed.

In the database world, software falls into two broad categories—"flat file" databases and "relational" databases.

WHAT'S THE DIFFERENCE BETWEEN "FLAT FILE" AND "RELATIONAL" DATABASES?

A "flat file" database is equivalent to a single stack of index cards, where each card is a complete record containing everything recorded about its subject, with the information broken into fields or categories spread out over the card.

An example is an art gallery's inventory where each card represents a single work of art with the artist's name, address, and phone number; the date it was acquired; the title of the work; the size of the work; the medium used; the gallery's inventory number; one or two lines briefly describing the work; the asking price; commission percentage; and room on the card for the price at which it was sold; date sold; and the buyer's name, address and phone number.

Such a "flat file" can only be sorted in one way at a given time and it's difficult (if not impractical) to combine two such flat files or to extract a subset of it as a new database. As time goes by, it gets harder and harder to maintain the integrity of the file after many additions, updates, deletions and manipulations of the records, especially if more than one person is manipulating the file.

Another drawback to the flat file database is the necessity for endless repetition of information already recorded on other cards, but which must again be entered manually to make each record complete. In the art gallery inventory example, this includes the artist's and buyer's address and phone number over and over again as more works from the same artist are brought into the gallery

At last! EASY TO USE COMMUNICATIONS SOFTWARE

for the HP110 and Portable Plus

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

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

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

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

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

prototype. It runs on the Portable Plus.

Both programs allow you to:

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

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

Most importantly, both programs make efficient, logical use of function keys and menus to make the job of transferring files and programs *easy*. You won't appreciate *how* easy until you try Term110 or TermPlus for yourself. We invite you to do so today at our risk.

Term110 (for HP110) or
TermPlus (for Portable Plus)\$99.95
(Specify which program when you order)
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RECOMMENDED FOR:		Term110	TermPlus
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Portable Plus		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Portable Vectra		<input type="checkbox"/>	<input type="checkbox"/>
HP150		<input type="checkbox"/>	<input type="checkbox"/>
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and repeat sales are made to the same buyer.

A "relational" database is equivalent to several stacks of index cards, some of which contain only subsets of the complete database, and if desired, another stack containing all the information on every item in the database.

The general principles of sound relational database design are to minimize the entry of information which has been entered before and to break up the data into several smaller related databases, each of which contains a separate class of records. Then, when you want to print out a report or view selected records containing only the information you want to see, you make a new database by combining information from the smaller related databases.

Back to the art gallery. The "WORKS" database includes all the information specific to each work including artist's name, date acquired, title, size, medium, inventory number, brief description, asking price, commission percentage, sale price, date sold, and buyer's name, address and phone number. The "ARTISTS" database includes the name, address, and phone number of each artist. The "BUYERS" database includes the name, address and phone number of each buyer.

Now we need only to enter each artist's address and phone number once in the ARTISTS database, and each buyer's address and phone number once in the BUYERS database. To be able to combine the three separate databases in different ways we must RELATE them by common fields. The ARTISTS database is related to the WORKS database by the "artist's name" field, present in both databases, with every artist's name found anywhere in the WORKS database also found on one of the records in the ARTISTS database. The BUYERS database is similarly related to the WORKS database by the "buyer's name" field—every buyer's name found anywhere in the WORKS database is also found on ONE of the records in the BUYERS database.

Any time we want to update the WORKS database for changes in the ARTISTS or BUYERS databases, we can instruct Condor 3 to match up the artist's name in every record in WORKS with the one record in ARTISTS which contains that name. Then we copy the artist's name, address and phone number from ARTISTS into the corre-

sponding fields in WORKS. Similarly, we can fetch information from BUYERS to update the buyer's address and phone number fields in all the affected records in WORKS.

Now suppose one of the artists moves. You've sold 20 of his works so far and have 11 more in current inventory. If you use a single flat file database for your inventory, you have the unenviable task of entering the artist's new name and address on 31 records. Same thing if a buyer moves.

With a relational database, you need change only ONE record in the ARTISTS database, and create a new WORKS database by recombining the WORKS and ARTISTS databases quickly, easily, and automatically.

WHAT ADDED CAPABILITIES DO RELATIONAL DATABASES HAVE OVER FLAT-FILE ONES?

Using Condor 3 with the art gallery example, we'd probably use the **post** command to add new addresses and phone numbers to the existing ARTISTS and BUYERS databases, and **post** again to update the WORKS database with this new information.

post retains a copy of WORKS as it was before the additions, and a copy of the new records added in a CHANGES file. This creates an "audit trail" which lets you reconstruct every step taken in modifying WORKS, lets you track and recover from data entry errors made, and lets you resurrect a database accidentally corrupted by operator error or a power failure.

Besides **post**, Condor 3 has several other valuable "relational" capabilities not found in purely flat-file databases.

compare lets you do just that—compare two databases record by record, calling attention to all the records in the second database which don't match those in the first. This tells you when information you need to make a new WORKS database is missing in the files from which you'll build it.

select lets you create a new database which is a subset of one you already have, selecting records by various criteria such as "all records where the artist is Mahler and the buyer is Kaufman."

project creates a new database where only some of the

fields and their associated information are extracted, and/or where only those records meeting certain criteria are extracted.

combine, **append** and **join** are subtly different ways of assembling a new database from two others. **combine** does just that—two sets of records in two databases of the same structure (same number of fields, in the same order, and of the same size and type) are combined into one new database while saving copies of the two databases being combined.

append attaches copies of all the records from database2 to the end of the records in database1, keeping a copy of database2 but NOT a copy of database1 as it read before the **append** was done. Compared to **combine**, **append** needs less work space in memory to operate, and while the two databases must be identical in number of fields and record size, the names of the fields need not be the same.

join attaches copies of all the fields and values from selected records in one database to copies of all the fields and values from selected records in a second database to make a new, third database. It's a powerful way to create a new database with larger and more complex records structured very differently from what's gone before.

WHY SHOULD YOU START OFF WITH A RELATIONAL INSTEAD OF A FLAT-FILE DATABASE?

Even if you think you can "get by" with a flat-file database, I recommend that you consider going with a relational database like Condor 3 from the beginning.

If all you need now are flat-file capabilities, Condor 3 is easy to use and as powerful as any other flat-file product I've seen for the Plus. Later, when you find you really need relational database capabilities, you've already built your databases in the correct form. All you have to do is learn a few more commands to greatly increase your data management power.

The relational database concepts you'll learn with Condor 3 are universally applied throughout the relational database world. They are concepts which will make it much easier for you to understand more complex database systems you may encounter in the future.

HOW IS CONDOR SO WELL-SUITED TO THE PORTABLE PLUS?

Unlike other relational database products, Condor 3 was designed from the start to derive the utmost capacity and power from computers with limited amounts of fast access on-line memory.

The entire program is very small by relational database standards—only 329K for everything which applies to the Portable Plus environment, including menu mode operation, command examples, and extensive in-context help screens and error messages. Two other popular relational databases for hard disk PC's, dBase III and Paradox, each need two megabytes or more just to store their program files.

Once you've become familiar with Condor 3, you usually won't need the menus and will be able to work much faster using the "command" mode. Eliminating the menus and their messages further reduces the Plus version of the whole program to 243K.

Another unusual aspect of Condor 3 is the way the

program is divided into many small files corresponding to individual commands, all under the control of a master module which is only 25K. Other relational databases typically have at least one monster file which must always be accessible for the program to run.

HOW MUCH DATA CAN WE HANDLE USING CONDOR 3 WITH THE PORTABLE PLUS?

Say you want to use Condor 3 on a Portable Plus without an external disk drive, under battery power, for data entry and for viewing/querying/manipulating data files. For this you need only 281K of program in menu mode and 195K in command mode to do everything of which Condor is capable, except creating complex customized reports. But reports require a printer—and report writing is something you only do back at the office.

Further, if you'll sit down and think about which commands you'll really be using, you can probably cut Condor's program files by another 30 to 50K (to make more room for data).

If you have a 512K Plus without a RAM card and are using Condor 3 in command mode, you can set your Main Memory/Edisc partition at 120K/392K. In the example above, this leaves $392K - 195K = 197K$ for your data files. If you want to sort and combine files, you'll need extra working space equal to the largest file you'll manipulate. In the worst case—only one large data file—you still have $197K/2 = 99K$ for your data file, or room for 500 records of 200 bytes each (a typical record size for a Rolodex name-firm-address-phone file).

If you want to work with bigger data files using a 512K Plus, the best strategy is to load the program files into the Edisc and keep the data files on the 9114 disk drive. The program will run somewhat slower but not painfully so.

With data on the HP9114 disk you can still partition the Plus' memory at 120K/392K in command mode. Since you need only 195K in Edisc for program files (without fancy report writing), you have $392K - 195K = 197K$ left over in Edisc for other programs, text files, etc. The 9114's 3 1/2-inch disks allow a maximum single data file of 350K (with 350K sorting room on the disk) or 2 data files of 233K each with 233K sorting room, etc. This is 3 to 4 times the data capacity of the 512K Portable Plus used alone.

With a 1 Megabyte RAM card installed in a 512K Plus, your file handling capabilities increase enormously! Again, setting the memory partition at 120K/392K for the above example, you now have $(392K - 195K) + 1024K = 1221K$ for data files. This allows one data file of 610K with 610K sorting room or two 407K data files with 407K workspace for sorting, or over 4000 records of 200 bytes each in the two data files. There's no point now in using the 9114 disk drive except for archiving and backing up the data files.

HOW FAST IS CONDOR 3 ON THE PORTABLE PLUS?

In my experience, with program and data files in Edisc, the Portable Plus runs Condor 3 as fast as my 8 MHz, 640K RAM, 20Mb hard disk HP Vectra (IBM/AT clone, for which Condor 3 is also eminently suited).

Some examples:

One of my Condor 3 data files has 1050 records with 159 bytes per record in 7 fields for a total data file size of 170K. None of the fields is indexed (very little speed advantage shown for a file this size). Speed tests included

time to **display** the first record in a file (subject to conditional selection criteria which rejected about 90% of the records), time to **scroll** from record to record in the displayed selected subset of the records, and time to **sort** the file into a new sequence.

Using a 512K Portable Plus with programs and the data file in Edisc, it takes 1 to 2 seconds to **display** the first record, ½ second to **scroll** from record to record, and 35 seconds to **resort** the 1050 records. Since you **sort** only occasionally, under these conditions Condor 3 seems VERY fast—responding almost instantaneously.

Using a 512K Portable Plus with programs in Edisc and the data file on the 9114 disk drive, it takes 2 to 4 seconds to **display** the first record, \ second to **scroll** from record to record with an additional 5 to 10 second delay after each block of 30 or so records (to fetch a new block from the 9114), and 4 minutes 54 seconds to **resort** the 1050 records. Except for the slow **sort**, you don't give up too much speed compared to keeping the data on Edisc.

Using a 512K Portable Plus with programs and the data file on the 9114 disk drive, it takes 37 seconds to **display** the first record, 3 seconds to **scroll** from record to record with an additional 5 to 10 second delay after each block of 30 or so records (to fetch a new block from the 9114), and 4 minutes 54 seconds to **resort** the 1050 records. This seems painfully slow and I don't recommend it.

In **sorting** time tests, I was surprised to find no speed difference at all for our database of 1050 records when the available RAM (Main Memory) was squeezed down from 512K to the minimum 120K required in command mode.

WE CAN TELL YOU'RE OVERSOLD, BUT WHAT OTHER GOODIES ARE THERE IN CONDOR 3?

For one thing, Condor includes a superb tutorial.

Unless you're already an experienced relational database user, DON'T shortcut the tutorial. It's very much worth the 20 hours you'll invest in it because you'll learn the principles behind relational databases, become familiar enough with the full depth and power of Condor to make it into a powerful tool in your hands, and learn some ESSENTIAL good habits for working quickly, safely, and soundly with a large database. The long range payoff for your productivity is a big one, and you'll greatly reduce the chances of disastrous data loss after investing piles of time building up a valuable database.

For another, there is a versatile and easy-to-use Report Writer.

Condor 3 can make quick and dirty columnar tabulations (like 1-2-3) of extracted and sorted data, and can produce mailing list labels without resorting to the Report Writer. For fancier reports, Condor 3 offers two report writing styles: an easy-to-learn "short-form" report specification which is all most people will ever need, and a harder-to-master "long form" report specification which will satisfy the most demanding needs.

Let us not forget the Custom Menus and Automated Procedures.

You can build your own point-and-shoot menus which invoke macros to automate frequently-used data manipulation and reporting procedures. These can save the expert a lot of time, and will help prevent errors and omissions when repeating complex procedures, and make

it easy to mobilize Condor 3 power in the hands of the inexperienced.

COME ON NOW, WHAT WON'T CONDOR DO?

It won't satisfy your needs for an on-line multi-user database in a local area network (LAN). Condor 3 is strictly a single user database (any number of people can access a Condor 3 database, but only one person at a time).

Condor 3 allows the user to relate only two files at a time. With successive relational procedures between different pairs of files, you can in principle build up an interactive multi-file database of unlimited complexity.

If you're building a complicated automated transaction-based data handling system linking bills of materials/parts inventory/sales orders/production orders/purchase orders/invoices/packing slips/accounts receivable etc., you'll be much better off working with a more powerful relational database like Paradox (fabulous) or dBase III (dreadful), both of which let you simultaneously open and manipulate many data files at a time.

However, if you really need to build such a complicated transaction-based system, you probably also need multiple access by many users, all entering and retrieving information at the same time. That gets you back to needing a relational database which will run on a LAN, which Condor 3 won't.

NOTHING'S PERFECT, SO HOW ABOUT 3 RUBS ON ALADDIN'S LAMP?

First Rub: Give us a CROSS TABULATE capability to make reports like this, showing total sales from January through March correlated by product line sold and sales territory:

FIRST QUARTER SALES SUMMARY				
WHAT>> WHERE //	Basic Widget	Bigger Widget	Bolder Widget	All Widgets
Oberammergau	12345	12	1234	13591
Unterammergau	1234	123	12345	13702
Innerammergau	123	1234	12	1369
Alle Gaus	13702	1369	13591	28662

Using Condor 3, it's easy but time-consuming to gather the totals needed to fill in this table by hand, but Condor's Report Writer offers no automatic way to produce the CROSSTAB report. The vast majority of other flat-file and relational databases out there won't do it either. A notable exception is the excellent flat-file database REFLEX, which built its marketing niche largely on its CROSSTAB capability.

Second Rub: Condor 3 offers no means to directly import and export data files from and to 1-2-3. You can import data via a three-step process involving conversion of 1-2-3 files to ASCII output, defining a database in Condor 3 to match the 1-2-3 records, and importing the ASCII data into Condor 3, and vice-versa. But even though Condor 3 was born long before 1-2-3, it's inexcusable these days not to include automatic data exchange with 1-2-3, especially since one of the first things most new Condor 3 users will want to do is transfer over databases they've already built in 1-2-3.

Third Rub: In an otherwise superb user interface, **scrolling** commands for browsing through selected records are curiously crippled. I've just sorted a database and selected 44

2400 baud portable modem for your HP Portable

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



Weights only 6½ ounces!

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

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

A MYRIAD OF FEATURES

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

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

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

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

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

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

DOUBLE GUARANTEE

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

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

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

	Retail Price	Subscriber Price
WorldPort 2400 modem	\$359.00	\$319.00
(with Carbon Copy PLUS software) PRODUCT NO. WM12NM		
WorldPort 1200 modem	199.00	179.00
(without software) PRODUCT NO. WM11NM		
Cable to connect modem to HP Portables	30.00	20.00
		PRODUCT NO. WM14NM
9-volt AC adapter	7.95	7.95
		PRODUCT NO. WM15NM
Acoustic coupler	79.95	79.95
(300/1200 baud) PRODUCT NO. WM16NM		
Upgrade kit: WorldPort1200—WorldPort2400	199.00	179.00
(includes Carbon Copy PLUS software) PRODUCT NO. WM13NM		

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records meeting certain criteria and want to browse through these records one at a time. Using the **display** command, Condor 3 shows me the first record and lets me step forward only through the stack. To move back one record I have to again invoke **display** and step forward again through the stack.

The **list** command is better, since at least I can step forward or backward one record at a time, until I access the last record when my only choice is to exit the stack or go back to the top of the stack. Really AGGRAVATING! When browsing a stack of records with **display** or **list**, I should ALWAYS be able to step forward, or backward one record at a time until I choose to exit the stack. And—for heaven's sake—I should also be able to jump forward or backward a specified number of records.

WE'RE TEMPTED, BUT WILL WE OUTLIVE THE LEARNING CURVE?

Remember learning to use 1-2-3? Condor's learning threshold is higher—it'll take you longer to begin generating useful results with it.

But if you have much experience with 1-2-3, you already realize how complex it gets at the outer reaches of its capabilities, limits few people ever attain. Condor 3 takes much less time to truly master—there's less to learn and the way it works is far more intuitive than 1-2-3. Build three modest databases with it and I predict you won't go back to the stack of index cards or 1-2-3 again for anything much over 100 records.

Condor 3 is a superbly conceived and crafted tool

which I appreciate every time I use—much like a fine computer (my Portable Plus), or a well-made musical instrument.

APPENDIX: CONDOR 3 PROGRAM FILES—WHAT'S NEEDED FOR WHAT?

The chart which follows takes into account the 62 Files on Personalized Software's supplementary Condor 3 Program Disk for the Portable Plus—minus five files which are not needed or are only used once at installation time. The cumulative number of bytes is computed by summing the number of bytes of Edisc space actually taken up by each file. (That is, the byte total for each file was taken from the directory listing and then rounded up to the next multiple of 512.)

The chart represents the maximum disk space taken by files in each category. In practice, not all the files will be needed for a given application.

This chart shows five possible ways you might use Condor on the Portable Plus and the maximum Edisc space required to hold Condor program files for each way. Each category can perform the function of the categories to its left, plus an additional function. "Relational files," therefore, can also handle "Flat files" and "Data entry."

The first category "Create File, Enter Data" is for those who want to use the Portable Plus as a "data entry machine." For example, you might want to take your Plus home one night and enter the information (such as your wine list) in the data base, or you might have your secretary enter all your customer data.

The second category shows the amount of disk space required if you are going to use Condor for a flat-file data base. For example, you may wish to use Condor to manipulate (sort, enter, print) your customer data base.

The third category shows the amount of disk space required if you are going to use Condor for a relational data base. To continue with the art gallery example, you want to list artists, works, and customers and be able to relate the three separate (flat) files.

The next category "Macros, Custom Menus" shows the amount of disk space required if you were to take advantage of Condor 3's ability to create macros and customize the menu system for your application. The final category, "Reports," shows the amount of disk space required if you want to generate complex reports.

If you want to be able to access each of these features via a menu system, the total bytes for each category is listed. If you know Condor 3 commands or are willing to use Condor 3 reference material, you can save file space by just entering commands instead of using the Condor menu system. The "Command Mode only" totals give the Edisc requirements for each category in command mode. (Running from menus or commands is like the difference between using PAM File Manager and DOS to manipulate files.)

EDisc Space Taken by Condor 3 Files In Bytes

	Create File Enter Data	Flat File manipulate, view, query	Relational Files, manipulate, view, query	Macros, Custom Menus	Reports
Command Mode only	124,416	173,056	189,440	195,072	242,688
Menu & Command modes	210,432	259,072	275,456	281,088	328,704

PRICING AND AVAILABILITY

Condor 3 retails for \$495. Subscribers to *The Portable Paper* can obtain Condor 3 from Personalized Software for \$379. The Personalized Software version of Condor 3 contains the original Condor 3, 2.20 packaging for the HP150 and a supplementary disk for custom installation into the Portable Plus.

[If enough readers are interested, a set of two to four Condor 3, 64K Eproms may be available. The makers of Condor 3 have already endorsed the idea. The only real obstacle is for Personalized Software to find the engineering time to create and test the EPROM's. If a reader is interested please give me a call. (Are you listening, Rod, Paul, or other Condor fans?)]—Hal]

P+ Clipper On The Plus

PV by Peter Leye, Brussels, Belgium

I have tested the program called Clipper on the Portable Plus, and my results are positive. For my tests, I used the Autumn '86 version. There is now a new version, Summer '87, and I would like to hear from someone else if that works also. My guess is that it does.

What is needed is nothing more than what is supplied on the original disks:

clipper.exe (78K)
plink86.exe (77K)
clipper.lib (253K)
ansi.obj (3K)

There is much more on the three disks, but what is listed here is essential. (Also, you can drop **plink86** and use

the MS-DOS linker LINK, but I didn't try that.) It is up to the user where to install it. Any drive is fine—just stick to the rules of the user's manual and the **readme.lst** file.

When you use Clipper, the following happens: There are one or more **.prg** source code files, almost identical to dBASE III+ **.prg** files. There are some differences however, which I would call enhancements. The **.prg** files all have to be in one directory, and they remain there untouched. Clipper will compile these into one **.obj** file. The **.obj** file is just an intermediate file, and can't be touched.

This stage works correctly right out of the box. Then **plink86** links your program, making one more file; the **.exe** file which is the program that will be able to run alone. To make this work on the portable, you must include the **ansi.obj** file in the list of files to be linked. Don't include the line **device = ansi.sys** in your **config.sys** file.

(Hint from *The Portable Paper* Vol. 2, No. 5): A typical batch file, **cl.bat**, to do all this in a row on the Portable Plus, would look like this:

```
cls
clipper %1
if not errorlevel 1 plink86 fi %1, \clipper\ansi.lib \clipper\clipper
```

The first four mentioned files as well as **cl.bat** are in the **a:\clipper** directory, which should be in the **path=** list. Be patient when the linking starts, because **plink86** does not provide messages such as **wait** or **busy** or anything like that. The process takes two and a half minutes for even the smallest program. Linking a big monster program won't take much more time, though.

Although Clipper uses the **ansi** terminal on the Portable Plus, the result is not a drastic screen slowdown, as you get with dBase III work-alike dBase XL (discussed most recently in Vol 3, No. 5, p. 30). The Clipper screen works normally, except for box frames. I tried to compare its speed of execution with a small program which writes nine times a number on the display, counting to one hundred each time. Here is its code:

```
clear
store 1 to num
do while num < 10
? num
store 0 to wait
do while wait < 100
store wait+1 to wait
enddo
store num + 1 to num
enddo
```

To make it run in dBase XL you must add "set talk off," and to make it run in dBase II you must use "erase" instead of "clear." To make the comparison, I put dBase XL, dBase II and the Clipper-compiled program on the Plus' Edisc as well as the **.prg** files for dBase XL and dBase. The times are in seconds.

	dBASE II	dBase XL	Clipper
loading the interpreter	2	10	
running the program	18	56	6

I made all three of them do an index on a **.dbf** file of 1495 records, on a 13-character key. For dBase II, I had to copy the file to an alternate delimited file. Then in dBase II I created a structure and appended it. (The index files of version summer '87 are identical to those of dBase III.)



	dBASE II	dBXL	Clipper
indexing time	90	32	22
resulting index file size	53 K	41 K	71 K

The total of 413K required to have all the necessary files on your Edisc may be a problem, but consider the difference with dBXL. Everything can be done using only 256K of memory-setting if your program is not too big. What's more, I don't think anyone would want to keep Clipper and Plink86 on their Edisc when they are developing a bigger program. You can use your Edisc to write the source code wherever you are. Once it comes to compiling you won't sit and gaze at the screen anyway, since it is not in Turbo. I have a floppy drive in my office, and one at home. Comparing the following tables you'll see that compiling from a floppy is still an elegant solution, if you want to work with the Plus.

This timing has been done as follows. The source code is composed of 33 .prg files, which total 184K. They are in a subdirectory on the Edisc. The result is an .obj file of approximately 100K and an .exe file of 233K. The memory setting was 384K. (The same compilation on an AT at 8 Mhz goes at about double the speed of the Edisc.) It is said that the summer '87 version compiles about 6 times faster. The times are minutes:seconds.

	Edisc	9114A disk drive
load the compiler	0:02	0:35
compile, pass 1 & 2 and tables	13:25	13:25
load linker	0:03	0:40
linking	3:10	7:50
total	16:40	22:30

It may be possible to link on a desktop, using **ansi.obj**, and then run the program on the Plus (I haven't tried this). If you link on the Plus, without **ansi.obj**, the program doesn't run on the Plus (maybe it runs on the desktop).

Compared to dBXL, the main advantage of running Clipper on the Plus is that you can travel with a powerful program, keep the rest of your Edisc free for data, and run your application at ten times the speed. Of course, dBXL has its own advantage, its interactive mode.

One more important thing to note about the resulting application programs is that the normal cursor keys won't work on the Plus. They are needed, though, for editing a **get** screen, or for using Clipper's nice menu system.

There is a solution; you have to use Ctrl-combinations. This may sound like a nuisance, but it didn't take long to get used to when I realized that the keys which replace the cursors lay in a nice cross near the Ctrl key. There are key combinations for delete, backspace and the insert toggle, but you don't need them as the normal keys do work. Clear to end of line is Ctrl-T, but that doesn't seem to be really needed either.

All of this works equally well in HP or ALT console mode. This means that if you wrote a program on an IBM-compatible, and used special line drawing or foreign characters, you need only run your program in ALT mode on the Plus, and all is well.

Only one problem was discovered: It happens that when your program has edited a screen, and some time later it re-writes a **get** which has been **read**, the whole screen blanks out, and only the new line disappears. The

program continues to work perfectly, but the screen which contains some information is gone. There may be a way around this problem if you include additional **save screen** and later **restore screen** in your program.



Through the Looking Glass

110 by Ed Keefe

P+ A REQUEST HONORED

PV Several months ago, a reader of this column called and asked if I would design a menu program which would let him run other programs on the Portable Plus. He didn't like PAM's menu system. He suggested that the menu program have the look and feel of Lotus 1-2-3.

Even though I have forgotten the name of the person who made the request, I have not forgotten the request. Your menu program is now ready.

YAMS: YET ANOTHER MENU SYSTEM

Since I don't remember the person who suggested the menu program, I've decided to make it available to "Looking Glass" readers as a public domain program. The program is called YAMS: Yet Another Menu System.

YAMS will be available, in a couple of months, on the 1989 Subscribers' Disk from Personalized Software.

If, however, after reading a description of the YAMS program, you decide that you must have this program sooner, send the usual \$9.50 along with your name and address, or a self-addressed, stamped, disk mailer and a blank, formatted disk to The FastAid Co., 314 SW Logan, Ankeny, IA 50021 (not to Personalized Software). We'll send you a copy of the program by return mail.

LE MENU

YAMS contains a small utility program called **lm.exe**: Le Menu.

By using the **lm.exe** program you can create either vertical or horizontal sliding bar menus: the kind of menus which are familiar to users of Lotus 1-2-3 or the Norton Utilities.

In the **lm.exe** program, the sliding bar may be moved back and forth or up and down by pressing the arrow keys, or by pressing the space bar or the backspace key. If you overrun either end of the menu, the sliding bar will wrap around.

In using **lm.exe** you may also move to any item on the menu by pressing the first letter of the item. And, when you design your own menu system, it may have several items with the same first letter. Thus you could hop from **dir** to **dirs** to **disk**, in the menu, by repeatedly pressing the "D" key. When you have chosen an item you simply press the Return key to activate it.

WHAT'S THE CATCH?

The biggest catch is that you will need a Portable Plus. The current version of YAMS does not work on the HP110 computer. Also, you will have to write your own batch file program to take advantage of the **lm.exe** program.

lm.exe comes with a sample batch file, called **yams.bat**. When you run the **yams.bat** program, you will get instructions on how to design your very own menu system.

If you are familiar with DOS error-level testing, you should see, immediately, how the batch program works. Even if you are not familiar with such esoteric stuff as "error-levels," you should be able to modify the **yams.bat** file and turn it into your own menu program. (**yams.bat**, incidentally, demonstrates a way to gather many small batch files into one large menu-driven batch file. Merging six batch files into one let me save almost 2500 bytes on my Edisc.)

One feature of the **lm.exe** program will let you put your menu anywhere on the screen. You will also be able to create submenus which seem to pull down from the main menu, or horizontal submenus which appear to slide out from a vertical menu. All of this is done with only one line in your batch file.

ANOTHER SMALL BONUS

The YAMS package contains another program called **text.exe**. This program, like **lm.exe**, is a batch file enhancer. It will let you fill up the screen of the Portable Plus with text material in the blink of an eye. You have only to tell **text.exe** where (in which file) to look for its text material and how much of it to display on the screen. **text** does the rest.

lm.exe, the heart of the YAMS menu system, and **text** were both written and compiled with Turbo Pascal 4.0. The Pascal code for the **lm** program and the **text** program is included in the package. However, you will need Turbo Pascal 4.0 or 5.0 and the new TurbPlus program from Personalized Software, if you plan to modify either the **lm** or **text** program.

I wrote **lm** and **text** to prove to myself that Turbo Pascal 4.0 would work on the Portable Plus. And I will have to admit that I like what Turbo Pascal 4.0 (TP4) can do to speed up program development on this computer. When TP4 is combined with The Editor and run from the Edisc of the Plus, the whole package becomes greater than the sum of its parts.

I have grown to like TP4. It lets me create programs rapidly, and the final products are usually small in size. **lm.exe** is only 6300 bytes. **text** is about 5000 bytes. The equivalent programs written in Turbo Pascal version 3.01 would have been about 18,000 bytes apiece.

(Since Borland recently announced Turbo 5, you'll have to wait at least another two months before you can purchase a Turbo Pascal 5 kit designed for the Portable Plus from Personalized Software. Personalized Software was set to go with a Turbo 4 product when the Borland announcement came.)

P+ FORMATPLUS

However, not all programs written in TP4 wind up being as small as **lm.exe** and **text**.

The FormatPlus program, whose story is told in "News From Personalized Software" elsewhere in this

issue, grew from a 26K byte program, (using Turbo Pascal 3) to a 33K byte program with TP4. Much of the growth was due to added features in FormatPlus. Many of the new features came from users of Format110, but, once the staff of Personalized Software learned what I could do with TP4, they offered a never-ending stream of "see if you can get FormatPlus to. . ." If I had tried to implement all the new features in the program with TP3, I have a hunch the final version of the program would have been around 40K.

The FormatPlus program now works and should be available from Personalized Software by the time this article reaches print.

WHAT ELSE WORKS AND WHAT DOESN'T

Another one of my summer projects while working for Personalized Software was to test as many programs as I could to see which ones could be made to function on the Portable Plus and HP150 computer.

Many of the programs I reviewed were in the area of programming languages. Here are a few of my findings.

P+ FROM THE PEOPLE AT MICROSOFT

PV The MicroSoft Macro Assembler program (MASM), version 5.1, does work on the Plus. There is no reason why it should not. MASM does not have a built-in editor. You need to use your own editor to write assembly language programs. MASM simply converts your code to machine language.

The biggest problem with MASM is that there do not seem to be very many exemplary program listings to key in and assemble. (Assembly is not my favorite programming tool, and trying to test MASM with my own code was only asking for trouble.) Much of the assembly language code which is available for giving MASM a trial run is IBM-PC specific. You will need the HP Technical Reference Manual for the Portable Plus so that you may convert the assembly code you find in books or magazines to work on the Plus. Without this additional reference volume, MASM becomes merely another way to write small, fast programs which will crash your computer.

For those of you who might be thinking of learning "C" (and who isn't these days?), here are a couple of tips.

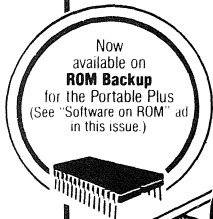
MicroSoft provides two different C compilers. I have not had a chance to work with the large MS C compiler, version 5.0. However, I have tried using the MS Quick C program on the Portable Plus.

Quick C comes in two "flavors": an integrated program and a command line-driven compiler. Needless to say, the integrated version of Quick C, with its built-in editor and pop-up help screens, does not work on the Portable Plus. However, I had high hopes that the command line version of the program could be adapted for use with the Portable Plus and the HP150 computer.

Using the command line version of Quick C implies that you would use your own editor to write a "C" program. After writing the code, you would then use a command, at the DOS prompt, to invoke the compiler and tell it to process your code.

Believe it or not, the MS Quick C command line compiler will work on the Portable Plus. That's the good news. The bad news is that it is a memory hog. Not only must the command line compiler (90K bytes) reside on the Edisc, the integrated version must be available as well. The integrated version uses 325K of Edisc space. On top of that

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



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

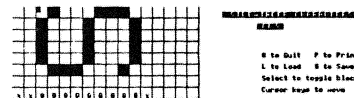
PRODUCT NO. SW11NS

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.

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

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 built-in 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

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you need room on the Edisc for library and header files. When all is said and done, most Portable Pluses would not have sufficient memory to handle the load. Trying to run the program from the HP 9114 disk drive makes a mockery of the "quick" in Quick C. In short, I cannot recommend this product for use on the Portable Plus.

P+

BORLAND WANTS YOU TO SPEAK ITS LANGUAGE

PV

On the other hand, Turbo C 1.5 does work well on the Portable Plus. Borland International, the company which sells Turbo C, provides both an integrated version and a stand-alone compiler and linker for their "C" program. The integrated version will only run on 100% IBM-compatible computers. However, the command line-driven compiler will run on the Portable Plus. The command-driven compiler, along with most of the other "C" files, takes up about 370K of disk space.

I have been using Turbo C on the Plus for the past month while teaching a course in this computer language. I started out using Turbo-C on a desktop computer. However, after several crashes and computer lock ups, I started using the Portable Plus as a test bed for C programs. The Plus is much easier to reset and start up again. I should also mention that the crashes and lockups were not the fault of the Turbo C program. I suspect that all failures were due to "pilot error."

"C" is a great programming language. It will let you write your own text editors, compilers, and operating systems and then, if you get sloppy, it will promptly OVER-write your editors, compilers and operating systems. It may, then, go merrily on its way and trash your whole system. The greatest advantage to using the Portable Plus, with "C," is that the operating system is in ROM. You can't trash that with anything less than a "C" compiler from the

Howitzer Co.

I won't recommend Turbo C, version 1.5, mainly because it is no longer available. Turbo C is now at version 2.0 and growing. The newest version has not yet arrived for testing so I can't recommend that either.

I would ordinarily, and heartily, recommend Turbo Pascal 4.0 for your programming pleasure. But alas, Turbo Pascal 4.0 has also been discontinued in favor of the newer Turbo Pascal 5.0. According to Borland, my copy of TP5 is somewhere in transit and should arrive in Ankeny, Iowa "real soon." Stay tuned.

Borland has also announced its own Assembly Language package and a Debugger program. Neither of these products was available for review at the time of this writing.

It would appear, from all these upgrades and new products, that Borland wants all programmers to speak its languages. And, I suspect, if programmers bought all the upgrades and new products, Borland would, truly, be able to say "Now you're talking our kind of language: money!"

If there is sufficient interest, I may be able to bring out Turbo C and other Borland language packages through Personalized Software. The packaged form will probably be similar to that which will be offered with Turbo Pascal 5.0—it would contain some kind of integrator program which easily lets you transfer between the Turbo Language and a text editor such as The Editor II.

P+ NEW FOR LOTUS 1-2-3

Apart from programming languages, I was also able to examine a spreadsheet enhancer which makes a disk-based copy of Lotus 1-2-3, rel. 2.01, work on the Portable Plus.

M&H Enterprises has recently released a set of driver programs for Lotus 1-2-3.

With the M&H set of driver programs, you may load a copy of 1-2-3, release 2.01, into the Portable Plus and make it run just like it does on a desk top computer. You may also incorporate many of the add-in programs which are currently available. Two such add-ins come with the driver programs. Both add-ins are provided by Lotus Corp. One of them will speed up calculations in large spreadsheets. The other add-in will let you create 1-2-3 macros on the fly. I have not tried any other add-ins such as Note It or 4-Word.

The only trick to using this package is to convert a copy of 1-2-3 from 5 1/4-inch disks to 3 1/2-inch disks. From there it may be installed on the Edisc of the Portable Plus. To do this installation you must, first, obtain a version of 1-2-3 which is free of any copy protection.

Lotus Corporation no longer uses copy protection on its software. It has even made available a program which will let you eliminate the copy protection scheme from 1-2-3, release 2.01. If you don't have a copy of the official Lotus Unprotect program, Copy II PC will also get rid of the protection scheme and make the 1-2-3 program usable without a key disk. Of course, copyright laws still prevent you from using the program on more than one computer at a time. However, you may decide to use 1-2-3 on the Portable Plus, exclusively, once you see how well it works on that machine. For myself this use of 1-2-3 is ideal. I only use 1-2-3 once or twice a week to update my grade book program. I don't need to keep 1-2-3 available in ROM and I don't mind the 30 second wait while 1-2-3 loads from the

HP9114 disk drive.

The M&H Lotus driver program should be available from Personalized Software by the time you read this article. The cost from Personalized Software to subscribers is \$59.95 and to non-subscribers is \$69.95.

110 A PLETHORA OF DISK FORMATS

P+ Three and one-half inch disks are the best thing since the fork-split English muffin, right? They're eminently more rugged than 5 1/4-inch disks, hold more data and fit better in coat pockets and desk drawers. The only problem with 3 1/2-inch disks is the multiplicity of formats.

PV At home, and on the road, I use both single-sided and double-sided 3 1/2-inch disks with the HP format (265K and 710K byte capacities, respectively). At work, I am faced with two more formats: 720K byte disks used on the new PS/2 Model 25's and 1.44M byte disks which work with the PS/2 Model 50 computers. I've solved the problem of the 3 1/2-inch disks, at work, by settling for the 720K byte format. This means that I have to carry twice as many disks, but it also means I have half as much irritation. I don't have to worry about putting an incompatible disk in the Model 25's.

Also, the Portable Plus is able to read from, and write to PC-formatted 3 1/2-inch disks. That's good to know. I can start converting all my 710K byte disks to 720K byte format and eliminate another small nuisance. But the real bonus comes if you have a desktop computer with an HP-IL card. With Revision E of the HP-IL software, you are able to use the HP9114 disk drive as a comparatively slow 3 1/2-inch drive. Once the new HP-IL software is installed, you can put an IBM-formatted disk in the HP9114 drive; hook the drive to the HP-IL card and issue the **dir** command. You will see a directory listing, rather than a message that you are trying to read a non-DOS disk. This undocumented feature lets me get by without having to buy an add-in 3 1/2-inch drive for my desktop computer. (The new revision E file will probably be available on the 1989 Subscribers' Disk assuming permission is obtained from HP.)

110 BATCH FILE TRICK

P+ Recently, Hal Goldstein asked me if there was a way which one batch file could create a second batch file.

PV If you have ever wondered the same thing, here is an answer.

Key in the following batch file using the file name **1.bat** and then run it. **1.bat** will create and run **2.bat** which will run **1.bat** which will delete and recreate and re-run **2.bat** which will run **1.bat**...and you will need to press CTRL-C to get this example of "mutual recursion" to cease and desist.

```
echo off
cls
echo echo off > 2.bat
echo cls >> 2.bat
echo This is #1.bat
echo echo This is #2.bat >> 2.bat
echo pause >> 2.bat
echo 1 >> 2.bat
2
```

The trick is done with the I/O redirection symbols > and >>.

Using the ECHO command with `>`, **2.bat** will delete and/or create anew a **1.bat** file and put the **echo off** command in it. The rest of the lines in the **1.bat** file append lines to the existing **2.bat** file. The last line in **1.bat** runs **2.bat**.

It is left as an exercise to the interested reader to write a batch file which writes a second batch file which writes a third batch file. Can it be done?

That's enough for now. Until next time, Happy Porting.

GRIMMER'S

Portable Tales

By Paul Grimmer

It is October 6th today and it has snowed for the first time this year in Anchorage. In a way I am glad since the great outdoors here is quite a large distraction in the summer-time. But then again, winter has skiing, ice skating, the Iditarod dog sled race. . . well, maybe winter won't be so easy to stay indoors either.

The pop-up is progressing. The name remains HPop although several other good ones were submitted. For example, if you believe that your Plus and your programs are like a brother, you might be tempted to name the program RAMBro (it gets better when you say it out loud). Or perhaps you would combine Plus and POP-up to get PLOP.

110 COMPLETING THE POP-UP

The form of the program is essentially complete and many of the modules are now close to being unleashed on the beta testers (and probably will be by the time you read this). HPop has changed somewhat into a combination DOS shell and pop-up, mixing the good points of PAM with the convenience of a pop-up. The shell part of the program allows you to "point-and-shoot," i.e., to run anything using the file manager of the pop-up. It also has a "command stack" which will remember your last 20 or so DOS commands so that you can easily re-use one or edit it.

The pop-up itself is comprised of two major parts, the permanently resident part and the overlay part. In an effort to conserve RAM, only the key parts of the program will be in memory and most of the applications will be swapped in and out of the program as necessary (very quickly coming from the electronic disk or the B: drive). Assuming that HPop will reside on a ROM, this will not only hold down memory use but also will enable us (or any programmers) to add applications at a later date without increasing the memory requirements of the program.

The "permanently-resident" parts of the program will not only be functional by themselves but will also be available to other parts. For example, the file manager will enable you to copy, delete, rename, move, etc., various files. This is certainly useful by itself, but it will also be called any time you are prompted in one of the other sections for a filename and you enter a wildcard (? or *).

The "permanently-resident" modules currently are:
File Manager

Clock/Calendar

Off

Clipboard (to cut/paste between HPop and applications or just within HPop itself)

Keyboard macros

Window editor

Error handlers, messages, I/O control, etc.

The "overlay" (or transient) modules are:

Notepad (up to 50K)

Shell routines

Time Manager

BIOS settings (like PAM)

Printer settings

Calculator

Phone Dialer

Outliner

The only part which will be swapped in and out of memory will be the program code itself. All data (except for the notepad) will remain in RAM since we would have to use even a bit more memory and time if we stored each application's data in a DOS file.

PROBLEMS TO OVERCOME

There are a number of problems unique to this type of program which must be overcome. Obviously, we have the pop-up/down problem we have previously discussed, but the others are not so obvious. When text strings are used in most high-level languages like Pascal, memory is set aside for each string, with enough memory for the longest line length. In Turbo Pascal, the longest length string we can have is 255 characters. If we set aside this much storage for each string, we will waste quite a lot of memory, since most strings will be 80 characters or less (blank lines won't even have any characters at all).

Suppose we want to have the capacity to deal with 1000 lines of text, each of which can be the maximum length of 255 characters (bytes). Simple calculations show this will require 255,000 bytes even though a typical 1000-line file contains only about 25,000 bytes.

Obviously we must devise a better system of dealing with text or else we will quickly run out of memory. HPop contains a fair amount of code dealing with this. Without getting too technical, let's just say that the technique involves the use of an undefined area within memory which we can reserve in programs for miscellaneous use. This undefined reserved area is called the "heap." We will be continuously reallocating this area of memory for our strings, and we want to allocate only enough memory to hold the amount of bytes which are contained in each string. As the string changes length, its location in the heap will also change.

The trick is to get all of this to occur fast enough so that it is transparent to the user. If we had a couple of man-years to put into the project, we could code it in assembly language so that it would be extremely quick but we don't have that much time, so we play some tricks within Pascal.

The other major obstacle we are overcoming is the overlay system as described above. This will shuffle various code sections in and out of memory as needed. Many languages, including Turbo Pascal, have this type of capability but with one very important requirement. The overlay sections must exist when the program is made (compiled or assembled), so that the compiler or assem-

bler knows what sections it is dealing with, and can establish the logic for how and where these segments are switched in and out. Our problem is that unless we want to close the program to future add-ons we cannot use the normal overlay system, since many of the applications may not be written when the core program is released. Thus, we have to write our own overlay. It must be able to find and import/export the program code, and also keep track of all of the data each one generates, so that the data from one application does not interfere with another.

MARKETING THE POP-UP

Now that I have attempted to convince you that we are doing a magnificent job on this highly complex task, let's discuss the marketing of this jewel. The first items to consider in releasing a product are the market size and competition. As we are all painfully aware, our favorite laptop is not mainstream anymore (if it ever was) and the market for any software for it is relatively small and literally spread out around the world. On the other hand, with the exception of Shelp, there is no competition and HPop is technically far beyond Shelp. So we have a small fragmented market with essentially no competition.

Assuming the product is useful, you might think that the laws of supply and demand would rule, and this program would carry a price tag somewhere around that of other major packages for this machine (\$300-\$400). However, unlike some of the major software publishers, I cannot afford to alienate the 110 Portable/Plus community with high prices; this will not be the last program I produce! I have yet to publish anything for more than \$85 and although this one may be a bit more, it certainly won't exceed \$150. I do not want to mislead anyone into thinking that I am altogether altruistic in this endeavor; if I cannot cover development and production costs and still realize a reasonable profit, I have no other choice but to stop developing software.

The market can be a very strange and cruel place. My first program was SideWinder, which technically was the easiest of all to do. Ironically, it has been the best seller (in terms of volume) of all. I was fortunate in that the application (sideways printing of spreadsheets) was truly needed, yet was overlooked by all of the big players in the software game, presumably because the market was too small.

On the other hand, until the latest release of LINK, HPrint was by far my proudest accomplishment. Sales of LINK, however, have been poorer than those of any other. Perhaps the reason for its lack of success was that although it does far more than its competition (Format110, PrinterTalk, etc.) it came out after these and somehow was lost in the mass of text print-enhancers. The lesson to be learned is that the timing of an application is probably a more important factor than the quality of the product, especially in an area where advertising is severely limited due to the size of the market and the fact that it is spread world-wide.

SOUTHERN VS. PERSONALIZED: LOVE-HATE

This brings us to an interesting subject; the relationship between Southern Software and Personalized Software. It is kind of a love-hate relationship. Hal and I both think that we give too much to the other guy. I sure don't like to see him take such a cut from my products and he thinks he has to have more to make it worth his while. I guess since both

of us think the other is getting too much, we are probably about even. He realizes that the number of programmers for the Portables is very small, so he has to keep me happy to some extent. On the other hand, I know that he is my primary outlet for software so I have to keep him happy, too. All in all, I think he has done a truly outstanding job of supporting the Portables, and quite honestly, I would not be doing any programming for these machines without his company. [Hal, don't forget to send my fee for telling these good lies about you. . .]

HPop will be marketed primarily through Personalized Software and I can assure you that although Hal and I will certainly argue about the split on the sales price, it will still be an affordable product, and one which will benefit you as much as it does us.

I plan to selectively release the code for HPop before the end of the year, to anyone who is interested in writing add-on modules. If you are interested, drop me a line in the mail or on CompuServe.

The new version of LINK is now out. It will be available through Personalized Software and also directly from us. Registered owners of the current version should have already received a flier in the mail describing its new features and costs. Let me know if you would like some information on the program and all of its accompanying utilities. I think you will be pleasantly surprised.

As you have seen, I lean strongly toward Turbo Pascal for programming on the Portables. Since I was in midstream with LINK and HPop (which are in version 3.01), I never really have done much with Version 4.0 except to play with it on my AT. Alas, time has passed me by and now version 5.0 is out (and, I hope, in my mailbox soon). It is not too much different from version 4.0 and I plan to make some 110 Portable/Plus-specific versions of the libraries Borland supplies with the compiler. I hope to release them to the public domain when they are ready in January or so.

Turbo Pascal has always been an outstanding programming language and environment and the new releases have improved it even more. Ed Keefe has done a hack which eases some of the pain of programming with a product which is becoming more IBM PC specific all of the time, and I believe his efforts with my libraries will enable those of you who are hackers and programmers to do some amazing things on the Portables with very little effort.

ONE YEAR OF GRIMMER'S PORTABLE TALES

Well, it has now been a year since I started this column for Hal and although it has been a strain (deadlines) at times, I have thoroughly enjoyed it and plan to continue if Hal will let me. Next year we will begin to explore how software can be written so that a customized version can be easily made for the Portable, Plus and the IBM PC's (and possibly the HP 150), all through the use of program libraries. This will include DOS calls, keyboard and screen, printing, and a host of other goodies. Now that I finally have my head above water with LINK, I can begin putting a lot of this in the Data Libraries on CompuServe so that all can have access to it. In our ever-shrinking community, this newsletter and CompuServe (or some other electronic forum) are our best bets toward extending the lives of our machines and even learning about the new technologies headed our way.

HPduette

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

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

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

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

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

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

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

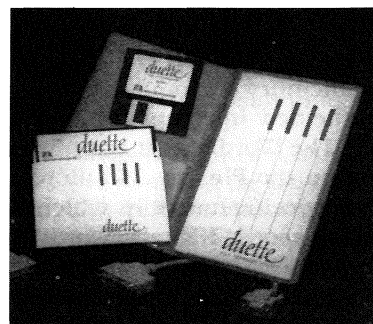
HPduette is easy to use too. Simple menus and easy-to-understand help screens are available at all times.

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

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

PRODUCT NO. DU11NM

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



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

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

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

TO ORDER

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WIZARDRY

by The Wizard, Cliff Looyenga

P+ More IBM Compatibility For The Portable Plus . . . WordPerfect 5.0 Runs

With Hal Goldstein's prodding, I finally found some time to look again at getting WordPerfect 5.0 to run on the Portable Plus. I used the latest (September 16, 1988) maintenance release of WordPerfect 5.0 and tried running it with PCRUN, the utility program found on the 1988 *The Portable Paper* Subscribers' Disk.

To my surprise, WordPerfect came up (it hadn't in the past with earlier releases of WordPerfect 5.0). The only problem was that not all the keys worked. **Return**, **Back space**, and **Alt (Extend char)** were among the keys that didn't work. I thought of remapping those functions to other keys using the keyboard setup feature of WordPerfect. That didn't work, so I decided to look at the technical reasons for why this was happening.

To read characters from the keyboard on IBM compatibles, most programs use interrupt 16h (hex). When this interrupt is called it will (among other functions), return a 16-bit word with information about the key that was pressed. The lower byte contains the ASCII value of the key that was pressed and the high byte contains the scan code of the key. (A scan code is a number which is associated

with every key on the keyboard).

On the Portable Plus the problem is that the Plus returns only the ASCII value, and the scan code is always zero (well, almost always). Another problem is that WordPerfect uses all levels of function keys (**Alt**, **Shift**, and **Control**). This conflicts with the Portable Plus in that **Extend char f8**, for example, is delete character.

PCRUN fixes some of the problems by intercepting interrupt 16h. PCRUN defines a key for scroll-lock and makes sure there is a scan code returned for keys which don't generate ASCII codes (such as function keys, for example). PCRUN does not, however, pass scan codes for keys which generate ASCII values. WordPerfect looks for the scan codes for some keys. That is why I had problems with some keys on the Portable Plus keyboard.

My next action was to modify PCRUN so that it would always return the correct scan codes with ASCII value. One of the challenges in doing this was the number of keys on the IBM keyboard vs. the keys on the Portable Plus. Somehow I needed to map all the necessary IBM PC keys onto the Portable Plus keyboard.

It turns out that by using the **Menu** key for **f9** and the **User/system** key for **f10**, most of the necessary IBM PC keys mapped to Plus keys. The exceptions were the **ins** and **del** IBM PC keys. I needed an equivalent on the Portable Plus keyboard: the normal Portable Plus **ins** and **del** keys, **Extend char f7** and **Extend char f8** were already used by WordPerfect as **Alt f7 Math/Columns** and **Alt f8 Style**.

After much thought I decided to map the **del** key to **Shift Escape**: this key already has **del** marked on it. I mapped the **ins** key to **Extend char Escape**.

The end result of this is a program called WPRUN. I ran WordPerfect with this program and it ran wonder-

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fully! To run WordPerfect, all I needed to do was type the following: **WPRUN WP /NC /NK /NF** (and have my internal memory set to 384K). This runs WPRUN, which sets up the new interrupt 16h to run WP.

The WordPerfect options necessary to run WordPerfect on the Plus are as follows: **NC** disables some hardware-specific functions which WordPerfect does with the cursor speed. **NK** tells WordPerfect that the keyboard is non-standard. **NF** is a special way to handle the screen IO.

I understand from Hal that he has a standing agreement with the WordPerfect Corporation to provide versions of WordPerfect for the Portable Plus and HP150. By the next issue of *The Portable Paper* he should be able to announce the availability of the version, and its overall memory requirements.

110 PCVIEW Update

If you have been thinking about purchasing PCVIEW you'll probably want to do it soon. As of January 1, 1989 the price is going up to \$49.95 (it's \$26.95 now). PCVIEW is a programmer's tool for those who use Turbo Pascal. It allows the easy use of forms within programs. Any program written in PCVIEW will run on the 110 Portable, the Portable Plus, the HP150, and IBM compatibles without extra effort. In-depth discussions of PCVIEW can be found in past *Portable Papers*, most recently, Vol 3, No. 4, p. 36.

To order PCVIEW send a check to Advanced Solutions, PO box 567, Veradale WA, 99037. The present cost including shipping etc. is \$26.95. They'll also accept MasterCard and Visa.

[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].

(100% continued from page 9)

installed and you have not invested in Reflection. Relay Communications can be reached at (800) 222-VMPC or (203) 798-3800. (I am not affiliated with Relay, just a satisfied user of the PC version.) There is also a version for the 150, and a PC version which runs on all of our Vectras.

P.S.—The software really is a full 720K diskette (get your 1M RAM drawer out) but the files actually required for normal operation should be considerably smaller (maybe 300-400K depending on the exact functions you need).

Relay's address is: Relay Communications, Inc., 41 Kenosia Ave. Danbury, CT, 06810-9990.

The mainframe software comes from Relay also. That's why the whole package works so well. We have been using Relay on VM/CMS for several years with quite good results and have recently added direct support for Relay file transfer on MVS/TSO. File transfer is as easy as pressing a few buttons. I have automated the process in one application so that the mainframe controls the entire upload/download process without any intervention by the user. This type of automation could be done on the Portable Plus but you'll probably need a 1Meg RAM drawer to get full functioning.

[Relay Gold Version 2.0 for the Portable Plus retails

for \$250 but is not currently a commercial product. Personalized Software is talking with Relay Communications about distributing their product for them. If you want the product, tell us—that will help both our companies decide whether it is realistic to create a commercial version of Relay Gold for the Portable Plus.—Ed.]

P+ Logging Onto CompuServe With The Portables

USING PC2622/REFLECTION ON THE PORTABLE PLUS
Fm: J.D. Fleming, Jr. [76317,3643]

Create the following text file in The Editor or MemoMaker. Save it as a file named **cis**. Substitute your local CIS (CompuServe Information Service) phone number, User ID, and Password for the bracketed terms below, getting rid of the brackets when you do so:

```
Transmit "ATDT[CIS phone no.]^m"
wait 0:1:00 for "ECT"
if not found
stop
endif
:CR
Transmit "^m"
Wait 0:0:1 for "ame:"
If not found
Goto CR
Endif
Transmit "CIS^M"
wait 0:1:00 for "D:"
if not found
stop
endif
wait 0:0:1
transmit "[User No.]^M"
wait 0:1:00 for "rd"
if not found
stop
endif
wait 0:0:1
transmit "[Password]^M"
stop
```

Now create a batch file named, for example, **c.bat**, which contains the following:

```
echo off
reflectl /v r.cnf cis
```

(Substitute **pc2622** for **reflectl** if you are running PC2622.)

Now go into Reflection or PC2622 and create a configuration file with parity **even** 1 stop bit. Also, be sure your Terminal config is set to **modem**, not **serial** if you are using the internal modem.

Store the configuration file as **r.cnf**.

To run the autologon, type **c** and press **return**. The script file should run, log you on, and return control to the keyboard.

This is a portion of a script file which I use to log on to several services.

HP110 Terminal Autologon

Fm: Rob Sherrard [73307,1435]

Control c can be generated in the Terminal Configuration Menu by holding down the **CTRL** key and typing **c**. But, because the **CTRL c** is text you are sending from your

(letters continued from page 4)

I read in a French monthly that Ashton-Tate has an upgrade formula for dBASE-II, -III, and -III+ owners. The MS-DOS version of dBASE IV would then cost \$175, and the OS/2 version would cost \$275 (without the compiler, I guess). May we, owners of an HP-portable version of dBASE-II, hope for the same treatment? Perhaps we will have to send back the dBASE-II? Many HP110 and Portable Plus owners having a desktop or a Vectra may be interested.

Peter Leye, Brussels, Belgium

[I don't know the answer to either query, although I suspect Ashton-Tate will be happy to upgrade dBASE II for you. Can anyone else help? -Hal]

110 MS Word Driver For DeskJet Printer

In response to the letter from Dr. Martin Koenig of Sun City, Arizona, the DeskJet works fine with the LaserJet .prd files built into the MS Word ROM version 1.10 for the Portable Plus. I have the Letter

Gothic font cartridge, which works with the **hplaslq.prd** file. Incidentally, the DeskJet also performs beautifully, if slowly, with Lotus 1-2-3 graphics using the LaserJet driver.

I have prepared my own version 1.10 .prd files for a portion of the DeskJet soft fonts (10, 12, 14pt Helv, TmsRmn regular, bold, and italic) and will copy the file those who send a formatted disk.

P. Patrick Mann, 438 Mariposa Ave., Sierra Madre, CA, 91024

110, it must be enclosed with quotes in the Logon String field. When you type **CTRL c**, your HP110 will echo a single symbol which looks like **Ex** instead of the **^C** you may be used to from other software. Your complete Logon String might look something like this:

W5"Ex" { User ID: } W2"76137,3534"E { Password: } W2"YourPassword"E

The **W5** and **W2**'s are wait statements of 5 and 2 seconds to allow for any delays in the communication link. The **E**'s are carriage returns. The information inside the braces { } requests your HP110 to wait until it gets whatever is between the braces before it continues with the Logon sequence. The information inside the quotes is text which you are sending to CompuServe.

[This is the same logon string we published in Vol. 2, No. 2, p. 11. We tested it before publishing and it worked fine. This time we could not get it to work even when we lengthened the initial wait. If any one knows the solution, please drop a line.—Ed]

110 PCopy On Bactools Disk

Fm: Jim Scheef [76137,757]

Shareware program **pcopy** (found on the Personalized Software Bactools disk) is a useful tool for backup work on the Portable Plus. It lets you follow a directory tree and allows you to copy hidden files. It also uses the DOS archive bit and resets it if desired. That way you can back up only the files that have changed since the last backup.

pcopy will process multiple input disks (nice for restores) but not the reverse. The problem for the Portable Plus comes (can you guess?) with the screen handling. **pcopy**'s default display is a full screen interface which is broken into windows. This does not work well on the Portable Plus. Fortunately, this full screen display can be overridden (even permanently), and, using TTY output, **pcopy** works on the Portable Plus just as it does on the PC, if you are in alternate console mode.

My quick tests showed that in HP console mode **pcopy** would reset the system clock to the "beginning of time" when the program ended. This does not happen in alternate mode. Running **pcopy** under **pcrun** did not help the clock situation. **pcopy** can be found on the IBMSW forum or on the Personalized Software Bactools disk (\$39.95 for subscribers). Norm Patriquinn, the program author, requests a reasonable shareware contribution of \$15 (above the Bactools fee) if you use the program.

110 Always Run IBM Software In Alternate Mode

Fm: Mark Horvatic (Sysop) [76703,4163]

You will find it in your best interest to NEVER run the Portable Plus in HP console mode when running IBM-compatible programs. There is a VERY serious bug in the Portable Plus which will cause **config info** to be trashed when IBM-

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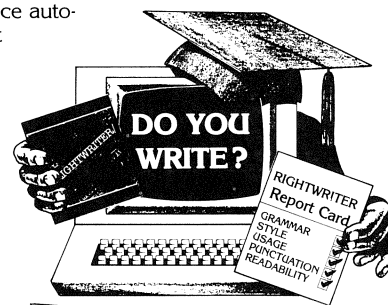
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compatible software interrupts are used while the keyboard is in HP mode.

Use **pcrun** (1988 Subscribers' disk), or set the **Console Mode** to **Alternate** from PAM's **f6 System Config** before running IBM PC software.

110 Battery Mystery

P+ THE MYSTERY: SCREEN GOES DEAD WITH 70% CHARGE

Fm: J.D. Fleming, Jr. [76317,3643]

While sending a file back to my office, I ran into a problem new to me. With Reflection on the Portable Plus using Telenet PC Pursuit, I was sending a 40K text file with **xmodem** to an HP150A running as a bulletin board on CrossTalk XVI. I have sent many files this way with no difficulty, but this time, the Portable Plus went blank after about 7K of transmission, and I couldn't revive it with the contrast key or any other. I plugged in the charger and after it was connected for perhaps 5 minutes, it did start from the contrast key, but immediately went through the boot routine. There was no loss of Edisc and apparently no file scrambles. The battery level was a bit over 70% when I started the session and it was at 68% when the Portable Plus came back on. Any ideas about what might have caused this and how I can avoid it?

POSSIBLE EXPLANATION

Fm: Paul J. Grimmer [71370,1303]

J.D., I own 2 Pluses and 1 HP110 so I have had my share of battery nuisances, too. Something that happened to me with a Plus is similar to what is happening to you. The problem is that your battery is no longer able to hold a full charge and when you are a bit below a 70% indication of battery life, you are at the end of the battery's charge. Keep in mind that the % indicator (as well as the **fuel.com** program, which uses the same technique) is a calculated value and does not necessarily reflect reality. For a new battery, it is fairly close, but as you can see, it is not worth a hoot on an old battery (except for the fact that if you see it in the 70% range you should find an outlet).

If this is what happened to you, there should have been a "Low Battery" indicator in the lower left corner of the screen in inverse video. It is possible, though, that it was overwritten by one of the Reflection screens. I know

that the one time I exhausted a new battery, it seemed to take a long time to get from the "Low Battery" indicator (at about 20% real life left) to the shutdown condition (at 5%). Once the battery became old, it usually was a matter of a couple of minutes from warning to lock-out/shutdown. Like you, when I recharged, no data was lost. I replaced the battery and all is OK now.

P+ International Problems With Plus Modem

Fm: David Speltz [76054,1022]

I am having trouble (as are others I know) getting my computer to talk to a Japanese bulletin board located in Tokyo. I am using the Portable Plus with Reflection 1. I hear the tone come up, but my computer does not respond to it as it does to boards in the US. Can anyone recommend a configuration which will work on overseas boards? Someone told me CCIT was necessary. Can Reflection do that?

Fm: Mark Horvatic (Sysop) [76703,4163]

The problem is hardware. Most non-US modems follow a different protocol than US modems. You need to have a modem with CCITT V.22 protocol, and I don't think the Portable Plus internal modem supports V.22. (The WorldPort 1200 and 2400 Baud portable modems from Personalized Software do support CCITT).

Fm: David Speltz [76054,1022]

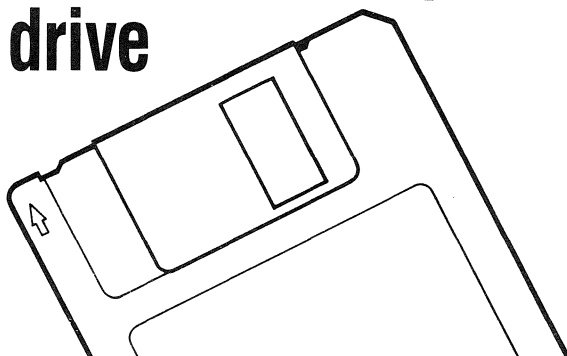
Mark, regarding the ATB command, when I issue the command, it comes back with an **OK**. If I issue nonsense commands, it also says **OK**. Is there a way to call out the status of the modem to determine if the "switch" has been set? Another way to check, I suppose, is to call a CCITT modem. Trouble is, the ones around here will automatically set themselves to BELL or CCITT depending on what you have, so there is no way to tell what has happened. Is the modem (updated version) a Hayes? Think they would know?

Fm: Mark Horvatic (Sysop) [76703,4163]

The modem is not Hayes. It looks like it's built internally by HP.

Perhaps you can get an answer by asking the RC Sysops [76701,44].

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110 Diskcopy From Plus' Edisc To Floppy

P+ *Fm: Sergio Biguzzi [76274,104]*

When I use **diskcopy a: c:** (where **c:** is the HP9114 disk drive) I can perform the **diskcopy** back and forth. The only problem is that the total amount of memory on the floppy will be the same as the one on the Edisc. Therefore I must not change (or go back to what was) the size of the Edisc if I want to be able to do **diskcopy c: a:**. Otherwise I'll get the message that the two disks are not of the same format.

My present idea is to find software to further partition the Edisc.

The expanded (1Meg) Edisc size becomes bigger than conventional floppies. I would like to have two Ediscs, say, **a:** and **c:** so as to be able to repeat **diskcopy a: c:** and then **diskcopy d: c:**.

110 HP-IL Card And IBM PS/2

P+ *Fm: Mark Horvath (Sysop) [76703,4163]*

The HP-IL card will work OK in the PS/2 models 25 and 30. It will not work, however, in the PS/2 models 50, 60, and 80, because the card design is not the same.

P+ ECM And PAM.ENV Don't Mix

Fm: Michel E. Kabay

Thank you for having thought about the ECM/110+ printing problem. You will recall that ECM failed with "Can't print." The **pam.env** file had been set up for Ed Gilbert's The Editor program to allow that program to find its standard **edconfig** files.

With the encouragement of the Atlanta Response Center (an engineer named Sylvia), I traced the problem to the mere existence of a **pam.env** file. My **pam.env** file included the following lines:

COMSPEC=b:\bin\command.Com

path=a:\;b:\hp82863k;b:\memotm;b:\45548k;b:\bin;b:\bin\etc

PROMPT=[%p]: \$s

EDCONFIG=a:\std\

Further tests showed that no subset of these lines would allow the ECM to print. Another interesting observation was the batch file I use to run ECM:

run53 b:\ecm\ecm;lib=b:\ecm\syslib.Prt;save

fails with "Bad command or file name" when the **pam.env** file exists. This failure is perfectly correlated with the printing problem and thus saved time when testing.

WORKAROUND: just set an **autoexec.bat** with

PROMPT [%p]: \$s

SET EDCONFIG=A:\STD

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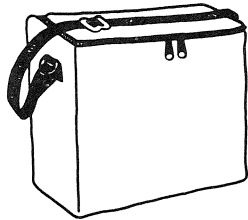
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to let ECM print properly while allowing The Editor to search the designated directory for its **edconfig.xxx** files.

The question now is why the **pam.env** file caused the problem with ECM in the first place.

110 HP-IL To Serial Card P+ Can Only Be Used One Way

Fm: Ted Dickens [76701,272]

The HP-IL/RS-232 interface box does not do everything you want it to do. The computer has to be on the HP-IL side. You can get an HP-IL interface card for your COMPAQ (82973A \$165) which includes drivers which make HP-IL devices look like normal DOS devices.

110 ThinkJet Margin Explanation, P+ Alternative Cartridges

Fm: Ted Dickens [76701,272]

PV The 2225 (all models) has an inviolable 1-inch margin on both the left and the right. Other printers print 80 characters across an 8-inch page; the ThinkJet prints those 80 characters across 7 1/2-inches (it prints 12 characters per inch where others typically print 10 cpi).

I have used Diconix cartridges, when that was all I could find, and they appear to be identical to the HP.

PV Incompatibilities Among Vectras

Fm: Miles Kehoe [72466,723]

I got my Vectra CS portable working: the problem was a badly installed modem card which thought it was port 2. Sadly, so did one of the two ports on the dual serial card. Opening the box with a torx drive and swapping a few jumpers saved the day.

Now I find an apparent incompatibility between the Vectra Portable CS and all other IBM/Vectras I have tried. If anyone at the RC or elsewhere can help me verify this problem I'd appreciate it. The video interrupt (INT 10) subfunction 1 (set cursor size) not only does not set the cursor size, it blows away the INT 10 handler so you'll not see anything until you reboot. I sure hope I'm wrong, but here you go: (with apologies to Borland for badly hacking their C):

```
regs.h.ah = 1;
regs.h.ch = 1; /* start scan line */
regs.h.cl = 7; /* end scan line */
int86(INT10,&regs,&regs);
```

This is true even if, on a mono monitor, I set start scan to 1 and end scan to 13 (the defaults for mono). Has anyone else tried these functions? Has anyone seen other incompatibilities? Let me know.

HP110/HP110+ USER 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, 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**, Stephen 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, International 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 Tue 6:30, US Route 1 ne, 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, Vectra users meet first Thursday 7-9 p., HP sales office, Bellevue. Pete Ross, 206-342-8875. **Portable**, 40 & 50 series: 7-9 p. second Wed., UWash. 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 to 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**, Trafalgar House, Grenville Place, Mill Hill, London, NW7 3SA England. Tim Cullis, (01) 959 4359. **HP Computer Users Association**, The Twenty-One Building, 21 Pinner Road, Harrow, Middlesex, England HA1 4LH 01-4275200, FAX: 01-4278252. **Netherlands**, Mr. R.M. Franquiner, Menthenbergseweg 13, NL-6816 PR, Arnhem, The Netherlands **Spain**, Club de usuarios HP 110, Pont Reyes S.A., A la atencion de D. Enrique Serra, Ronda Universidad, 15, 08007, Espana. **Sweden**, Stockholm, first Thursday each month 6:30 p.m., call to confirm. Jens Pettersson 08-713-1710. Telex 149 70 gentel S.

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Note to Portable Plus users: As always, you have to plan memory space in the Portable Plus. You'll need 512K of RAM to allow space for the basic WordPerfect program and still leave room for other files on your electronic disk. To fit everything on your A drive, you'll need an additional 340K for the spelling checker, and 360K for the thesaurus. (The speller and thesaurus can be run from your HP9114 if you wish.)

Our version of WordPerfect includes an 8-page supplement to the manual that tells you how to run WordPerfect on the Portable Plus.

Note to HP150 users: By special arrangement with WordPerfect Corporation, our version of WordPerfect includes the standard 5 1/4" disk plus our supplementary double-sided 3 1/2" disk that Customizes the program for HP150 users. The disk includes a special utility that allows WordPerfect to run on the 150. (If your HP150 requires single-sided disks and also has a hard disk drive, a version of WordPerfect is available that will run on your machine. Specify "single-sided on your orders.")

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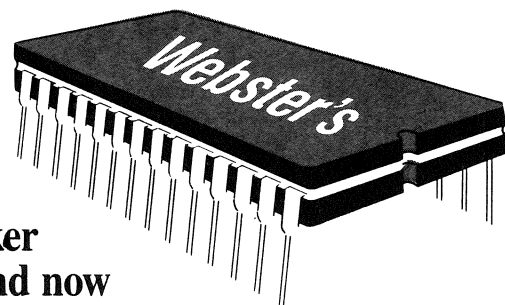
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Portable Plus users: At last! A great spelling checker available on ROM!



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

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

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
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