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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.

IMPORTANT INFORMATION ABOUT OUR ROMS

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

ROM Backup Packages

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

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

Please note:

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

2. Prices for ROM Backups alone are as follows:

Best of DOS Tools	\$129.
The Editor	\$95.
HPDuette	\$95.
HPrint	\$95.
Shelp	\$55.
SideWinder	\$55.
Shelp + SideWinder	\$95.
Sketch	\$95.
SuperROM	\$149.
TermPlus	\$95.
Turbo Pascal	\$95.
Typing Whiz	\$95.
Webster's Spelling Checker	\$179.

Special sale price: \$49.

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

HP ROMs

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

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

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

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

SOFTWARE AVAILABLE ON ROM

For product details, see individual ads elsewhere in this issue or in our catalog, or refer to articles in past issues. Note that in many cases you can save space in your software drawer by buying two or more programs on the same chip. (See last portion of chart—"Combined ROMs.")

Product	Notes	Type ¹	No. of chips	Retail Price	Subscriber Price	Product Number
WORD PROCESSORS						
The Editor	Also available as part of our SuperROM chip (see "Combined ROMs," below).	PS	1	\$194.95	\$174.95	ED12PP
MemoMaker	Comes on same chip as Time Manager (see "Combined ROMs," below).	HP	—	—	—	—
MS Word		HP	1	\$375.00	\$199.00	MS20UR
Multimate		HP	1	\$495.00	\$275.00	MM20UR
WORD PROCESSING UTILITIES						
Format 110	Comes as part of SuperROM (see "Combined ROMs," below).	PS	—	—	—	—
HPrint		PS	1	\$175.00	\$170.95	HP12PP
Mini PrinterTalk	Comes as part of SuperROM (see "Combined ROMs," below).	PS	—	—	—	—
Webster's Spelling Checker			2	\$258.95	\$248.95	WB13PP
SPREADSHEETS						
Lotus 1-2-3, Version 1A		HP	2	\$495.00	\$295.00	LT12UR
Lotus 1-2-3, Version 2.01		HP	3 ²	\$495.00	\$399.00	LT15UR
SPREADSHEET UTILITY						
SideWinder	Also available on a ROM with Shelp, and on our SuperROM chip (see "Combined ROMs," below).	PS	1	\$134.95	\$124.95	SW12PP
DATABASE PROGRAMS						
Executive Card Manager (ECM)	(Lotus 1-2-3 can also be used as a database manager).	HP	1	\$295.00	\$259.00	EC11UR
COMMUNICATIONS SOFTWARE						
PC2622	VT100 and HP Terminal emulator.	HP	1	\$395.00	\$239.00	PC13UR
Reflection	Minor upgrade of PC2622.	HP	1	\$395.00	\$325.00	RF11UR
TermPlus	Also includes FormlBM, Jetctrl, and other great utilities.	PS	1	\$194.95	\$174.95	TE13PP
PRODUCTIVITY BOOSTERS						
Best of DOS Tools	Contains selected utilities from Portable Utilities Disk, Vol. 1: DOS Tools ³ .	PS	2	\$178.95	\$168.95	DT12PP
HP Calculator	From our 1987 Subscriber Disk.	PS	1	\$104.50	\$104.50	CL11PP
HP Duette	Contains Portable Plus half of software.	PS	1	\$194.95	\$184.95	DU13PP
Shelp	Includes note extraction program. Shelp is also available on a ROM with SideWinder, and as part of our SuperROM chip (see "Combined ROMs," below).	PS	1	\$110.00	\$104.95	SH12PP
Time Manager	Comes on same ROM as MemoMaker (see "Combined ROMs," below).	HP	—	—	—	—
Typing Whiz		PS	1	\$144.95	\$134.95	TW12PP
GRAPHICS						
Sketch	(Lotus 1-2-3 can also be used for graphics).	PS	1	\$175.00	\$170.95	SK12PP
PROGRAMMING LANGUAGES						
MS BASIC	This is not GWBASIC.	HP	1	\$300.00	\$150.00	MS21UR
Turbo PASCAL	Includes RUN.COM, which can save you 10K of disk space from any program you compile with Turbo.	PS	1	\$194.35	\$184.95	TP13PP
COMBINED ROMS						
MemoMaker + Time Manager		HP	1	\$195.00	\$119.00	MM21UR
Shelp + SideWinder	Also includes SideWinder enhancement utility.	PS	1	\$229.95	\$214.90	SH13PP
SuperROM (5 programs on one chip): The Editor Format 110 Mini PrinterTalk Shelp SideWinder	Mini PrinterTalk is the abbreviated version included on the PrinterTalk disk; it is functionally equivalent to PrinterTalk for most applications. Shelp and SideWinder are the same versions as on the individual ROMs described above.	PS	1	\$473.80	\$399.00	SU11PP

Special sale price: \$299.

¹ HP = Used HP ROM; PS = Personalized Software ROM Backup Package

² Two of the three ROM chips for Lotus 2.01 are required. The third contains the "Help" screens, and can be omitted.

³ Utilities included in the **Best of DOS Tools** ROM Backup Package are as follows. For program details, see Portable Utilities ad in this issue.

PACK	DUMP	TY	CYPHER	RENDIR	WHEREIS	TEE	SDL	FDATE	LABEL	DIRS	TRANSLIT
CLEAN	DIRALL	ARCE	MOVE	OFF	CHANGE	ARC520	MOVEALL	TRIM	BEEP	SOPC	SM
COPYNEW	VOL	TMA	TJETA	FCOPY	ASK	PRNCONF	WAIT	FGREP	XCOPY	FDUMP	

Note: ARC520 is shareware; the author normally requests a \$35 contribution. However, you do not need to send any money. We've already paid your user fee.

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

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

Hal Goldstein, Publisher
The Portable Paper

HOW TO RESTORE DELETED FILES

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

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

HERE'S HOW IT WORKS

How can a deleted file get unerased? Simple. The file isn't really deleted in the first place. When you delete a file, all that actually gets erased is part of the file's directory entry. (That's why it only takes an instant to delete an entire file.) Without a directory entry, DOS can't find the file, but THE NORTON UTILITIES can.

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



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

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

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

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

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

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

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

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

"Indispensible."
—PC Magazine

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

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

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

POWERFUL FILE MANAGEMENT COMMANDS

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

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

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

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

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

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

CUSTOMIZED TO YOUR COMPUTER

Because of their great helpfulness and ease of use, THE NORTON UTILITIES are a best-seller in the IBM PC market. Personalized Software is authorized to distribute them on 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	•		•

PUBLISHER'S MESSAGE



Hal Goldstein

months, including a number of letters from Portable Vectra subscribers.

There is nothing new to report about the new HP Portable (alias Zenith 286 SuperSport). HP plans to introduce the

This issue should prove exciting for all HP Portable users. Many of you will be interested in reading about the new Portable Plus backlit screen and also about a number of new Portable Plus, HP110, and Portable Vectra products from Personalized Software.

Once again you'll have the pleasure of reading the many pages of our expanded letters section. We've received many letters with useful information (and interesting viewpoints) these past two

machine in the fourth quarter, 1988, with a few added HP touches. From what I can tell, this new HP Portable will be a closed, state-of-the-art, mainstream IBM PC-compatible system (with its own unique foibles, I'm sure).

There is a concept which I have always kept close to heart: "Progress is the basis of maintenance." We have a number of ideas on how to serve new HP (Zenith) Portable users. However, I welcome your feedback, as readers of our journal and as astute business professionals, as to how we should welcome these new HP Portable users.

FOR HANDY REFERENCE: Items *directly* relevant to the three HP Portables are denoted in this issue as follows:

110 110 Portable **P+** Portable Plus **PV** Portable Vectra

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

110 110 Portable **P+** Portable Plus **PV** Portable Vectra

Letters

PV Portable Vectra Impressions, HP Frustrations

I am a Portable Vectra owner and read with interest your comments in the Vectra Views column in the March/April 1988 issue of *The Portable Paper*.

My Portable Vectra is the eighth personal computer I have bought and I have been pretty fortunate over the years, in the chances I've taken with new proprietary, CP/M, and IBM-compatible machines. However, I was not totally prepared for HP's talent. I bought the Vectra (although it was panned in every review that I read) because it seemed to fill a particular niche for me. I work at several sites but don't make enough money to spend much time with it on my lap in a jumbo jet, so its size is OK. I have seen what I thought were some pretty poor screens over the years and thought that I could live without back-lighting. The large floppies appealed to me, and I guess, somehow or another I wanted a piece of the HP image.

For most purposes, the reviewers did not say enough negative things about the Portable Vectra's display. It is an "Emperor's Clothes" sort of thing. Some junior engineer, or maybe some secretary or janitor or maybe even (impossible thought) some senior executive should have pointed out to those design and marketing people, "You can't read the screen!" At any price, it's an embarrassment to HP.

Also, although HP advertises that it will output to a monochrome or an EGA

monitor, that is not to be confused with a more useful capability: actually providing MDA and/or EGA output. (HP doesn't.) With all the software I have used it outputs plain old CGA 640 x 200. The promo pieces speak of 640 x 400 and by fooling around with it, it appears that the Vectra can be made to run 640 x 400, but not in any way that is recognizable by any kind of modern software no matter how many display drivers it recognizes. DesignCAD's driver for something called Persyst BOB comes close but not quite. Since one of my applications is CAD, I am left with 200 vertical resolution when the machine is capable of 400. HP could have a really decent machine if they had held to wonder board specs or something similar.

Support? Forget it. With the new cartons lying beside my desk and the nicely bound HP manuals opened to the non-existent material on the Vectra's hardware, and needing to find how to use the 640 x 400 resolution which I had assumed to be EGA, I called HP support. I was reminded that HP is not interested in consumers, but only in professionals who can tap a budget for \$25 a call. They will, however, accept a return if it has been less than 30 days since purchase and if the buyer has not opened the box yet.

I had no more luck with dealers. The Vectra is not in the mainstream of his balance sheet, he doesn't have the vocabulary to talk in terms of IBM compatibility, and he can't interest anyone at HP in talking to him about anything less than a 3000 either.

In fairness, there are some positive aspects. I use DBXL and Quicksilver and use the Vectra instead of a hopped-up XT to compile, because it is faster. Its keyboard is the best among the 50 or 60

machines I have access to. It has the quickest screen I've seen. And its purchase makes me the owner of the world's most expensive lead-acid battery (\$250). Since I normally spend a lot of time staring into space while I am using the machine anyway, I have even been able to get somewhat used to a screen that no normal person can read.

It is a little early though, to recommend the machine for use with DBXL. For some reason, the DBXL editor accesses the disk after a return, and while doing cursor movements after a return, and this puts the keyboard to sleep for 5 or 10 seconds. I have had to use SideKick instead. Other text processors, including DBase III+, don't have this problem, but it makes me wonder what else does.

The Vectra seems to work OK with Word Perfect 5.0. However, here again, it would be much better if the Vectra would emulate MDA to allow on-screen underlining, and install to some screen driver that could use its 640 x 400 resolution instead of 640 x 200 in graphics mode, to take advantage of 5.0's graphics displays.

I use the Vectra with Turbo Pascal and most of Microsoft's compilers. Everything seems to work except for trying to locate the cursor after the screen re-draws. Using something like Word Perfect's **cursor.com** to change the cursor into a big black block helps, if the software does not force it back to a skinny little line (which SK does).

Incidentally, despite tech writer insistence that the coating on 1.44 Meg disks is different than the coating on 720K disks, I have had no problem using the \$.99 variety. You just have to drill a 3/16-inch hole in the corner. Also,

you can reformat back to 720K after putting a write-protect tab over the hole. Somebody out there should be thanked heartily for selling us the bill of goods on the "3-pack for \$39.95" (Radio Shack) variety.

When using the 1.44 Meg capacity on whatever quality disk, I have found that you have to be careful about unintentionally exceeding the 1.44 Meg when writing to the disk. After giving the "disk full" message, the system seems to leave the FAT area a little confused about what is going on. When trying to access some of the files that appear to have copied OK, an "Error Reading FAT" message is generated. I don't know if this is HP's problem or a 1.44 Meg problem but I have learned to reformat and to leave some extra space on the disk when it happens.

The Vectra works OK with just about any monitor. I have used it with Samsung, Blue Chip, Kaypro, Wyse, and Commodore. I thought that your article implied that the Vectra outputs EGA to an EGA monitor. I think you will find that it only tolerates the EGA monitor and that it only outputs high resolution text to it as it does to the LCD, but not enhanced graphics. As you say, "Portable Vectra users can choose a CGA, EGA or monochrome monitor." However, they can't use their capabilities. The only graphics mode that works on even the \$700 monitors is CGA.

Finally, J.C. Penney sells a Jordache canvas material brief bag for about \$15 that just fits the Vectra, not padded but cheap, with lots of pockets and both an over-the-shoulder strap and handles.

I still use the Vectra, partly because I couldn't return it, and also because I (like most probably will) am growing to admire parts of it. I also still have my AT&T 6300 in case I have to see what I am doing.

But I am less inclined to be forgiving of HP. To sell premium quality machines at premium prices without decent documentation, and then invite you to spend \$150 for a tech manual and pay \$25 and up per support call is really pretty poor. It may work with the corporate budgeted professional and a few brand-committed buyers, but they may as well forget the consumer market. Those people vote with their feet and can get better treatment (and probably more usable hardware) from the smallest two-person-one-telephone clone operation out there.

Machines that I have personally bought in the past have often resulted in spin-off purchases of 50 or more similar machines among students, clients, and employers with whom I have contact. So far no one has expressed interest in the Vectra. One even bought the IBM convertible. It makes me glad I sold my 20 HP shares.

Gerry Johnson, Caldwell, ID

110 P+ Toshiba T1100 + Vs. Portable Plus

As a "charter" purchaser of the Portable Plus, I was always interested to learn where new minds and the lessons from HP, DG, and others could lead. Recently a client gave me a Toshiba T1100+ to use on an overseas assignment. I thought I would tell you how it stacks up against the Plus.

First, after the lightning-like program and file loading of the Plus, I became increasingly annoyed by the slowness of the Toshiba. Just to boot the machine and load, say, MS Word is a 2-3 minute procedure.

Now often when I am overseas, my portable computer is just one among a number of things that I have going at one time. It is nice to be able to just wake up the Portable Plus and dash off a memo or modify a spreadsheet. The agonizing slowness of the Toshiba makes one think twice about shutting the machine off (no sleep mode for the Toshiba) in between little uses. However, if you do not shut off the Toshiba, then the machine's batteries will not last an entire workday. What happens is that one ends up using the machine off a wall socket. But, of course, less developed countries would not deserve to be so called if they had perfectly reliable power supplies. Sorry, Toshiba, you are really meant to be used in an American hotel room.

Of course the Toshiba is 100% IBM compatible and the display is pretty good (but not that much better than the Plus' green screen). With the power supply that one must always carry around plus all the disks (originals, copies, anti-virals), the machine ends up weighing in at a lot more than its advertised 10 pounds. When I take my 9114B disk drive with me, it goes into checked baggage. I have never had a problem (I take precautions). Even if the drive goes, I can work.

In contrast, I once comforted a group of consultants whose Zenith drive had died in Dakar, Senegal. Very cute, explaining to the client that your report cannot be written and data cannot be logged because your genius little machine has a bum disk controller. Try getting that fixed in West Africa. By contrast, HP offices are everywhere (right next to my hotel in Dakar, for example). Sometimes, with enough pleading, you can get to use the good printers there, or you can get a question answered. Clients tend to like results better than excuses.

My Portable Plus has been all over the world with me. It has worked through power shortages in Pakistan, balky desktops in Morocco, no power at all in Guinea, and all the way across the Pacific for one of those wonderful "BE HERE TOMORROW" show-and-tell sessions at the home office. My one trans-pacific ses-

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Editor/Publisher
Hal Goldstein

Managing Editor
Michael A. Sugarman

Department Editors
Paul Grimmer
Ed Keefe
Cliff Looyenga

Contributing Editors
Gary Bauer
Rita Goldstein
Ed Keefe
Dave Ritterbusch
Rob Sherrard
Ray Simons

Art Director
George Foster

Typography
The Word/Form Corporation

Circulation
Larry Baldozier
Rick Finnell
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James Needham

Executive Advisor
Rita Goldstein

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sion with the Toshiba left me needing a power socket somewhere past Anchorage.

What can we conclude? HP had the right idea in its original conception of the laptop. More memory, full compatibility, and one or two other adjustments are all the machine really needs. In general, I do

not find the Toshiba's approach an intelligent one. Its short battery life, dependence on slow disk drives, and lack of a sleep mode render the machine useful only in an office.

But who am I to say? Toshiba has sold tons of their units. In trying to improve the battery insufficiency of other laptops HP ended up with too much weight in the Portable Vectra. The Portable Plus is as heavy as is reasonable to carry around. HP had a great idea and they should have stuck with it. There is no good reason why a third-rate machine like the Toshiba should become the standard of the industry.

Finally, a question—what do you know about the 16Mhz NEC V30? Will a C mos version come out?

Without *The Portable Paper*, I would never have gotten so much use from my Portable Plus. It is a great publication—keep up the good work.

Donald I. Hertzmark, Washington, D.C.

110 P+ Portable Plus Survives Fire

I thought you might get a kick out of this picture of a happy Portable Plus user with a problem on his hands. The Portable owner in the picture is Richard Lyon of Bellingham, Washington.

I'm a local writer who has acquired the reputation of HP junkie because I feed



my habit by buying and selling used equipment, mostly old Portables, HP 75C's, disk drives and such, the way you do, but on a smaller scale.

Richard recently called me to report that his Portable Plus had been burned in a fire, and that he needed to replace it. Richard brought the machine down to my office and we set about assessing the damage. The left rear quarter (see photo) of the machine looked as if Arnold Schwarzenegger had squeezed it like play-dough. Curious to see whether the heat

had cracked the screen, we slowly pried the machine open with a screwdriver. The keyboard was undamaged, and the screen dirty, but not cracked. When I touched a key, up popped PAM in all its glory.

We were able to download all of Richard's files to a 9114, without losing a single byte. I offered to take Richard's machine in trade, but he elected to keep it.

Jack Swanson, *Writers Ink*, Seattle, WA

110 P+ Comments & Answers On Last Issue

Just a quick note regarding a comment (question 12, page 5) in the last *Portable Paper*. The HP110 will stay on all of the time when a charger is plugged in, but the Portable Plus will "time-out" if the battery level is less than 80%, even with a charger connected.

Rick Finnell's creations with SKETCH are impressive. It is always gratifying to see the software "in action." Also, you can invoke SKETCH from any other language via a shell but currently it cannot be linked in.

Battery recharger question on page 10: My experience has been that the one single item which causes the "real" battery charge to differ from the calculated value is having the serial port on. In addition to being the single largest drain on the system, it seems to cause the calculated value to be way off. In SKETCH I have the serial (mouse) port turned off at the end of the program if it was off coming in. In this fashion, the user conserves battery power by only having to have the serial port on while using the mouse in SKETCH.

Page 17: On the HP110/Plus, you can also get the last DOS command, a character at a time, by successive presses of **fl**, or the whole line via **f3**.

Ed Keefe used a technique for entering the **esc** character into a file which involves Ctrl-V followed by the **[** key. Note that this is only valid for DOS 3.0+ and not DOS 2.11. In DOS 2.11, you press **[Esc]** followed by **&** (i.e., an upper-case 7).

I heartily echo Cliff's enthusiasm for Word Perfect 5.0. I think the printer handling (especially **Lj**) and graphics integration are superb additions.

One little utility that is on the B: drive of the Plus probably deserves mentioning in a future *Portable Paper*. The **fc.com** program does an excellent job of comparing text files, giving comparative differences in the output. This comparison can be listed a page at a time using **more**, or can be redirected to a file. I copied it to my AT and use it quite often there.

I have encountered a bit of a problem with The Editor on my AT. I wrote a short utility that speeds the cursor up to about 40 cps and The Editor handles it just fine except on an enhanced keyboard using the dedicated cursor keys. If I turn off NumLock and use the number pad, it

works okay but that is a hassle. I think Mr. Gilbert must be getting into the hardware a bit for this to be happening. I wonder if the new version is more "conventional?"

I love using Sidekick Plus, which has also been an excellent source of ideas for the ongoing Portable pop-up project.

Paul Grimmer, *Anchorage, AK*

110 P+ Buying A Battery From HP Direct

This is a short note to let you know that I was able to get a battery for my portable from the HP Direct Corporate order line under part number 1420-0329. I was very impressed with HP Direct. They were extremely helpful, although the first woman I talked to made sure I understood that the battery was supposed to be installed by an authorized individual before giving me the corporate number to actually place the order. It was really easy to install. \$27.00 is a heck of a lot cheaper than \$150!!

Michael B. Stewart

P+ Block Cursor For Portable Vectra?

After first living with the HP110 for a year and then the Portable Plus for two years, I have recently graduated to the Portable Vectra.

With the Vectra, there are two things I actually miss: the extra user-friendly System Config (**f6**) and Datacom Config (**f5**) features of PAM. In most instances, I have adapted, but one thing continues to elude and frustrate me: how to change the cursor from an underline to a block. The three software applications I use most (Executive MemoMaker, Lotus 1-2-3, PC-SAS) do not offer this as a feature, so I must find some way to do this from a "system" level.

HELP!! Any suggestions?

M.J. Snyder, *Los Angeles, CA*

[Anyone have any ideas or know of some general software that will change the cursor? (As discussed in another letter, WordPerfect 5 has a program that changes the cursor for WordPerfect.) —Hal]

110 P+ Margin Codes, MacCharlie Comments

Let me say that I like the new codes in the margins of the last two issues of The Portable Paper. How did you set that up on an MS DOS system (I assume it was done with software)?

I don't use my HP110 as much as I used to, except when I'm on the road. At home I use a Macintosh SE with a MacCharlie. The Mac SE you've certainly heard of; MacCharlie, by Dayna Communications, lets me run MS DOS software in conjunction with the Mac. I have an HP-IL card in the expansion chassis, which allows me to transfer information

(continued on page 39)

NEW BACKLIT PLUS

110 **Backlit Screen May Be Available For Portable Plus Users**

P+ Hewlett Packard has confirmed the development of a limited-availability backlit screen version of the Portable Plus. We received a production unit for evaluation about a week before *The Portable Paper* deadline.

HP'S DESCRIPTION

Here is the how HP describes the product.

"The product, HP 93558B, was developed as a result of users' requirements for a rugged, portable terminal PC with memory storage capabilities and superior screen readability.

"The HP 93558B Backlit Portable Plus retains the performance and functionality of the standard Portable Plus. Differences include:

- * LCD display is backlit with an electroluminescent panel, providing superior readability in a wide variety of lighting conditions

- * ROM drawer with Reflection ROM for terminal emulation capabilities

- * built-in 1200 baud modem

- * high output charger to allow battery charging while the Plus is in use

- * battery life of at least 3 1/2 hours (4 hours average)

- * 1 year return-to-factory warranty (90 day on-site warranty available in some areas)

"Because there are no software differences between the backlit Portable Plus and the standard Portable Plus, the battery indicator on the PAM screen is rendered meaningless. The backlit version does give a correct indication of low battery conditions and will put the unit into "sleep" mode should the charge on the battery become dangerously low.

"Units are FCC Class B certified only and are for sale in the U.S. only.

"Upgrades of customer-supplied HP 45711 E's or HP 45711 F's may also become available as HP 93558 B option 001. This option would add the backlit display to these customer-furnished Portable Pluses. The warranty for this option would cover the upgrade only.

"Pricing and availability for quantities of 200 or more backlit Pluses and backlit Plus upgrades are available through your local HP Sales office. Small quantities of the backlit Portable Plus may be made available. It is expected that these units will be priced at about \$3500 each, with a considerable quantity discount.

"If you would like to be notified when small quantities of the backlit Portable Plus or backlit Portable Plus upgrades will be made available, send your name, address, and quantity you would be interested in purchasing to:

Hewlett Packard
MS 102 D
1266 Kifer Road
Sunnyvale, CA 94086
ATTN: HP 93558B availability

SUBJECTIVE REACTION TO THE "GLOW WORM"

Our Personalized Software staff had different reactions to the backlit Portable Plus. Since evaluating such a screen is largely a subjective matter, I decided to have some of the Personalized Software staff share their opinions with you.

MY REACTION TO THE "GLOW WORM"

Here are some of my initial impressions of the backlit Portable Plus—known inside HP as "Glow Worm." Overall, I feel it is a step forward in HP Portable computing. I have some reservations as you will see, but if given a choice between the "Glow Worm" or a standard Portable Plus, I would choose the "Glow Worm" (that is, the HP 93558B Portable).

The backlit screen can be read in all kinds of light, without strain. You can even work on the Glow Worm under the stars. The screen is readable in every lighting condition we tried.

Another positive is that the screen can be seen fairly well from different angles, and from a distance. This means more than one person can look at the screen. I find the backlit screen itself not as aesthetically pleasing as the regular screen. In good lighting conditions, I prefer the normal screen. That may, at least in part, result from what I am used to.

The screen reminds me of a neon sign, and is a little too bright and flashy. It is a green that does not suit my taste. It doesn't seem as soothing to the eyes as the other screen. My wife, however, who is not used to either screen, has a quite different impression (as you will see) after working on it exclusively for a couple of days.

HP did not backlight the original screen, but replaced the screen with another screen technology altogether. One result is that the backlighting cannot be turned off, even in good lighting conditions. This means upgrading your screen or buying a new unit commits you to a shorter battery life (but perhaps longer eye life).

Besides the screen itself, the only physical difference in the look of the unit is a small half-inch bulge in the back of the Plus. The bulge stores an inverter and looks like a Portable Plus with video interface capability. The inverter piece heats up when the battery is charging.

The battery charger itself has about the same length and width as the original charger. It is about 3/4-inch thicker, twice as heavy, and three-pronged.

Simply, the tradeoff for anyone considering an upgrade or a new unit is screen readability vs. battery life. If the current screen is sufficiently readable to you given your lighting conditions, or the 20 hours of battery life is necessary for your use, then stick with what you have. Otherwise, if you can accept 3 1/2 to 5 hours of battery life, and you are sometimes bothered by the Plus screen, then choose the Glow Worm if the opportunity presents itself.

MY WIFE'S REACTIONS TO GLOW WORM

Even though my wife, Rita, and I started Personalized Software together, she has never been that interested in computers. Nevertheless, Rita writes fiction using The Editor, Format110, and the Webster speller on HP computers. She has used the backlit Portable Plus for the past two days, and I think you will be interested in her perspective. Following Rita's report, several of our staff offer their reactions to the backlit Portable Plus.

Feast Your Eyes With Glow Worm

By Rita Goldstein

A few days ago my HP150 went "out of whack." Hal finally replaced my defective machine, as I have called it so many times, with a Portable Plus.

I used the Plus when we started Personalized Software, but I have grown unaccustomed to its dull, mind-fatiguing, eye-straining screen. The Portable Plus replaced my HP150 just at the time when I was under pressure to turn in a report.

Needless to say, when I found myself in front of the dull, grey-tinted, olive screen of the Portable Plus, my mind—already jittery—became totally unruly, and I came an inch from dumping the Plus in the waste basket.

My next impulse was to pick up the phone, call the office, and complain to Hal that once more he had given me some left-over piece of DEFECTIVE equipment. The thought that Hal has dedicated his creative genius to promote and support HP Portable computers stopped me from calling him.

After addressing some unbecoming insults to the Portable Plus for having such a lousy screen, I began to try different light settings to improve my visualization of the screen.

Using the Portable Plus was an utterly aggravating experience, which I do not want repeated in my work at any cost. Trying to see on the regular screen of a Portable Plus was like trying to see through murky water. The dullness of the grey-ish shade of the screen did not respond to the daylight coming through the windows, nor to any of the different lights in the room.

Finally I picked up the computer, moved around the room, and pressed the contrast and shift keys until I found some favorable light that made the screen somewhat readable.

A few days later Hal brought home the backlit Portable Plus. "Glow Worm" is a most fitting expression as you set eyes on this screen. I absolutely enjoy this life-supporting shade of green. This particular screen provides a sort of natural background setting—it gives me the feeling of being outdoors writing in the midst of trees and plants.

Because the color is so aligned with the favorite color of the Creator, my eyes, my mind, and my whole being, find it a very soothing experience writing with it.

This screen makes the Portable Plus truly portable: the kind of external lighting available does not make any difference. Right now I am downstairs, in the coolest, darkest room in our house, and I can write as efficiently as I did in my study where there is an abundance of daylight. I can't imagine using a Portable with a regular screen in a dark room like the one I am in now.

I find that the regular screen of the Portable Plus fatigues the mind unnecessarily, and it is definitely a strain

to my eyes. Glow Worm is a tremendous addition to the Portable Plus computer line. It has a color very soothing to the nervous system and to the physiology in general.

The possibility exists that my genius husband, Hal, will make Glow Worm available to all portable users. I hope so.

PERSONALIZED SOFTWARE STAFF REACTIONS TO "GLOW WORM"

Bob Wendell, R & D

The main drawback in using LCD screens is their high sensitivity to lighting angle, and the amount of light needed to guarantee sufficient contrast. Moving a light source close enough to make text easily readable just creates other problems. The angle at which the light strikes the screen often varies so greatly that readability may be fine in one part of the screen, but inadequate in another.

This pleasant green backlit screen (although still somewhat sensitive to viewing angle), presents a nice, even contrast over the entire screen. Once the user has chosen his viewing position and angle, contrast can be set for optimum readability. The screen presents a consistent, easy-to-read contrast everywhere. The usual eye-strain, and the psychological and physical strain of constantly jockeying for a better viewing position is eliminated. Phew! What a relief!

David Seagull, Sales

You might say I'm totally in the dark about the Glow Worm backlit screen. Actually, I'm writing this review of the Glow Worm screen in a totally dark room. The screen is very clear and completely readable, even without any external light.

The only drawback I found is that when I look away I see a red rectangle composite of the green screen. Aside from this, I give the Glow Worm screen a definite "thumbs up."

Brian Teitzman, Sales

Under normal lighting conditions, I found the new backlit screen only adequate and not quite as easy to read as the regular "Super Twist" screen. The better the light, the worse the backlit screen looks. On the other hand, under insufficient light, the backlit screen looks better. If you often use your portable in poor light, I recommend the backlit screen. Otherwise, stick to the regular LCD.

Larry Baldozier, Operations

I must admit that my first impression of the screen is a flashback to the sixties. The longer that I stare at the screen, the more I become entranced by the the Glow Worm.

I find the ability to use the Portable Plus in the dark an advantage, but I also have to ask myself how frequently I would be doing so.

I believe that I would have to question the added expense to obtain this seldom-used luxury. I don't think that I would spend my own money for the upgrade.

Jonathan Kolber, Finance

I like the screen color. It is somewhat more difficult to obtain a good viewing angle, however, under natural light (in our office, we use Vita-Lite full-spectrum bulbs, which simulate sunlight) than with an LCD screen.

I took the machine into a dark room. The screen is fully readable and, if you tilt it at a 90-degree angle to your keyboard, provides adequate lighting for the keyboard as

(continued on page 40)

Whether you want to learn programming or you're a seasoned programmer, the best programming language for your HP Portable or Portable Plus is

Turbo Pascal

—and our Turbo Pascal Starter Kit is the best way to buy it
Here's why.

The Pascal programming language was originally designed for use at the college level in teaching the fundamentals of computer programming. Borland International enhanced the language, making it practical for actual programming use. Their version is called Turbo Pascal.

Today, Turbo Pascal is the programming language taught at most universities. The reason is that its underlying structure fosters good programming habits. It forces you to think in a modular way: You create self-contained, well-defined units and put them together to make a full working program.

GREAT WORKING ENVIRONMENT

Turbo provides you with an exceptionally good programmer's environment.

One aspect of this is Turbo's built-in text editor. It's a sophisticated WordStar work-alike that in itself is worth the price of the program.

Another aspect is Turbo's compiler*. In addition to being uncommonly fast (an amazing 80-100 lines per second), it is also uncommonly helpful: If the compiler encounters a mistake in a program, it stops compiling, gives you an error message, returns you to the editor, and takes you to the place in your program where the error occurred.

The external environment for Turbo is also excellent: There are numerous books, articles, public domain programs, and even a CompuServe forum devoted to helping people use Turbo to full advantage.

With all these advantages and more, it's no wonder that Turbo Pascal is today's best-selling programming language for the IBM PC.

THREE-PIECE STARTER KIT CUSTOMIZED FOR THE PORTABLES

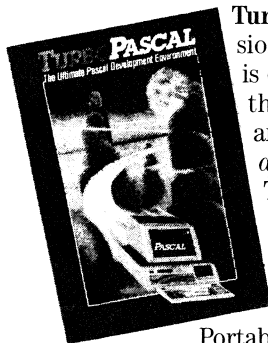
For Portable and Portable Plus users, there's yet another enormous benefit: *Turbo Pascal takes up less than 40K of memory*—and that includes its powerful

built-in text editor.

We are now offering Turbo Pascal in a special 3½" disk version for your Portable or Portable Plus, ready to install from PAM.

Although you may purchase Turbo all by itself, we recommend our **Turbo Pascal Starter Kit**. It's ideal for novice and intermediate programmers alike.

The Starter Kit includes **Turbo Pascal**, Borland's **Turbo Tutor**, and our own special disk, **Turbo Pascal Programs for the Portables**. Here's a rundown on each:

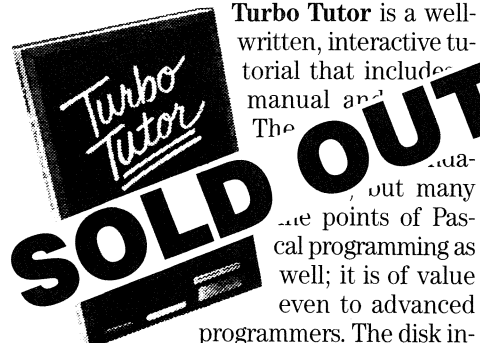


Turbo Pascal: Our version of Turbo Pascal is customized to both the HP110 Portable and the Portable Plus at no extra charge.

The customization, authorized by Borland, allows the Turbo editor to use all the normal

Portable editing keys (Extend Char—Delete Line, etc.).

This saves you from having to learn many of the commands particular to WordStar.



Turbo Tutor is a well-written, interactive tutorial that includes manual and The

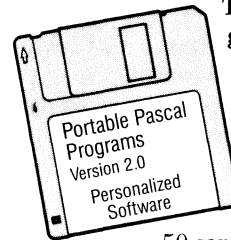
...out many the points of Pascal programming as well; it is of value even to advanced programmers. The disk includes every example covered in the manual, already keyed in and ready to use. (Note: neither the IBM version nor the HP150 version of Turbo Tutor will run on the Portables; only our 3½" disk version will.)

RECOMMENDED FOR:

HP110 Portable	•	Portable Vectra	•
Portable Plus	•	HP150	•
IBM PC and compatibles			•



Version 3.0 is for the HP110 and Portable Plus. It is available in limited quantity. When we run out, it will not be available again. Please order now. Version 4.0 is for the Portable Vectra.



Turbo Pascal Programs for the Portables is a great supplement to Turbo Tutor. Based on the principle of *learning by example*, the disk contains more than

50 sample Turbo Pascal programs, and every one of them runs on the HP110 or the Portable Plus. The programs range in length from ten lines of code to hundreds, and from simple (temperature conversion, games, arithmetic) to advanced (input/output, graphics, and more). Every program is included on the disk so you don't have to key in any of them—they're ready to run or to be incorporated into your own larger Pascal programs.

If you're into—or getting into—the highly productive world of programming, our Turbo Pascal Starter Kit will help you become an expert. Order your copy of this dynamite programming package at no risk today.

NEW

TURBO OPTIMIZER

Saves run time and storage space by making your Turbo Pascal programs 10-30% faster and 15-50% smaller. Works with Turbo Pascal Version 3.0. Customized to the HP110, Portable Plus, and HP150.

Portable Paper Subscribers:
The Turbo Pascal Starter Kit **saves you \$50** off the price of the three products purchased separately.

	Retail price	Subscriber price
Turbo Pascal Starter Kit (3.0) (includes Turbo Pascal, Turbo Tutor, Turbo Pascal Programs for the Portables)	\$189.85	\$150.95
Turbo Pascal (3.0 or 4.0)	99.95	89.95
Turbo Tutor (3.0 or 4.0)	59.95	53.95

New Turbo Optimizer 125.00 119.00

Pascal Programs for the Portables 49.95 44.95

Turbo Pascal on ROM Backup for the Portable Plus (3.0)** 95.00 95.00

**ROM Backup version includes RUN.COM, a utility program that can save 10K of disk space from any program you compile with Turbo. Note: You must own (or order) the disk version of Turbo in order to purchase the ROM Backup version. See ROM Backup ad in this issue for details.

TO ORDER: See inside back cover.

Be sure to specify Version 3.0 or 4.0.

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

*Compiling a program means getting it to meet the rules of syntax imposed by the programming language. A program will not run until it can be compiled.

110%

Making More of Your HP Portable

by Hal Goldstein

110 **The 1989 Subscribers' Disk From Personalized Software****P+** by Ed Keefe**PV**

The 1989 Portable Paper Subscribers' Disk is in the final stages of preparation.

Most of the programs on the disk were created by Personalized Software or its readership or were found in the public domain and tested on HP Portables. Several of this year's offerings are "shareware" products. If you use a shareware product, you are requested to pay the author a shareware fee (usually between \$5 and \$35).

The highlight is a shareware program called **pkarc**. **pkarc** is a file compression program which is fast by any standard. **pkarc** reduces (compresses) the size of files and combines a group of files into one file. **pkxarc** is its companion file decompression program. If you have ever used the older **arce.com** program, we're certain that you'll appreciate the extra speed and flexibility of the PK series of programs.

We mention the **pkarc** program before any others because **pkxarc** must be used to decompress many of the other files on this double-sided disk. The **pkarc** programs work on all HP portable computers.

Some of the other programs include the following:

swp.arc—[110, Plus, PV]. If **pkarc** is the highlight of the disk, **swp** is a close second, (with no shareware fee attached). **nswp** (abbreviated as **swp**) is an excellent file manager utility program which runs on the HP110, Portable Plus, and Portable Vectra. Among its many features is the ability to tag files for mass copying and deleting. **swp** prompts you with one file at a time. You respond by pressing **Return** to go to the next file or with the appropriate letter to copy, rename, delete, tag, etc. the current file.

The **swp** program also gives you the ability to squeeze and unsqueeze files and to "Zoom" into compressed archived files and read text files therein. The **swp** program comes with a couple of Personalized Software batch files which enable you to easily run the program on the HP110 and Portable Plus. (You will need 148K of working memory on either machine to use the **swp** program.)

cal—[110, Plus]. A useful calendar program for Time Manager users.

ato—[PV]. A great way of saving lots of money and making better use of CompuServe. The program automates most CompuServe functions, minimizing your online time and letting you make better use of the wide source of information on CompuServe.

tmmerge—[110, Plus]. A many-featured program from reader Tom Page which lets you merge Time Manager name and address file information with your word processing file.

advent.arc—[110, Plus, PV]. A text adventure game which is fairly easy to master. If you are familiar with the ZORK series of adventure games you should be able to master this one in 15 minutes. On the other hand, it should

get beginners hooked just as quickly.

areacode—[110, Plus, PV]. A simple little program which prompts you for the two-letter code for a state (e.g., IA for Iowa). It then gives you the telephone area codes for the state. Clever.

boxes—[110, Plus, PV]. A series of line drawing characters and boxes of various thickness contributed by reader Tom Page, which can be imported into The Editor and other word processors for fancy output.

batfiles—[110, Plus, PV]. A series of utility programs which you can use to enhance your batch files. It will let you do such things as programmatically change your working directory and then return to it when the subtask is finished. (Shareware)

mutil—[110, Plus, PV]. Another collection of batch file utility programs. This collection also contains several programs for Pascal programmers. One program is a simple "pretty printer" program which will reformat your programs to show their structure more clearly. (Shareware)

catbat—[110, Plus, PV]. A large batch program which includes several utility programs. It is an excellent disk cataloging program, and takes up little space on your disk. **cat.bat** was featured in the column "Through the Looking Glass" in the May/June, 1988 issue of *the Portable Paper*. The text of the article is contained in the **catbat.arc** file.

mndlbrt—[Plus]. A drawing program contributed by reader Graham Collins which uses fractal geometry to draw intriguing patterns on the display of the Portable Plus. The patterns take a long time to be generated. However, they may be dumped to a ThinkJet printer and saved on disk.

hdiff—[110, Plus, PV]. A "file compare" program. This program should be of interest to programmers. It will compare two versions of a program and will also list all the differences on disk as an **edlin** script file. You can therefore discard the old version of the program and just save the new version and the difference file. By using **edlin** and the difference file, you can quickly regenerate the older file if it is ever needed.

dosknows—[110, Plus, PV]. This is a program which will tell you all sorts of technical information about the inner workings of your computer. Much of the information will be of interest to computer programmers, especially those who are trying to "program the bare metal."

shell—[110, Plus, PV]. A command processor much like **command.com**. However, **shell** emulates quite a few of the UNIX operating system's commands. It isn't a full implementation of UNIX, yet it will give you a good taste of what many people say will be the operating system of the future.

whereis—[110, Plus, PV]. A file finder program. It is somewhat faster than Norton Find File. **whereis** allows for wild card searches, and pauses after each find to wait for you to tell it to find any other files which match the search description.

vi.arc—[PV only]. A text editor which implements a subset of the **vi** editor available in UNIX. It “almost” works on the Plus. Those who are in the habit of denigrating MemoMaker should try **vi** for a couple of days. You’ll grow to appreciate MemoMaker a lot more. On the other hand, this program, along with **shell** should make a person familiar with UNIX feel right at home.

syslog—[110, Plus, PV]. This is a utility program which enables you to keep track of how often you use your computer, and what percent of the time is devoted to each particular task. (Shareware)

Since most of the programs on the 1989 Subscribers’ Disk are either public or shareware products which we are distributing as a service to our loyal subscribers, we cannot offer technical assistance for these programs. The programs all come with their own documentation files, which we often modify and clarify. It is up to you to assess their usefulness and to determine if and how they meet your needs.

Finally, we may change (probably add to) the collection described above. It is also possible that we may have to eliminate one or more of the above. If you have a contribution to the 1989 disk which you think many other readers would appreciate, please send it as soon as possible.

If your subscription includes at least one 1989 issue of *The Portable Paper* you are eligible to receive the disk. To request it, send \$9.50 (to cover the cost of disk media, shipping and handling). Alternatively, you may send a self-addressed stamped envelope with a formatted 3 1/2-inch double-sided disk. We’ll copy the software onto the disk and return it to you at no charge.

For those of you who already have subscribed through 1989, or who wish to renew your subscription early, we have a special offer. We will send you the 1989 Subscribers’ Disk free with the January, 1989 issue if by September 30, 1988, your subscription includes all the 1989 issues.

110 P+ E Version Of HP-IL Link Software Finally Available For PC’s

As reported in the past several issues of *The Portable Paper*, there is a new Revision E version of the software for the HP82973A HP-IL Interface Cards which fit in IBM PC compatibles. With Revision E, users can read IBM PC 720K-formatted 3 1/2-inch disks in their HP9114 disk drives.

The upgrade costs \$25 and, as far as I can determine, can only be done through the Sejus Corporation. Sejus is the manufacturer of the HP-IL card for the Portable Vectra, as discussed in this issue’s *Vectra Views*. You can contact them at 2618 Palisades Crest Drive, Lake Oswego, OR 97034-7550, Fax (503) 638-9009, phone (503) 638-9000.

110 P+ PV Our Current Catalog

We’ve had a number of inquiries about a current catalog of products for HP Portables. Our last catalog, Winter/Spring 1988, was essentially a reprint of our Fall, 1987 catalog. It will probably be a good six months before we produce another Portable catalog. If you would like a copy of the Winter/Spring 1988 catalog, please give us a call or drop us a line.

As mentioned in *News From Personalized Software*,

we have just published our first HP150-only catalog. If you have an HP150, be sure to ask us for one.

P+ Wrong Again—No 128K EPROM’s Yet For Plus

In the last issue, for the third time, we managed to publish misinformation about the availability of 128K EPROM’s for the Portable Plus. The Toshiba part we listed had 32 pins instead of 28 pins. If and when such 28-pin EPROM’s are uncovered, we will be able to double the capacity of what we can easily put on chips. Currently, unless we can order 500 ROM’s at a time, we can only put 64K bytes on an EPROM.

P+ Possible Accounting Package For The Plus

I recently talked with Frank Keresztes-Fischer of Brighton, Michigan who told me of several discoveries which may be of interest to our readers. He told me that DAC-EASY 1.0, a popular and well-regarded inexpensive accounting package, works on his Portable Plus. The program requires all 10 of its files. However, these files collectively occupy only 240K of disk space. The program requires 128K of internal memory to run, and needs to be run in Alternate mode on the Plus.

I called the publishers, Dac Software, and was told that the current version is 3.0 and requires 256K of internal memory. I did not get an exact figure of file space. They are sending Frank a copy of 3.0 for review. He will report his findings in the next issue of *The Portable Paper*.

Let us hope that the program has not grown so much in size or sophistication that it will not run or be practical for Plus users. We may have a difficult time obtaining earlier versions for resale.

110 P+ PV Lighting Portables Without A Screen Upgrade

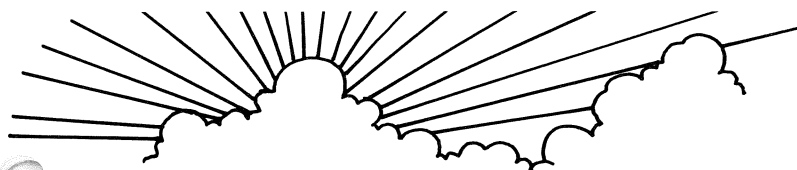
The other thing Frank Keresztes-Fischer told me was that he had discovered a lamp for about \$30 at an ACE hardware store which brightened up his Plus without creating glare. The lamp is a 110V 13 Watt unit with a U-shaped bulb and arm. It folds up to 1 inch thick, 6 1/2 inches wide, and 13 inches long. The lamp stands 25 inches tall. It is manufactured by Wallace Leisure Products, inc., under the name “13 Watt twin tube lamp,” and is ivory-colored like the Plus. I will be getting several samples and will report more in the next issue.

110 HP110 System File Available

In Vol. 2, No. 6, p. 32 of *The Portable Paper* we published an article about how to add memory to the HP110. We forgot to mention that the software (device driver) necessary to make use of the extra memory is available from us. Just send us a self-addressed stamped envelope and a formatted disk and we’ll put the files on it for you. Otherwise, send us \$9.50 and ask for the “Sam Chau HP110 Upgrade Disk.”

110 P+ MS Spell Hard To Come By

HP no longer sells the MS Spell program that works with HP110 and Portable Plus Microsoft Word. A reader reported that the IBM PC version 3.1 of MS Spell works fine on the two Portables. Unfortunately, that version has also been deleted from the Microsoft price list. On occasion we have used MS Spells: call for availability.



The Editor

It's way beyond MemoMaker!

You won't believe all the word-processing features this \$99.95* program contains—and it takes up less than 40K of memory!

*(only \$79.95 for Portable Paper subscribers)

by Hal Goldstein

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

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

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

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

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

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

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

3. THE EDITOR will automatically back up your files to protect you against mistakes: When you save a file, THE EDITOR saves not just the current version, but the previous one as well.

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

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

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

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

THE EDITOR \$99.95
\$79.95 for Portable Paper subscribers.

PRODUCT NO. ED11NS

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

60-DAY MONEY BACK GUARANTEE

See order form for details.

TO ORDER

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

Personalized Software

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

Special combined offer— SAVE \$30:

THE EDITOR and THE FORMATTER together—
Only \$99.95 total (Portable Paper subscribers only)

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

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

THE FORMATTER \$59.95
\$49.95 for Portable Paper subscribers

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

- **Search and replace.** Just tell THE EDITOR what word or phrase to look for, and it will find every place you've used it. At your option, it will display each occurrence, or replace the occurrences either selectively or globally.
 - **Edit two files at once.** THE EDITOR will display two separate portions of text at the same time, one above the other. You can view and edit two parts of the same file—or even two different files—simultaneously.
 - **Backspace delete.** You can erase the last character with a single keystroke.
 - **No limit on file size.** If you're an HP110 Portable user, you're no longer confined by MemoMaker's 819-Line limit. You can have as large a file as internal memory allows.
 - **File merge.** You can merge two or more files together with ease.
 - **Compressed and expanded.** You're no longer restricted to bold and underline. You can imbed control characters in your text to tell your printer to print all or part of your text compressed, expanded, bold, underlined, or whatever else your printer can handle.
 - **Unlimited line length.** Your files are no longer limited to 80 characters per line. This means, for example, you can print 132-character lines on your ThinkJet printer in compressed mode.
 - **Lines per page.** You can specify the number of lines per page, using the control codes required by your printer.
 - **Easy in, easy out.** You can exit from THE EDITOR, run another program, then type a one-word command and be back in THE EDITOR in a flash, exactly where you left off. This includes exiting and returning from DOS—which means you can delete, copy, and rename files while running THE EDITOR.
 - **Right justification and automatic paragraph indent.** A simple command right-justifies your text, and at the same time automatically indents your paragraphs however many spaces you wish.
 - **Undelete.** Erased something you want back? No problem. A simple command will undelete the last line or block of text deleted.
 - **Upper/lower case conversion.** Another simple command lets you change upper case to lower case and vice-versa without having to retype anything.
- In terms of useful features per dollar, and in terms of the convenience and increased productivity you gain, I feel that THE EDITOR is a truly exceptional buy. I urge you to try it. Order yours today.

Hal Goldstein

The Formatter

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

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

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

The Webster spelling checker from Personalized Software will work with MS Word files saved as text (ASCII) files. If an interested reader has both Webster and MS Word and is willing to do some experimenting, they might be able to configure Webster to work with normal MS Word files. Give us a call and ask for David Seagull. He'll give you the information necessary to begin experimenting.

P+ CrossTalk XVI For The Plus?

There is a chance that the CrossTalk people would be willing to modify this best-selling communications package to run on the Portable Plus. If you are interested, especially if you can guarantee a large order, please contact us.

110 ThinkJet Notes

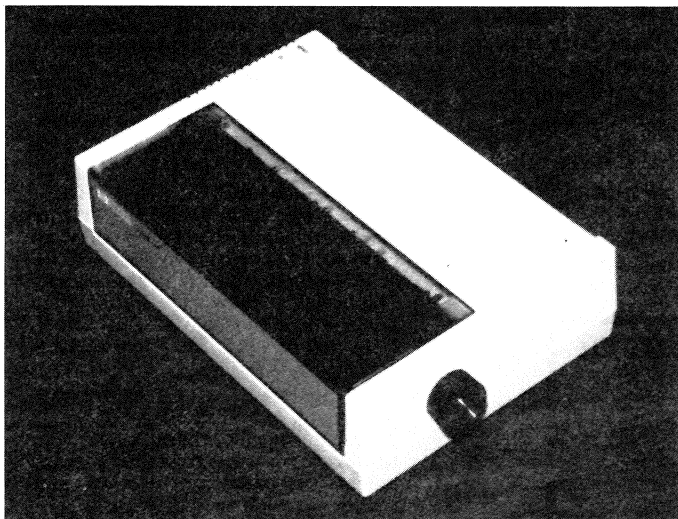
P+ KNOB FOR THINKJET PRINTER

by Dave Ritterbusch

PV The HP2225B ThinkJet printer is a very good printer, but it has one design deficiency. It does not have a paper adjustment knob—until now!

A knob kit for either the right or left hand side of the ThinkJet printer is now available. The knob kit retails for \$15.95 (this includes shipping within the continental U.S.). It contains: 1) a replacement stainless steel roller shaft, 2) a knob, and, 3) complete instructions (including photos) for disassembly, replacing parts, and re-assembly of the ThinkJet.

The printer knob kit can easily be installed in about 20 minutes. Standard tools required include: needle-nosed



pliers, a 5/16-inch Allen wrench, a 1/4-inch drill bit, and a 1/2-inch drill bit. One special tool is also required: a T-10 Torques Driver, which is available from auto supply stores for \$2 to \$3.

The HP2225B ThinkJet Printer knob kits can be ordered from:

Ritterbusch Business Ventures
7201 W. Paradise Drive
Peoria, AZ 85345

When ordering, please specify either a right- or left-hand knob kit. If right or left is not specified, a right-hand kit will be shipped. Please send check or money order payable to Ritterbusch Business Ventures in U.S. dollars, drawn on a U.S. bank. For COD add \$2. I am a small business and

cannot accept credit card orders.

[Reader Rodman Sharp has suggested that right-handed people might want to order the left-hand knob. This enables the user to turn the knob with the left hand while adjusting the paper with the right. -Ed.]

THINKJET INK SOLUTION

by Gary Bauer, Ontario, Canada

In the most recent issue of *The Portable Paper*, Mr. C.J.H. Duncan of New Zealand had a question about a "splodge" of ink that his ThinkJet produces at startup or reset.

Each ThinkJet Cartridge canister contains a clear plastic diaphragm (disposable) under which can be found a small piece of adsorbent stiff paper. This should be inserted in the small metal prongs at the left of the paper carriage. One side of the pad is adsorbent, and should face the cartridge, and the other is coated in plastic and keeps the ink (which is ejected as part of the reset/startup process) from leaking through.

I don't use the paper clip method to start ink flowing, but rather apply a piece of tissue paper firmly from bottom to top of the print head.

This appears to squeeze out enough ink out to start the printing, and does not use up too much ink in priming.

THINKJET SOLUTION—PART II

by Rob Sherrard, Costa Mesa, CA

In response to Mr. C.J.H. Duncan's problem with his ThinkJet Printer (*The Portable Paper*, Vol. 3, No. 4, p. 44), the solution is a simple one. HP engineers built a cartridge purge routine into the ThinkJet. At power ON, or any time the printer receives a RESET, all the dot positions are fired to purge the nozzles of any congealed ink or paper dust.

This purge pulse occurs when the printhead is at the far left end of its travel. Packaged with every print cartridge (under the clear plastic disk at the bottom of the container) is a piece of adsorbent blotter material. The adsorber is intended to be inserted into a clip just left of the left-hand pinch roller. If the adsorber is not installed, the print cartridge will purge itself onto the paper where it will detract from the overall presentation. I have not experienced difficulty in restoring print cartridges to operation with the paper clip technique. Perhaps the print cartridge is beyond its expiration date (located on the bottom of the container).

P+ No Luck Yet With WordPerfect 5.0

Both contributing *The Portable Paper* editors Cliff "The Wiz" Looyenga and Paul Grimmer are looking into ways at getting WordPerfect 5.0 to run on the Portable Plus. It can be made to work on the HP150. Both Paul and Cliff are somewhat hopeful but neither has arrived at a solution.

P+ No Luck Yet With 2400 Baud Internal Plus Modem

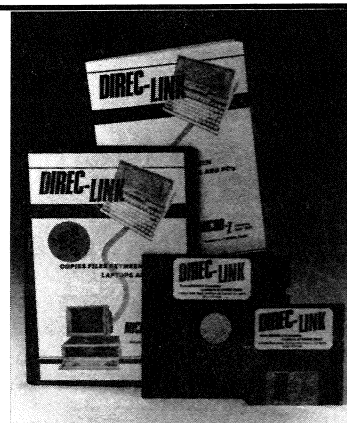
The manufacturer who expressed interest in producing 2400 Baud internal modems for the Portable Plus has put the project on hold. If your company wishes to place a large order for 2400 Baud internal modems, they should give me a call, and we can start things moving again for everybody.

(continued on page 42)

For Portable Vectra users:

DIREC-LINK™

- Transfers files to and from your desktop computer with just a few simple keystrokes
- Works with serial or parallel ports!



Of all the software on the market that will transfer files between your Portable Vectra and your IBM PC or compatible, our choice is Direc-Link by Micro-Z Company. The reasons are **versatility, ease of use, and price.**

Versatility: Direc-Link transfers files via serial or parallel ports. So if your desktop's serial port is being used for something else, you can still use the parallel port, and vice-versa. (Note: To use Direc-Link in serial mode, your Portable Vectra must have an HP serial adapter card, available from Hewlett-Packard.)

Ease of use: Direc-Link displays a simple tree diagram of all the files in a directory.

You "tag" the files you want to transfer by highlighting them with the cursor. Alternatively, you can use "Script" commands to transfer files *automatically* with both computers completely unattended. In addition, you can display and control both screens from *either* keyboard, and can enter DOS commands without leaving the program.

Price: Even with the added cost of the cables (see box), Direc-Link is *less* expensive

than most other file-transfer programs on the market, including many that are serial or parallel only. For easy, versatile file transfer at an excellent price, order Direc-Link at our risk today.

	Retail price	Subscriber price
Direc-Link	\$ 59.95	\$ 53.95
Parallel cable	29.95	19.95
Parallel cable adapter	20.00	18.00
Direc-Link Cable Pack	45.00	42.00
Direc-Link Total Package	134.90	115.00

RECOMMENDED FOR:

HP110 Portable	Portable Vectra	•
Portable Plus	HP150	•
IBM PC and compatibles		•

CABLES FOR DIRECT LINK

To use Direc-Link with parallel ports, you'll need a standard *parallel cable* (the kind normally used to connect a computer to a parallel printer) plus a *parallel cable adapter* (enables the standard parallel cable to connect the parallel ports of two computers).

For serial use, we recommend the economical *Direc-Link Cable Pack*; it includes 3 serial cables (covering all combinations of 9-pin and 25-pin connectors) plus a parallel cable adapter.

MILESTONE Project Manager

Ideal for field use on small to medium projects

Milestone analyzes your project and finds the critical path as you add activities step by step. Helpful instructions right on the data entry screens make the program almost intuitive to use.

Printed reports include job costs, labor requirements, calendarized time schedules, job descriptions, and job prerequisites.

Milestone is well-suited to field use. It handles up to 342 activities on the Portable Plus, and uses only about 105K of memory.

Milestone \$89.95

(Suggested retail price: \$99.95)

PRODUCT NO. ML11NS

Milestone is a registered trademark of Organic Software Associates.

Portable Vectra users:

Make your floppy drives work 10 times faster! (Save battery life too!)

FloppyDRIVER speeds up your 3½" disk drive(s); it saves you time loading, copying, and backing up files; and it even formats your blank disks automatically.

Impatient with slow floppy disk access on your Portable Vectra? FloppyDRIVER makes a big difference.

It's a software program that speeds up movement of the disk drive's read-write heads, *allowing your programs to load 30% to 50% faster.* Other disk access operations (copy, save, backup, etc.) are as much as *10 times faster.*

And since disk access is the biggest drain on your Portable Vectra's batteries, FloppyDRIVER also extends battery life significantly.

Installing FloppyDRIVER is easy, and once installed it works automatically—you don't have to do a thing.

Bonus feature: Whenever you access a floppy disk, FloppyDRIVER will format the disk automatically, but *ONLY* if it isn't already formatted. No need to type the DOS "Format" command ever again!

If you use a dual-floppy Portable Vectra, FloppyDRIVER will save time with almost every program you run.

If you use the hard disk system, you'll be grateful for FloppyDRIVER whenever you back up your files.

Either way, FloppyDRIVER is an absolute must for every Portable Vectra owner. Order a copy at our risk today.

FloppyDRIVER \$79.00

Portable Paper subscriber price \$69.95

For ordering information, see inside back cover. PRODUCT NO. FD11NS

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 HP-IL Card Available For Portable Vectra

P+ The Sejus corporation of Lake Oswego, Oregon, has recently released an HP-IL card that fits in one of the Portable Vectra expansion slots. We have been using a production unit inside a dual floppy Portable Vectra for a month and it has performed flawlessly.

PV The Portable Vectra HP-IL card and accompanying software works in the same way as HP's HP-IL card for IBM PC-compatibles. The Sejus card even uses a modified version of the same revision E software as its HP counterpart.

The Sejus card can be easily installed inside the Portable Vectra by following the directions provided in the Portable Vectra manual for the insertion of adapter cards. Like the HP counterpart, the manual is on disk. However, software installation is actually quite easy and operation is a snap. Simply add a line to the Portable Vectra **config.sys** file and copy a file onto the disk containing **config.sys** and you are in business.

You can now transfer files between your HP110, Portable Plus, or HP9114 disk drive and your HP Portable Vectra using PAM's file manager or DOS commands.

If you want to use your ThinkJet printer, you can do so with a modification similar to the **config.sys** file and disk. We have Word Perfect 5.0 printing successfully from the Portable Vectra to the HP-IL ThinkJet. However, beware that not many software packages are directly able to support an HP-IL ThinkJet. You will have to do most of your printing using the DOS **print** command.

Finally, although we have not yet tested it, Paul Grimmer's LINK program should work quite well with the HP-IL card. With LINK software you can transfer data (both ways) between your HP41, 71, 75, or series 80 computer, and your Portable Vectra. You can also control your handheld from the Portable Vectra keyboard, and use the Portable Vectra screen to display entries from your handheld.

Joe Wilhelm, Sejus' president, told me that they made an initial production run of 100 units. Unless they get a large order, they will not run any more. If you are interested in the card, it is probably a good idea to order as soon as possible.

The Sejus HP-IL card retails for \$245. Sejus can be

contacted at (503) 638-9000. *The Portable Paper* subscribers can order the product from Personalized Software, for \$235, at (515) 472-6330.

PV Backing Up Your Work

DO IT!

How are you backing up your Portable Vectra's hard disk or floppy disks? Are you using DOS or a commercial backup program like FastBack? At this time there is no tape backup system for backing up the Portable Vectra's hard disk.

I am embarrassed to admit how seldom I had been backing up any of my work. The 20 Meg hard drive in my Portable Vectra seems so reliable. However, even given the rugged clamshell design, it is susceptible to damage. Every time I take my 20 Megabyte Portable Vectra back and forth from home and work, it gets jostled as I drive on the gravel roads of the Iowa countryside. No harm so far, but I've resolved to take no more chances.

Writing this month's column has inspired me to come up with a reasonable solution to backing up my hard disk. Like so many things in life, it is just a matter of setting up a system. Once the system is in place it takes very little time to safeguard files.

Creating such a system is vital whether you have a dual floppy Portable Vectra system or a hard disk system. If a full Portable Vectra floppy disk gets corrupted, you lose 1.44 Meg of files. If your 20 Meg hard disk fails. . . . not pleasant to think about, is it?

I urge you to use one of the backup solutions described in this article, or invent your own. Some day, tomorrow, a month from now, or 2 years from now, you'll really appreciate the fact that you spent the hour or so studying this article and putting your backup strategy into place.

I will propose a simple solution that works well with either a dual floppy system or a hard disk system. If you have other backup solutions that you think readers would appreciate, please send it along and we'll publish your thoughts.

CRITERIA FOR BACKUP SOLUTION

As I studied the problem, the following criteria evolved:

1. Backup should be done daily.
2. Backup should take only a minute or two.
3. A system should be structured so that backup is done almost automatically. It should take as much effort and intention NOT to back up the files as to back up the files.
4. The backup system should require very little learning.
5. The backup system should require no additional purchase of software.
6. The files backed up should be easily and directly retrievable (as opposed to being stored in an unreadable format such as DOS **backup** and many commercial programs).

I achieved all these goals using the DOS **xcopy** utility which comes on the Portable Vectra DOS disk. The idea behind the solution is that only a small percentage of files actually changes from day to day or week to week. None of the program files changes, and only a few of the data files change. Therefore only a few data files that have

changed or been newly-created need to be backed up daily.

Before describing how I use **xcopy**, I will describe my strategy for organizing my hard disk.

ORGANIZING MY HARD DISK

One underlying principle I use is that program files and the data they generate should be in separate subdirectories. For example, all my WordPerfect executable program files—the ones that came on master disks—are in one subdirectory. The word processing files I create with WordPerfect are in other directories. That way those directories containing files which don't change (such as WordPerfect program files) don't have to be backed up.

For applications (such as word processing or spreadsheets), I generally have one subdirectory for program files and one for the data files the program creates. However, when I have "projects" such as the creation of this newsletter, I devote distinct subdirectories to the project. In my **ppl17** (Portable Paper number 17) subdirectory I have various outlines, articles, and spreadsheets, all relating to the issue.

The important point is: no matter how subdirectories are organized on your hard disk, or even on your 1.44 Meg floppies, files that never change should be grouped together, and files that tend to change should be together. Files that don't change (program files, batch files, certain spreadsheets, data base, and word processing data files) don't have to be backed up more than once.

THE XCOPY COMMAND AND THE ARCHIVE BIT

With its various options, the DOS **xcopy** command is powerful and useful. **xcopy** is most often used to copy an entire subdirectory structure—directories and their contents from one disk to another. However, **xcopy**'s ability to check the **archive** bit also makes it most useful as a backup tool.

Every file you create has a set of bits (switches) associated with it. Each bit or switch is either on or off. One such switch is the archive bit. When a file is created, the archive bit is initially set to "on." Whenever you modify a file, that is, whenever the file changes in any way, DOS also sets the archive bit "on." The only time the archive bit gets turned off is when some program, usually a backup program, turns it off.

xcopy has the ability to check if an archive bit is on, and if so, to turn it off. If you select the **/m** option of the **xcopy** command, you instruct **xcopy** to back up only those files whose archive bits are on. Further, using the **/m** option with **xcopy** turns off a file's archive bit once it has been copied.

The net result is that **xcopy** can be made to back up only those files that have changed since the last backup.

MAKING INITIAL BACKUPS OF FILES

My **xcopy** solution works if the total number of files you manipulate daily can fit comfortably on a 1.44 Meg floppy disk. If they don't, you can use the DOS **backup** command solution described below.

This first step of making initial backups of files can be skipped if you have less than approximately 1 Meg of potentially changeable files in your various subdirectories.

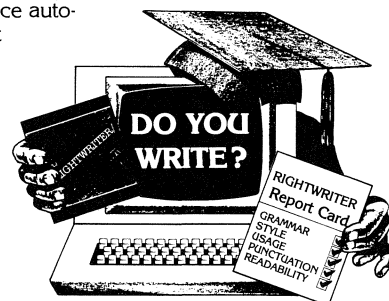
If you have more than 1 Meg of data files, you will want to create an initial set of backup disks. Each disk should contain at least one subdirectory from your hard

NEW! VERSION 2.1

RightWriter®

THE Intelligent Grammar and Style Checker

RightWriter is a new tool to help you produce lean, powerful BUSINESS WRITING. RightWriter uses advanced artificial intelligence technology to flag errors in GRAMMAR, STYLE, USAGE, and PUNCTUATION. RightWriter is the first office automation package aimed at producing better writing, not more writing.



• **Messages are Inserted** directly into text to point out possible errors and problem areas.

• **Easy to Use** — only one command to learn, your word processor does the rest.

• **Works with Leading Word Processors** — including MemoMaker, The Editor, MS Word, WordPerfect, MultiMate, and WordStar.

• **Readability Index** — measures the reading grade level of the document using the D.O.D. standard Flesch-Kincaid formula.

• **Uncommon Word List** — lists misspelled, slang, and uncommon words.

• **Recommends** — never decides. RightWriter is a writing aid. The final decision is always left to you.

"...RightWriter is an idea whose time is long overdue."
Phil Wiswell — PC Magazine
"RightWriter is an excellent, low-cost, eye-opening software package..."
Inside Word Management
"The documentation is among the best I have seen."
Jim Pile, Soft Sector

RightWriter \$89.00

Suggested retail price: \$95.00

PRODUCT NO.
RW11NS

Also available: RightWords
Dictionary extension utility for RightWriter. It has 7 auxiliary dictionaries (including business, computers, and engineering), and also lets you add words of your own to RightWriter's built-in dictionary. Product No. RW12NS
RightWords dictionary extension . . . \$29.95

Note: The version of RightWriter that works with WordPerfect 5.0 will not fit on single-sided HP disks. Therefore, if you intend to use RightWriter with WordPerfect 5.0, specify "RIGHTWRITER: DOUBLE-SIDED DISKS" on the order form.

RightWriter is a trademark of RightSoft, Inc.. WordStar is a trademark of Micropro International Corporation. MultiMate is a trademark of MultiMate International. MS Word is a trademark of Microsoft Corporation. WordPerfect is a trademark of WordPerfect Corporation.

disk. If one of your hard disk subdirectories takes up more than 1.44 Meg of disk space, you will have to create two or more 1.44 Meg floppies to back up that subdirectory. Once you have created these backup disks, using the procedure described below, be sure to clearly label the disk according to the disk's contents.

When you initially back up your data files, you will need to use the **xcopy** command with the backup **/m** option for my daily backup scheme to work. To back up your Lotus files, for example, from subdirectory **123files** you would issue the following command:

xcopy c:\123files a:\123files /m

When you give this command, **xcopy** asks you whether **123files** (as created) on the destination disk is to be a file or a directory. It prompts you to type a **D** or an **F**, so you type **D** for directory. **xcopy** then creates the subdirectory **123files** on your A: drive and copies all the **c:\123files** into it.

If you have room on that same floppy for another subdirectory (for your WordPerfect files for example), you would repeat the same step:

xcopy c:\wpfiles a:\wpfiles /m

At last! Graphics for the Portable and Portable Plus

by Hal Goldstein
President, Personalized Software

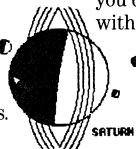
Paul Grimmer has done it again. He's the author of two of our best-selling programs: SideWinder (the sideways printing program for the HP Portables) and LINK (the program that lets you transfer data back and forth between HP hand-helds and Portables, printers, and other peripherals).

Now he's developed SKETCH, a fabulous graphics program designed for both the HP110 Portable and Portable Plus.

CURSOR BECOMES DRAWING PEN

Using SKETCH couldn't be simpler:

Put SKETCH in *draw* mode, and your cursor becomes a "pen". The pen can either be "up" or "down." When it is "down," it draws wherever you move it. When it is up, you can move it around the screen without affecting the drawing. (You set the cursor up or down simply by pressing "U" or "D.") You also can set the cursor speed, and can toggle between a faster speed and a slower



speed in an instant.)

The pen also has an "eraser": Just press "E," and when the cursor is down it will erase whatever it encounters.

DOZENS OF HANDY FEATURES

But that's just the beginning. SKETCH also lets you draw diagonals, boxes, circles, and arcs—each with a single key.

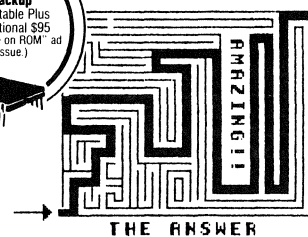
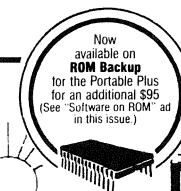
(If you have a mouse, you gain even more convenience: Move the mouse in any way you want, and the cursor follows instantly. See ad on the Logitech Mouse for the Portable Plus in this issue.)

SKETCH also lets you fill closed shapes with light or dark solid—or even invert the entire screen (light areas become dark and vice-versa)—with a single keystroke.

With SKETCH, you can create text in any of 5 different character sets and place the text anywhere in your drawing—including sideways or even upside-down.

SKETCH lets you save part or all of any drawing for future use, or you can print directly from the screen onto your ThinkJet or QuietJet pages.

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



THE ANSWER

You can also import graphics screens into SKETCH from Lotus or any other graphics program.

SKETCH doesn't limit the size of your drawing area to the size of your screen. The total drawing area is 70% bigger than the screen on the Portable Plus, and more than 150% bigger than the screen on the Portable. As you move the cursor past your screen's borders, SKETCH automatically shifts you into the areas that were off-screen.

Now you might be expecting that all these great features come at a high price in terms of memory space. But they don't. The entire program takes up only 44K! (As I said, Paul Grimmer of Southern Software has done it again.)

USING IS BELIEVING

No matter how fired up you might get by reading about SKETCH or looking at the few samples we've shown of what it can do, there is no substitute for actually getting your hands on this wonderful program and trying it out for yourself.

Remember, with our money-back guarantee, if you are not completely satisfied with SKETCH within 60 days, you can return it for a full refund. Why not order a copy today?

SKETCH graphics program \$80.
\$75.95 for Portable Paper subscribers.

PRODUCT NO. SK11NS

If, on the other hand, you don't have enough room on your 1.44 Meg floppy for all the files in hard disk **123files** directory, then you will have to issue several **xcopy** commands to copy all the files. If you plan ahead, and you have developed some file naming conventions for your 123 files, you can probably create your 2 or 3 backup disks without much effort. For example, your first command might be:

```
xcopy c:\123files\sales*.wk1 a:\123files /m
```

This command would copy all worksheet files beginning with **sales**.

The important thing is be sure to use the **/m** option. The **/m** option switches the archive bit to off. This means that when it is time to back up those files again, only those files that have changed since the last time will be backed up. Remember the **/m** option means copy only those files that have been created or modified since the last backup, that is, copy only those files whose archive bit is switched on.

CREATING THE BACKUP BATCH FILE

Now we are ready for the finale. Using your favorite editor, Create a (batch) file that is similar to the following: (Note: Remember to substitute the names of your subdirectories, and be sure to save the batch file as an ASCII (text) file).

```
echo off  
echo Insert backup disk  
pause  
echo Backing up root directory  
xcopy c:\ a:\root /m  
echo Backing up \wpfiles  
xcopy c:\dgv a:\wpfiles /m
```

echo Backing up GrandView files \gvfiles

```
xcopy c:\gvfiles a:\gvfiles /m  
echo Backing up \123files  
xcopy c:\dkey a:\123files /m  
echo Backing up \ppl7  
xcopy c:\dout a:\ppl7 /m
```

Call this file, say, **back.bat**. Run **back.bat** by typing **back** from PAM or DOS. The first time you run it, you will be asked whether you want to create a file or directory on your destination disk. As before, answer **D** for directory. After the first time, you will not be asked again.

This batch file copies to a floppy only those files that were modified or created since the last backup. The chances are, unless the files you are working with are very large, it will be a long time before you fill up your floppy.

MY 30-SECOND-A-DAY BACKUP SOLUTION

How do I make the backup procedure automatic? I do this by activating the **back** backup file every time the Portable Vectra is turned on. Each time the Portable Vectra is turned on or re-booted, all the commands in the file named **autoexec.bat** are executed.

Use your word processor to attach the word **back** as the last line to your **autoexec.bat** file. If you don't have a file named **autoexec.bat** in your root (main) hard disk directory, then create it with one line: **back**.

Now when you turn on your system, you are prompted by "Insert backup disk," the second line in the batch file. Insert your backup disk. Usually in less than a minute, you have a safe backup of any file changes made from the day before. (If for some very good reason, you want to

bypass the backup procedure, hold down the **ctrl** key and press **c**. Then answer **yes**, you want to terminate the batch file.)

If you run out of disk space on your first disk, run the same **back** batch file again. The only files that will be backed up on the second disk are the ones that weren't backed up on the first disk.

To speed the backup process I recommend FloppyDriver (discussed in this column the last two issues).

DUAL FLOPPY VECTRA BACKUPS

The simplest backup plan, especially if you use only one to three floppies for most of your work, is to issue the following command:

xcopy a:\ b:\ /m/s

This command copies all the files and directories from the disk in the A: drive to the disk in the B: drive. Option **/s** tells **xcopy** to copy and create (if necessary) the entire subdirectory structure. The **/m** ensures that only those files which were changed or created since the last backup will be copied.

THE DOS BACKUP PROGRAM

On your Portable Vectra DOS disk you'll find **backup.com**, a program dedicated to backing up your hard disk. The main reason I don't care for the program is that it stores files in its own unreadable format (without significantly saving disk space). You must use another program on your system disk, **restore.com**, to restore the backed-up files.

The advantage to **xcopy** is that a file can be accessed directly from the backed-up disk. That way if you somehow mess up a file, you can directly and easily retrieve the previous version of the file.

However, if you have large files (over 1.44 Meg) or a great number of files to be regularly backed up, you are better off using **backup** or a commercial equivalent. Also, if the hard disk actually does go bad, restoring your files will be much simpler than with the **xcopy** method I proposed. With my method, you will have to go to your original program master disks for your application files, and to various **xcopy**-ed disks for your data files.

Probably the smartest procedure is to do a backup using DOS **backup** at least once a month, and use my method daily. You can then use DOS **restore** to recover your files if the hard disk crashes. Those more recent files on your **xcopy**-ed disks can be recovered using the **/D** option of the **xcopy** command. The **xcopy /Dmm-dd-yy** option lets you restore those files only with dates after the month, day, and year specified.

It is best to study **xcopy**, **backup**, and **restore** in your DOS manual. The **backup** command I would recommend would be:

backup c: a: /s

The **/s** option backs up all files and subdirectories. You need the **/s** option to copy the subdirectory structure.

You can also add the **/m /a** option, which backs up files since the last backup. This will make the backup procedure faster. However, you must remember that if you also use the **xcopy /m /a** option described above, you will not back up any files that haven't changed since being backed up by **xcopy /m**. The **/a** must be present or the backup program will delete all existing files on the backup disk before starting the backup.

It makes your HP printer come alive!

HPrint takes text (ASCII) files you've created with MemoMaker, The Editor, or other word processors, and prints them with a dazzling array of enhancements on the ThinkJet or almost any HP graphics printer.

HPrint comes with an italic type font for ThinkJet.

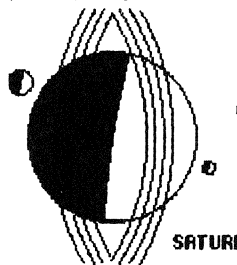
It also allows:

* **bold** * **wide** * underline * compressed
* centering * headers * footers * page
numbers * double space * right-justifying
* multiple copies * 8 lines per inch * even
subscripts and superscripts * and much more

... all of which you specify from a simple menu or by means of sensible control codes.

(For example, @U controls underlining, @H lets you specify a header, @L toggles 6/8 lines per inch, etc.)

With the QuietJet and LaserJet, HPrint lets you change type fonts from within your document. With the ThinkJet, you can insert messages that prompt you to change the ink color.



HPrint also does mail merging and lets you insert graphics from Sketch and other graphics programs.

And it even lets you create your own graphics characters: @b Δ √ @

Expand your printer's boundaries. Order HPrint today.

HPrint\$80.00
\$75.95 for Portable Paper subscribers.

Note: This ad was printed on a ThinkJet printer using HPrint and MemoMaker.

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

COMMERCIAL BACKUP PROGRAMS

Based upon reviews in a number of computer magazines, I can recommend two commercial hard disk backup programs. If you want a fast backup system with all the control you can imagine over what files get backed up and how often, with an attractive user interface and excellent on-line help, then buy *Fastback Plus*. For simplicity and value and a program that is easy to learn and install and does its job quickly and cleanly, choose *PC-Fullbak*.

Fastback Plus retails for \$189 from Fifth Generation Systems, (800) 225-2775. *The Portable Paper* subscribers can purchase it from us for \$159. PC-FullBak lists for \$129.95 and comes from Westlake Data Corp., (512) 474-4666 and can be purchased from us for \$115.

PV GrandView—My New All-Purpose Tool

I am a great fan of outliner programs. The outline format best captures my manner of thinking and planning. For example, my work consists of a series of projects which divide into subprojects which in turn can be subdivided. *The Portable Paper* consists of a number of columns which contain articles, each of which has four or five main points, which in turn have subpoints. Both these examples fall nicely into the hierarchical structure of an outline.

Word processors manipulate words, spreadsheets manipulate numbers, and outline processors manipulate ideas. Just as word processors and spreadsheets have evolved over the years, so have outliners. Enter super outliner, GrandView.

I now spend about 75% of my Portable Vectra time in Symantec's GrandView. GrandView lets me think and plan. From GrandView I write correspondence, memos, and articles for *The Portable Paper*. Further, I can quickly generate outlines which serve as the basis for the work of our professional writers. I give outlines to our copy writer to generate our ads and to our technical writer to create our documentation. The outlines and written work are printed to my HP DeskJet.

GrandView is said to be part of a new class of applications sometimes called information managers (newly-released Lotus Agenda is also part of this class). For my purposes, GrandView is fundamentally an outline program with advanced features, and it can best be understood as such.

After all, although a product like WordPerfect has spreadsheet, database, graphics, macro, and desktop publishing capabilities, its fundamental metaphor is word processing. In the same way, while Grandview has word processing, database, and macro capabilities, it is fundamentally an outline program.

My *The Portable Paper* number 17 Grandview outline template consists of the different possible columns for this issue. Thus, under the main headline of "Portable Paper 17" are such subheads as "Vectra Views," "110%," "News From Personalized Software," and so forth. There are also subheads for projects such as "New products."

As deadlines approach, different points accumulate under the different headings. Since most of my time is spent in GrandView, and GrandView can hold up to nine outlines at once, it is a simple matter to hold down the Alt key and type 3 to switch to "Portable Paper 17" outline even if I am working on something else. I load GrandView in a way that always brings me to the spot where I left off

the day before. That keeps "Portable Paper 17" as outline 3 even though I haven't yet accessed it.

I also keep a memory-resident program called Ready, another outline product from Symantec, available. That way, even if I am not working in GrandView I can plug ideas into an outline. When I return to GrandView, I can easily import ideas from Ready to GrandView. In general the import/export features of GrandView are robust.

When it is actually time to write an article, I press **Return** from the appropriate outline headline and just start writing. If I don't want to see the clutter of the outline when I am writing the article, I just press the **f5** function key and all I see is my word processing text. Press **f5** again and I am back in the outline. If I want to hide the text of the article, I press another keystroke combination. The headline which houses the article ends with an up-arrow symbol to remind me there is something there.

GrandView lets me re-define the keyboard as I like, and enables me to create simple keyboard macros, thereby easing the burden of learning yet another word processor. The word processor is full-featured and even knows about printers such as the LaserJet, so I can control fonts and output reasonably well.

Grandview's outlining features shine. Moving headlines, promoting them, demoting, gathering random ones, and sorting and arranging them is a snap. If you are working on one section of an outline and don't want to see the rest of the outline, an **Alt** ["hoists" the section of the outline on which you want to work and hides the rest. You can easily hide or show any level of subheads. A plus or minus sign in the left margin indicates whether a headline has any subheads.

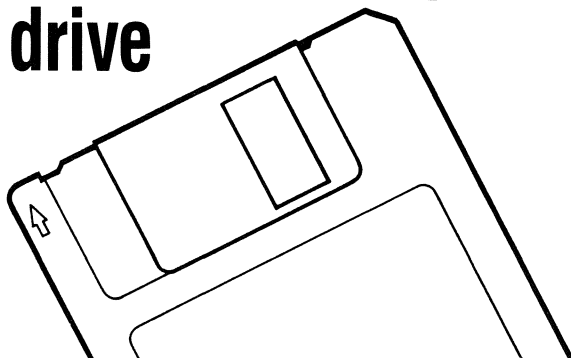
There is a context-sensitive help screen a function key away that saves always dipping back into the well-written manual. You can have more than one outline on a screen by "tiling" them vertically or horizontally, or laying them one on top of the other. You can resize or move any of the outline windows. It is a simple matter to cut or copy to a "clipboard" a section of an outline, and move it to another place within an outline, or to a different outline altogether.

The default outline structure is the type I learned in grade school: Roman numerals, capital letters, arabic numeral, small letters and so on. You can restructure it into legal or any other form you desire. Portable Vectra users with a color monitor will see each level in a different color. Portable Vectra users using the regular LCD screen will appreciate the fact that you can choose "Force black and white" thus eliminating the unreadable shades of grey inherent with programs that take advantage of color.

The GrandView feature which has received the most press is its ability to assign categories to headlines. For example, you can assign a priority to any point in the outline. In the Vectra Views section of my outline, I assigned "Urgent" to a point under the HP-IL card article, which reminded me to find out about pricing. I have another category called "Person Responsible." The headlines indicating articles on which I am working are assigned "Hal" in the "Person Responsible" category. Those articles which are being edited by managing editor Michael Sugarman are assigned: "Mike." A headline can have any number of categories and assignments attached to it.

If I choose, I can dedicate the lower few lines of my screen to show me any assignment made to the headline

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



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

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

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

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

ReadHP \$59.95

Portable Paper subscriber price \$49.95

PRODUCT NO. RD11NS

60-DAY MONEY BACK GUARANTEE

See order form for details.

TO ORDER

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

Personalized Software

P.O. Box 869, Fairfield, IA 52556-7415 472-6330

RECOMMENDED FOR:

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

where my cursor resides. So, if my cursor was on "HP-IL card," I would see "Priority: Urgent" and "Person Responsible: Hal." At any time, I can create a list by category and assignment. I could list for example, all "urgent" items or print out a "Person Responsible" list.

CRITICISMS

GrandView is by no means perfect. My biggest criticism is that it is almost too much. Even for an experienced computer user, familiar with outliners, word processors and macro generators, the program does not seem intuitive enough. It is a bit like taming a wild horse.

For programmers out there, creating large outlines is like programming in BASIC rather than Pascal. In BASIC it is easy to get sloppy and create an undisciplined "spaghetti code"—code that seems to assume a life its own. On the other hand, Pascal is more restrictive to use. It enforces a kind of discipline, which makes it much easier to write modular, controlled, programs.

In other words, the more features you use in GrandView, the more disciplined you need to be. Cloning, categories, automatic assignment, keyboard redefinition and so on are powerful features that must be kept under control to be useful.

Also, I miss features like macro pause, merging of outlines, and keeping subheads when listing by categories. Somehow, I get the sense that GrandView is not quite a finished product. The rough edges still need smoothing.

Despite these criticisms, I spend most of my computer time in GrandView. Slowly, I tame it.

ORDERING INFORMATION

GrandView is published by Symantec, Corp. of Mountain View, CA, (800) 441-7234. The product retails for \$295. *The Portable Paper* subscribers may purchase it from Personalized Software, (515) 472-6330, for \$239.

PV Great Eye-Saving Trick

Here is a great discovery which will make your LCD screen or monochrome monitor much more readable, at least some of the time. Whenever you return to DOS and find

your screen displays those unreadable, grey, oddly-shaped letters, issue the following command:

mode bw80

Make sure the **mode.com** program from the DOS disk is in your current directory or is included in a path which your system recognizes.

As discussed in previous Vectra View columns, the LCD screen becomes unreadable because of software which senses the Portable Vectra's CGA color capability. Without consulting the user, software sometimes creates a colorful display for a color monitor. However, users with the LCD or even a monochrome screen can find the same display virtually unreadable. See Vol. 3, No. 3, p. 8 of *The Portable Paper* for a complete discussion of how to customize your screen for each application using the **HP setup** program.

This trick, using DOS **mode**, works especially when you wish to use a memory-resident program from DOS or another application that does not cloud up your screen. It is also useful for clearing up your screen after exiting a program that assumes a color monitor.

After I have been using the Vectra for a while, sometimes this trick does not work. I have not been able to narrow down exactly when it works and does not. I invite readers to comment.

PV Creating A RAM Disk In EMS Memory

In the last issue I asked readers to check if the **vdisk** program which creates an internal RAM disk could be made to run in Portable Vectra-style expanded memory. Several readers called in to say that it couldn't.

However, upon talking with HP internal support, I found out there is a way. Since I have not yet received my extra memory, I have not tested the solution.

On the supplemental disk which comes with EMS memory, there is a program called **emdisc.sys**. If you read the instructions which accompany **emdisc.sys**, you can configure some or all of the EMS memory as RAM disk. For further information about constructing a RAM disk in regular memory, see last issue's Vectra Views or consult the **vdisk.sys** section in your DOS manual.

NEWS FROM



Personalized Software INC.

Products that make HP Portables smarter

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

By Hal Goldstein

110 New HP150 Catalog

P+ Ever since we started *The Portable Paper*, we have received requests to start a similar journal and product line for the HP150. I have resisted for many reasons, mostly the lack of time. However, with the help of Ed Keefe this summer, we have produced a catalog containing only products for the HP150 Touchscreen.

PV Lest our readers fear abandonment, we haven't forgotten that the basis of our success is our support of the HP Portables. In actuality, as you will see, the process of putting together the HP150 catalog will have advantages for HP Portable users. A number of products which run on the Portables were uncovered or invented because of our efforts in creating the HP150 catalog.

The catalog is divided according to applications, and includes word processing, file transfer utilities, programming, project management, and Lotus enhancers. HP Portable users should find the following products (which emerged as a result of the HP150 catalog effort) of value.

(If you are an HP150 user or know someone else who is, be sure to contact us so that we can send you a free catalog. If you would like one or more HP150 catalogs give us a call at (515) 472-6330 or drop us a line, and we'll send you the catalogs immediately.)

110 Manzana 3 1/2-Inch Floppies

P+ INTRODUCTION

I met David Gluck, Manzana's president, at Comdex (the microcomputer trade show) several years ago (see *The Portable Paper* Vol. 2, No. 1, p. 16). Despite our lengthy discussion, for some reason the value that his 3 1/2-inch floppy drives could hold for HP Portable users did not dawn on me until I started working on the HP150 catalog.

When we get calls from HP150 users, one of their most common questions is how to transfer files back and forth between their PC-compatible with 5 1/4-inch disks and their HP-formatted 3 1/2-inch disks. HP Portable users can get around this problem by installing an HP-IL card in their PC and then connecting it to their HP9114 disk drive. Using the DOS **copy** command, it is a simple matter of copying files to and from their 5 1/4-inch floppy in their PC and 3 1/2-inch HP9114 diskette.

In putting together the HP150 catalog I remembered Manzana because they not only sold 3 1/2-inch floppy drives, but had a software driver that knew about HP-formatted disks. I checked out Manzana and a competitor, Astro systems, who also sported a 3 1/2-inch floppy drive

with HP drivers. Although I was not altogether satisfied with either, Manzana had superior documentation and has been in business longer. They were the first company to manufacture 3 1/2-inch drives for PC compatibles. They also provide a two-page list of different PC-compatible machines with which their Manzana drives work.

TESTING THE MANZANA

Since I was used to an external drive via the HP9114, I first obtained an external Manzana 3 1/2-inch drive to test with our desktop HP Vectra. With a little help from Manzana (they had left an installation step out of the manual) we were able to connect the Manzana drive. The manual is good and fairly complete, but contains a number of addenda—revisions and updates of their software and hardware. They have just completed a revision of the manual that incorporates all the changes and the missing step. We have not seen the manual yet but it should be available by the time you read this.

The drive we ordered reads HP-formatted disks, IBM-compatible 720K disks, and Portable Vectra/IBM-compatible 1.44 Meg disks. After using the disk drive and then later staring at the empty area under the 5 1/4-inch drive in our Compaq Deskpro, the light suddenly dawned on me. A Manzana internal drive would be a valuable acquisition for any HP Portable user with a 5 1/4-inch IBM PC-compatible.

We have the Compaq connected to a LaserJet Plus and an HP9114 disk drive. It is the machine we all use for simple disk conversion and for letter quality printing/desktop publishing. In my inspiration I realized that inserting an internal 3 1/2-inch Manzana drive would benefit us in many ways.

With the Manzana internal drive we would no longer need the services of the HP9114. That means more space on the desk and more importantly, the slot where the HP-IL card now resides could be made available. Further, the Manzana can read both 720K and 1.44 Meg IBM PC/Portable Vectra floppy disks. The HP9114 cannot read 1.44 Meg floppies, and only systems with revision E of the HP-IL software can read IBM PC 720K floppies.

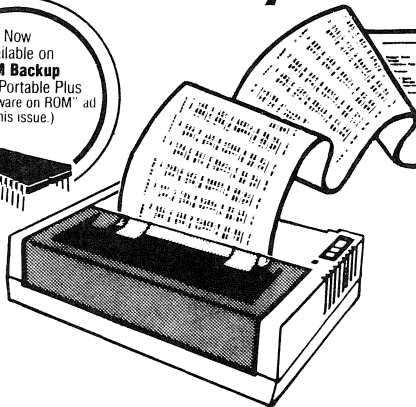
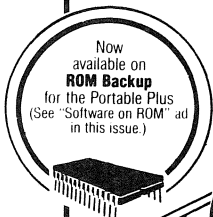
Also, no matter how many notes we attach to our HP9114: "Do Not Remove, etc.," someone always has a good reason for borrowing and not returning it. The HP9114 shortage at Personalized Software is often acute, since HP9114 disk drives are our most popular used product. Neither our shipping nor sales departments are bashful about sending out any unit on which they can get their hands.

THREE PROBLEMS

I ordered the internal Manzana drive and installed it in our Compaq. We had three problems. First, our Compaq DeskPro didn't come with the extra side rails and power splitter required for installation. The computer store around the corner had these standard IBM PC parts, so we were able to install the drive. Manzana also has inexpensive kits for the various machines, including the HP Vectra. (See the end of this article for costs and part numbers.)

Second, the Manzana drive didn't read my Portable Vectra 1.44 Meg disks. After staring at the manual, I finally realized that the computer must be at least an IBM AT compatible before it can read 1.44 Meg 3 1/2-inch floppy

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.)

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

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

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

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

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

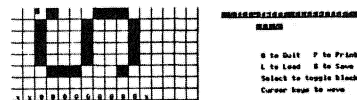
SideWinder \$69.95
\$59.95 for Portable Paper subscribers

PRODUCT NO. SW11NS

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

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

SideChar lets you create your own sideways characters.



Simply fill in a grid on your Portable to modify SideWinder's 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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disks. Our Compaq is an IBM XT clone. (We had no trouble reading 1.44 Meg 3 1/2-inch disks with our desktop HP Vectra.)

Finally, the most serious and inexplicable problem was that we could read some HP-formatted single-sided disks with the Manzana drive, yet could not read others.

Apparently, HP has two or three different versions of its single-sided format. After some experimentation we found that the Manzana could read single-sided disks formatted by the Portable Plus and HP150. It could not read disks formatted by the HP110, which is the format we use on our distribution disks. (To create a single-sided formatted disk from either HP Portable requires entering DOS and typing: **format c:\w**. HP110 users must use the **format.com** utility, which can be found on the HP110 utilities disk.)

I phoned Manzana immediately and sent them a couple of sample disks. They worked on the problem and had

it solved the day they received the disk. Their engineer wrote me:

"Although we had a number of HP single-sided diskette specimens on hand, the disk you sent me proved to be different. Certain key parameters in the bootsector of the disks differed from any that we had seen before. This prevented our device driver from recognizing the disk as a valid MS DOS volume. Enclosed is a new version of our software which will recognize your HP single-sided disk. All DOS 3.3 utilities like **xcopy** and **comp** work properly, and the disk passes the Norton Utilities **Disk Test** program."

Manzana will update old versions of the software at no charge. If you order a drive through us, we will make sure you have the latest version of the software. The new version will be included with the product, no matter which dealer, within the next few months.

Lotus and 1-2-3 are registered trademarks of Lotus Development Corp.

Personalized Software Products and Services in Brief:

WORD PROCESSING

110 P+ PV

The Editor

Many features not in MemoMaker, including search/replace, editing 2 files at once, embedded printer codes, up to 255 columns per line. Also does word wrap, right justify. Easy to use. Uses less than 40K. Versions for HP110, Plus, HP150, Vectra, and IBM PC all on master disk. See page 11.

The Formatter

Sophisticated text formatter for large reports, program documentation, etc. Multiline headers, footers, page numbers, table of contents, glossary capabilities, and more. Works with almost all printers. (Note: Manual is in draft form: no technical support available.) See page 11.

110 P+

HPrint

Takes text (ASCII) files you've created with MemoMaker, The Editor, or other word processors and prints them on an HP printer. Comes with italic type font for ThinkJet. Also allows bold, underline, compressed, expanded, subscripts, superscripts, headers, footers, page numbering, double space, and much more—all of which you specify from a simple menu or by means of sensible control codes. HPrint also does mail merging, and it lets you create your own graphic characters. See page 17.

110 P+

PrinterTalk and Format110: MemoMaker Enhancers PrinterTalk lets you change type styles in the middle of a document, change number of copies and lines per page, do automatic page numbering, and much more. **Format110** lets you format headers, footers and page numbers; chain or merge documents; compensate for "widow" and "orphan" lines and much more.

110 P+ PV

RightWriter

Flags errors in grammar, style, usage, and punctuation, inserting comments directly into your document. Also produces overall critique. Works with most word processors. Also available: **RightWords** dictionary extension utility: it has 7 auxiliary dictionaries (business, computers, engineering, etc.), and also lets you add words of your own to RightWriter's built-in dictionary. See page 15.

P+ PV

Webster's Spelling Checker

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

P+ PV

WordPerfect 4.2

Disk-based Portable Plus, Portable Vectra, and HP150 version of the best-selling word processor. Includes spelling checker and thesaurus.

110

The Word Plus

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

UTILITIES TO BOOST YOUR PRODUCTIVITY

110 P+ PV

DOS Tools: Portable Utilities Disk, Vol 1

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

P+ PV

FilePlus: File Management Software

Lists the files in two directories simultaneously. You can tag multiple files and perform actions (such as copy, delete, move, etc.) on all the tagged files at once, without having to use P.A.M. or DOS. See page 33.

110 P+ PV

LINK HP-IL Connector Software

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

110 P+ PV

The Norton Utilities—Customized For The Portables

Allow you to recover deleted Portable files and organize your electronic and external disks. Peter Norton has authorized us to include an extra 3½" disk (formerly available only on 5¼" disk). The disk includes The Norton Utilities, and instructions for running them on the Portables and the HP150. Version 4.0 and Advanced Edition are now available. See page 2.

110 P+ PV

1987 Portable Paper Subscriber's Disk

Includes (1) DISKPACK, a disk-packing utility whose commercial equivalent sells for \$50. (2) Time Manager's Calendar Utility. (3) HP Calculator program. (4) C Drive Copy Utility. (5) Game and Lotus templates. Clear instructions are included right on the disk.

110 P+ PV

1988 Portable Paper Subscriber's Disk

Contains: (1) New utilities for Time Manager, including an expanded Calendar program and an automatic mail-merge utility. (2) Some of the best public domain software and "shareware" for the Portable Vectra. (3) A password program to protect usage of the HP110. (4) TERM Xmodem program for the Portable Plus. (5) Lotus templates. (6) Games. (7) New DOS tools. (8) A file to toggle HP and Alternate mode from DOS. (9) Lots more. Clear instructions included on the disk.

110 P+ PV

Private File

Protects your letters, documents, and data files by scrambling your file so only you can understand it.

P+

Shelp

From within almost any program, Shelp gives you immediate access to a notepad and calculator and lets you define up to 26 keyboard macros—that is, assign up to 31 characters to a single keystroke. Written exclusively for the Portable Plus. See page 41.

110 P+ PV

Tiger Fox

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

110

Time Manager

The highly acclaimed Portable Plus ROM-based **Time Manager** program in a 3½" disk version for the HP110 Portable. Does not run on Portable Plus. (Available to Portable Paper subscribers only.)

110 P+

Typing Wiz

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

FILE TRANSFER MADE EASY

PV

Dirac-Link

A software program for high-speed transfer of files between your Portable Vectra and IBM PC or compatible. Versatile (works with parallel and serial ports), easy to use (simple manual file-tagging or automatic unattended file transfer), and very affordable price. See page 13.

110 P+ PV

Disk Conversion Service

We will convert your data to and from single-sided, double-sided, high-density, 3½ inch and 5¼ inch formats at a reasonable cost.

P+

HPDuette

A software program that lets you transfer files back and forth at high speed between your Portable Plus and an IBM PC or compatible desktop computer—without the need for an HP-IL card. Comes with proper serial cable. See page 37.

110 P+ PV

Manazana disk drives

These are high-quality drives for IBM compatibles. They allow a 5¼" IBM PC compatible system to access 3½" HP or IBM formatted disks. See page 27.

110 P+ PV

ReadHP

This software program allows an IBM compatible computer with a 3½" disk drive to read and write to HP formatted disks directly. See page 27.

SPREADSHEET ENHANCERS

110 P+ PV

101 Macros for Lotus 1-2-3

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

110 P+ PV

SideWinder

This program allows you to print your spreadsheets (or any other text file) sideways on your ThinkJet. This means you can print your 60 column by 53 row spreadsheet from your Portable as one long printout without cutting and pasting. See page 21.

110 P+ PV

Statistix

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

COMMUNICATIONS

110 P+ PV

CompuServe Starter Kit

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

110 P+

Term110 and TermPlus communications software

Exceptionally easy-to-use alternatives to Terminal for the HP110 and PC2622/Reflection for the Portable Plus. Both Term110 and TermPlus allow you to send and capture ASCII information. Both offer fast XMODEM transfer of programs, Lotus worksheets, and archive files. Both offer auto log-on, dialing directories, on-line help, and the ability to run other programs without severing the phone connection. See page 25.

110 P+ PV

WorldPort Portable Modems

The **WorldPort 2400** is a battery-powered, highly compact (4"×2"×1"), lightweight (6.5 oz.), full-featured external modem that transmits data at 300, 1200, and 2400 baud. Faster than HP's internal modems, the WorldPort 2400 is fully compatible with the industry-standard Hayes AT Command Set, and with both the CCITT and Bell communications standards. The **WorldPort 1200** modem transmits at 300 and 1200 baud. See page 29.

PROJECT MANAGEMENT

110 P+ PV

3 Project Management Packages

All 3 work on the HP110, Plus, Vectra, HP150, and IBM PC. **Project 8-9-10**, a Lotus template, helps you manage small to medium projects. **Milestone** is also for small to medium projects. (On HP110, you need to scroll to see entire Milestone screen.) **Perlmaster** is for medium to large projects (specify which machine).

DATA BASE

110 P+ PV

Condor 3 and Condor, Jr.

Database programs customized for the HP Portables. Enter data, sort, search, manage files, and print address labels with ease. **Condor, Jr.** runs on the HP110 and Portable Vectra. It allows limited report writing, and is highly memory-efficient. **Condor 3**, runs on the Plus, Portable Vectra, and HP150. It is a fully "relational" system, allowing you to combine data from two or more files. It includes advanced report generating capabilities, data transfer to and from Lotus 1-2-3, and more. See page 35.

PROGRAMMING

110 P+

Turbo Optimizer

Saves run time and storage space by making your Turbo Pascal programs 10-30% faster and 15-50% smaller. Works with Turbo Pascal Version 3.0. Customized to HP110, Portable Plus, and HP150. See page 8.

110 P+ PV

Borland Turbo Pascal—Customized For The Portables

Turbo Pascal, the HP Portable programming language of choice, outstrips others in price, performance, compatibility, memory consumption, and programmer environment. The WordStar-type editor alone is worth the price. Borland has authorized us to include an extra disk customizing the Turbo editor to the HP110 and Portable Plus's editing keys. The **Turbo Pascal Starter Kit** includes **Turbo Pascal**, and **Portable Pascal Programs** (a double-sided disk with more than 50 program examples for the Portables).

GRAPHICS

P+ PV

Flowcharting II+

This program creates professional-looking flowcharts and organizational charts using 26 flowchart symbols in 95 styles. Wide variety of text fonts for creating labels. Easy to add and delete lines without disturbing the rest of the flowchart. "Shrink Screen" feature lets you view up to 14"×11" chart on 25-line screen. (Portable Plus only.)

P+ PV

Logitech Mouse for the Portable Plus

A 3-button mouse for the Portable Plus, bundled with our proprietary Portable Mouse Software and special connecting cable. Using the mouse to move the screen cursor makes using your Plus easier and more fun. The Logitech mouse was rated Editor's Choice by PC Magazine.

110 P+

Sketch

A graphics program for the HP Portables. Lets you draw free-form using cursor keys. Also draw lines, boxes, circles by pressing a single key. Five character sets can be displayed normally, sideways, or even upside-down. Entire screen can be printed on ThinkJet at virtually any enlargement. Screens can be saved for future use. Screens can also be imported into Sketch from Lotus and other programs. Only uses 44K of memory. See page 16.

ACCESSORIES

110 P+

Cases for Portables and Peripherals

Roomy, rugged, high-quality, highly padded cases to protect your ThinkJet, HP9114, and HP Portable when traveling. See page 37.

110 P+

HP9114 Empowerer

A hardware product that prevents the HP9114 disk drive from running out of juice in the middle of your work. Plug Empowerer into your HP9114 and a normal wall outlet, and you can run your HP9114 forever. See page 37.

110 P+

Mobile Recharger

Lets you recharge your HP110, Portable Plus, ThinkJet, HP9114, HP hand-held etc. from your car's cigarette lighter.

P+

2-Megabyte RAM card

A giant leap in memory size for the Portable Plus. Simply remove your existing RAM drawer and replace it with this card. Works with any Portable Plus with 512K of built-in memory. We will accept your old RAM drawer and any extra memory as a trade-in towards purchase.

P+

RAM/ROM Card

A megabyte of RAM plus four pairs of ROM slots. Add the RAM/ROM card to your Portable Plus and you have a megabyte of extra RAM in addition to space for Lotus, Reflection, Webster's Spelling Checker, MemoMaker/Time Manager, and SuperROM (5 products on one ROM chip). We will accept your old RAM or ROM drawer and any extra memory as a trade-in towards purchase.

INTEGRATED PACKAGE

110 P+ PV

T/Master and T/Maker

T/Master is a fully integrated word processor, spell, relational database manager, spreadsheet, file manager, and communications package. Also includes graph making. Runs on Portable Plus and Portable Vectra without modification, and on HP150 with a PC emulator. **T/Maker** is an earlier version; it runs on the HP110 Portable with an external disk drive, and does not include the communications module. Both programs are more integrated than any other package. Our reviewer says, "...there is no other application I know of that matches the power, thoroughness, and simple elegance of T/Master."

PORTABLE VECTRA ONLY PRODUCTS

PV

Direc-Link

See description in File Transfer section.

PV

FloppyDRIVER

A software program for the Portable Vectra that makes all floppy disk access operations (loading and running programs, managing and copying files, etc.) up to 10 times faster. See page 13.

PV

Monitors for The Portable Vectra

Convert your Portable Vectra to a desktop computer—and back to a portable—in seconds. Excellent values in monochrome and high-resolution EGA color monitors from GoldStar.

110 P+ PV

HP-IL Card for Portable Vectra

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

MISCELLANEOUS

P+

Software on ROM

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

110 P+ PV

Used HP Portable Equipment

The Portable Equipment Exchange, a division of Personalized Software, buys and sells used HP110s, Portable Pluses, HP9114s, HP ROMs, and RAM drawers for a great buy. Because of HP quality, used HP products are a plus. 30-day return policy on all used equipment, plus **one-year guarantee** (parts and labor).

110 P+ PV

Volume Discounts

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

PRICE LIST

The prices given are for **Portable Paper subscribers**. Normal prices are listed in the ads in this issue or are available by phone from **Personalized Software**.

1 Yr Portable Paper Subscript.	\$ 55.00
Product No. PP11PU	
2 Yr Portable Paper Subscript.	99.00
Product No. PP12PU	
3 Yr Portable Paper Subscript.	139.00
Product No. PP13PU	
4 Yr Portable Paper Subscript.	175.00
Product No. PP14PU	
Back Issues—Portable Paper	9.20
Product No. PP99PB	
BacTools	39.95
Product No. BC11NS	
Catalog, HP Portables	0.00
Product No. CATPOR	
Catalog, HP150	0.00
Product No. CAT150	
Compuserve Starter Kit	35.95
Product No. CM11NM	
Condor 3—Plus HP150	379.00
Product No. CR11NS	

Condor Jr.—HP110	89.95
Product No. CR13NS	
Direc-Link Cable Pack	42.00
Product No. DL15PP	
Direc-Link Pack	115.00
Direc-Link Parallel Cable	19.95
Product No. DL13NM	
Direc-Link Parallel Cable Adap.	18.00
Product No. DL14NM	
Direc-Link Software	53.95
Product No. DS11NM	
10 disks & case—110 & Plus	29.95
Product No. DS12NS	
10 disks—high density	69.95
Product No. DS12NM	
Disks monochrome—color	39.95
Product No. DS14NM	
Dos Tools	39.95
Product No. DT11NS	
Dos Tools—ROM	129.00
Product No. DT12NR	
Editor	79.95
Product No. ED11NS	
Editor—ROM	95.00
Product No. ED12NR	
Editor/The Formatter	99.95
Product No. ED13PP	
9114 Empowerer Supply	89.95
Product No. PR12NM	
FilePlus	59.95
Product No. FE12NS	
FloppyDRIVER—Vectra	69.95
Product No. FD11NS	
Flowcharting II—Plus/Vectra	209.00
Product No. FL11NS	
Format110	35.95
Product No. FM12NS	
Formatter	49.95
Product No. FM11NS	
Goldstar EGA Monitor	495.00
Product No. GL11NM	
Goldstar Monochrome Monitor	119.00
Product No. GL12NM	
HP-IL Card—Portable Vectra	235.00
Product No. HP16NM	
HPCalculator—ROM	95.00
Product No. CL11NR	
HPDuette—Plus	89.95
Product No. DU11NM	
HPDuette—ROM	95.00
Product No. DU13NR	
HPrint	75.95
Product No. HP11NS	
HPrint—ROM	95.00
Product No. HP12NR	
Kermit Diskettes	19.00
Product No. KE11NS	
Link	75.95
Product No. LK11NS	
Logitech Mouse	99.95
Product No. MS14NM	
Logitech Mouse System—Plus	179.95
Product No. MS15NM	
Mouse Software for Plus	60.00
Product No. MS11NS	
Mouse cable	20.00
Product No. MS13NM	
Lotus 123, HAL w/ Plus driver	545.00
Product No. LT13NS	
Lotus 123/Symphony Drivers	69.95
Product No. LT14NS	
101 Macros for Lotus 123	62.95
Product No. MC11NS	
Manzana 1.44M external drive	439.00
Product No. MZ12NM	
Manzana 1.44M internal drive	275.00
Product No. MZ11NM	
Manzana 720K external drive	369.00
Product No. MZ14NM	
Manzana 720K internal drive	219.00
Product No. MZ13NM	
Microsoft Mouse	174.95
Product No. MS12NM	
Milestone	89.95
Product No. ML11NS	
Mobile Recharger	36.95
Product No. PR11NM	
Norton Utilities 4.0	89.95
Product No. NU11NS	
Norton Utilities Advanced	129.00
Product No. NU12NS	
PC-Emulator for HP150	9.50
Product No. PC11NS	
Padded Case—HP Plus	89.95
Product No. CS12NM	
Padded Case-Printer/Drive	37.95
Product No. CS11NM	
PertMaster—HP110	499.00
Product No. PR11N1	
Pertmaster—HP Plus	499.00
Product No. PR12N1	
Pertmaster—HP150	499.00
Product No. PR13N1	
Pertmaster—P. Vectro	499.00
Product No. PR14N1	
Pertmaster Demo—HP150	50.00
Product No. PR17N1	
Pertmaster Demo—HP Plus	50.00
Product No. PR16N1	
Pertmaster Demo—HP110	50.00
Product No. PR15N1	
Pertmaster Demo—P. Vectra	50.00
Product No. PR18N1	
PrinterTalk	44.95
Product No. PT11NS	
PrinterTalk/Format110	59.95
Product No. PT12NS	
Private File	34.95
Product No. PF11NS	

Project 8,9,10	89.95
Product No. PJ11NS	
ReadHP	49.95
Product No. RD11NS	
RightWords Dictionary Extension	29.95
Product No. RW12NS	
RightWriter	89.00
Product No. RW11NS	
Shelp	49.95
Product No. SH11NS	
Shelp & SideWinder—ROM	95.00
Product No. SH13NR	
Shelp—ROM	55.00
Product No. SH12NR	
SideWinder	59.95
Product No. SW11NS	
SideWinder + Utilities	69.95
Product No. SW13NS	
SideWinder—ROM	55.00
Product No. SW12NR	
Sketch	75.95
Product No. SK11NS	
Sketch—ROM	95.00
Product No. SK12NR	
Sketch Halftone Disk	9.50
Product No. SD11NS	
Softword 1 meg RAM/ROM—A	CALL
Product No. SD11NM	
Softword 1 meg RAM/ROM—C	CALL
Product No. SD12NM	
Softword 2 meg RAM—drawer A	CALL
Product No. SD13NM	
Softword 2 meg RAM—drawer C	CALL
Product No. SD14NM	
Softword 2 meg RAM—drawer A/C	CALL
Product No. SD15NM	
Statistix	159.00
Product No. ST11NS	
Subscribers' Disk 1987	9.50
Product No. SB12NS	
Subscribers' Disk 1988	9.50
Product No. SB13NS	
Super ROM	49.00
Product No. SU11NR	
Symphony 2.0 with Plus driver	595.00
Product No. SY11NS	
T/Maker—HP110	199.95
Product No. TM11NS	
T/Master	279.95
Product No. TM12NS	
Tech. Ref. Manual for Plus	105.00
Product No. HS146	
Term10	79.95
Product No. TE11NS	
TermPlus	79.95
Product No. TE12NS	
TermPlus + utilities—ROM	95.00
Product No. TE13NR	
Tiger Fox	29.95
Product No. TF11NS	
Time Manager Pack	9.50
Product No. SB11NS	
Turbo Optimizer	119.00
Product No. TP17NS	
Turbo Pascal—ROM	95.00
Product No. TP13NR	
Turbo Pascal 3.0	89.95
Product No. TP12NS	
Turbo Pascal Programs—Plus	44.95
Product No. TP16NS	
Turbo Pascal Starter Kit	129.95
Product No. TP11NS	
Turbo Tutor 4.0	53.95
Product No. TP15NS	
Typing Whiz	39.95
Product No. TW11NS	
Webster Spelling Checker	69.95
Product No. WB11NS	
Webster Spelling Checker—ROM	179.00
Product No. WB12NR	
WordPerfect 5.0, HP150	395.00
Product No. WD14N1	
WordPerfect 4.2, HP150 DS disks	329.00
Product No. WD11NS	
WordPerfect 4.2, HP150 SS disks	329.00
Product No. WD12NS	
Wordperfect 4.2, Plus	299.00
Product No. WD13N1	
Word Plus	99.00
Product No. WP11NS	
WorldPort 1200 Upgrade Kit	179.00
Product No. WM13NM	
WorldPort Modem—1200 baud	179.00
Product No. WM11NM	
WorldPort Modem—2400 baud	319.00
Product No. WM12NM	
WorldPort cable	20.00
Product No. WM14NM	

USED EQUIPMENT

For complete pricing of used equipment see **Portable Equipment Exchange** brochure.

Used HP 128K Memory Drawer	150.00
Product No. MM13UM	
Used HP 128K Memory card	125.00
Product No. MM14UM	
Used HP 384K Memory Drawer	295.00
Product No. MM12UM	
Used HP Computer Case—large	69.00
Product No. CS13UM	
Used HP-IL 7470A Plotter	650.00
Product No. PL11UM	

Used HP-IL Interface card	99.00
Product No. IL11UM	
Used HP110	750.00
Product No. PQ11UC	
Used 110, ThinkJet, 9114	1375.00
Product No. PP40PP	
Used HP9114A Disk Drive	395.00
Product No. DD11UM	
Used HP9114B Disk Drive	450.00
Product No. DD12UM	
Used Lotus 1A	295.00
Product No. LT12UR	
Used MM/TM ROM	119.00
Product No. MM11UR	
Used Microsoft Word & ROM	199.00
Product No. MW11UR	
Used Portable Plus—128K	995.00
Product No. PP12UC	
Used Portable Plus—256K	1195.00
Product No. PP14UC	
Used Portable Plus—512K	1495.00
Product No. PP16UC	
Used Portable Plus-128K-modem	1195.00
Product No. PP11UC	
Used Portable Plus-256K-modem	1395.00
Product No. PP13UC	
Used Portable Plus-512K-modem	1795.00
Product No. PP15UC	
Used Software Drawer	99.00
Product No. SW11UM	
Used ThinkJet Printer HPIL	295.00
Product No. TJ11UM	
Used Video Interface	279.00
Product No. VI14NM	

COMPLETE ROM PACKAGES

Pricing for used HP ROMs and Personalized Software disk and ROM backup.

WORD PROCESSORS

The Editor	\$174.95
Product No. ED12PP	
MemoMaker/Time Manager	119.00
Product No. MM21UR	
MS Word	199.00
Product No. MS20UR	
Multimate	275.00
Product No. MM20UR	

WORD PROCESSING UTILITIES

HPrint	170.95
Product No. HP12PP	
Webster's Spelling Checker	248.95
Product No. WB13PP	

SPREADSHEETS

Lotus 1-2-3, Version 1A	295.00
Product No. LT12UR	
Lotus 1-2-3, Version 2.01	399.00
Product No. LT15UR	

SPREADSHEET UTILITY

SideWinder	124.95
Product No. SW12PP	

DATABASE PROGRAMS

Executive Card Manager	259.00
Product No. EC11UR	

COMMUNICATIONS SOFTWARE

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

by pressing **f9** (the **menu** key on the Portable Plus). You can mark a number of files this way and then perform the operation (such as deletion) on them all at once.

The Lotus-like menu at the bottom of the screen can be accessed by pressing the first letter of the operation or by tabbing to the operation and pressing [Return]. You can easily move or copy files between the two directories on the screen (or to any directory you designate). You can back up a directory, and only the files that have changed since the last backup will be backed up. You can also rename files and browse (view) through them.

Finally, two new features in this latest release enable you to execute programs or exit easily to DOS from the file manager. This means you can use FilePlus as an alternative to PAM. You can manipulate files in a manner more efficient than that of PAM's File Manager, and you can run programs.

The 10 function keys (Plus users: **menu** = **f9** and **user system** = **f10**) also have a role in FilePlus. The first 6 have paired assignments. That is, the odd-numbered function keys (**f1**, **f3**, **f5**) act upon the left-hand window; the even keys act upon the right. Therefore, **f1** and **f2** display help screens on the left and right windows, respectively. If the cursor is placed on the name of a directory, **f3** will put the directory in the left window and **f4** in the right. **f5** and **f6** prompt you for the name of a directory to put in the left or right window.

Other function keys (and the combination of shift and a function key) let you sort directories by name, extension, size, or date. You can also hide, unhide, protect, and unprotect files and directories for security.

CHANGES IN THE PLUS VERSION

At my request, Bill Neidert is making a number of small changes so that the program will run better on the Plus. As of this writing, I have not seen the final version with my suggested changes, but all should work as I describe here.

Since the Plus does not support large capacity (100 Meg) hard drives, Bill was able to reduce the size of some of his internal tables, thus reducing the amount of internal

memory required to run the program. Currently, the program requires approximately 130K to run and 160K to support shelling to DOS and executing programs. With the revision, FilePlus should require less than 100K to run, and 128K to support shelling and executing. Naturally, you will need more internal memory depending upon how much memory is required by the particular program you are running.

Bill is also including the proper codes so that FilePlus automatically comes up in Alternative mode (required) and turns on the box cursor. When you exit to a shell or execute a program, FilePlus will put the system back into HP mode. This is necessary so that programs like Lotus 1-2-3 will run properly.

Finally, (again, at my suggestion) he is changing a few of the user interface features and screen messages. Now, for example, the space bar will mark a file and move the cursor to the next file. Previously, only **f9** marked the file and the cursor didn't move.

If you are in the habit of moving, copying, backing up, deleting, examining files etc. on the Portable Plus or Portable Vectra I'm sure you'll find FilePlus extremely useful.

110 FormatPlus

P+ FormatPlus is the latest incarnation of Ed Keefe's Format110 program, now written for the Portable Plus and HP150. Since it is not yet ready for release, a more descriptive article will appear in the next issue.

PV All of the features of Format110 remain, such as a MemoMaker-like user interface. From FormatPlus you will still be able to effortlessly add headers, footers, page numbers, etc. to your MemoMaker or Editor document.

Ed Keefe has also added a set of function keys to FormatPlus. From within FormatPlus you will now be able to call up your word processor (e.g., MemoMaker or The Editor), your spelling checker (e.g., Webster), your file manager (e.g., FilePlus, swp, PAM's file manager), or another program (e.g., RightWriter). This establishes one program environment, FormatPlus, from which you can perform all your word processing duties. We also will be including a printed manual for FormatPlus.

110 TurbPlus Integrator, Turbo Pascal

P+ As Ed Keefe writes in this issue's Looking Glass column, he has written a program which creates a usable environment for Turbo Pascal 4.0 programming on the Plus and HP150.

PV The good news is that the Turbo Pascal 4.0 compiler will run on the Plus and HP110. The bad news is that the Borland integrated environment which weaves the Turbo editor and the compiler does not work on the Plus. The 256K internal memory requirement makes Turbo 4 impractical for use on the HP110.

Ed deftly turned a negative into a positive by writing his program to permit use of the programming editor of choice, such as MemoMaker or The Editor. Ed has some further tricks up his sleeve which permit you to jump to the source code line of the compilation or run-time error, when using the upcoming release of The Editor. More next issue.

110 The BacTools Collection

By Ed Keefe

P+ One of the most asked-for utility programs for the HP110 and Portable Plus has been a program which would let users of these laptop computers efficiently back up their files from the Edisc to a floppy disk. Pressing keys in PAM's File Manager is unacceptable, especially when you have a Portable Plus with more than a megabyte of memory and 60 or 70 data files on your Edisc.

This past summer, Hal Goldstein presented me with the challenge of researching available public domain programs to see if there was such a "backup" program that would work on the HP laptops.

Many users of the HP110 and Portable Plus already have the **xcopy** and **copynew** backup programs from the DOS Tools (I) disk and from the 1988 Subscribers' Disk. However, neither of these programs addresses a situation wherein there are more files on the Edisc than will fit on a single floppy disk. Both programs "run out of steam" at that point and you are left with the DOS **copy** command or PAM's File Manager to finish what **xcopy** or **copynew** started.

I spent over 200 hours collecting, testing and documenting the programs that make up the BacTools Collection. In the process, I crashed my computer countless times—so that you will not have to press your contrast key even once.

WHY BACKUP FILES?

Even in the best of all possible worlds, Murphy and his laws still reign. There will come a day when, for some unknown reason, your extra memory will be trashed (corrupted) and all the information on it will be lost. Don't hold your breath waiting for this to happen. It may not happen today, tomorrow, or next month, but it will happen: Murphy says it will! It's inevitable.

That's what the BacTools collection is all about. None of these programs will let you avoid the ultimate ALL MEMORY LOST. However, they will give you a form of insurance. You will be able to recover from ALL MEMORY LOST and return to MOST MEMORY FOUND. The programs on this disk enable you to transfer your files from the Edisc of the Portable Plus and HP110, or the hard disk of the Portable Vectra CS, to an external magnetic disk. They will also let you transfer files in the opposite direction.

The suite of programs on the BacTools disk should contain all the backup programs you'll ever need. They are mostly public domain programs. They have all been tested on the Portable Plus and HP150 desk top computers and they all work. Most of them will also run on the HP110.

Here is an annotated list of most of the programs on the BacTools disk:

copynew.com 2944 bytes (HP110, Plus, HP150, PV)

This is a relatively small program, from the DOS Tools (I) disk. It creates a backup of all new A drive files. The criteria for newness is any difference (in date, time or archive bit) between the source file and the destination file. (I'll say a bit about the archive bit later). If you use subdirectories on your Edisc, **copynew** will create parallel subdirectories on your external disk and put the files in the appropriate subdirectories.

co.com 19981 bytes (HP110, Plus, HP150, PV)

This is a moderately large program from Satellite Business Systems. It does what **copynew** does, but with a little more flexibility. It will copy new files from the Edisc or hard disk to a micro disk (or back). **co.com** defines "newness" only by looking at the archive bit of a file. This program also creates subdirectories as they are needed and handles backups that require more than one micro disk.

xcopy 2125 bytes (HP110, Plus, HP150, PV)

This program first appeared on the 1987 Subscribers' Disk. It has some problems, but if you use the accompanying **copyall.bat** program, the problems do not arise. It operates in much the same fashion as **copynew**. It will create parallel subdirectories on the target disk and transfer files to the appropriate subdirectories.

Owners of the Portable Vectra will have a different version of **xcopy**. This version is on the MS Vectra DOS disk. It is one of the jewels of MS DOS 3.2. You will probably wind up using this program provided you can figure out all the command line switches and what they can let you do. (See this issue's Vectra Views.) It's too bad that this program does not work with DOS 2.1.

DIFFERENT STROKES FOR DIFFERENT FOLKS

Why would you pick one program over the other?

The answer to this question depends on three factors: Size, Speed and Style.

SIZE CONSIDERATIONS

For HP110 users, size is not the determining factor. You have, at most, 256K bytes of Edisc to back up to a floppy disk. That many bytes of data and programs will usually fit on an empty single-sided disk, and always on a double-sided disk. HP110 users may use any of the three backup programs.

On the other hand, if you are using the Portable Plus or the HP150, size is a critical factor in your choice of backup programs.

a. If you have fewer than 685K bytes of files (701440 bytes total) you should be able to use **copynew** or **xcopy** (that is, the **xcopy** program on the BacTools disk).

You can determine the total byte count of all your files by running the **chkdsk** program or by using the **diskfree.com** program, included on the BacTools disk. If you use **chkdsk**, be sure to add the total for directories to the byte totals for all your files. **diskfree.com** will do this for you.



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

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 Manzanita'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 Manzanita's product quality and documentation are superior.

4-WAY CHOICE

There are four kinds of Manzanita 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 Manzanita 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 Manzanita's "3rd Internal.")

EXTERNAL DRIVES

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

EASY TO USE

When you buy a Manzanita disk drive, you also get Manzanita'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.

Manzanita 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 Manzanita 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 Manzanita quality.

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

	<i>Suggested Retail Price</i>	<i>Subscriber Price</i>
Manzanita internal disk drive, 720K \$235. \$219.

PRODUCT NO. MZ12NM

Manzanita internal disk drive, 1.44mb* \$290. \$275.
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*Requires AT compatible PRODUCT NO. MZ11NM

Manzanita external disk drive, 720K \$395. \$369.
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PRODUCT NO. MZ13NM

Manzanita external disk drive, 1.44mb* \$475. \$439.
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*Requires AT compatible PRODUCT NO. MZ14NM

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 millsec. avg.	100 millsec. avg.

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The BacTools **diskfit** program will tell you whether all of the files on the Edisc will fit on the C: (external) disk or not.

b. If you find that you have more than 685K bytes of files and directories, then you use the **co.com** program. The same condition applies to users of the HP150 with a hard disk.

SPEED CONSIDERATIONS

There is a noticeable difference in the speed with which **co.com**, **xcopy**, and **copynew** get the job done. To find the difference, I loaded up a Portable Plus with over 800K bytes of files. The Edisc was arranged in eight different sub-directories. I formatted two blank double-sided disks. Then I ran each of the programs on the same data, reformatting the disks between runs. I was using a 9114B disk drive as the backup unit.

xcopy, **copynew** and **co.com** all began to register legitimate errors when the micro disk could not accept any more data. At this point I stopped the program. **copynew** took about 6.5 minutes to fill up the disk. **xcopy** took 4.1 minutes, and **co.com** took about 12 minutes to reach this point.

It would appear that **xcopy** was the winner. However, I was left with more than 100K bytes of programs that had not yet been backed up.

None of the programs prompted me to insert a new disk. However, with **co.com** I merely re-issued the same command that I had used to start the copy process. **co.com** completed the backup process by copying the remaining files to the second disk in under two minutes. With **xcopy** and **copynew**, I estimated that it would take at least ten minutes to figure out which files had NOT been copied and then copy each of these files to the second disk with the use of the DOS **copy** command.

For this reason, I determined **co.com** to be the fastest program of the three for use with more than 685K bytes of files.

STYLE CONSIDERATIONS

Each of the three backup programs performs its backup process in a slightly different way.

When **co.com** copies a file to the backup disk, it changes the date and time of the copied file to the current date and time, whereas **copynew** and **xcopy** do not. Similarly, **co.com** turns off the archive bit of the source file: **copynew** and **xcopy** do not.

I am not sure why the author of the **co.com** program chose to have the dates and times of the files changed when they were copied. I suspect that he wanted to be able to keep several backups of the same files. If the dates were changed, then he could look at these dates and tell, at a glance, which disk contained the most recent back up.

If you rely on knowing the original date and time when a file was created (or most recently modified), then this information will be lost if you use the **co.com** program.

One possible workaround for this situation: Use the **sweep** program on this BacTools disk and issue this command, at the DOS prompt (or on the PAM command line):

```
sweep dir > datetime.org
```

This will create a file containing all the file names in all the directories, along with the original dates and times. It's not elegant, but it might just let you use **co.com**.

SOME OTHER PROGRAMS FOR YOUR COLLECTION

As an added value, I have included several other utility programs which I have found useful in the course of several years of copying files on the HP110, Portable Plus and desktop PC's.

knew.com 2771 bytes (HP110, Plus, HP150, PV)

This program will transfer new files from the Edisc to your external disk and back. It has one limitation: it does not transfer subdirectories. It might be more suitable for use with the HP110 (which has less memory and no directories other than the root directory on its Edisc).

cpy.com and **bldcpy.bat** (HP110, Plus, HP150, PV)

All of the programs described above are automatic or semiautomatic. There are times, however, when you may want to copy only a specific group of files from one disk to another. Sometimes you can do this by using the DOS **copy** command with wildcard characters. Most times, however, this won't work.

The **cpy** program will read a prepared list of all the files you want to copy and proceed to copy them. The **bldcpy.bat** program is offered as one way to build such a list of files. **cpy** will not create new subdirectories on a destination disk.

ls.com 17141 bytes (HP110, Plus, HP150, PV)

This program is used in the **bldcpy.bat** program, but it is a clever directory lister all by itself. To see what some of its capabilities are, issue the command: **ls -h** [Return].

dirs.com (HP110, Plus, HP150, PV)

This is a utility program from Dos Tools (I) that will tell you how much space a group of files will occupy on a disk.

sweep.com (HP110, Plus, HP150, PV)

sweep enables you to issue certain global commands, like: delete every file with the **.bak** extension from all the subdirectories on a disk. All it takes is the single command: **sweep del*.bak**.

fdate.com 1536 bytes (HP110, Plus, HP150, PV)

fdate will let you change the date and time of a file (or of a group of files).

diskfree.com (HP110, Plus, HP150, PV)

This small program will tell you how many bytes are available on a magnetic or electronic disk.

change.com 1664 bytes (HP110, Plus, HP150, PV)

Another program from the DOS Tools (I) disk. This program enables you to change the status of the Archive bit for a file or group of files.

FURTHER INSTRUCTIONS ON THE DISK

Further documentation, along with operating instructions, are included in the **.doc** files on the BacTools disk.

Much of the documentation comes from the programs' original authors. I have added some further comments to illustrate how these instructions can be interpreted for use on the Portable Plus and HP110. There is even a step-by-step set of procedures to walk beginners through their first backup session.

And, for the adventurous, there is one backup utility program that needs more experimentation and testing. It is called **sbbackup**. It seems to work, but the documentation that came with the program makes it unsuitable for use by beginners. I hope that someone is curious enough to figure out how it is supposed to work.

2400 baud portable modem for your HP Portable

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



Weighs only 6½ ounces!

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

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

A MYRIAD OF FEATURES

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

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

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

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

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

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

DOUBLE GUARANTEE

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

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

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

	Retail Price	Subscriber Price
WorldPort 2400 modem (with Carbon Copy PLUS software)	\$359.00	\$319.00
WorldPort 1200 modem (without software)	199.00	179.00
Cable to connect modem to HP Portables	30.00	20.00
9-volt AC adapter	7.95	7.95
Acoustic coupler (300/1200 baud)	79.95	79.95
Upgrade kit: WorldPort1200—WorldPort2400 (includes Carbon Copy PLUS software)	199.00	179.00

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Finally, another fairly complete backup program named **pcopy** is included on the disk in its own subdirectory. This is a shareware program, and in it you are asked to make a contribution to the program's author.

Products We May Have A Hard Time Delivering

What follows is a discussion of the future of several products we have been offering or were planning to offer.

110 TURBO PASCAL 3.0

As mentioned in previous issues, Borland International will no longer be selling Turbo Pascal 3.0. Turbo Pascal 3.0 provides an ideal memory-efficient interactive programming environment for HP110 and Portable Plus users.

When we heard this news we purchased more than 100 Turbo Pascal 3.0's and 70 Turbo Tutors. As of this writing we have 25 Turbo Pascal 3.0's and 4 Turbo Tutors. *The Portable Paper* subscribers may purchase the Turbo Pascal Starter Kit (consisting of Turbo Pascal, Turbo Tutor, and Pascal Programs) for the Portable for \$159.95 as long as supplies last; when we run out of Tutors, subscribers can purchase Pascal Programs and Turbo Pascal 3.0 for \$129. Turbo Pascal 3.0 is \$89.95, Turbo Tutor is \$53.95, Pascal Programs is \$44.95, and the Turbo ROM backup is \$95 (subscriber prices).

As Ed Keefe discusses in his Looking Glass column, Turbo 4.0 can be made to run on the Portable Plus (not on the HP110). However, memory requirements jump from 40K disk space, 96K internal memory, to approximately 90K disk space and 256K internal memory.

110 POWER CUBE

We probably will no longer be able to offer the Power Cube, (one of the products we use most here at Personalized Software). The Power Cube can recharge up to four HP Portable products at once. For example, you can charge your HP Portable, ThinkJet, and two HP9114's and only use one AC power outlet. We use Power Cubes not only at individual desks but to keep the batteries of our used portable equipment properly charged.

Summit systems, the Power Cube manufacturer, has discontinued the product. We bought up their last run of 35. However, operations director Larry Baldozier has claimed the cubes for internal use to keep used equipment batteries charged. He said he would be willing to part with five to ten units, but that was it. If you want a power cube, you must call to check for availability. We are looking into the possibility of manufacturing them ourselves. However, even if we do the manufacturing, it will probably be a number of months before we can ship any more of them.

110 WEBSTER SPELLER

I received the unpleasant news the other day that Simon and Schuster is likely to discontinue the version of the Webster Spelling Checker that runs so nicely on the Portable Plus and HP150. They have a newer version that I have not yet been able to run on the Plus. I immediately ordered 500 of their remaining stock of 2000 and have an option to buy their last 750. If your company would like to buy Websters in quantity, please contact us immediately.

The 500 Websters should last for some time. However,

once they are gone we probably won't be able to sell either the disk-based or ROM version.

PV MOBILE RECHARGER FOR PORTABLE VECTRA

When HP first introduced the Portable Vectra, a customer asked us to develop a mobile recharger for the Portable Vectra in large quantity. The mobile recharger would charge the Portable Vectra through DC power via a car cigarette lighter. The engineering work was done and a prototype built by S.O.S. systems. The large order fell through and it is not now price-effective to build production units for only a few orders. If a company can guarantee the purchase of a volume of Portable Vectra Mobile Rechargers, we will consider having final production units built. Until then we must remove the Portable Vectra Mobile Recharger from our price list.

P+ SOFTWORD 2 MEGABYTE RAM, 1 MEGABYTE RAM/ROM CARDS

RAM prices and the U.S. dollar are so volatile that the price of these cards sometimes changes daily. For example, SoftWord just informed me that RAM for their memory boards are so hard to come by that the SoftWord cost has increased over \$400 per 2 Megabyte RAM board.

If you order a SoftWord card, please call first, so we can confirm pricing and availability.

P+ DBXL NOT A PRODUCT

Several issues back we reported that dBase III clone DBXL runs on the Plus, but we were waiting for the current version for final testing. Ed Keefe, Looking Glass columnist, tested the current version. He found it to be so slow on the Plus that it was unacceptable. Every time a cursor key is pressed the screen refreshes itself. That process takes several seconds. You would have to have the patience of a saint to use the product, so we decided to take it off our price list. The dBase III compiler, QuickSilver, does not work at all.

P+ NO LUCK ON VPExpert

Last year we reported that VPExpert, the expert system program, could be made to work on the Plus. Again, Ed Keefe did some testing and could not make the latest version work. We will not be able to offer VPExpert on the Plus.

110 EMPOWERERS AND MOBILE RECHARGERS

P+ We regularly have delays in receiving these products from our manufacturer. When you place your order, you may be fortunate in that we have your item in stock. However, don't be surprised if your order is delayed for as long as two months and longer, especially for the recharger.

Terminal B

110

110 Communicating Between 110's With HP110 Terminal

by Ray Simons, Decatur, GA

The article in *The Portable Paper* Vol. 1, No. 4 on the HP110 Terminal program, as well as correspondence between Ed Keefe, Hal Goldstein and August Nechi seems to indicate that the program is beset with bugs, is difficult to use and probably is not worth using at all. Much of what has been written is probably true, but with some helpful suggestions from Kevin Lane, a local HP Tech Rep, and considerable experimentation by Gus Nechi and me, we have arrived at simple methods which make it a quick and easy matter to transfer text, binary, Lotus spreadsheet and graph files between HP110's using the internal modem and the Terminal program. For the beginner to modem use, a step-by-step procedure follows:

1. In PAM, place cursor over Terminal.
Press **f1** to start application.
2. Press [Return] then **f5** to enter Terminal Configuration.
3. Set up Terminal Configuration as follows:
COMMENT: None
LOGON STRING: None
PHONE NUMBER: A (upper case) for receiving calls or phone number to call.
HANDSHAKE: None

XMIT PACING: XON/XOFF
EOL SEQUENCE: CR/LF
PARITY: None
RECV PACING: XON/XOFF
PARITY CHECK: Off
DEVICE: Modem
BAUD RATE: 300
DATA BITS: 8
ECHO: On

4. Press **f2** to store file; assign file name as requested.
Press **f1** to load file; provide file name as requested.
Press **f8** to exit configuration.
5. Press **f3** to set up Upload Configuration (if sending).
Press **f4** to set up Download Configuration (if receiving).

FROM LOCAL FILE: Name of file to be sent.

TO REMOTE FILE: Blank

FILE TYPE: Binary (this specification is mandatory for binary and graph files and works perfectly for text files as well.)

REMOTE INVOCATION: Blank

PROTOCOLS: On (must be On for binary and graph files; best set to Off for text files. This permits the text to be seen on screen during transmission.)

COMMAND OPTIONS: Blank; A Download

Configuration is similar except for a blank
REMOTE FILE: and a file name to receive after
TO LOCAL FILE:

Press **f2** to store file; assign file name as requested.

Press **f1** to load file; provide file name as requested.

Press **f8** to exit configuration.

6. Press **f8** again to exit Terminal and return to PAM.
7. In PAM, place cursor over Terminal and await call if you are receiving, or proceed to press **f1** to enter Terminal program. In Terminal, if receiving, enter the name of the Terminal Configuration with a capital A in the Phone Number slot. If you are calling, enter the name of the file with the phone number to be called. Then press Return. . . . in a few seconds the message "Waiting For Carrier" then "Connected" will appear on the lower left side of the display. The two HP110's are ready to talk!
8. Alternately, parties on either end of the line can edit the display messages to and from the other party. Pressing User System will now provide a new menu at the bottom of the screen. The use of this menu permits sending or receiving the files previously entered into the Upload or Download Configuration files, by pressing either **f1**, (From Host) or **f2**, (To Host).

It should be emphasized that in order for the HP110 to answer a call from another HP110, an upper-case A must be used in the PHONE NUMBER: slot. It has been found to be helpful to have the various Terminal, Upload and Download Configuration files already set up and saved to the Edisc for use as needed. It is then just a matter of loading the files for each type of use by given file name. In corresponding by modem with Gus Nechi, I have a file named **gusA** for answering a call, a **gusC** with phone number for calling, a **gus1**, **gus2** etc., for uploading and downloading files. This enables you to skip the step of setting up a Configuration file after you have made the Connection. It only requires Loading an already-created Configuration file.

GRIMMER'S

Portable Tales

by Paul Grimmer

110

P+

PV

In this column we will primarily cover methods of putting characters on the screen. As usual, the programming language used is Turbo Pascal, but the concepts are applicable to all high-level languages. We will cover the Portable Plus video display and see how to make your programs increase video speed by over 200 times!

If you have done any programming at all, you are familiar with the process of writing text to the screen. In general, all high-level languages go through DOS with basic screen output (e.g., the Turbo "write" statement). Your program tells DOS to put a specified character string on the screen at the current cursor position. DOS then sends this string through one of its devices known as "standard output."

It is important to note that "standard output" is used because although it is normally the console screen driver, it can be any file or device if you use what is called redirec-

tion. If you enter **dir >prn** at the DOS prompt you will notice that your directory listing goes to the printer rather than your screen. DOS redirects your output to whatever file or device it finds following the **>** character.

In some cases, this is important, but increasingly this is of less significance with fancy windowing or menu-type programs, since the lines of text may not be written consecutively down the screen. Instead, we may write some text on the bottom line of the screen, accept some input (echoed to the screen) on line 3, pop up a window on lines 10 through 15, etc. If this went to the printer, it might not make sense. If you are unsure as to whether a program uses redirectable output, if the screen writing is very quick at all then it is not.

Also, if you run your program with **>prn** and some or all of the data still goes to the screen, it is not going through the DOS standard output. When you are designing software try to imagine how likely it is that the user would want to save the text output to a file or to the printer. If it is a high probability, either put in some file or printer write statements or live with slow screens.

As a rule of thumb, bypassing the DOS redirection capability alone speeds up your screen writes by a factor of 3 or 4. In my first column I gave you a short routine to do exactly that in Turbo Pascal by making the "write" statements use BIOS interrupt 50h, function 6.

I ran some tests using various forms of output to the screen for the same data. It turns out that going through DOS standard output averaged 215 times slower than "going straight to the hardware" (more on how later). I was expecting it to be significantly slower but I was quite surprised at the magnitude of the difference. Let's consider the factors that slow us down so much by going through DOS.

First, you have to tell your program what data to send and then your program has to tell DOS where and what it is. Then DOS has to find the current "standard output" device and send it to that device, which it then can put into video RAM where the hardware screen driver can display it. This is fairly cumbersome but only part of the story. Read on. . . .

Once DOS passes it to the console driver (assuming it is not redirected somewhere else), the console driver has to analyze each character. If it is a displayable character, the console driver must use the current video attribute with the character byte to put it in video RAM. But where does it put it? At the cursor position, of course. It would be relatively simple if there were only 25 lines of text to deal with but there are actually 64 rows in your screen memory. The screen driver has to locate the cursor position and then place the character there. Then it has to move the cursor to the next position. If we are in the middle of a line, after we figure out whether the cursor is actually turned on at that time, we have to figure out whether it is a box or an underscore and move it. That is not too bad until you get to the end of a line. Now we have to drop down one row and go to the first column of the next row. If we are on the bottom row, we have to scroll everything in the screen up one line.

Actually, the Portable Plus pulls a relatively neat trick by just changing in memory the byte that the screen hardware uses to determine which of the 64 rows of text to put at the top of the screen. This works okay until we scroll

down to line 64 of screen memory and have to either wraparound to the top again or move each line of text up one row in screen memory.

There are some more steps such as interpreting escape sequences, linefeeds, carriage returns, etc., but the point is that there are a lot of things going on just to display each character. Add this to the DOS overhead, and performance suffers considerably.

This brings up a potential improvement in our system. If you think about all of the screen output you write or just use, you will find that a majority of the things written to the screen do not really require that we move the cursor position at all. If we can just get the characters into display RAM where the hardware can display them, we can improve output by a factor of 25. It is amazing how much improvement is seen when we do not worry about the cursor position, linefeeds, etc. It is programmatically more complex, and we have to do any cursor positioning, screen scrolling, etc. by ourselves. This works extremely well in menu-driven programs, programs using pop-up windows, etc. This one speedup can do more than anything else to make "professional quality" programs. This entire procedure of writing directly to screen memory is known as "fast writes."

The one area we do care about cursor positioning is how we are receiving information from the keyboard, as in a word processor. Even slow DOS can keep up with all but the very fastest typists, so this is an area that can be kept "normal."

If we want to place characters in screen memory for fast writes, we need to know how screen memory is arranged on the computer. The Plus uses a memory scheme that is similar to the IBM PC in the respect that it takes two bytes of data to determine how a character will be displayed on the screen, a character byte and an attribute byte. The similarity ends here. The attribute byte is structured differently, but what is contained in each row is different. The PC maintains separate video "pages" (1 for monochrome and up to 8 for color systems). Each page has a separate cursor and data that are in screen memory but do not have to be visible on the current page.

Before going further, let's make it clear that video RAM is ordinary memory that you can read to and write from, just like any other RAM. It starts at segment 8000h on the Portable Plus and extends for 16K (the HP110 has the same starting segment but is laid out differently and only has 8K dedicated to the screen driver). An IBM PC in 80-column-by-25-row mode requires 2 bytes per character also, so it takes 4000 bytes of memory per page. (This amounts to 160 bytes per line, and in memory, the next line starts just past the end of the previous one.)

Now if you do this same arithmetic for the Portable Plus you would calculate that there should be 102.4 lines of screen memory for the 16K. The Plus uses quite a lot of screen RAM to store the various character fonts (normal, halfbright and math) and it holds three complete sets of characters in there. To further complicate our lives, rather than putting the character fonts after the screen data, HP decided to put 96 bytes of font data (12 characters) after each row of video RAM. So rather than each row of text being offset by 160 bytes (80 characters times 2 bytes per character), they are offset by 256 bytes. In addition to complicating screen data locations, it also makes it very possible to "write" into the font tables—this can cause some

very interesting characters to appear on the screen.

To compose our fast write, all we have to do is figure out where in memory to start the output and then place each character byte and attribute in memory, end-to-end. This is fairly simple as long as the attribute is the same for the fast write. It turns out that this is one task very well-suited for assembly language. By stuffing some of that code into my programs (via Inline code) I can further improve output by a factor of 3, but at the expense of development time (I really do hate assembly but it sure can be fast).

Now we see that we only really need four things in order to do a complete fast write: 1) the string of characters, 2) the video attribute, 3) the starting column, and 4) the starting row.

To keep our lives simple, we normally don't want to deal with all 64 lines of screen memory, so we will restrict it to those 25 lines (23 if softkeys are displayed) which are currently visible. If we read a byte I/O port 83h using the Turbo "port" statement, we will receive value from 0-63 that is the current top line of the video display. If we add our row number to it then we have the offset from 8000h of the row. This isn't too bad since each row has 256 bytes in it. Now we add two bytes for each column from the left one we want (remember it takes two bytes for each display character) and now we have the memory location to start writing our data.

One item we have left out so far is how the attribute byte is set up. The screen hardware driver interprets each bit as follows:

Bit	When Set
0	Blink
1	Inverse video
2	Underline
3	N/A
4	Halfbright (thin) (Font 2)
5	Math/Line draw font (Font 1)
6, 7	N/A

I have defined constants for each of these. When I specify the video attribute(s) to be used, I add multiples or use logical **or**. My own fastwrite procedure is called "FW" and if I want to display "Hi guy" on line 3 starting at column 1 in thin inverse characters, the code is:

```
fw("Hi guy",1,3,Inv or thin);
```

You can easily extend this concept to one which includes switching between two video pages, has windowing capability, and is even capable of reading characters and/or video attributes off the screen.

To place character **ch** at a given row and column, in straight Pascal it is:

```
mem[$8000:((port[$E3]+pred(row)) shl 8)+(pred(col) shl 2)]:=ord(ch);
```

The attribute for that character would be set by:

```
mem[$8000:succ(((port[$E3]+pred(row)) shl 8)+(pred(col) shl 2))]:=attr;
```

One last item to cover in this brief discussion of video handling is compatibility, not only for video techniques but also keyboard, timers, etc. In general, this implies performance degradation but Turbo Pascal offers us an opportunity to get around this.

For example, fast writing on an IBM PC is different from the same thing on the HP110, but the same basic parameters must be passed to a routine which does that. We have separate libraries for each machine (including the 150 and Portable) in which the "guts" of the procedures are obviously different and even certain constants (such as video attributes) are different, but the procedure and function calls are identical. Thus, as soon as an application is developed on one machine, it is available on all machines by simply putting the appropriate library on top of the main program and re-compiling it. Not only does it save an enormous amount of development time, it simplifies maintenance of code since there is only one version of the application to update, fix bugs, etc.

I would like to hear how many of you would like to make use of these libraries. I have them in running order and use them every day, but no "formal" documentation exists. I don't want to make a fortune this way but the documentation of over 200 specialized routines for four very different machines will take some time. If enough demand exists, I will publish them (I hope for less than \$50).

Pop-Up News

We have had some good name submissions and a few that are, well . . . interesting. I'll let you know next time who the winner is. These last couple of months have been hectic in fine-tuning the basic routines (such as those described above) as well as finishing the new LINK program (how would you like the PC to be six HP-IL devices all at one time?) so I haven't finished coding all of the pop-up. Not too long after you read this, I will be looking for some beta testers. If you are interested, let me know (call, write, or by CompuServe).

LINK Plus

By the time you read this, LINK Plus will be ready for sale. It is much faster than the current version, but the two most significant additions are the included utilities and the ability of the PC to emulate two disk drives, a printer, a keyboard/video interface, a DOS file and a DOS device, all at the same time. Free utilities include a loop monitor which can log to the screen, file, and/or printer. It also includes a bunch of Pascal routines for having the PC control the loop, and a utility to make use of all 7 devices built into the **hpi1.sys** file you use on the PC from HP (I bet you didn't know you can use essentially all of the same devices on the PC loop as you can on the Portables). Let me know if you need some more info and I'll send it to you. The price is \$85 from us or Personalized Software, and registered owners can upgrade from us for \$45.

[Paul Grimmer, president of Southern Software, writes commercial and public domain software for the HP110 and Portable Plus. His credits include SideWinder for sideways printing of spreadsheets to the ThinkJet printer; Sketch for free-form graphics on the Portables and ThinkJet, HPrint for fully exploiting the text, font, and graphics capabilities of the ThinkJet and QuietJet printers; and Link, which enables the transfer of data between all HP-IL devices. "On the side" he is employed as a supervising engineer for Conoco.]

You can write Paul at 12501 Clippership Dr., Anchorage, AK 99515 or send E-mail on CompuServe to: 71370,1303.]

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

Also works on the
HP150.

- 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.

Order FilePlus at our risk today!

FilePlus \$69.95

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



Through the Looking Glass

by Ed Keefe

110 A SUMMER'S TRIP INTO THE "REAL" WORLD

P+ After 17 years of loyal service, the Community College where I teach year-round has given me the summer off.

PV In other realms of higher education (I'm sure), a summer off represents a true vacation. But, when you're working for a state-supported community college, a "summer off" becomes "industrial work experience."

The catch is that there is no real "time off."

Career education instructors who receive this ten-week leave of absence must find full-time employment in a business or industry which relates directly to their teaching area. The College continues to pay the instructors' salaries during this time, provided they will contribute something worthwhile to the Iowa economy, and to the businesses which employ them. At the same time, the instructors gain invaluable experience about the "real" world of work, which pays off later in the classroom.

Another catch is that instructors compete for the chance to "get away from the classroom." The first person to secure a job for the summer is the winner.

No sooner had I been told of the opportunity to get away for the summer than I was on the phone to Hal Goldstein at Personalized Software. Hal was gracious enough to accept my offer to work for him for ten weeks. He even sounded eager to have me on board: perhaps too eager. Ten weeks later I can see why.

There was only one real problem. I live in Ankeny, Iowa, and Personalized Software is 125 miles away in Fairfield, Iowa. Hal and I agreed that I would be able to do most of my work at home and commute once a week to Fairfield to deliver what I had accomplished and pick up more work. The rest of our contacts could be handled on the phone and over CompuServe. So, for me, this would be an experience in "tele-commuting" as well as commuting.

I realize that for many, commuting to work is a day-to-day experience. Some of you may even commute 125 miles or more on a daily basis. But imagine that the trip is through the Iowa countryside, passing through a dozen small farm communities. In between the towns are miles of narrow, two-lane roads, the natural thoroughfares for tractors, combines, hay-balers, and manure spreaders. It's a challenging journey. There's always the possibility of getting lost, which I managed to do once. And then there's the ever-vigilant Iowa State Patrol. They didn't understand why I was so eager to get to Fairfield. I was awarded my first speeding ticket in 33 years of driving.

MY FIRST ENCOUNTER WITH THE "REAL" WORLD OF PERSONALIZED SOFTWARE

When I met Hal Goldstein for the first time this summer, my impression was that he had just hit the ground, run-

ning. He was enthusiastic about a new opportunity for Personalized Software: entry into the HP150 after-market. Hal had already formulated plans to offer a whole new line of software and support for this machine—enough to keep the HP150 alive and ticking for several more years.

I also had the chance to meet Hal's fellow workers at Personalized Software and could immediately sense that his enthusiasm is contagious.

Many of you talk with Brian Teitzman and David Seagull on the phone when you have a question or want to place an order, and you know how helpful they always are. Well, multiply those two people by six and you'll see why Personalized Software is a great place to work. I'm sorry that I was there only one day a week.

THE CHALLENGE: COME UP TO SPEED IN TWO WEEKS
The first challenge for me was to come up to speed on both the HP150 computer and the Portable Plus—in two weeks or less. I've had extensive experience with the HP110 and thought, initially, that this challenge would be easy.

Surprise! The HP150, the HP110 and Portable Plus are three distinct computers. They share the HP label, but they each have their own nuances and idiosyncrasies. They may, indeed, be three members of the same computer family, but, then, how many members of any family are exactly alike?

My task was to become familiar enough with these two machines so that I could use them to test new software and program them for new uses.

REFLECTIONS ON THE HP150

The HP150 that I used this summer was a remarkable machine. At first I hated it. I decided that the people who designed it had to have been brain-damaged. Within a few weeks I loved it and admired the engineers who created it. The HP150 was truly a great computer for its day. It still is. The HP150 sports one of the first Alpha/Graphics displays and one of the best. The display is somewhat similar to a Hercules monitor, but goes beyond the Hercules standard. It includes its own Input/Output system and is entirely programmable.

Sure, the HP150 is no screamer. On the other hand it is reliable. It and its hard disk drive survived several round trips to Fairfield with nary a bad report from **chkdsk**. After working with faulty IBM PS/2 hard disks for a year, I am, once again, sold on the durability and quality of HP computer products.

My favorite programs for the HP150 turned out to be the HP calculator emulator programs. I will admit to being a handheld hacker. Seeing the HP-15C, HP-12C, and, my favorite, the programmer's HP-16C come up on the TouchScreen was like meeting some old friends.

The HP150 now has its own version of MS DOS 3.2. Sad to say, we were not able to get a copy of this new operating system to play with before the end of the summer.

If you already own an HP150, don't give it away. With an upgrade from MS DOS 2.11 to MS DOS 3.2 you will have a machine that will last well into the next two generations of computers. By then it may be time to upgrade. In the meantime you will be able to run 1-2-3, WordPerfect, and Condor 3, etc. You will also have the support of Personalized Software: something that will last as long as the HP150 itself.

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

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.

THE SPEEDY PORTABLE PLUS: MALIGNED AND MISUNDERSTOOD

I have sworn by my HP110 for the past couple of years. I was already sold on diskless computing in spite of what the computer pundits said.

Having the use of a Portable Plus for ten weeks was a real treat. Having five times the memory of the HP110, a larger, more legible screen, and plug-in ROM's made me feel twice as productive.

I know that the Portable Plus is maligned in the computer press. Lately, it has been completely ignored in reviews of laptop computers. Critics seem to dislike any computer that does not have a built-in disk drive.

Interestingly enough however, I hear that NEC is getting ready to market a diskless laptop computer. The NEC computer is rumored to have up to 5 megabytes of RAM, but no-plug in ROM's. The HP110 and Portable Plus may yet become the pace-setters they were intended to be.

COMING UP TO SPEED ON NEW SOFTWARE

The Rise of TP4 : The Demise of TP3

Another challenge I faced this summer was getting Turbo Pascal 4.0 to run on the HP150 and Portable Plus.

Borland International no longer sells Turbo Pascal version 3.02. The demise of this terrific piece of software marks the end of an era. TP3 was, and still is, the darling of the computer programming hobbyist. In two years' time it took over the educational market, outselling every other piece of software in that market except for Lotus 1-2-3.

On the other hand, "real" programmers derided TP3 in the much the same way that they derided BASIC. "Oh, you actually program in Turbo Pascal? That's nice."

However, as more and more programmers become acquainted with Turbo Pascal version 4.0 (TP4) their derision is changing to admiration. TP4 provides a programming environment suitable for real-world computing tasks. It is advertised as having incomparable speed in compiling programs. Indeed, it is fast, but that is not what makes it great. TP4 is a whole new product, not just an upgrade from TP3. It now has almost all the power of "C" and Modula-2. It generates executable files that go from the extreme of being almost as small as comparable Assembler programs to (the size of) programs that take over all the memory your computer can handle.

TP4 is a mature product, and is relatively free of bugs (I have only seen a few bug reports and those dealt with TP4's use of an 8087 math coprocessor).

Borland has already upgraded all of its Toolboxes to run with TP4. The shareware and public domain markets are filling up with useful add-ons to TP4. There are already at least a dozen software products written entirely in TP4.

A while ago I had tried to get TP4 to work on the HP110 computer. I met with limited success. The HP110 does not have enough memory to do justice to Turbo Pascal 4.0. Now, with the HP150 and (especially) the Portable Plus, TP4 really shines.

I started out using the command line compiler **tpc.exe**, furnished by Borland International. The **turbo.exe** integrated editor and compiler will not work on anything that is not 100% IBM-PC compatible. I soon tired of typing in command line switches for **tpc.exe** and wound up developing my own integrated programming environment for use on the HP150 and Portable Plus. "TPshell: The TP4 Expediter" is almost ready for its beta-test flight.

If you have been using TP3 on your Portable Plus, I strongly encourage you to upgrade to Turbo Pascal 4.0. If you are like me, you will probably start learning TP4 by using one of the programs on the Borland disks. The program is called UPGRADE. It is a handy program that takes a .pas file, written in Turbo Pascal 3, and adds comments to it. The comments are instructions on how to convert the code to compile and run it under TP4.

There is even a part of the Turbo Library which will let you revert to Turbo Pascal 3 and write and compile programs in that language.

I started, in earnest, using these two capabilities of TP4 to upgrade my Format110 program to run on the HP150. I soon tired of the effort of converting code, and wound up rewriting most of the code using TP4 conventions. Format150/FormatPlus will soon be a software product available from Personalized Software. One significant difference between Format110 and FormatPlus is the speed of operation. Another feature is that you can now run several other programs without leaving FormatPlus.

In the near future, Personalized Software will be selling TP4 to first-time purchasers of Turbo Pascal. However, if you are a registered user of TP3, the least expensive way is to first upgrade through Borland. You can upgrade by phone (408) 438-8696—by giving Borland the serial number from your Borland master disk and a credit card. Alternatively, you can send a check for \$39.95 plus \$5 shipping to Borland International, 4585 Scotts Valley Dr., Scotts Valley, CA 95066. (If you wish, you can then contact Personalized Software, and we will sell you supplemental disks for the Plus for a nominal charge.) Personalized Software will also be selling my TPShell program, probably under the name of Turb150/Plus Integrator.

TP4 is ideally-suited for use on the Portable Plus. Its speed of compilation will amaze you. Its power and flexibility may frustrate you, at first, but, within a couple of weeks you will wonder why you ever liked Turbo Pascal 3. As evidence of this, on July 22, 1988, I tucked all my TP3 programs into several, large archive files. I then copied the archive files to floppy disks and erased them from my hard disk: (I hope) forever.

Look for a further article or two on getting started with TP4 on the Portable Plus in this and in future issues of *The Portable Paper*.

THE NEVER-ENDING SEARCH FOR SOFTWARE

Beyond developing new software, Hal presented me the challenge of tracking down as many programs as I could find that would work on the HP laptops and the HP150. This was something I had been meaning to do for a long time.

I began by perusing over 200 different shareware and public domain programs that I had amassed over the past couple of years. Ninety percent of them would not work on any of the HP computers.

I then ran up my telephone and CompuServe bills by practically camping on the local electronic bulletin boards and CIS network, downloading everything in sight. That gave me another 100 or so programs to look at.

The result of this effort is four software collections which will soon be available from Personalized Software. Two of them are for the HP110, Portable Plus, and Portable Vectra: two for the HP150.

Many programs for the HP110 and the Portable Plus are contained on the new 1989 Subscribers' Disk. (See the article describing this collection in the 110% column in this issue.)

Another entire disk contains an extensive collection of programs devoted to saving your data and software from the eventual system crash. This collection is called **Bac-Tools** and is described in the *News From Personalized Software* column elsewhere in this issue. Now there's no excuse for not backing up your Edisc every day. The software on this new disk makes it easy.

One other find: **emacs 3.9**, the grand-daddy of all text editors. It runs on practically every computer, including the HP150, HP110 and Portable Plus. (The archived files consume over 350K of disk space.) If you need a terrific text editor, especially one that has macros, formatting commands for C and Pascal programmers, please send Personalized Software \$9.50, and you will receive a copy.

If you are an HP150 user, you should, by mid-August, be able to request and receive Personalized Software's new HP150 Catalog. Therein you will find a description of the all the software tools you could ever want for that computer.

KEEPING THE LINES OF COMMUNICATION OPEN

Another task I undertook this summer was to find a suitable program for Personalized Software to use to start operating its own electronic bulletin board.

There are at least a dozen such programs available. RBBS, Wildcat and FidoNet are three of the most popular BBS ones. SpitFire BBS is the program that I would recommend to anyone thinking of starting a bulletin board service. SpitFire is the product of a local software firm and is the easiest such program to run and maintain. If you need more information on this product, drop me a line and I'll be glad to give it to you.

We hope that within a couple of months you will be able to call Personalized Software's BBS and use your computer to leave a message, ask for assistance, place an order, or upload and download programs.

THE ALL-TOO-SOON END

My summer's work experience is rapidly coming to a close, and I realize that I am still too close to the experience to have any profound insights.

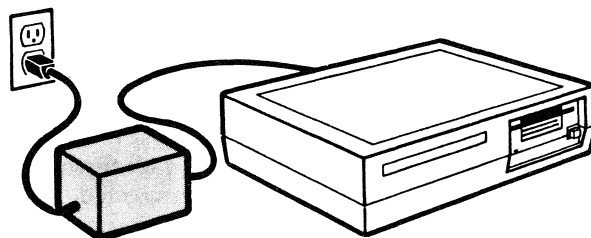
I have certainly learned how easy it is to become addicted to working in the microcomputer field, especially when one's fellow workers exude enthusiasm for what they do. What started out as a leisurely, 40-hour-per week experience quickly mushroomed into a 90-hour-per week job.

Just this past week, I received notice of my fall teaching schedule. I'll be teaching nine different classes a week with an 8 a.m. to 10 p.m. workday twice a week.

By contrast, that teaching schedule sounds like a vacation compared to ten weeks of hopping from one deadline to the next.

Perhaps more than anything else, I will miss the almost daily phone contacts with Hal and the weekly meetings with the other people at Personalized Software. I will also miss having an HP150 with which to play. I was really reluctant to return the HP150 if for no other reason than I would not be able to use the calculator programs any more.

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,

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

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
\$89.95 for Portable Paper subscribers.

PRODUCT NO. PR12NM

60-DAY MONEY BACK GUARANTEE

See order form for details.

TO ORDER

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

Personalized Software

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

HPduette

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

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

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

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

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

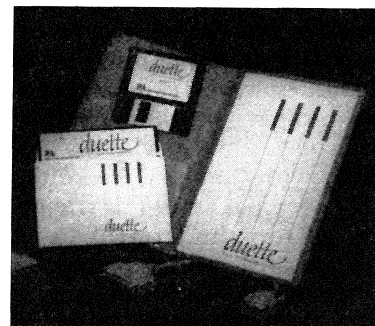
HPDuette performs complete error checking during the transfer process to ensure data integrity. It handles multiple-file transfers, subdirectory transfers, and DOS "wild card" usage. It lets you use DOS commands such as type, list, rename, and erase without having to exit the program. And it transfers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

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

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

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

PRODUCT NO. DU11NM



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

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

60-DAY MONEY BACK GUARANTEE

See order form for details.

TO ORDER

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

Personalized Software

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

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

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

(However, just this past week a fellow handheld hacker sent me copies of three new programs that emulate the HP-11C, HP-12C Financial and HP-16C Programmer's calculator, in living colors on an IBM PC. Owners of the Portable Vectra should be able to use any or all of these programs on their computer. For anyone interested, the company that produces these programs is Caltech Inc., 13629 Bellevue-Redmond Rd., Suite 202 Bellevue, WA 98005-9861. The list price for each of the calculator programs is \$49.95 and \$99.95 for all three together.)

I certainly will miss having the use of the Portable Plus. And to the many Portable Plus users with whom I spoke this summer, I can see why you value the Plus as much as you do.

If you have a Portable Plus handy (this won't work on the HP110) type in the following secret code and press Return.

```
PROMPT $e&a1D GNITROP YPPAH...EMIT TXEN
LITNU
```

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



by The Wizard, Cliff Looyenga

110 Term110

One of the nice features of the HP portables is their ability to dial up other computers. Doing this on the HP110 portable, however, can be a nightmare. The built-in terminal program, stuck in ROM, has a number of very annoying bugs. Anyone who has tried to use the **xmodem** file transfer with CompuServe, or toggle logging to a printer will know what I mean. It was out of this frustration that I decided to write Term110.

Term110 is a terminal emulator which runs on the HP110 portable. Some of its features: the ability to run DOS commands or MemoMaker directly from Term110 without losing its connection to the host, a capture facility that allows one to log what is coming to the screen and easily toggle it on and off, fast **xmodem** file transfers, ASCII file uploads, a startup menu that allows you to easily select the host to which you want to connect, script files to automate tasks such as logons, and support of external Hayes-compatible modems.

One of the biggest challenges in writing Term110 was the need to compromise between features and code size. Every time I needed to add some feature or fix a bug, the code got a little bigger. My goal was to keep the code from getting any larger than about 20K. I didn't really make it, even with Turbo Optimizer, but considering the functionality I think it came out OK. The final program is about 26K, and I'm considering including a smaller version that has some features missing. I can save about 4K just by eliminating the **xmodem** file transfer feature.

The big performance gain with Term110 was seen in

the **xmodem** file transfers. Here is a table that compares the built-in terminal program to Term110:

	Term110	TERMINAL	
UPLOAD	1:01	2:37	(times are
DOWNLOAD	1:03	10:35	minutes:seconds)

As you can see, at worst, Term110 is more than twice as fast as the built-in terminal program, and at best it is 10 times faster. This test was done at 9600 baud and connected to an HP3000. The actual performance improvement will vary depending upon your baud rate and the host to which you are connected.

On the technical side, there were a number of challenges. I found that **xmodem** transfers would only transfer a file of up to 26 blocks. Transferring a file larger than that would cause the transfer to abort after 26 blocks. What frustrated me was that the code being executed was the same, regardless of what particular block was being transferred. The number 26 is significant. It so happens that ASCII 26 is a [Ctrl] [z] which DOS interprets as an end of file. When I sent the 26th block out of the RS232 port, DOS saw the ASCII 26 and therefore wouldn't allow me to send any more of the file.

The fix for this was to put the AUX device (the RS232 port) into RAW mode. RAW mode tells DOS to ignore all the data that flows to that device. To set this as well as other device information I used DOS function \$44 (hex). I won't get into the details of this DOS function in this article, but I'd encourage brave Turbo Pascal programmers to experiment with it.

One technical "how to" I'd like to share is how to run other programs, like MemoMaker, from within a Turbo Pascal program. Here is a procedure called DOS commands which will allow you to do this:

```
procedure doscommands(progname:str255);
var max_dynamic : integer absolute cseg:$2a63;
    envseg       : integer absolute cseg:$002c;
    reg          : regpac;
    comline      : str255;
    comlen       : byte absolute comline;
    parmblock    : record
                        envptr,
                        comptr, comseg,
                        fcb1ptr, fcb1seg,
                        fcb2ptr, fcb2seg : integer;
                    end;
    jbool        : boolean;
    row,col,
    screentop,
    mem_avail    : integer;
    screenhold   : screentype;
    screen       : screentype absolute $8000:0;

begin
    { initialize return value and parm block }
    comline:= ' '+chr($0d); { add a CR }
    comlen:= comlen-1;
    with parmblock do begin
        envptr:= envseg;
        comptr:= ofs(comline);
        comseg:= seg(comline);
        fcb1ptr:= $005c;
        fcb1seg:= cseg;
        fcb2ptr:= $006c;
        fcb2seg:= cseg;
```

```

end;
reg.ds:=dseg;
{ deallocate memory. assume sseg is highest
  addressed }
reg.bx:=sseg-cseg+max__dynamic;
reg.es:=cseg;
reg.ax:=$4a00;
inline($fc);
msdos(reg);
jbool:=(not odd(reg.flags));
if not jbool then begin
  writeln('unable to deallocate memory.');
```

```

msdos(reg);
jbool:=(not odd(reg.flags));
if not jbool then begin
  writeln('Error running program. Error #',
    reg.ax);
  delay(4000);
end;
end;
end;
```

To call the above procedure to run MemoMaker or DOS Commands the calls would be as follows:

```

doscommands('B:\BIN\COMMAND.COM'+chr(0));
doscommands('B:\BIN\MEMOMAKR.COM'+chr(0));
```

There are some very technical points in this procedure, mostly regarding memory management. The technical parts of this I pulled from some public domain software, but I felt that this routine would be valuable for many readers.

For those of you who need to communicate with your portable, I think you'll really like Term110. Term110 is available from Personalized Software for \$79.95.

(letters continued from page 5)

quickly and easily between my Portable, Mac, and MacCharlie. I also use my 9114A disk drive to supplement MacCharlie's two 5 1/4-inch drives (the extra disk space makes up for the lack of speed).

Our office is starting to use the Zenith Z-184 portables, so **formibm** from the 1988 Subscribers' Disk will help my co-workers trying to transfer information; the Revision E software will help even more.

J.F. Herlocker, APO San Francisco

[As The Portable Paper is still not typeset with a desktop publisher program, we are continuing to use an outside typesetting firm, The WordForm Corporation here in Fairfield. WordForm does an excellent job for us, and they are the ones who insert the codes in the margins.—Hal]

in MemoMaker, try:

```

/pf(filename)caoouq
r(range 1)ag
crr(range 2)ag
crr(range n)agq
```

All the ranges will be concatenated under (filename).

Question: For the command **copy con codes.prn**—In DOS, how does one enter [Ctrl] [C]?

Also, is PC Forth available for the HP110/Portable Plus?

Brian P. Kim, Honolulu, HI

[I think you have to use Edlin or The Editor or some other product to create the **ctrl c**. PC Forth is no longer available. However, you can always call us to see if we have used software that no longer is being sold as new.—Hal]



PertPlotter Clarification

I noticed my name in the latest issue of The Portable Paper, and would like to give you more information about PertPlotter.

Originally I purchased the PertPlotter for the IBM PC, for one of our subsidiaries in Argentina. When they visited our Florida office, they brought with them an installed copy on a 5 1/4-inch diskette to run on our IBM PC. I left a copy of PertPlotter and their files on the hard disk, as a backup. Later on I decided to try to run it on the Portable (we have the HP-IL card installed on the IBM). I copied the files on a 3 1/2-inch diskette and tried to run the **.exe** file. It worked, and all I had to do was change the printer setting (we have a LaserJet attached to the IBM, and I have a Brother dot matrix hooked to my Portable).

Because the software worked, I ordered a copy through Personalized Software (and that is when I told you that PertPlotter works on the Portable Plus), so that I could use PertPlotter legally. Interestingly, the software came on a 3 1/2-inch diskette, labeled as Version 1.07 F, Format IBM PC.

I did not use the built-in install batch program, since it seemingly just copied appropriate files to the working disk. The **pertplot.exe** file of Version 1.07 F on the 3 1/2-inch disk was different from the "bootleg" **.exe** file (file size and date stamp in directory). I manually copied the **.exe** file, replacing the "bootleg" version, and just typed in pertplot (the **.exe** file) from the d: drive (one of my 3 1/2-inch disk drives). After long disk I/O the display went blank and the keyboard locked up.

Next I turned on the disk write-protection tab on the original PertPlotter disk and tried to run it from there, figuring that a serial number mismatch may have caused the problem. This time I received the DOS error message: Unable to write to disk. I then disk-copied the entire disk, and ran PertPlot from the duplicate disk. This time it worked, although it took a long time to finally show something on the screen. After that, I was able to copy the **pertplot.exe** file, replacing the "bootleg" version, and subsequent runs from my working disks were successful. It appears that the kind of copy protection used by PertPlotter does something the first time the program is run.

Now I have my own legal copy of the PertPlotter software, and it runs and plots

Concatenating Lotus Print Ranges

The Portable Paper is an inspiration and a joy. The even-handed, candid journalistic tone is refreshing. When I first purchased my Portable here in Hawaii, the only assistance I could get was, "Try [Ctrl] [Shift] [Break]."

Here is something I haven't seen mentioned in *The Portable Paper*, and I hope it's useful to somebody. This has to do with concatenating print files in 1-2-3. Due to the tabular nature of many of the things I do, I often write in Lotus. Because of my fragmented mentality, I usually break up large projects into smaller parts, then finish in MemoMaker. Instead of using + with DOS **copy**, or pasting blocks

(*New Backlit Plus continued from page 7*)

well. The opportunity to use this in the dark, or in a dimly lit room will make the Plus a complete writing/notes-taking tool.

I conclude that the backlit screen is an excellent tool for use in poor light, and an adequate one for a brightly-lit office.

Peter Timaratz, Systems Analysis

I tried on several occasions to use the Plus. Each time I quickly became exasperated by the screen and stopped using it. It was too much of a strain to read it.

I'm writing this with the "Glow Worm." It is a big improvement. I can actually see what I'm writing. But it's still far from perfect because of the glare from the fluorescent lights. I can see the overhead ceiling fan whirring away in the corner of the screen. The screen must be carefully positioned so that lights are not reflected. I can almost use

the screen as a mirror.

Now I'm writing in a room with incandescent lighting. I love it. I could happily work with this screen under these conditions.

I'm glad my work doesn't require the use of a portable. But if I had to use a Plus I would definitely want this screen.

FUTURE AVAILABILITY AND UPGRADES

At this point HP is non-committal about the availability of these new machines on a one-at-a-time basis. Also, HP has not decided whether it will be able to upgrade individual units. Interested readers should definitely write HP (and us). We may be able to perform the upgrade or sell individual Glow Worm units if HP decides not to. Keep HP and us informed of your interest, and we'll keep you informed of developments.

perfectly on my Portable Plus, with the Brother printer. If I change the console mode to "Alternate," then even the box framing is correct on the PertPlotter screens.

My recommendation for other users is to order the same, 3 1/2-inch disk version of PertPlotter from Personalized Software, make a diskcopy of the master disk, then start the program from DOS in the appropriate mechanical disk drive, and the program will work (don't forget to put the display in "Alternate" mode). The manual thoroughly explains the files and the workings of the program.

One final note—the program is slow. It takes 15 to 30 minutes to plot a less-than-40-step project. I start it before lunch, and the plot is ready by the time I am. I hope this explanation has been helpful.

Janos Komaromi, Ft. Lauderdale, FL

Act—EAA) to the U.S. Department of Commerce (DOC).

The Portable Plus can be found among this lot of controlled items. The reason is the size of the Plus' memory and the data processing rate, or "DPR"—not the speed in MHz. I don't know about the 110, but you can easily find out: if the 110 has more than 1.1 million bits (not bytes) internal memory or a DPR of more than 2 million, then it would also be considered a controlled item.

The Plus, therefore, may only be exported to countries which are not on the embargo list, and only with a respective export license. If you or your readers in the U.S. want to know more about it, ask the special department within HP, or a specialized consultant (I can give you 2 addresses in Boston, if anybody is interested).

In essence, everybody leaving the U.S. with a Portable but without a license is violating U.S. law. Even if it is your private, personal computer, and you are sure to bring it back, and you will never sell that valuable piece and best friend of yours, you need the license.

U.S. law also stipulates that HP has to inform their buyers (agents, dealers, sister companies and the like) about the fact that re-export contrary to U.S. law is prohibited. These agents, dealers etc. again have to inform their buyers about this fact, always in writing.

Of course you can risk crossing borders without this license. At most border points you are not even checked when leaving the country. Arriving in a foreign country is not much trouble either. The worst thing that can happen is that your computer can be confiscated (!) or held back during your stay. When you are returning to the U.S. without proof that you originally had exported the computer out of the United States, you risk being checked by customs, and if they catch you, you will probably have to pay customs duties and taxes.

The same applies for people in COCOM-countries (and certain non-COCOM countries like Switzerland). In Switzerland, it is very easy to receive an export license for countries which are not on the U.S. embargo list. You will usually receive the license within 3 days. In urgent cases the authorities are even calling the respective customs office to give spoken permission (which has to be backed up with the normal license).

In order to avoid problems when returning to the country in which you live, you may apply for a special international document, the "Carnet A.T.A." Not all countries, however, have signed this convention. The principle is simple: If the holder of the Carnet A.T.A. violates a particular regulation (e.g., not re-exporting the goods stated in the carnet), the local organization (in most countries the International or local Chamber of Commerce) guarantees payment of all duties and taxes applicable in foreign countries.

Of course the issuing organization is only releasing the Carnet after certain conditions have been met by the applicant (payment of an agreed guarantee, written commitments etc.). The holder of the Carnet has then to present the Carnet and the goods stated therein at each and every border. The Carnet will be stamped by customs, who will also retain one of the sheets in the Carnet. If readers would like to know more about it, they may ask the nearest PANALPINA office. Export licenses are required even if you are travelling with a Carnet A.T.A.

There are some airports (Zurich, amongst others) where officially you are not allowed to carry your Portable as cabin luggage (no checking possibility at security checks). However, I experienced no problems as soon as I demonstrated that my Plus is in working condition (don't run Tiger Fox as a demonstration, they will never let you go before all of them have tried it out, and you are bound to miss the plane. . .).

110 Crossing Borders With Portables

P+ You may remember that I have long wanted to write about this problem. I started several times, only to realize that this is an extremely complex topic. It certainly is not difficult to cross state lines within the U.S., but problems begin for law-abiding citizens once they want to take their Portables across national borders.

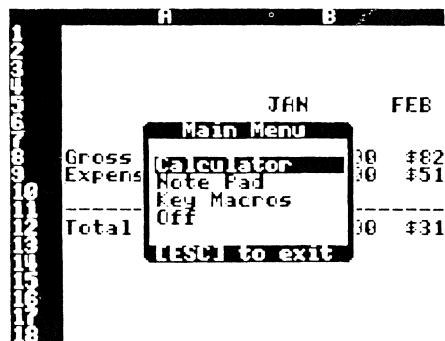
PV Whether you travel by automobile, train or plane, you have to make a decision. Many countries (20, to be exact: all NATO nations except Iceland and Japan) have joined "The Coordinating Committee Organization" (COCOM). This organization's aim is to coordinate export controls for security purposes. Its charter is to determine what items should be controlled and to approve or deny requests for distribution of controlled items to embargoed countries. In the United States, Congress has delegated responsibility for the respective law (Export Administration

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.

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After having read all of this you may understand my reluctance to write about it previously. I wonder how Srini Nagoshwar (*The Portable Paper* Vol. 2, No. 5, page 18) is solving these problems. (He probably has a distribution license, HP certainly has.) That's another thing salespeople don't tell you. . . .

Rudolf J. Sommer, Nussbaumen, Switzerland

110 QuietJet Plus Questions

P+ I use the QuietJet Plus almost exclusively with my Portable Plus. I am concerned as to whether PrinterTalk and Format110 can set the escape codes which the QJ-P can read.

I would also like to know if it is possible to print to the QJ-P from any of the programs on the SuperROM.

John Ferman, Minneapolis, MN

[In the user's manual for Format110 there is a paragraph which describes the long-lost .pr command, which you may use to send any escape sequence to any .prn device. The trick is to get the escape sequence into your document. As an example, use the Editor and ^[. A typical .pr command might be .pr [esc]&k0s. This would send the WIDE escape sequence. You could also try the codes for the ThinkJet, which are already in Format110, on the SuperROM.—Ed Keefe]
Most of the built-in PrinterTalk

ThinkJet codes will work for the QuietJet. PrinterTalk also lets you define up to 10 printer codes of your own. Define them once using your QuietJet manual, and you can use them from then on—Hal.]

PV Portable Vectra Wish List

I am writing this brief note to re-confirm my interest in bus extensions and hard disk capability for the dual floppy Portable Vectra. For my purposes, the hard disk does not need to be battery operated; 110-220 v. is fine. Any developments concerning a backlit screen would also be most welcome.

Ingemar Nilsson, Letchworth, England

[Unless some third party comes to the rescue, there will be no new Portable Vectra screen. We are still working on the Bus extender card to connect to a portable hard disk, a tape backup unit, a 386 processor external unit, and a 5 1/4-inch disk drive. The more interest we know exists, the more we can encourage third parties to complete work that has already been started.—Hal]

PV Modifying Portable Vectra's Config.Sys File

I am happy to report that both EMS Expanded Memory and Executive Card Manager are installed and working in my Portable Vectra. There are a couple of items which might interest you.

At first, ECM loaded OK but strangely would not work. I attempted to load an ECM (previously used on a Portable Plus) which I had transferred to a 720K disk in IBM format using the **formibm** utility (from the 1988 Subscribers' Disk). The files loaded well enough but could not be called up on the Portable Vectra-installed ECM. Most confusing to me were the error messages that varied although the same keystrokes were repeated each time. The situation seemed hopeless.

I returned to MemoMaker in an attempt to check the **config.sys** file, but found that MemoMaker would not execute either. Again, I received several different error messages, none of which made sense. I finally got to the **config.sys** file through the DOS **type** command, and found it had been corrupted, and that the file designation had been changed from 20 to 2 nul. Using Edlin I returned the file designation to 20. Even so, I still could not get MemoMaker to load and ECM continued with the same problems.

Not knowing what else to do, I reloaded MemoMaker from the master program disk, and this fixed the problem. This tells me that it may be necessary to re-load certain applications after a change in the **config.sys** file.

ECM, however, would still not work. I changed **config.sys** to increase the number of buffers to 98 and the number

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of file handles to 254, and MemoMaker and ECM both worked perfectly. The key appears to have been that there was an insufficient number of file handles in the **config.sys** file.

A second complication was that after loading expanded memory I could not get the **chkdsk** program to show the increase in memory. For a while, I figured that I had loaded the expanded memory incorrectly. Then I tried something Brian Teitzman suggested, and entered Lotus and checked worksheet status, which showed me that in fact the expanded memory was present.

To date I cannot get my Portable Vectra to print. I am attempting to use the newly-installed serial port (nine-pin) with an HP LaserJet. I use this same printer with the nine-pin serial port on the Portable Plus. Any advice?

Everything else seems to be going well (although the screen is still an unhappy experience). Thanks for all your help.
Donald R. Harkleroad, Atlanta, GA

[I plan to discuss the serial card next issue. I too have had problems with the 9-pin port.—Hal]

Word, to which you responded in one of the recent issues of *The Portable Paper*. Since it will take a while until we receive a response (if at all), I have a different idea. The MS Word utility disk contains the procedure of how to create a **.pdr** file for printers which are not listed in the MS Word manual. I am afraid that it might overtax my abilities somewhat to attempt this, so I'm wondering if there is someone at Personalized Software who might be up to the task. Moreover, this **.pdr** file could be made available to other readers who are interested. Thank you for your help.
Dr. Martin C. Koenig, Sun City, AZ

[Since we have no MSWord experts here, the project gets put on the back burner. I'm sure someone out there has done it. Please, send in your results.—Hal]

110 BASIC Questions

P+ Can you give me some more information on the various BASIC's for the HP110? What is the difference between MS BASIC and GW BASIC? Are programs in one interchangeable with the other? Are BASIC programs developed on an IBM executable by either? Can MS BASIC programs later be used and compiled with the compiled MS BASIC?

Also, are there any Forth compilers available for the HP110?

Bill Pinnick, Greenville, NC

[As far as I know, there are no Forth compilers still on the market that work on the HP110 or Portable Plus.]

The BASIC's offered by HP are very early versions. Consequently, unless you have those same early versions of IBM PC MS BASIC, you will have to do some translation by hand to make the programs work on the HP Portables. (Actually, even with the same version numbers, there is some inconsistency.)

There are three "types" of BASIC offered by HP. The most basic BASIC is the MS BASIC interpreter. There is also an MS BASIC compiler that compiles MS BASIC programs. For example, three years ago, before I knew about Turbo Pascal, I wrote Personalized Software's first product, PrinterTalk, using the MS BASIC interpreter. When I succeeded in getting it in its final form, I used the MS BASIC compiler.

*Finally, GW BASIC gives you some graphic control. I believe GW BASIC is a superset of MS BASIC containing commands like **circle**, **line**, and so forth. GW BASIC programs using these graphic commands cannot be compiled.—Hal]*

110 Creating MS Word PDR File

P+ This refers to my recent question concerning the use of the DeskJet printer with MS

(110% continued from page 12)

HP Portables, The Press, And The Mainstream

As many readers are aware, the Portable Vectra has not been well received by the press. Some reviews have been neutral to mildly positive. Many others have been quite negative.

HP has a pattern of producing superbly engineered, high quality products, which do not fall in the "mainstream." Examples known to most of our readers are the HP110, Portable Plus, HP150, and now, the Portable Vectra. Many readers are also familiar with the high end calculator line and series 70 and 80 microcomputers.

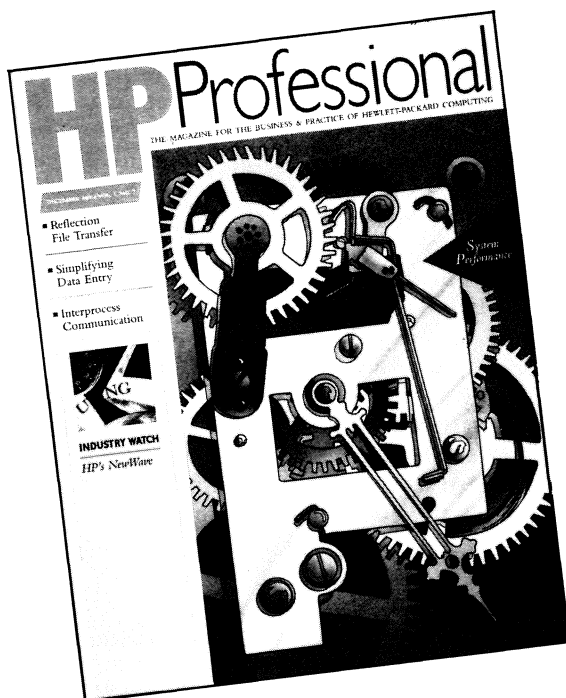
One of the disadvantages of this out-of-the-main-

stream approach is that much education of the potential end user is required to sell many of these computers. In the past, HP has not been willing to spend advertising dollars in the education process. Traditionally, brilliant HP engineers develop these wonders and hand them over to marketing folks who don't know what to do with them and aren't given the means to market them.

The HP110 and the Portable Plus have been perceived as toys by the computer sages, and the Portable Vectra is seen as some kind of dinosaur. HP portables just don't look like miniaturized desktop computers, which is what portable computers are "supposed" to look like.

When these HP portables are reviewed by the com-

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puter industry press like PC Magazine, InfoWorld, etc., they are not judged so much on their own merits. Instead they are judged in terms of the miniaturization metaphor. That is, the ideal portable computer is expected to look and function like a desktop, but in miniature form. Inherent in this philosophy is (the assumption) that some tradeoffs must be made, either in the area of weight or desktop features. If too much is sacrificed in either area, the computer is judged deficient. Now HP itself has bought into this view as it has announced that it will be selling the Zenith Supersport under its own label.

Up until now, The HP approach with the HP110, Portable Plus, and Portable Vectra has been to examine and strengthen those features which are essential to portable use. These three machines reflect two fundamental principles. First, ruggedness is absolutely necessary. Desktop computers are sedentary. They don't get moved around much. Portable computers, however, get jostled, dropped, banged, and bumped.

The HP110 and Portable Plus have no moving parts. They are RAM/ROM-based as opposed to containing mechanical disk drives (a point for which they have been criticized). With the Portable Vectra, HP adopted the mechanical disk drive approach. However the drives are shelved in a unique "clamshell" design. One of the reasons for the Vectra's extra weight is its rugged construction. I know of no portable computers made anywhere which are as rugged and reliable as the HP Portables.

The second principle applied across the HP Portable line is that battery power is vital. There are circumstances in the life of every portable user where he/she does not have access to an AC outlet for a certain period of time. No current MS DOS machine even approaches the 20 hours of continuous use of which the HP110 and Portable Plus are capable.

In a recent InfoWorld magazine comparison of 9 portables, the 20 Megabyte hard disk Portable Vectra system

lasted nearly twice as long as its nearest competitor between battery recharging.

In the InfoWorld comparison, the Portable Vectra's score was lowest. It came in last because of its poor score for three areas—weight, screen readability, and support. If those three criteria had been omitted, the Portable Vectra would have come in first. In every other facet of comparison—IBM compatibility, speed, battery life, keyboard, documentation, and workmanship, the Portable Vectra was rated good to excellent.

The Portable Vectra was designed for the executive who could take his computer back and forth between home and work. Used in this manner, it is easy to attach the system to an external monitor. A person who uses his Portable Vectra this way can arguably be said to have the best portable computer in its class rather than the worst.

No thanks to the reviews given the Portable Vectra, it has not sold well. HP has obviously not put much R&D effort into the Vectra's future. HP has dropped the effort to produce a new screen, which is unfortunate.

Except for the backlit screen which may or may not be made available to the general public, it's been well over a year since HP has made advances on the Portable Plus front. When memory prices fall again, RAM/ROM-based portables will be basic to the future of portable computing. Let us hope that HP is not throwing away its wonderful technology. I hear rumors that HP might be working on a RAM/ROM-based machine with a floppy drive, but there is nothing of substance (yet) to these rumors, and such a machine is certainly well over a year away.

All of HP's current efforts seem to be focussed on the introduction of its version of the Zenith machine. It is an excellent machine. However, for an HP enthusiast like me it is a painful irony that with all its home grown talent, and as pioneers in the portable computer arena, HP must turn to a competitor to find a state-of-the-art portable computer for resale.

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.

Colorado, Colorado Springs, Dan Ritt, 303-528-8080. **Denver**, Call Bob Pressey, 303-777-0326 **Georgia**, Atlanta, Call Brian Walsh D:404-394-2500 E: 404-399-6842 **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 one, Yarmouth, ME 04096, 846-5497 **North Carolina**, Charlotte and surrounding area, John Jacob, 704-334-3468. **Texas**, Houston, Thomas R. Page, D: 713-759-4259, E: 713-528-7138. **Utah**, Utah County, Donna Hoover, D: 378-4421, E: 375-4812. **Washington**, Eastern Washington, Northern Idaho, Western Montana, and possibly Western Washington, Bob Sandberg, 509-466-4999. **Eastern Washington**, Stephen S. Warner, D: 509-534-1588, E: 509-535-3322. **Western Washington**, Portable, Plus, 150, 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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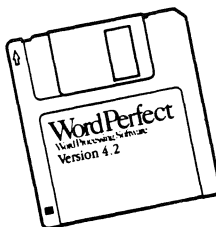
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Note to Portable Plus users: As always, you have to plan memory space in the Portable Plus. You'll need 512K of RAM to allow space for the basic WordPerfect program and still leave room for other files on your electronic disk. To fit *everything* on 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.)

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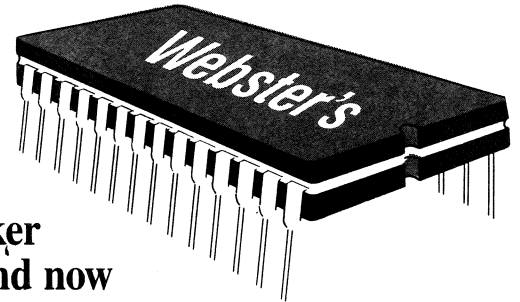
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In addition, WEBSTER'S will let you preview a list of all questionable words *before* displaying them in context; this saves you time because it lets you eliminate words from the questionable list (or add them to your auxiliary dictionary) before you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

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