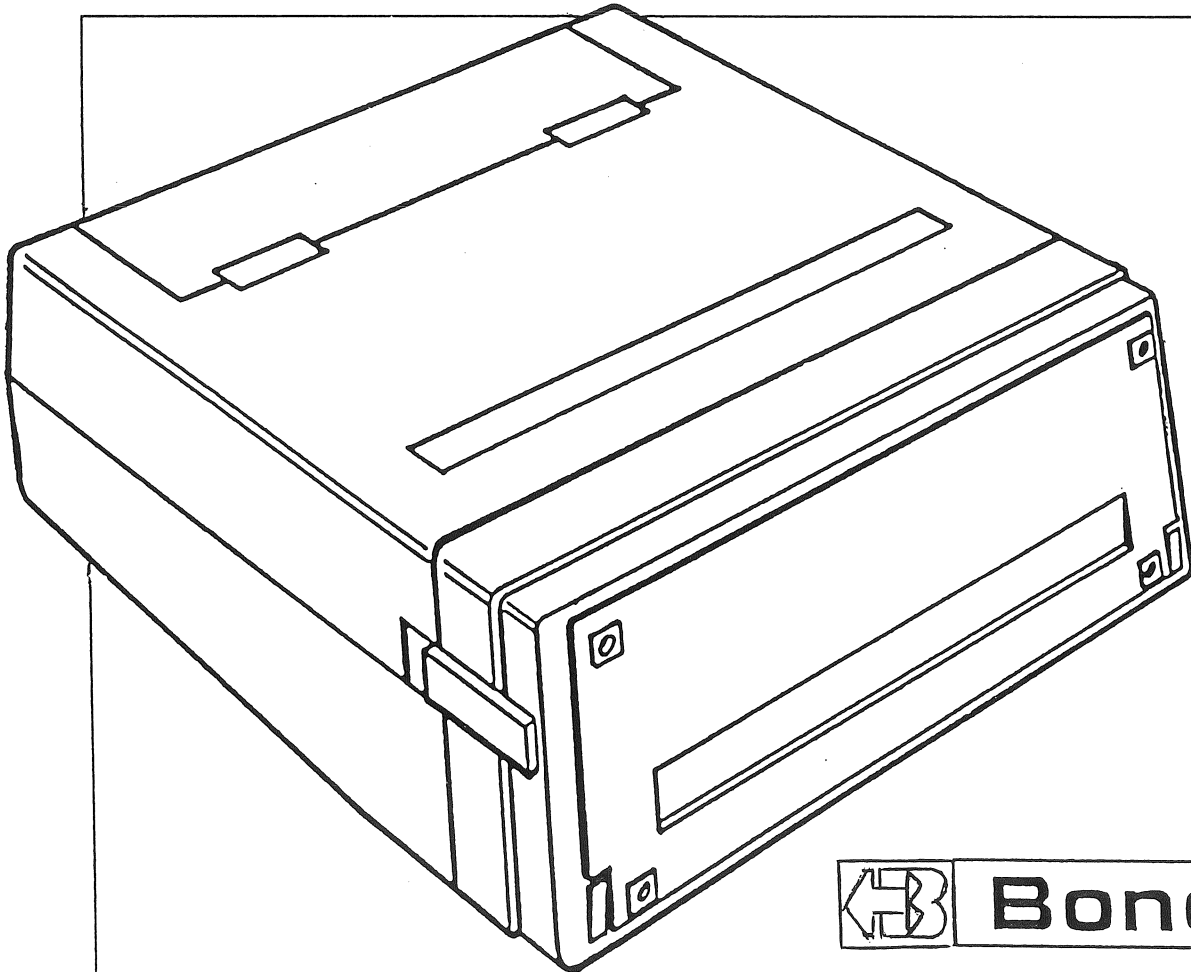


The Z-Letter

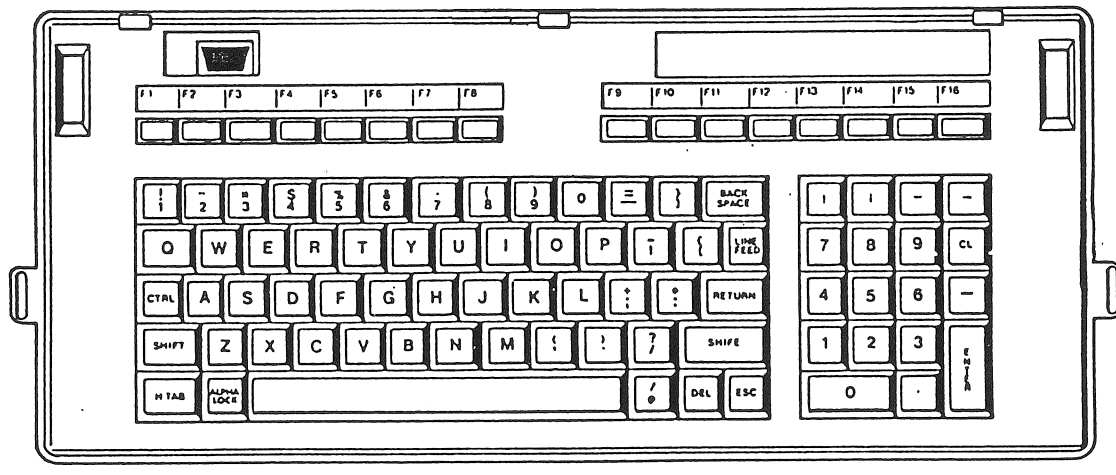
Newsletter of the CP/M and Z-System community

Number 28

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 **Bondwell**



The Bondwell 12

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Welcome to *The Z-Letter*, a newsletter for the community of CP/M and Z-System users. Everything in this issue is copyright © 1993 by David A.J. McGlone, Lambda Software Publishing, 149 West Hilliard Lane, Eugene, Oregon 97404-3057, phone (503) 688-3563.

The purpose of this magazine is to spread the news about new developments in the community, and to help newcomers get the most out of their machines. So send us the news about your new software or hardware, your opinion of someone else's product, that article you've been meaning to write, your praise, gripes, or just plain questions! This is the place.

Please submit material on 5¼" or 8" diskette in almost any format, or printed or typewritten on clean white unlined paper. We cannot pay for articles, but the author of any article we publish will receive that issue of *The Z-Letter* free. If the author has a subscription, the subscription will be extended for one issue.

The Z-Letter reserves the right to edit for publication letters received. If you're not willing to have your letter printed, or edited before

printing, please say so in the letter. All letters become the property of Lambda Software Publishing upon receipt.

A subscription to *The Z-Letter* starts with the first issue after payment is received. See the Lambda ad in this issue for subscription rates, back-issue price, etc.

Anyone may submit personal ads. Each ad will be run three times. If the ad doesn't achieve its end in that time, it can be reinstated after a lapse of one issue. If the ad succeeds before it has run three times, please inform us so we can drop it at once.

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The Z-Letter is indexed as time permits. The index for issues 1-5 appeared in issue 5. The index for issues 1-24 is being prepared; the contents section has been finished.

This issue was printed by Alan Bard Newcomer's Hypatia Press, 360 West First, Eugene OR 97401, phone (503) 485-0947, and mailed by the Press' bulk-mail permit.

RANDOM ACCESS

NZCOM updated to version 1.2H

Jay Sage has made some changes to NZCOM. The new version, 1.2H, is now available from Jay's Sage Microsystems East, Bridger Mitchell's Plu*Perfect, and from Lambda Software Publishing (see ad in the back of this magazine). The new version comes with a revised manual.

Z3PLUS 1.02F now available from Lambda

The same changes have been made to Z3PLUS and its manual. The new version 1.02F of Z3PLUS is also available from SME, Plu*Perfect, and Lambda. Previously, Lambda was unable to offer Z3PLUS to its customers.

Micro Cornucopia disks and back issues available

David J. Thompson is the founder, editor, and publisher of *Micro Cornucopia*, a magazine for the Big Board, Xerox, and Kaypro computers. *Micro C* ceased publication after issue 53 (May 1990). This sad event was announced in *The Z-Letter* at the time.

Now Mr. Thompson has given Lambda permission to reprint *Micro Cornucopia*, and to sell both the magazine and the collection of Kaypro disks it compiled.

The price for single issues of *Micro C* will be \$8.00 in the U.S., Mexico, and Canada, \$10 everywhere else. This price represents the cost of printing, postage, a royalty to David Thompson, and a small profit for Lambda.

The price for the *Micro C* Kaypro disks will be \$5.00 each, half what Lambda has been charging for its disk copying service, and for the Sound Potentials software collection, and less than *The Computer Journal* has been charging for these disks. In addition, Lambda will offer the entire 49-disk set for \$200, which is a savings of \$45 over its price, and a savings of between \$111 and \$136.50 over *TCJ*'s price, depending on where you lived and how you specified the set should be shipped.

Effective immediately, *The Computer Journal* will not be carrying the *Micro Cornucopia* Kaypro disks, so that Bill Kibler, its editor, can concentrate on *TCJ*.

Borland says no to CP/M license deal

A year of negotiating with Borland, spurred by a conversation with Jay Sage last November, led to

apparent success with a contract to sell the CP/M versions of Borland's and Ashton-Tate's CP/M products, including TURBO Pascal, TURBO Modula-2, dBase II, TURBO Tutor, TURBO Database Toolbox, TURBO Editor Toolbox, Friday!, and MenuMaster. At the last moment, however, a new department at Borland got involved, and Borland has backed out of the deal.

Carol Lamberson, Director of Business Development at Borland, called me December 1 to deliver the bad news. The follow-up letter, which is not a good summary of the conversation, says in part:

"Borland is not interested in entering into a reseller license agreement with your firm for the following reasons:

- *Regardless of the channel or vehicle by which our products are sold, Borland must be in a position to provide technical support to its customers. As we are no longer equipped to support our CP/M products, we do not want to sell additional licenses of these products.*
- *So that we can control the quality of technical support we offer our customers, Borland will not contract out technical support.*
- *Our CP/M products are nearly a decade old and no longer reflect company standards for product features, performance [sic] and supportability.*

Thank you again for submitting your proposal to Borland."

Needless to say, I have not yet given up on getting a final OK from Borland. I have sent a reply to Ms. Lamberson, suggesting that if Borland will not license its CP/M products, it should release them to the public domain. I pointed out that this would reflect well on the company, not only with the CP/M community, but with computer users of all kinds who believe that a company should either keep its products available, or make them public domain.

If Borland refuses this as well, I will try starting a letter-writing campaign and boycott to try to make them make their CP/M products available. In the meantime, please do not write to Borland. A letter with the wrong tone, or at the wrong time, could make matters worse.

Another possibility would be selling the TURBO Pascal clone I wrote in Ryan-MacFarland COBOL. I don't have a manual or an installation program for it yet, and it runs about 5% slower than TURBO Pascal. But if we cannot pry loose TURBO Pascal or any of the other Borland/Ashton-Tate products, LPascal

might be an acceptable substitute for TURBO.

Reaching *The Z-Letter* online

I now have a GENie account. GENie users can send GE Mail directly to D.MCGLONE. Those who log on to Internet, CompuServe, or America Online can also send mail to me; check with your service representative to learn what you have to add to my GENie ID to get mail to me. I promise to log on and read my mail at least twice a week.

Historical Computer Society debuts

David A. Greelish is founder and President of the Historical Computer Society (HCS). In the first issue of his new magazine, *Historically Brewed*, David writes, "We are a non-profit organization dedicated to preserving older and classic computer hardware, software [*sic*] and literature while educating and helping our members as well as the public. *Historically Brewed* is all about personal computer history and computer history in general! In only 18 short years, there is much history to be shared." See the MAGAZINE ARTICLES section this issue for the contents of the first two issues of *Historically Brewed*, and HCS's address and phone number.

Running a PC from another computer

One of the things I've long wanted to do is set up my Tandem 6AX, which I use only for disk copying and format translation, so that I could run it remotely from my real computer (my SB180FX). The ideal arrangement would have the 6AX's main box and attached 8" floppy-disk drive sitting to one side of the SB180FX, where I could reach the drives easily. A cable would connect the 6AX to the SB180FX, and I would run the 6AX from the SB180FX, with all input to the 6AX coming from the SB180FX's keyboard, and all output from the 6AX's programs showing up on the SB180FX's screen. In this ideal arrangement, I wouldn't need a keyboard or monitor attached to the 6AX at all.

Recently, David Samson and I rounded up the necessary resources to try out this idea. We set up the 6AX for remote operation by using the MODE command to set up the serial port (MODE COM1:96,N,8) and the CTTY command to redirect I/O to that port (CTTY COM1). Then we fired up a modem program on the remote computer and started trying out programs on the 6AX.

22DISK from Sydex works perfectly! We were able to run all 22DISK commands from the remote keyboard, without errors, and all output went to the

remote screen. On the other hand, Sydex' AnaDisk writes directly to the local monitor and reads input directly from the local keyboard. It completely ignored the remote system.

Several other programs fell in between these two in their behavior, accepting input from the remote keyboard, but writing their output directly to the local monitor. Uniform-PC works this way, and the HotDir command I use on the 6AX to display directories. So does Digi-Duit, the laser-printer font generator, and the PC version of Spellbinder.

Since AnaDisk, an irreplaceable program, insists on having a local keyboard and monitor, the whole idea has to be abandoned. It was nevertheless an interesting exercise, and we both learned a few things.

Lee Bradley to publish MY-Z80 book

Lee Bradley is working on a book on MY-Z80, the Z80 emulator for PCs written by Simeon Cran of Australia. Lee sent early versions of his book to Jay Sage, Howard Goldstein, and me for review and comments. I was sure that Jay and Howard would find any technical bugs, so, while I did not ignore that aspect of things, I concentrated on the writing, spelling, grammar, and organization.

Lee's book comes with the shareware version of MY-Z80 on a 3½" disk. So you not only get a book on the emulator, but a working copy to play with. When Lee has finished his work, that news will also appear in this magazine.

Collection, repair, and inventory

No doubt you can tell from all the news just how busy and productive this past couple of months have been. For the mad computer collector (me, that is) a lot has been going on.

Despite a general shortage of cash, I've been able to acquire a few machines. At a local Goodwill computer sale, I picked up a complete Coleco ADAM, including printer, for \$28. This does not include floppy-disk drives, however, which Coleco considered an unnecessary luxury. I also acquired two CompuPro 8/16s and another NorthStar Horizon, with lots of extra boards and software and documentation, for free from a gentleman who no longer had room, but wanted to see them find good homes.

One CompuPro I gave to David Samson in appreciation for all the hardware hacking he's been doing around here, and one I traded to Ron Reymore for all the repair work he did on my TeleVideo computers. I now have a working TS-803H and two

working TS-802H computers, and a TS-802 that still needs some work. Two other working TS-802 computers left the house. One I traded for a Sanyo MBC-1100, the other one I sold.

Ken Thomson, an old friend of mine from the Eagle Computer Users Group, has also acquired a few things to sell and trade me. This month's haul includes two CMC Super 20s (Intertec Super Brains with 20-Mb hard disks), another Coleco ADAM, and a 12-Mb Eagle hard disk.

The CompuPro collection also included two double-sided Qume 8" floppy-disk drives. I had been looking for DSDD 8" drives for some time, to put in an external 8" drive unit that John Hogg in Gary, Indiana paid me for. The only double-sided drives I had, a NEC drive and a Shugart, were stubbornly refusing to work. The Qume drives worked perfectly, and I shipped the unit with great relief. I'm hanging onto the other Qume drive as a backup for the 8" drive on my Tandem 6AX.

From another friend in McMinnville I picked up a homebrew S-100 system and a ton of software and manuals. I also found a NEC APC CP/M-86 system at a local St. Vincent de Paul, and bought an HP 125 computer with lots of software, manuals, and an extra keyboard. I was given an Osborne Executive, which for right now works fine. How long this will remain true is another question.

I've sold a few extra computers, too. Besides the TS-802 I already mentioned, I've sold a couple of Eagle III computers. One went to Errol A. Diaz, Sr., in Louisiana. Errol has a TRS-80 Model 4, which under TRSDOS can use two 3½" 720K drives. He wants to go to CP/M, but the Model 4 CP/M that he has only lets him use single-sided 5¼" drives, with a 156K format. He leapt at the Eagle III, with its two 784K drives.

With David Samson in residence, I've felt able to tell people with computer hardware problems that we would at least look at their machines, and perhaps fix them. Jarrall LaGiusa of San Jose shipped his Eagle II, which had been sitting, unknown to him, under a leaky spot in the roof. He turned it on one day when it had water in it, and it hasn't booted since. Dave and I were able to establish that every part still worked fine except the floppy-disk circuits. The Eagle will boot from a File 10 external hard-disk unit, and works fine, but it cannot do anything with perfectly good floppy-disk drives. Jarrall has purchased an Eagle III to replace

his II, which I am keeping and will pay Dave Samson to fix.

Another guy, whose name I will omit to spare him embarrassment, sent a Kaypro 10 to be looked at. The machine turned out to be full of roaches, most of them (thankfully) dead from the trip cross-country. We kept cleaning up the machine, finding more, killing them, etc. Between the roach deposits and the roach damage to wiring (they chew on insulation) the machine may not be repairable, but we will try. We bug-bombed the house twice to eliminate the imported vermin, and it seems to have worked.

We've also been having a lot of fun testing machines in my collection, and assigning them inventory numbers. A number of Morrrows and Eagles have turned out to be mainly good for spare parts. I still have three good Morrrows and two good Eagles, and will have more when I have time to combine parts from these machines.

Working Assets Long Distance

This is almost a commercial, so don't read it if that offends you. But there is a commercial long-distance phone company called Working Assets Long Distance. WALD saves you up to 15% over AT&T, and there are even greater savings (20%) when you call other Working Assets subscribers.

The real attraction, though, for a liberal like me, is that an amount equal to 1% of your phone bill is donated by Working Assets to various good causes. Since 1986, Working Assets customers have generated over \$2.3 million for groups like Planned Parenthood, Greenpeace, Rainforest Action Network, Oxfam America, Amnesty International, National Coalition for the Homeless, Fund for a Free South Africa, and over 100 other worthy groups. They also print their bills on unbleached, 100% post-consumer recycled paper, print with soy-based ink, and plant 17 trees for every ton of paper they use.

If that doesn't matter to you, here's something that might: Working Assets will take \$10 off the phone bill of a member for every person he or she brings into the network. So if you join up, Lambda will get \$10 off its phone bill. To join, call 1-800-788-8588, and tell them to credit David A.J. McGlone, member number 0153312.

End of commercial. We now return you to your regularly-scheduled magazine.

REFORMATTER DISKETTE SYSTEM

Product review by David E. Samson and David A.J. McGlone

One of the services Lambda offers is copying files from one disk format to another. A few months ago we were talking to a company that needed a lot of 8" disks copied to PC format. In the end, because there were so many, and because they would be done in batches over an extended period of time, the prospective customer decided to buy a ReformatTER 8" external floppy-disk drive unit for his PC. Lambda contacted MicroTech Conversion Systems, the company that sells ReformatTER, and got the loan of one for evaluation and review.

The package we received contained the ReformatTER box itself, two manuals, a PC/XT controller card, a cable to connect the card to the ReformatTER, a power cord for the ReformatTER, and a disk of software to install and run the ReformatTER.

The ReformatTER itself is a black metal box approximately 12" W x 15" D x 6" H (we forgot to measure it before sending it back). We got the standard configuration, which contains a single half-height 8" drive. Available options involve a second drive, which can be 8", 5¼", or 3½".

The *ReformatTER Conversion Software* manual is 5½" x 8½", and 19 pages long. The *MicroTech Conversion Systems ReformatTER Diskette Hardware* manual is 8½" x 11", and has 31 pages. Both manuals are clearly written with a lot of white space and quality printing. There are a few grammatical and spelling mistakes, and in one of the manuals two pages are reversed. All in all, the manuals are way above par for today's technical writing.

The controller can be configured as a primary or secondary controller, and works well in either mode. The jumper blocks are located together and are clearly marked. The instruction manual gives enough options to cover any condition we can think of. Jumper options for eight common 8" drives are included, and step-by-step instructions for the most common installation configurations.

Hooking up the hardware was easy; installing the software was the first trouble we had. A statement of the form `DEVICE=MTE.SYS [param . . .]` must be added to your `CONFIG.SYS` file with the correct parameters for your system. The manual wasn't clear on the need for a B at the end of the parameter for the internal drives on the XT. We called MicroTech. While they made us put in the B, they were mistaken in one of the other settings they gave us. In this case the manual is correct but the requirement isn't clear.

Without the B, the XT's internal drives will not work.

When you put an 8" disk in the ReformatTER, it checks it, and presents you with a list of the formats known to the DOS2CPM software that the disk could be. If your format is known to DOS2CPM, you need only select the number next to the format description. Your options then include copying from MS-DOS to CP/M, copying from CP/M to MS-DOS, switching to another disk drive, or formatting a disk. These operations, in theory, can be performed either at the menu, or from the command line, permitting ReformatTER to be used in batch files. In practice, we could not get the software to switch drives or format a disk from the menu.

The formats known to DOS2CPM are contained in a separate file, which can be edited to add missing formats. This is good, and there are 20-30 8" formats listed that are unknown to Sydex' 22DISK. However, there's a lot of bad news here, too.

First and foremost, there are only 75 formats total. Several of them are so poorly described as to make certain identification difficult to impossible, and some of them are described as "Unknown" or contain question marks in their descriptions. At least one 5¼" format, the common one used by the Kaypro 4, 2X, and 10, seems to be incorrect; the DOS2CPM software would not read a Kaypro 4 disk that several other computers, and the same computer under 22DISK, had no problem with.

When specifying a format from the command line, you use the number of the line on which the format appears in the format file. These lines are not numbered; the numbering starts with 0, not 1; and the formats are not in order by company name, format description, number of tracks, or any other field. There are also several spelling mistakes in the format descriptions; Ithaca and TeleVideo are misspelled, for instance. All in all, the format file suffers from a lack of the care and professionalism that went into the hardware and the manuals.

Since there are so very few formats known to DOS2CPM, we tried to remedy this by using Sydex's 22DISK software with the ReformatTER hardware. But we were completely unable to make the ReformatTER and 22DISK work together.

In conclusion, we cannot recommend RefomaTTER to anyone. The paucity of known formats might not matter to a given prospective user, if he only wanted to read disks in one of the formats listed, and that

format was correct. Even in that case, however, the price tag is way too high. MicroTech wants \$2095 for the ReformatTter hardware, and \$595 for the software. For less than the price of the DOS2CPM software alone, you can purchase a case and power supply (\$5-\$100), an 8" drive (\$5-\$100), a MicroSolutions CompatiCard IV controller (\$95) and 8" drive cable (\$20), and 22DISK software from Sydex (\$25-\$50). Not only will it be cheaper, it will let you handle many hundreds of CP/M formats on all your drives, and if your format is unknown to 22DISK, Sydex will add it for you. We strongly recommend this alternative to anyone wanting an 8" drive attached to his PC. We also recommend that MicroTech look into marketing

such a box, for a more reasonable price, under their ReformatTter name; MicroSolutions and Sydex should be more than willing to cut a deal. At the very least, MicroTech should replace DOS2CPM with 22DISK, adding hundreds of formats to their product, and adding a couple dozen formats to Sydex's. That would be a real win all the way around.

MicroTech Conversion Systems is located at 940 Industrial Avenue, Palo Alto CA 94303. You can phone them at (800) 223-3693. We would like to offer special thanks to Chris Cross for his help in getting the ReformatTter for evaluation, and for answering questions as they arose.

COMPUTER CLASSICS

The Bondwell 12 and 14 portable computers

To appreciate the enormous diversity among CP/M computers, you have to collect them, as I do. Only the twin tasks of collecting them, and trying to support all the different makes and models, will drive home just how many different kinds there were, and how many ways they differed from each other.

The Bondwell 12 and 14, featured on this issue's cover, are good examples of this diversity. At first glance a Bondwell is "just another portable," with a strong resemblance to an Osborne, TeleVideo TPC, or TRS-80 Model 4P. Appearances are quite deceiving in this case.

To begin with, the Bondwell portables benefit from coming on the scene later than the Osborne and Kaypro portables. Many features appear modeled after the earlier machines. As with most other portables, the keyboard forms a lid over the screen and disk drives when the machine is not in use, and the latches that hold the keyboard in place are identical with those used by Kaypro. The amber screen is 7" W x 5" H, 80 columns wide. The 5½" floppy-disk drives are half-height, and sit on their bases, rather than their sides, to the right of the screen. At 25 pounds, these machines are not light, but they weigh less in their high-impact plastic cases than they would if they had metal cases like Kaypros. The CPU is a 4-MHz Z80, the standard for CP/M computers.

There are only three differences between the Bondwell 12 and the Bondwell 14. The Bondwell 12 has SSDD 48-tpi disk drives, with a format capacity of 180K; it has 64K of RAM and runs CP/M 2.2. It boots with a 16K Bank 0 and a 32K common bank. Bank 0 contains a 4K boot ROM (0000H to 1000H) and 12K of

boot Rom image (1001H to 4000H); the common bank consists of 30K of user RAM (8001H to F800H) and 2K of video RAM (F801H to FFFFH). After booting, Bank 0 is switched out and Bank 1, consisting of 32K of user RAM (0000H to 8000H), is switched in.

The Bondwell 14 has DSDD 360K drives, 128K of RAM, and runs CP/M 3.0. It has the same Bank 0, Bank 1, and common bank described for the 12. It has two additional banks, Bank 2 and Bank 3, each consisting of 32K of user RAM mapped to 0000H to 8000H. In all other respects the two models are identical; they even use the same motherboard, which has sockets for the full 128K of RAM.

The Bondwell's case is attractive in a subdued way (*see front cover*). It's a light gray overall, with a medium gray lip at the front, and the Bondwell name and model number in black and white on a blue insert on the top. At 17½" W x 6¼" H x 15" D, it is smaller than an Osborne. The case is not square like a Kaypro; the corners and edges are rounded, it tapers slightly from front to back, and the top and bottom halves widen to the line on which they join. The black plastic and metal carrying handle, at the back of the machine, is comfortably wide and solidly mounted. Two black plastic feet, very similar to those on a Zorba portable, snap down to elevate the front of the machine when in use.

The ports and power socket are not exposed to the elements. They exit the machine at the rear, in the top half of the case (*see Figure 1*), and a hinged door latches into place to protect them when the machine is not in use. When it is being used, this door swings completely over and lies flat on top of the case, where it is no nuisance. From left to right,

the elements in this protected recess are: the fuse, the power socket, a voltage selector, a female parallel printer port, two female RS232C serial ports, and a female external video jack. A deep pocket at the left of this recess contains the power cord during travel.

Slots in the upper surfaces of the recess provide ventilation, though there is no fan (see Figure 2).

All the controls of the Bondwell are on the front, which is very nice. The edges of the contrast and brightness controls wheels are accessible to the thumb

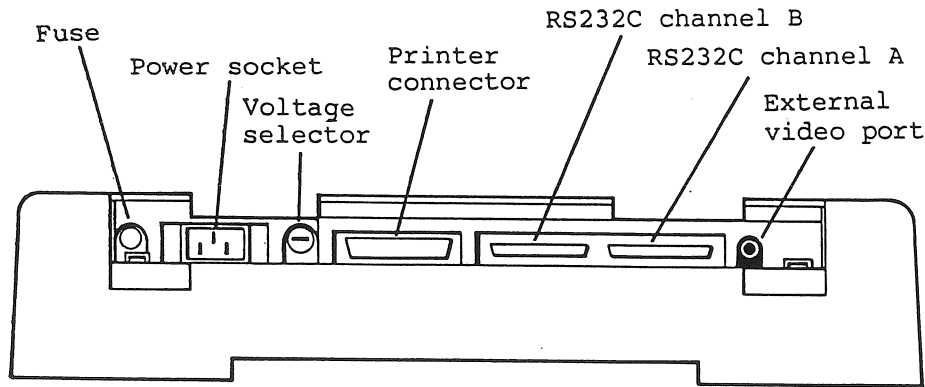


Figure 1. Ports on the upper rear of the Bondwell.

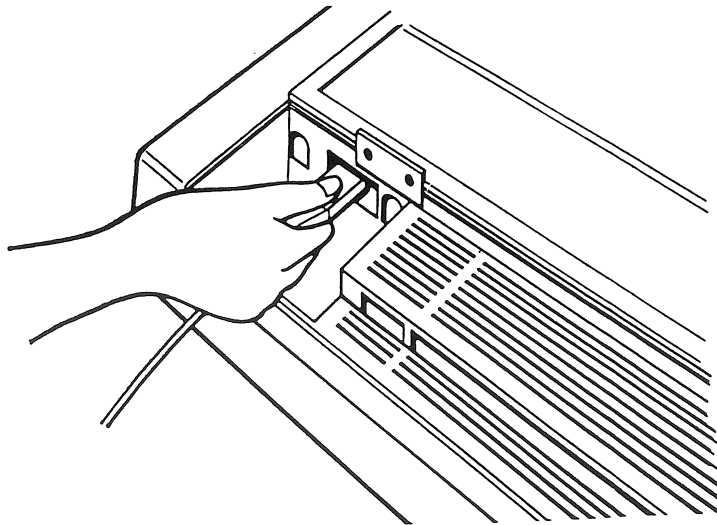


Figure 2. Upper rear of the Bondwell, showing hinged cover and ventilation slots.

in a recessed area to the upper left of the screen. In the upper right, above the disk drives, is a square reset button and a rectangular on/off button (see Figure 3). All these controls are in blue to stand out against the medium gray of the front. A recess below the drives, 5.75" W x 1" H x 6" D, will hold all the distribution diskettes, and there is a thumb recess on the bottom lip to make it easy to grasp them. All the front not taken up by controls, screen, and drives has slots for ventilation, and the back of the diskette storage is also slotted.

The keyboard also attaches to the front of the computer. There is a rectangular hole in the lower

left front, and the keyboard cable, a black cord coiled like a phone cord, comes out of it, attaching to the keyboard with a small trapezoidal 9-pin connector (see Figure 4).

Like the rest of the machine, the keyboard shows careful attention to design details. It is a full-sized keyboard, very comfortable to type on. Personally I dislike it when the cursor keys are arranged in a line. But there is a full adding-machine key pad, and 16 function keys. Instead of fold-under keyboard feet, two plastic bars on the upper left and right of the keyboard push through and lock into place; these are the rectangles in the keyboard illustration on the

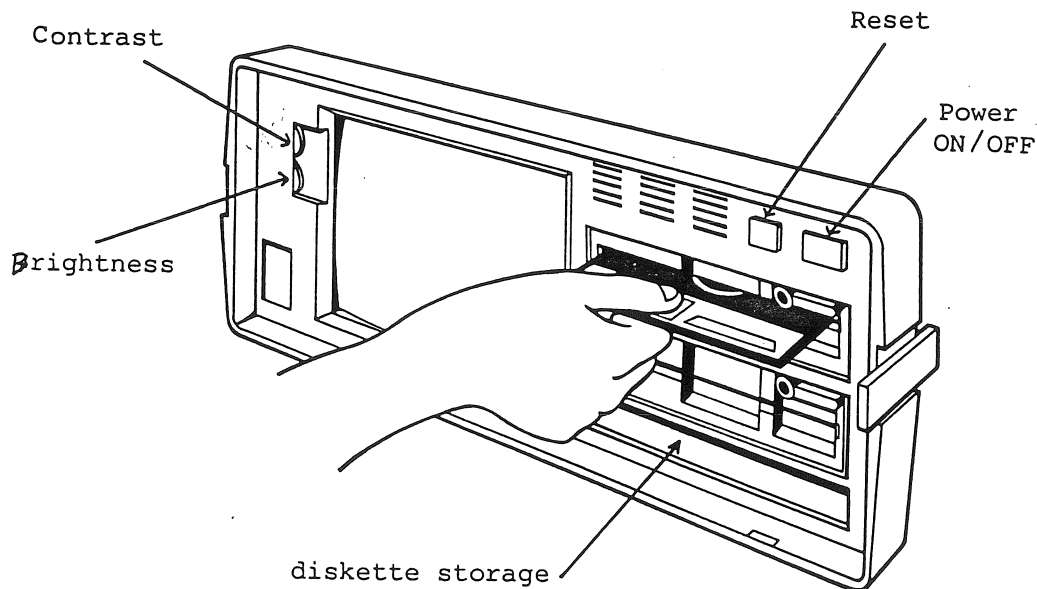


Figure 3. Controls and features on the front of the Bondwell.

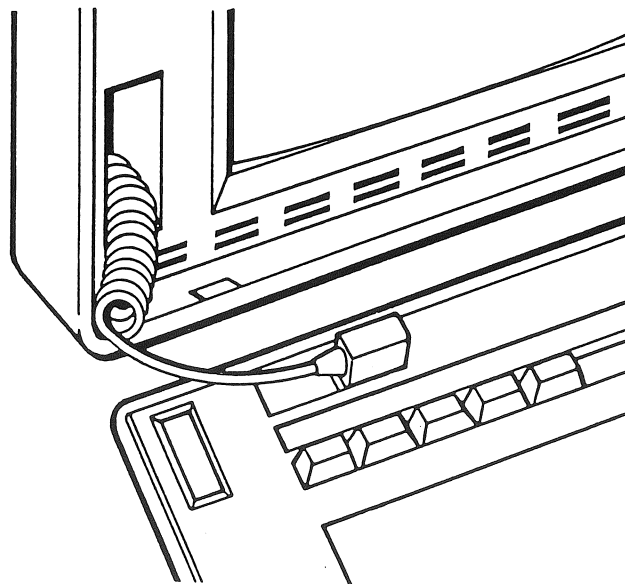


Figure 4. The Bondwell's keyboard cable attaches in front.

cover of this issue.

The Bondwell User's Manual is 7" x 9½", and about 60 pages long. It includes the usual stuff, such as how to unpack and set up the computer, listing the software and manuals that come with it, etc. All the illustrations in this article come from this manual.

The User's Manual also includes the pin-outs of the ports, the screen control codes (clear screen, cursor positioning, etc.), and port and memory maps. It also documents the screen's graphics character set, the SPEECH program, and programming the function

keys.

The SETUP program is the only way documented in the manual for programming the function keys. The shift key has no effect on the function keys; F1 and shifted F1, for instance, emit the same string. The default programming for the function keys is:

Key	Emits
F1	DIR
F2	ERA
F3	TYPE

F4	REN
F5	SAVE
F6	STAT
F7	A:
F8	B:
F9	PIP
F10	ED
F11	ASM
F12	LOAD
F13	DDT
F14	DUMP
F15	SUBMIT
F16	SETUP

The Bondwell comes with little plastic templates that fit into the recesses above the function keys, with tabs on their ends to fit into the slots at either end of these recesses. One set of templates are labels for the above set of functions under CP/M; the other set is for WordStar.

Besides the User's Manual, the Bondwell manual set includes one for CP/M (a printing of the Digital Research manual); a manual for WordStar 3.3; a ReportStar 1.0 manual; a ReportStar 1.0 Reference Manual; a MailMerge 3.3 manual; and a DataStar 1.4 manual.

The Bondwell 12 comes with seven disks of software. The CP/M disk includes the standard CP/M 2.2 utilities, and the Bondwell utilities **BACKUP**, **FORMAT**, **SETUP**, and **SPEECH**. **BACKUP** is a whole-disk copy program like the **DISKCOPY** found on Epson QX-10 and several other makes of computers, and **FORMAT** formats disks.

SETUP allows you to define the function keys, change the RS232C ports, set drive B's format, load a **KEY** or **COM** file, or exit to CP/M. Drive B can be set to Osborne 1 double-density format, Kaypro II format, Spectravideo 318/328 format, or left in Bondwell format. After changes have been made, pressing Escape gives you a choice of Abort (exit, ignoring changes), Update active (install the changes in memory), Save on disk, or Both (that is, both Update and Save). Save gives you a further choice of saving function-key changes by themselves in a **KEY** file, or saving all changes in a **COM** file. For some reason, when you have drive B set to Osborne, the function keys cannot be used.

The **SPEECH** program takes a script you write and speaks it aloud, using the computer's speaker. The use of **SPEECH** is documented in the User's Manual, and the Bondwell comes with a sample script file, **SAMPLE.SPH**, which is actually a very bad example. **SAMPLE.SPH** sounds like Frankenstein's monster with a Hindi accent. That's because the sales people who wrote it (it talks about the Bondwell's

features) did not take the time to learn **SPEECH**'s script language. The author of **SPEECH** has devised an easy-to-learn way to spell English phonetically, with unique letters and letter combinations for all of its sounds, numbers to denote pitch and stress, and punctuation that reflects speech. There's also a short "phonetic spelling dictionary", a six-page glossary of common words and how to spell them in the script language, and many tips. All of this is ignored by the sample script, which is written in ordinary English spelling. Though this displays well on the screen, it is barely intelligible to the ear.

The other disks that come with the Bondwell 12 are a WordStar installation disk; a WordStar and MailMerge disk; a ReportStar installation disk; a ReportStar disk; a CalcStar disk; and a DataStar disk. Not having a Bondwell 14, I would not care to guess how many CP/M Plus disks it has, and what other software comes with it, or on how many disks.

All in all, the Bondwell 12 and 14 are nice machines. The hardware design is particularly nice, as would be expected of a 1984 portable. While I could wish that they hadn't bothered with single-sided drives on the 12, and had marketed a hard-disk model, the machine is pleasant to use. The completeness of the User's Manual makes it a very easy machine to configure **Spellbinder** and **SELECTOR** for, as all the information needed is right there. My main gripes are with the function keys. They should have both shifted and unshifted values, and the escape sequences to program them should be documented.

Bondwell is still in business today. Bondwell Industrial Inc. (47485 Seabridge Drive, Fremont CA 94538, phone (510) 490-4300) makes notebook PCs. The Bondwell CP/M disk does not include the BIOS source, and a call to Bondwell to find out whether I could get it from them elicited replies from polite but unhelpful to uncomprehending to downright rude. In the past, Bondwell offered to sell the source code for the 12 and 14 (something that should have come with the machine) for several hundred dollars; nowadays, they deny having it any longer, and generally act as though you must be crazy to ask.

Crass though the company may be, the machine is very nice. I don't have a copy of the Bondwell 14 manuals or boot disk, so if anyone has who reads this, please contact me at Lambda Software Publishing, 149 West Hilliard Avenue, Eugene OR 97404-3057, or phone me at (503) 688-3563. A donation of a copy of the Bondwell 12 and 14 BIOSes, preferably on disk, would also be very welcome. Bondwell also made a CP/M laptop, the Bondwell 2, but I've never even seen one, nor have copies of the manuals or disks. Perhaps I can describe that machine in a follow-up article some day.

PERSONAL ADS

Computers for sale or trade

One **Morrow MD2** computer, \$50 plus shipping; terminal not included. Three **Eagle File 10** external hard-disk units, \$100, plus shipping. Two **TRS-80 Model 3** computers, one with 16K, one with 32K, condition unknown, \$20 each plus shipping. Five **NorthStar Horizon** computers, condition unknown, \$20 plus shipping; wood and steel covers available. Two **Xerox 820** computers, both working, dual 8" floppy disk drives, each \$50 plus shipping. Other computers come and go all the time; let me know what you're looking for. Will trade for comparable computers not represented in my collection. Contact David McGlone, phone (503) 688-3563.

Available for cost of shipping

Currently I have nine Kaypro computers (seven I would recommend only for parts), one Osborne 1 (likewise), two SWP 8088 boards for Kaypros, and various and sundry manuals and software. I am willing to part with most of this, with the exception of perhaps one copy of the manuals, for reimbursement of the shipping cost. Contact Marion Wilde, 3131 Candelaria NE #179, Albuquerque NM 87107, phone (505) 243-4209.

Coleco ADAMs for sale

For sale, two or more like-new ADAMs in boxes, \$80 each plus shipping. Ramen G. Griffin, 3 Robin Hood Road, Albany NY 12203-5113, phone (518) 456-3293.

Terminals and printer for sale

Three Esprit Executive terminals, one Microterm 5510 terminal, one HP 2671G thermal printer with Centronics interface. Each \$30 plus shipping (probably \$50 total for each item). Includes manuals. Call Zener, (503) 344-6230.

Epson Geneva laptop for sale

CP/M laptop with all the fixings, \$75 plus shipping. 80 column x 8 line LCD display, full-sized keyboard, 64K RAM, microcassette recorder, 64K RAM disk, internal 300-bps modem, RS-232 adapter. Software on removable ROM capsules includes Portable WordStar, BASIC, CP/M utilities, PortaCalc spreadsheet and Scheduler (these last two on one ROM). Various other programs and utilities available on microcassette (slow, but very reliable). Includes all manuals, extra tapes, case, and AC adapter. Write Lee Hauser, c/o Williams, Kastner, & Gibbs, P.O. Box 21926, Seattle

WA 98111, or call (206) 233-2985 during business hours.

Morrow MD-11 computer, etc., for sale

Excellent hard-disk Morrow with all the accouterments and lots of extras, \$500 firm. Package includes Morrow, all the software and manuals that came with it; MDT 60 terminal; MP 200 wide-carriage daisy-wheel printer with tractor feed; Hard Disk Revival Kit with manual; Whizlist; full set of Morrow service manuals, with complete service info and schematics; various CP/M magazines, blank disks, printer ribbons. Will sell on take-all basis only. Contact Harry Strawbridge, 5202 W. Broadway, Atwater CA 95301, or phone (209) 358-4120.

Kaypro stuff for sale

Kaypro 4, all stock, no modifications. System disk, WordStar 3.3, some other software, printer cable. No manuals available. Works fine! Asking \$50 plus shipping. **Kaypro 2X**, with Advent TurboROM and drive decoder board, two 96-tpi floppy-disk drives, one 48-tpi drive. Advent system disk, utilities, and docs-on-disk, WordStar 3.3, etc., manuals and one-piece cover. Runs great! Asking \$75 plus shipping. **Kaypro 1** (last model made), TurboROM and drive decoder board added, one 48-tpi and one 96-tpi floppy-disk drive, Minnie Winnie 20-Mb external hard disk, 7-10 Mb of software including NZCOM, Z-System utilities, programming stuff, WordStar 4.0 and 3.3, CalcStar, DataStar, ReportStar, and more. Manuals, cover, etc. included. A really nice machine! Asking \$200 plus shipping. **Kaypro printer (Juki 6100 daisy wheel)**, tractor feed, cable. Works fine! Asking \$60 plus shipping. **Kaypro technical manual**, \$10. **Magazines**: quite a few *Z-News*, *Profiles*, etc. If I can sell all the machines I'll let the magazines go for shipping costs. Dave Templin, 2978 Spruce Way, West Sacramento CA 95691, phone (916) 371-2964.

Morrow Micro Decision 2 for sale

In perfect working order. Includes ADM 21 terminal, all software and manuals, JRT Pascal, boxes and boxes of diskettes. \$50 plus shipping. Larry Baladino, 907 Milsom Place, Windsor CA 95492, (707) 838-7576.

Kaypro 2X, Silver Reed EXP-400 for sale

Computer has internal modem, 2 DDDD drives. Printer is daisy wheel. Includes software, manuals. Asking \$200 OBO. Terry A. Chaney, 1111 N. Main, Joplin MO 64801, (417) 624-2518.

LETTERS

Spectravideo SV-318 and SV-328

20 September 1993

Dear David,

I am enclosing several boot disks for the Spectravideo models SV-318/328. When funds permit, I will send you the two main books and some other documentation for the SV-328 (also means *when* I actually locate the extras in all the *junk* in my basement).

The disks are primarily for the 328, as it was the more prevalent. This is a 64K CP/M machine that was abandoned at birth in the USA, though highly promoted and used in Europe, South Africa, Australia, and New Zealand.

The machine is expandable, and capable of extra RAM and ROM banks. The use of these required CP/M 3.0, and this was never implemented.

The downside to this versatile machine was that many, many of the CP/M functions were aided, if not totally implemented, through the use of "ROM calls" In other words, turn on the ROM, jump in, do something, jump out, turn the ROM off, and back to whatever you were doing. This is done so well, there seems to be no hesitation; like bank switching with a flair. But this prohibits direct alteration of little things like disk sizes, number of sectors, etc., above the amount for the SV format (Xerox 820-II). Almost any smaller disk could be emulated.

In issue 26, Mr. Richard Brewster mentions MYZ80. I have used 22NICE on a 486DX-33 and found it runs CP/M a *lot* faster than my SV-328, I guess on the order of five times faster. The big problem for me is that the SV-328 emulated closely, but not 100%, the Z-19/H-89 terminal codes, so with 22NICE the PC's screen is a mish-mash of weird stuff; usable, but irritating.

I do wish my SV would be able to handle the labels and printing that this MS-DOS unit (my wife's work machine) and Canon BJ-200 do.

Since I have had to learn MS-DOS 6, in order to set up and troubleshoot this system for my wife, I have had "impure thoughts" about switching to something like this 486. Especially with how easy it is to write and style with AMI-PRO. But alas, I "get religion" and return to "tuning" the old 328, and really doing all the things that I have made it do for the last 7 years, and it works well.

In reference to the Sony that Mr. Kleiser has, these may be MSX-based machines, as is the

Spectravideo. I will mail him some addresses of MSX users and groups. These may not be current, but all you need is one response to start with, and then the tree can grow. Copies enclosed for your reference as well.

MSX was abandoned by Microsoft. Before it died, it went through three versions. (1) MSX was used by the SV, Canon, Yamaha, Sony, and others, about 1985 to 1987 (first home MIDI with Yamaha). (2) MSX-1 was fancier, new disk format, an MS-DOS 360K imitation. (3) MSX-2 had a better DOS and better bank switching.

None of these were officially available in North America, but mostly distributed in Western Europe and South Africa. MSX-1 and MSX were widely distributed in Australia and New Zealand.

Sincerely,

John Rudzinski
36227 LaMarra Drive
Sterling Heights MI 48310

John, thanks for the disks. Now I can check out the Spectravideo I have, and try to get it working. I look forward to the manuals, too.

I'm sure your SV can do any printing and labels that your wife's PC can do. I print The Z-Letter, maintain my subscriber data base, and print the mailing labels with software that will run on your SV once translated into the SV disk format. Granted, a larger disk format and a hard disk are always useful, but not necessary.

I tried booting the Bondwell 12 using the Spectravideo disks you sent. The reason I tried this is that the Spectravideo logo, as well as the Bondwell logo, is all over the Bondwell's manuals. Also, the Bondwell's board has two large PROMs, which sounds like the Spectravideo. However, it would not boot, so even if it's a descendant of the Spectravideo design, it's too different for that.
-DAJM

News from the Bay Area

11 September 1993

David,

I sold my Kaypro 10 about three weeks before the May/June issue arrived on June 23rd. When the ad appeared, I received 3 calls on the Kaypro 10, and none of the Kaypro 2x. And I received 2 calls on the Kaypro 10 from the next issue.

Only Bill Josephson, Dave Banoff, and myself were at the August ECUG meeting, but today,

besides Jerry Davis and his wife, David Honkala and Jack Morse showed up.

I was up at 5:15 this morning to go to the season's last Foothill Flea Market. I misjudged sunrise and got there at 6:15, where I actually saw people out doing their shopping with flashlights.

I saw an old TRS-80 Model 3 at the flea market, which was the only CP/M machine there. It is my opinion that the end of 1993 will see the very bottom of the CP/M market, and anyone buying a CP/M machine now can do nothing but make money on the deal (as a collector).

Nothing else new, except that I wrote to the guy in Louisiana with the Sony, and told him I might have a couple of Sony drives that might work for him.

Cordially,
Kenneth D. Thomson
71 Rosenkranz Street
San Francisco CA 94110
(415) 648-7550

Thanks, Ken, for the news. It's good to hear that people actually respond to the personal ads, and that readers are helping each other out. -DAJM

Datavue 373-M2 help wanted

16 October 1993

Dear Sirs,

Thank you for the opportunity to speak with you recently; your support and suggestions are most welcome!

I am currently trying to run a DATAVUE CP/M-80 373-M2 multi-user machine, using CP/M 2.2 with a 15-Mb hard disk. I believe that I am having software problems with it.

This machine has the potential to use up to four console. My version is currently configured to use only two consoles, hence the suffix M2 in the model identification. The machine refers to the two consoles in my setup as CPU #1 and CPU #2. CPU #1 is the master console; this can be confirmed by calling up a short file ID.COM which identifies the console in use.

There are a number of Z80 boards, one for each user, each having 64K of memory. Each is a daughter to the master, which also appears to be an arbitration board, and is involved in the boot procedures both on initial startup, and during the reset procedures of each board.

Mass storage for this machine is a 15-Mb hard disk and an 800K quad density floppy-disk drive. The hard disk is currently partitioned into 10 partitions, identified as 0-9. Partitions 0 and 1 are

public. All other partitions are private, and are distributed among the consoles in a way determined by the DPB of the version of CP/M used to boot the system. There are different versions of CP/M, one installed for each console onto the hard disk by the technician at installation time. These versions only differ in the DPBs as far as I can tell. All users are able to read from all partitions, but only CPU #1 may write to partitions 0 and 1. The private partitions may be read by all users, but only written to by the consoles to which they have been allocated. The printer port is available to all users, but only to one at a time, and then only if CPU #1 has unlocked it.

Currently I can only use CPU #2; access to CPU #1 is not available to be because of one or more corrupted files on the hard disk. The system boots OK from the hard disk, but then only allows use of CPU #2. Control is never regained by the CCP on CPU #1; the CP/M logo shows, but the A> prompt never appears. I cannot boot from the floppy, even by using the keyboard F as an intercept during the boot process.

How did this all come about? It all revolves around one of the facilities (peculiarities) offered by the 132-/80-column consoles. They have two RS-232 ports, and the console can input and output data through either one of them, as programmed by the user. I was having trouble with the power supply of one of the consoles, so I was working with just one console, but switching it between being CPU #1 or #2 according to the needs at that time. Murphy's Law dictated that I would be distracted at one point, and as a consequence, I wrote some files onto the wrong partition. Now I cannot access any of the files from CPU #1, nor can I boot from my floppy-disk drive. It appears that I overwrote the boot files for CPU #1 with some other file, and in doing so, wrote myself out of CPU #1! The snag is that all the important utilities, including setup and formatting programs, may only be accessed from CPU #1. Use by all other consoles is denied.

What have I tried to do about it so far? First I checked all the CP/M files, to find out where the differences were. They appear to be only in the DPB. Using DDT or DU77 I have inspected the memory, and found that part of the DPB on the hard disk has been replaced by a section of directory. I have corrected the corrupted parts of the DPB, and have tried to rewrite the good stuff back to the hard disk. In each case, however, on exiting from the program, those parts of high memory get written over by the junk from the hard disk.

I have checked the floppy-disk drive by replacing one of the drives in my upgraded Kaypro 4, and reading, writing, and formatting disks on it. I

have replaced all but two of the ICs on the board for CPU #1, except for a small PROM (74S288), and the same conditions apply. I have put a known working quad density drive into the system, to no avail. I have interchanged the two daughter boards, trying to make each perform the role of the other, thus making the board which is normally CPU #2 pretend that it is #1. Still no access to CPU #1 or the floppy. I can't get any other programs which I may have onto the hard disk, since I can't use the floppy-disk drive.

To get over my problems, I think that I may need to reformat my 15-Mb hard disk, but the utility (DVMTUTIL.COM) which enables me to do almost everything to setup the system is only accessible from CPU #1, hence I can't get at it.

I am not a programmer, just one who enjoys his machines, and hates to meet a challenge which appears to be insuperable!

Is there anyone out there who has any manuals for this equipment, or who can suggest to me how I may be able to outwit the locking system? I have the original quad-density boot disks, write-protected and, as far as I can tell, uncorrupted.

Yours sincerely,
Alwyn Stockley
P.O. Box 1764
Sisters OR 97759
(503) 549-0603

Boy, Alwyn, that's some problem. I wish I had an answer for you, but all I can do is print your letter for some Datavue user to see. When you get this problem licked, please send me a copy of your boot disks and utility disks. -DAJM

Good news for Model 4 owners

29 November 1993

Dear Mr. McGlone,

I hope you remember me. I'm the one who obtained some TRS-80s at a school auction. I became sidetracked with other projects, but am now back to my TRS-80s.

As you suggested, I checked the Model 4s and, indeed, all three have the sockets allowing me to expand the memory to 128K. I suspect this is an aspect of all the Model 4s, as one of my machines has an early serial number.

Sincerely,
Ernest E. Smith
410 Willis Street
Hallettsville TX 77964-2158
(512) 798-2514

Thanks for checking that, Ernest. I suspected that,

since Model 4s and 4Ps came with either 64K or 128K, the sockets would be there for the extra 64K even if the memory was not installed. It's good to have that confirmed by someone who has several Model 4s.

I now have in my possession a version of CP/M Plus for the Model 4 that includes an unbanked version that will run (with fewer features) on a 64K machine, as well as the banked version. -DAJM

Possible bug in Model 4 CP/M Plus

2 December 1993

Hi David;

I just found a problem with the CP/M Plus Model 4 *unbanked* boot disk. I was using the setup program to change the cursor from blinking block to blinking underline. It works fine when you select "Exit and test changes made." But when you select "Permanently update changes on disk," the disk *will not boot again!* So be careful with the setup program, it apparently has bugs in it. Thank goodness for backups. I normally use the banked version, and the setup worked fine on it when I changed the cursor.

Sincerely,
Errol A. Diaz Sr.
3051 Grand Route
New Orleans LA 70119

Thanks for the information, Errol. This just underscores the fact that you should never use the distribution disk in your machine, except to make copies of it. That way, if you come across a bug like that, you still have your original disk to use to replace the one that got totalled. -DAJM

Husky, Execuport, Macintosh CP/M

3 November 1993

Dear David:

In all the discussions of laptop computers in *The Z-Letter*, I am surprised that no one has mentioned the CP/M machines manufactured by Husky Computers of Sarasota, Florida. I have never owned or seen Husky computers, but I am enclosing some old literature which might find a home in your reference collection. I have read that the Husky Hunter was a standard battlefield computer for NATO, so they should exist in large numbers. Perhaps these machines have become military surplus and may meet needs for some contemporary CP/M users. Most of them seem to have peculiar keyboards, however, necessitated by requirements for water resistance.

Another little-discussed CP/M platform was the

Execuport XL, a handsome portable Z80 machine I saw at a New York City computer show late in 1983. The keyboard and wide display screen each attracted my attention. The Execuport flier is attached for your file.

Your mention of the Macintosh computer reminded me of two versions of CP/M for the Macintosh, advertised in *Dr. Dobb's* circa 1984-1985. I have never seen these programs, perhaps because I do not hang around in Macintosh circles. I have run a CP/M emulator on a Mac, however, using Insignia's SoftAT as an intermediate emulator. Naturally, this requires a fast Mac to get acceptable speed.

Best wishes,
Steven Johnson
Uncle Steve's Computer Repair

325 East 201st, Apt. 6H, Bronx NY 10458

Thanks for the literature, Steve. I had never heard of the Husky computers, and only just heard of the Execuport. I've never seen either one, and I collect them, so perhaps it isn't so strange that no one else has mentioned them, either. Any time I think I know all about the CP/M machines that were made, along comes information about something completely unknown to me to set me right.

It had occurred to me that you could run 22NICE or MY-Z80 on top of a PC emulator on a Macintosh, but you're the only person I know who's actually done it. Which CP/M emulator did you use? Did you have any trouble installing it? What happens when an application encounters an error, do you fall through all the way down to the Macintosh operating system? -DAJM

MAGAZINE ARTICLES

The following magazines were received since last issue. Articles relevant to the CP/M and Z-System community, if any, are listed for each magazine. Where the address and subscription rate are not listed, see the listing for the magazine in the RESOURCES section.

ADAM newsletters are very difficult to cover adequately. There are a lot of them, and most are full of little articles and product reviews, that would take too much space to list individually. At the same time, they all reprint each other's articles. While this is undoubtedly a great service to their local readers, I have no space for listing an article five times when it appears in five newsletters. Suffice it to say, if you have a Coleco ADAM, you should probably get at least a sample issue of all the ADAM newsletters. Ones received since last issue include:

ADVISA, September/October 1993. *Advisa* is the newsletter of V.I.S.A., the Vancouver Island (B.C., Canada) Senior ADAMphiles. It's probably the easiest ADAM newsletter to read, and the best organized. The editor is B. David Cobby, 17-885 Berwick Road, Qualicum Beach, B.C., Canada V9K 1N7. Write to him for information on V.I.S.A. membership and/or the subscription cost of *Advisa*.

AIM, #95, October 1993. AIM stands for Adam International Media, and is the house publication of Adam's House, a company that sells ADAM hardware, software, etc. AIM is

the most businesslike of the ADAM newsletters. The editor/proprietor is Terry R. Fowler. For information write ADAM's HOUSE, Route 2, box 2756, 1829-1 County Road 130, Pearland TX 77581-9503, or call (713) 482-5040.

AUGER, November 1993 and December 1993/January 1994. AUGER (ADAM Users Group Educational Report) is the newsletter of ECAUG, the Emerald Coast ADAM Users Group. ECAUG has evolved from a local to a national ADAM users' group, and AUGER has regular short articles on CP/M and T-DOS. Membership in ECAUG is \$15 per family per year. A 36-page list of the disks in the group's public-domain library, plus the year's issues of AUGER, come with the membership. Send the money to Norman J. Deere, Treasurer and Editor, at P.O. Box 4934, Fort Walton Beach FL 32549-4934, phone (904) 244-1516. All back issues of AUGER are available; see the ad in any issue.

Metro Orlando Adam Users Group newsletter, October and November 1993. A subscription to the newsletter comes with membership in MOAUG, which is \$20 per year. Write to James Poulin, 1146 Manatee Drive, Rockledge FL 32955, phone (407) 631-0958.

Omaha ADAM Users Club newsletter, #56 (October/November 1993), bills itself as the

oldest active ADAM newsletter in the USA, and says it was established 11 July 1984 by Norman R. Castro, who is still the editor. Subscriptions are \$5, \$7, or \$10 per year (6 issues) for U.S., Canadian, and other foreign subscribers, respectively, from Norman R. Castro, 809 W. 33rd Avenue, Bellevue NE 68005, phone (402) 291-4405.

AMSTRAD PCW User's SIG, Vol. 7, No. 2, September 1993. This user's group is a Special Interest Group of American Mensa Ltd. Every issue has lots of letters from AMSTRAD owners all over the country, and a list helpers and their specialties. The SIG chairman and editor is Al Warsh, 2751 Reche Canyon Road #93, Colton CA 92324, phone (909) 370-0359, CompuServe ID 73300,2644. Dues (which presumably includes the newsletter) are \$7/year for US Mensa members, \$9/year for associate members. Outside the U.S., dues are \$7/year for members of non-U.S. Mensa chapters, \$15 for associate members. What about non-members, Al?

The Analytical Engine, Volume 1, Number 2 (October-December 1993). *ENGINE* is still available online, but the response to the first issue was so great, that the Computer History Association of California has come out with a second print issue that's very good-looking, and 34 pages thick! Information this issue includes progress made by CHAC, DEC's Computer History Project, the Intel Museum, a computer history museum at UC Davis, an article on LOGO and SmallTalk by Aaron Alpar, a great story on making mainframe tape drives play music by Tom E. Ellis, information about the Charles Babbage Institute by Judy E. O'Neill, Associate Director thereof, reviews, letters, etc! Annual subscriptions to the *Engine* are \$25 e-mail, \$35 paper for individuals; \$75 e-mail, \$85 for institutions; \$15 e-mail, \$25 paper for students, seniors, or low-income people. Write Kip Crosby, Managing Editor, 1001 Elm Court, El Cerrito CA 94530-2602, or fax him at (510) 528-5138, or contact him on Internet at cpu@chac.win.net.

Classic Computer Society Newsletter, October 1993, November 1993, and December 1993. The Classic Computer Society was formerly a local Kaypro and a local Osborne group, that merged and extended their mandate. Their newsletter is always interesting, if somewhat eccentric typographically. Andy Shapiro is the secretary and newsletter editor; Al Paarmann contributes many short articles. Write

Classic Computer Society, P.O. Box 2007, Santa Barbara CA 93120 for membership and subscription information, or call (805) 684-8838.

Historically Brewed, #1 (Aug/Sept 1993) and #2 (Oct/Nov 1993). This is the publication of the brand-new Historical Computer Society. Issue one has an article on Star Trek's influence on computing, the origins and evolution of GUIs, short articles on Xerox PARC, the Altair, and Cromemco, and a review of *Stan Veit's History of the Personal Computer*, plus reproductions of computer ads (without the original addresses). Issue 2 has *Where's Lisa Now?* by Michael J. Posner, *VIC-20 Remembered* by Mark Makower, *The Computer That Cracked the Enigma* by David M. Castlewitz, a review of *Hackers: Heroes of the Computer Revolution*, short bits on the Coleco ADAM and ENIAC, and letters. To subscribe to *Historically Brewed* and join the Historical Computer Society ("Admirers of the youngest antiques ar a r d"), send \$15.00 to HCS, 10928 Ted Williams Place, El Paso TX 79934.

Smaller is Better, October and November 1993. This is the newsletter of the Connecticut CP/M Users Group, affectionately called CCP/M. CCP/M is a long-standing group that has much to its credit, not least of which is the East Coast Z-Fests. The October issue reproduces a message from Walnut Creek CDROM about progress on the CP/M CDROM, and has a review by Steve Goldsmith of Hi-Tech C, a freeware C compiler for CP/M. The November issue has *Binary Programs Via Text* by Stephen Griswold, a several-page ad of stuff for sale by Mike Arman, and an ad for Lee Bradley's upcoming MY-Z80 book. For dues and/or subscription information, write Stephen Griswold, P.O. Box 74, Canton CT 06019-0074, or call the Mouse House BBS at (203) 665-1100.

Z-100 LifeLine, #28 (August 1993). This magazine is extremely well written, and the editor writes long articles on all the ins and outs of the Z-100. Unfortunately nearly all of every issue is devoted to PC subjects. This issue's highlights are a detailed report of the 1993 Z-100 Get-Together, address and information about a Z-80 adapter board for the Z-100, and the news that a long-time subscriber is offering to keep doing *Z-100 LifeLine* after Paul Herman gives it up at issue 30. I will report developments as they occur. In the meantime, see RESOURCES for the address of *Z-100 Lifeline*. Now is *still* the time to get back issues.

RESOURCES

Lee Bradley sells public-domain CP/M packages, \$15 each for the game disk, word-processing disk, dot-matrix printer disk, time-manager disk, SIL compiler disk, NPS COBOL compiler disk, mailing-list disk, spreadsheet disk. NZCOM, Z3PLUS, ZSDOS, BDS C, ZMAC also available. He also carries the MYZ80 Z80 emulator for PCs, plus a large set of Z-System utilities, as a package called Z-4-AT, at \$10 per disk; there are currently two disks. CP/M computer training, \$15/hour. Contract programming service available. Computers, printers for sale. Write Lee Bradley, 24 East Cedar Street, Newington CT 06111, or call (voice) (203) 666-3139 or (data) (203) 665-1100.

Paul Chidley is the co-inventor of the YASBEC computer. The YASBEC board is \$100 Canadian, the YASMEM memory-expansion board is \$30 Canadian, the EuroCard backplane is \$25 Canadian, and the ZVID video board is \$35 Canadian with PALs, \$25 Canadian if you wish to provide your own PALs from the logic in the documentation. Contact Paul Chidley, 627 Hunterfield Place N.W., Calgary Alberta, Canada T2K 4L5.

The Computer Journal is the foremost magazine in today's CP/M community. Published 6 times a year. Free sample issue available. Subscription is \$24/year surface, \$34 air, \$44/2 years surface, \$64 air, in the US. In Canada and Mexico, \$32, \$34, \$60, \$64 respectively. Elsewhere \$34, \$44, \$64, \$84 respectively. *The Computer Journal*, P.O. Box 535, Lincoln CA 95648-0535, phone (800) 424-8825.

Corvatek sells KEY-UP, a keyboard interface for IBM-style keyboards. The DM-1 for Big Boards, DM-2 for Xerox 820, DM-3 for Kaypro, DM-4 for Franklin, DM-5 for ASCII Universal, DM-6 for Apple II are each \$129. Inquire for other models and custom key definitions and applications. They also sell Keytronic keyboards in QWERTY or Dvorak; the KB5150 is \$112, KB5151 is \$164; shipping and handling extra. Corvatek, 561 N.W. Van Buren St., Corvallis OR 97330, phone (503) 752-4833.

Davidge Corporation makes and sells the Ampro Z80 Little Board, one of the CP/M computers still made. This is a 4-Mhz Z80 single-board computer with 64K RAM. The Little Board without SCSI is \$240, the Series 1B Little Board Plus is \$250. Software, BIOS source, manuals, and repair service

are also available. Volume discounts available. Write to Davidge Corporation, 94 Commerce Drive, P.O. Box 1869, Buellton CA 93427, phone (805) 688-9598.

Elliam Associates sells disks of public-domain software and commercial software for most CP/M computers, including the Amstrad PCW. For a 100+ page catalog, send \$8.50 plus \$2.00 shipping and handling to Elliam Associates, P.O. Box 2664, Atascadero CA 93423, or phone (805) 466-8440.

Herbert R. Johnson is "Dr. S-100". He supports S-100 bus computers, including NorthStar, Compupro, Cromemco, IMSAI, and Vector. He can sell you S-100 boards, manuals, books, etc. Write to him at P.O. Box CN-5256 #105, Princeton NJ 08543, or phone (609) 771-1503.

Lambda Software Publishing publishes this magazine and sells CP/M and Z-System software, manuals, laser fonts, books. See the ad at the back of this magazine.

Microcomputer Mail-Order Library of books, manuals, and periodicals relating to microcomputers in general, and Heath/Zenith systems in particular, will loan you any item for 4 weeks for a handling fee plus postage. Send the deposit plus enough for postage, and the requested items will be sent you by first class priority mail. When you return them, the deposit and any left-over postage, minus the handling fee, will be refunded. For periodicals, the deposit is \$1 per issue, \$0.25 handling; books and hardware manuals are \$5 deposit, \$2 handling fee; software manuals are \$10 deposit, \$5 handling fee. The price is deliberately low to encourage people to learn more about their computers. Inevitably, some items will be lost in the mail or not returned. Donations of printed material would therefore be greatly appreciated! To obtain a list of available items, or to borrow material, write to Library c/o Hart, 10111 Cedar Lake Road, #111, Minnetonka MN 55305.

Micromint makes and sells the SB180 and SB180LO computers. These are 9-MHz HD64180/Z180 single-board computers with 256K RAM. The SB180 is the size of a 3½" disk drive, costs \$299 (\$195 each 100 quantity), or \$399 with ZCPR, ZRDOS, BIOS and ROM sources. The SB180LO is the size of a 5¼" disk drive, has SCSI, costs \$400 (\$320 each 100 quantity),

or \$490 with ZCPR, ZRDOS, BIOS and ROM sources, Z-System utilities. The SB180FXMME 2-Mb memory-expansion board, populated with 256K, costs \$319. Micromint, Inc., 4 Park Street, Vernon CT 06066. Technical Assistance, (203) 871-6170. To order, 1 (800) 635-3355.

MicroSolutions makes several products of interest to our community. Uniform format-translation software costs more and knows fewer formats than 22DISK (see Sydex, below), but 22DISK only runs on PCs. Versions of Uniform are available for CP/M machines: Actrix, Bondwell (12 and 14), Epson QX-10, Kaypro (all models except Robie), Micromint SB180, Morrow Micro Decision (2, 3, 5, 11, 16, and 34), NEC PC-8801, Osborne 1 (double density), TeleVideo (801, 802, 803, and TPC-1), Toshiba T100, Xerox 820-II, and Zenith Z-100. All versions of Uniform, including Uniform-PC, cost \$69.95. MicroSolutions also sells UniDOS, a Z80 card for PCs, for \$175; and their CompatiCard IV lets a PC use 4 floppy-disk drives, including 8" drives, for \$95. MicroSolutions Computer Products, 132 W. Lincoln Hwy, DeKalb IL 60115, phone (815) 756-3411.

Morgan, Thielmann & Associates sells and services computers, not only the latest 386 and 486 systems with DR DOS or Unix, but also Eagle computers, all models, and other CP/M computers. Call them at (408) 972-1965 for prices and information.

Paul F. Herman Inc. publishes *Z-100 LifeLine*, a bimonthly journal dedicated to the Zenith Z-100 dual 8088-8085 computer. A one-year subscription is \$24 per year to any U.S. zip code, \$28 to Canada or Mexico, and \$28 to any other company by surface mail, \$36 by air mail. Back issues are available for \$5 each (\$2 each is you're a *Z-100 LifeLine* subscriber); some early issues are getting low. An index disk to Z-100 articles in various magazines is available to subscribers for \$19, and an update can be purchased any time after that for \$5. Contact Paul F. Herman Inc., 9317 Amazon Drive, New Port Richey FL 34655, or call (800) 346-2152.

Sage Microsystems East, selling and supporting the best in 8-bit software. NZCOM, Z3PLUS, XBIOS,

PCED, DSD, Z-System Software Update Service, Backgrounder ii, ZSDOS/ZDDOS, DosDisk, JetFind, ZMATE, BDS C, Turbo Pascal, ZMAC, SLR Systems assembly-language tools, MEX-Plus and MEX-Pack. Next-day shipping of most products with modem download and support available. Order by phone, mail, or modem. Shipping and handling \$3 USA, \$4 Canada per order; based on actual cost elsewhere. Check, VISA, MasterCard. Specify exact disk formats acceptable. Sage Microsystems East, 1435 Centre St., Newton Centre MA 02159-2469, Voice (617) 965-3552 (9:00 AM - 11:30 PM), Modem (617) 965-7529 (pw=DDT) (MABOS on PC-Pursuit)

Chuck Stafford sells important products for Kaypro computers. The Advent TurboROM allows flexible configuration of your entire system, reading and writing additional formats, and more; \$35. The hard-disk conversion kit includes everything needed to add a hard disk except the hard disk itself; the interface, controller, TurboROM, software and manual. \$175 without clock, \$200 with clock; very few are left, so order now. Orders receive a free copy of the schematic for the Personality Decoder Board which lets you run more than two drives, and use 96-tpi drives (when combined with the TurboROM); unfortunately there are no more of the actual boards left. Write him at 4000 Norris Avenue, Sacramento CA 95821, or phone (916) 483-0312 evenings or weekends.

The Staunch 8/89'er is a magazine for users of Heath/Zenith H-8 and H-89 computers; \$15 per year U.S. and Canada, \$19 overseas. Kirk L. Thompson, the editor, also sells CP/M and HDOS software, in all H/Z formats, including hard-sector. Write him at P.O. Box 548, West Branch IA 52358, or phone (319) 643-7136 (evenings and weekends).

Sydex sells PC software useful for copying CP/M files and handling CP/M disk formats (22DISK), running CP/M programs on a PC (22NICE), and copying CP/M boot disks without having the original machine (AnaDisk). \$25 each plus \$2.50 shipping and handling per order. Free sampler disks with the limited shareware versions are available. Talk to Chuck or Miriam at Sydex, P.O. Box 5700, Eugene OR 97405, phone (503) 683-6033.

Lambda Software Publishing

149 West Hilliard Lane, Eugene, OR 97404-3057
(503) 688-3563

Operating system

CP/M (version 2.2), \$25. A lot of my customers have picked up a computer without a disk to operate it. I can sell you the disk to run your computer. (DRI)

Boot disks wanted! I am building a library of CP/M boot disks so that I can supply working CP/M disks for all makes of machines. The disk should contain the CP/M utilities, the formatting and other utilities that are specific to the machine, and have the operating system on the boot tracks. I will pay you \$5 for each one I don't have already, or deduct \$5 from any products you buy from me.

Manuals and newsletters

Computer manuals, \$15 each. Manuals for many different makes and models of CP/M computers are available, too many to list here; please inquire. (Various companies)

Software manuals, \$15 each. *CBASIC Reference Manual*, (DRI); *MBASIC Reference Manual*, (Microsoft); *Perfect Calc User's Guide*, *Perfect Filer User's Guide*, *Perfect Writer/Speller User's Guide*, (Perfect Software, Inc.); *The CP/M Handbook with MP/M*, by Dr. Rodney Zaks (SYBEX); *Personal Pearl Manual* (Pearlsoft). Other manuals available; please inquire.

The Z-Letter, back issues: \$3/issue (US, Canada, Mexico), \$5/issue (elsewhere).

The Z-Letter, subscription: \$18/12 issues (US), \$22/12 issues (Canada & Mexico), \$36/12 issues (all other). Now published bi-monthly.

The Z-Letter, back-issue/subscription package. Get all back issues of TZL plus a current subscription for less than the cost of the individual back issues. Send the money for a 36-issue subscription (\$54 in the U.S., \$66 Canada and Mexico, \$108 elsewhere), and indicate that you want your subscription to start with issue 1. You will receive all the back issues immediately, and the remainder of your subscription as it is published.

Eagle Computer Users Group newsletter, \$15. All issues from July 1987 to October 1990, in one package.

Micro Cornucopia reprints, \$8 per issue in U.S., Canada, and Mexico, \$10 per issue everywhere else. An excellent magazine, especially for owners of Kaypro, Xerox, and Big Board computers. All 53 issues are available. (Micro Cornucopia)

Word processing

Spellbinder (version 5.3H), \$60. The best CP/M word processor. Includes all four manuals and full support. (Ltek)

MagicIndex (version 3.00), \$100. Text formatter used to produce this newsletter. Versions available for standard word processor or WordStar, LaserJet or Diablo 630. Please specify your word processor and printer when ordering. (CES)

Z-Fonts catalog, \$3 (US, Canada, Mexico), \$5 (elsewhere). Samples of all the fonts available from Lambda for HP LaserJet printers, with instructions on how to choose what size, orientation, etc. you wish.

Z-Fonts, \$8 per font. (Digi-Fonts)

SuperCalc 2

The standard CP/M spread sheet (version 2.0), \$30. (Sorcim)

Move up to the Z-System!

NZ-COM (version 1.2H), \$20. Upgrades your CP/M 2.2 system with no hardware change, yet you can still run your CP/M programs like Spellbinder and SuperCalc. Includes a manual and a large set of Z-System utilities. (Z-System Associates)

Z3PLUS (version 1.02F), \$20. Upgrades a CP/M Plus or CP/M 3.0 system, just as NZ-COM does for a CP/M 2.2 system. With manual and utilities (Z-System Associates)

ZCPR 3.4 source code, \$15, \$10 if purchased with NZ-COM. (Z-System Associates)

I/OR, \$25. Saves the screen in a file, saves printer text in another file. 1.5K IOP segment, ZRDOS required. (Alpha)

B/Printer, \$25. Deluxe background single-file printing. 1.5K IOP segment, ZRDOS required. (Alpha)

NuKey (version 2.03), \$25. Advanced function-key generator. 1.5K IOP segment, ZRDOS required. (Alpha)

All three IOP segments, \$60. (Alpha)

Sound Potentials public-domain software

Catalog disk, \$10. Lists the public-domain and shareware software for CP/M systems in this collection, and includes NULU, CRUNCH, and UNCRUNCH, along with their documentation files. If you have a earlier printed catalog, from when Sound Potentials was a separate company instead of a Lambda trademark, you may use it to order software from me.

Any software in the collection, \$10 per disk. To order, add up the sizes of the software you are ordering, divide by the size of your disk format, and round up to get the number of disks required to hold it. The larger your disk format, the more software you can get for the same amount of money. As with all things I sell, there is no separate charge for shipping and handling.

***Micro Cornucopia* Kaypro disks**

Catalog disk, \$5. Lists the contents of all 49 disks of Kaypro software compiled by *Micro Cornucopia* during its publication.

Individual disks, \$5 each. Order the disks you

want after perusing the catalog disk.

Entire set of disks, \$200. Get the entire collection of 49 disks all at once and save \$45 over the cost of buying them one at a time.

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Each protects up to three 5¼" diskettes from harm in briefcase, etc. Perfect for traveling or just between home and office. \$3 each.

Disk copying – \$10 per disk

I can copy most soft-sector (both single- and double-density) 5¼" CP/M formats, including Apple II CP/M and Commodore CP/M. (Sorry, no hard-sector formats except Northstar, Heath/Zenith, and Vector.) I can also copy 8" disks and 3½" formats. Copies can be CP/M <-> CP/M, CP/M <-> MS-DOS, CP/M <-> Mac, or Mac <-> MS-DOS; specify the format of your originals, and the format desired for the copies. Both originals and copies will be returned. *The responsibility is yours to ensure that you are the legal owner of material you ask me to copy.* Software you buy from Lambda will be sent to you in the disk format you request at no extra cost.

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Make sure you tell me your name, company name if any, address, home and business phone, and the computer format in which software should be supplied. For back issues, list which issues you want. For fonts, use the order form from a copy of the catalogue. For Sound Potentials software, list the programs you want. Your check for the total should be in U.S. funds in an international money order, or the equivalent in your country's currency. There is no sales tax in Oregon. I do not charge separately for shipping and handling.