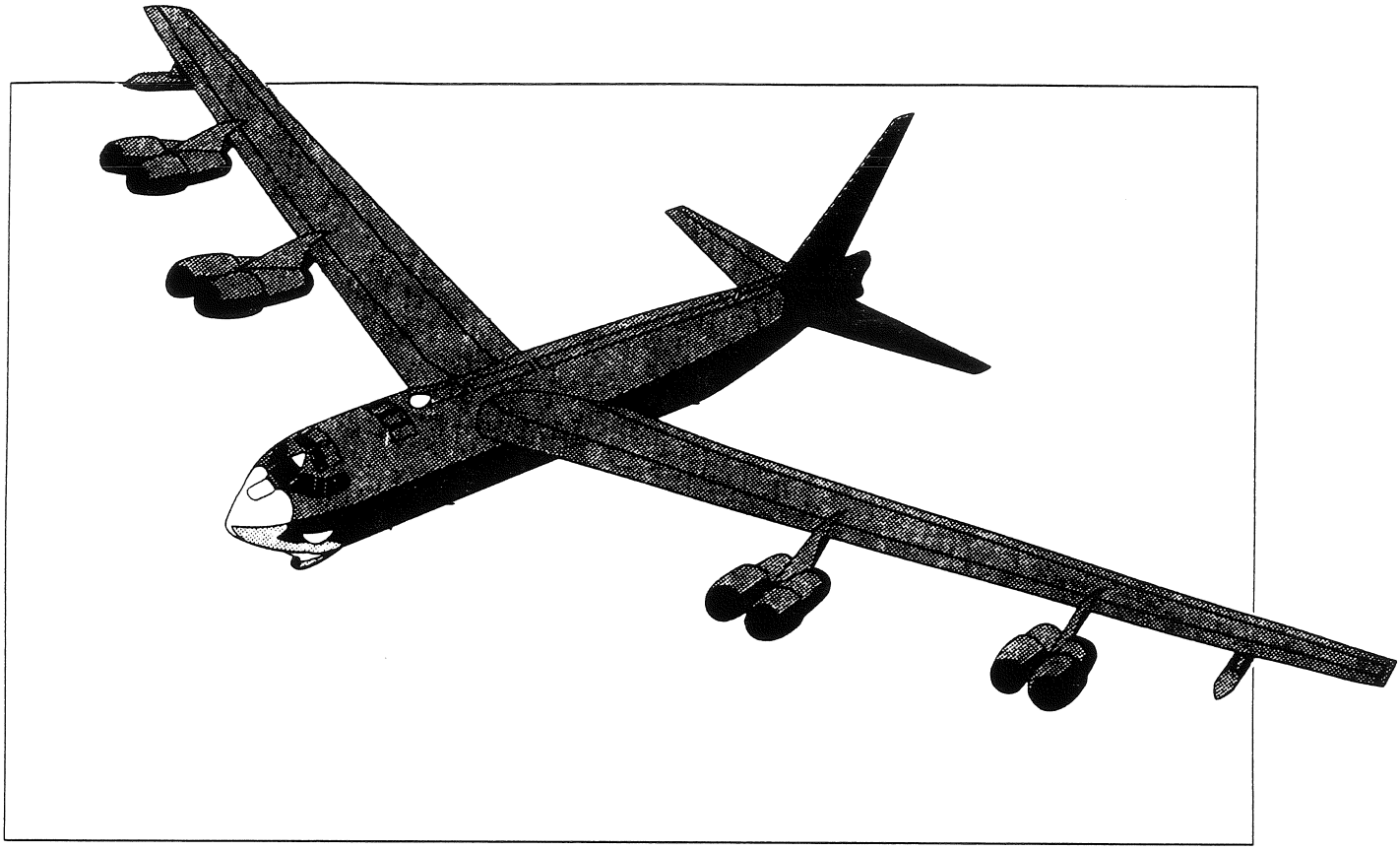
The Z-Letter

Newsletter of the CP/M and Z-System community

Number 10 March 1991



Why is a B-52 like a CP/M computer?

Coming changes in the computer industry, by Gene Austin

A new CP/M laptop

Lambda adds MagicIndex to products

Report from BUSCON/91-WEST

MOVE script by Jay Sage

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ABOUT THIS NEWSLETTER

Welcome to *The Z-Letter*, a newsletter for the community of CP/M and Z-system users. Everything in this issue is copyright © 1991 by the editor: David A.J. McGlone, Lambda Software Publishing, 720 S. Second Street, San Jose, California 95112-5820, phone (408) 293-5176.

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.

Submitting material for publication

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

Letter policy

The Z-Letter reserves the right to edit letters received to conform to standards of taste, decency, and language. We will NOT distort the meaning of any letter; we'll simply not print it first. If you are not willing to have any letter you send printed, or edited before printing, please say so in the letter. All other letters will be assumed to be for publication and become the property of Lambda Software Publishing upon receipt.

Subscriptions

The Z-Letter is a monthly publication, and subscriptions will be accepted for 1 or 2 years. A subscription starts with the first issue after the subscription payment is received. The cost is $15 per year for subscriptions mailed to U.S., FPO, or APO addresses. Canadian and Mexican subscriptions cost $18 per year. Other foreign subscriptions cost $45 per year. Subscriptions should be paid by check or international money order in U.S. dollars, mailed to Lambda Software Publishing. Back issues cost $2 apiece; every back issue is kept in print.

How to read your mailing label

If you are a subscriber, your address label lists when your subscription expires, for example, *Your last issue: 12*. If we have sent you a single issue in hopes that you will subscribe, it will be marked *Sample copy*. *Complimentary* copies go to people we expect to spread the word of the newsletter's existence, and perhaps contribute information or articles.

Advertisements

There is no charge for either business or personal ads. Business ads are carried as a public service to the community. If you sell a product or provide a service to the community, please send us ad copy, either camera-ready or on disk. If you stop doing business in our community, please let us know so that we can drop your ad. Readers who find a product or service unsatisfactory, or discover that a vendor has gone out of business, are requested to inform us.

Subscribers may place personal ads at any time. Each ad will be run three times automatically. 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.

Trademarks

All trademarks used herein are acknowledged to be the property of their owners.

Index available

The Z-Letter is indexed annually. The index for issues 1-5 appeared in issue 5. The index for issues 6-8 appears soon! Honest!

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Regular products – quantities not limited

1. Spellbinder Version 5.3H **$60**
The Rolls Royce of word processors. This includes the software, the User's Guide which always came with the software, the Technical Manual and Macro Manual (which always cost extra), and a new Introduction. All four manuals come a 2" binder in 8½ X 11" format. Both generic and Eagle versions are available. (Ltek)

2. CP/M Version 2.2 **$15**
Bought the hardware, and don't have the operating system? I can sell you the license and the manuals, making the copy you get from your user group legal. For many brands of computers, I can even send you the actual operating system with the BIOS for your machine. (DRI)

3. MagicIndex Version 3.00 **$100**
Extends even Spellbinder's control of printers, and what it does to WordStar has to be seen, and then you still won't believe it! Used by us to produce this newsletter. Versions available are: SL (for Spellbinder or other ASCII word processor plus HP LaserJet or laser with HP emulation), SD (for standard word processors, Diablo 630 and similar daisy-wheel printers), WL (WordStar or WordStar clone plus laser), and WD (WordStar and Diablo). Please specify your word processor and printer when ordering. (CES)

4. Various computer manuals **Each $15**
Complete manuals now available for: Eagle CP/M, Eagle 1600, Eagle PC Plus and Spirit, Otrona Attache, and Pied Piper. (Various companies)

5. Eagle Computer Users Group newsletter July 87 to October 90 **$15**
All the issues done by the present editor of the only Eagle user group left. (Lambda)

6. *The Z-Letter* (back issues) **$3/issue (US, Canada, Mexico), $5/issue (elsewhere)**
Past issues of our newsletter for the CP/M and Z-System world. (Lambda)

7. *The Z-Letter* (subscription) **$15/year (US), $18/year (Canada & Mexico), $45/year (all other)**
Published monthly. (Lambda)

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

9. Z-Fonts **$2 per font plus $2 per disk**
Once you've perused our catalog, you can order the fonts you want very cheaply. (Digi-Fonts)

Opportunity products – limited to quantity in stock

A. *CBASIC Reference Manual* **$15**
CBASIC comes with CP/M as CBAS2.COM, CRUN2.COM, and XREF.COM. However, the manual for the language was rarely included and is hard to find. Get your copy while you can. (DRI)

B. *The CP/M Handbook with MP/M* **$15**
A good introduction to CP/M by Dr. Rodnay Zaks. It assumes no prior knowledge of computers. This or another book like it is a must for a novice handed a CP/M computer and told "You're on your own." (SYBEX)

C. **Nevada COBOL** **$15**
This is an excellent COBOL which I've used myself for years. It's the only one I know of that ever sold for less than $700. Packaged for the Commodore 64, but will run on any CP/M computer. (Ellis)

Please circle each item desired, and write the quantity desired in the margin next to the listing for the item. For item 6, list which issues you want. For fonts, use the order form from a copy of the catalogue.

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Art credits

The picture of a B-52G on the cover is courtesy the *New York Times*. The illustration of a Laser PC4 on page 11 was done by Deborah Snavely on a Macintosh computer.

WHY IS A B-52 LIKE A CP/M COMPUTER?

Random access by David McGlone

Riddle me this

No one has called me a reactionary to my face (and a good thing, too!), but I can tell from the behavior of some of the MS-DOS users I know that they think I am. They think I'm a "CP/M bigot", because I don't share their irrational belief that anything newer, such as MS-DOS, is automatically better than anything older, such as CP/M. Actually, I like new things, when they work well. But I can be very loyal to older things, especially when they get the job done. An example of both is my watch, which has hour, minute, and second hands, and Roman numerals, rather than a digital display in Arabic numerals; nevertheless, it runs on a battery, since I always overwind mechanical watches.

Another example of older technology getting the job done comes from the air phase of the Gulf conflict. An article from page 22A of the *San Jose Mercury News* for Saturday, January 26, 1991 deserves to be quoted at length. **Fast, flashy B-1 sitting out the war,** says the headline. **Mechanical flaw keeps prized bomber at home.** That about says it all. But let me quote a few choice paragraphs:

While the sleek B-1, the bomber pilot's answer to the fast and flamboyant fighter jet, sulks on the ground, the ungainly B-52, a 36-year-old weapon that is years senior to most members of its crews, is pummeling Iraqi President Saddam Hussein's prized Republican Guard in Kuwait and southern Iraq.

The Strategic Air Command says the $280 million-a-copy B-1, the most expensive warplane in any arsenal, cannot be spared from the U.S. strategic deterrent. That is, it must remain posed to drop nuclear bombs on the Soviet Union in case the Cold War is somehow rekindled in the days ahead. [And if you believe that, I've some Florida real estate for you . . . DAJM]

But there is another reason the B-1 cannot go to war in the gulf: It was grounded last month after two incidents in which engine fan blades broke. The Air Force says it does not know when the plane will be allowed to resume flying.

The Pentagon purchased 100 B-1s, with delivery beginning in 1985, at a total cost of $28 billion. Three of the planes have since crashed.

One of the oldest and by far the biggest combat plane flying against the Iraqis, the swept-wing B-52 has been so extensively remodeled since its Vietnam days to bolster its accuracy and make it safer from enemy attack that little more than its airframe and hulking silhouette remain the same.

The heavy bomber was initially planned as a turboprop plane in 1948, but was built as a turbojet after improvements in jet engines' fuel economy. By 1951, the plane was being designed to carry up to four nuclear bombs at high altitudes for a range of 7,000 miles, or long enough to fly from the continental United States to the Soviet Union without refueling.

The first B-52 was delivered on June 29, 1955, the last was delivered on Oct. 23, 1963; the United States never sold the plane to other nations.

The 744 B-52s purchased from Boeing between 1955 and 1963 averaged a little more than $8 per plane ($35.3 million in 1990 dollars). Improvements made since the 1960s have cost several times the original price of the planes.

Originally designed to fly 5,000 hours before structural fatigue, most B-52s are now expected to achieve at least 15,000 hours. It is estimated that the planes could be used in active duty until 2035, 80 years after the first delivery.

In the mid-1960s the wings and fuselages were reinforced and corroding metals were replaced with new alloys. The reinforced plane can now fly at lower altitudes. The range of the B-52G was increased to 7,500 miles without refueling.

The electronics on the B-52 have been updated numerous times. Recent improvements include equipment enabling the planes to communicate with Air Force satellites, electro-optical systems to provide

guidance in low-level flights at night or in bad weather, and radar jammers and lasers used to guide "smart" weapons to targets.

The more things change . . .

It is possible to buy a personal computer not made by IBM, with a CPU not made by Intel, and an operating system not made by Microsoft. The twist here is that I don't mean a CP/M computer, for once, but a PC.

PCs have been made by companies other than IBM almost since the day the first IBM PC came out. They were almost always cheaper, more reliable, and faster than the machines sold by IBM. But these machines always used an Intel chip and Microsoft's MS-DOS. Two recent developments could change this in a big way.

Digital Research has released version 5.0 of DR DOS, which *Datamation* for February 1, 1981 calls "a better DOS". A few interesting quotes:

Digital Research shipped the first version of DR DOS in 1987 using the same technology it had developed for Concurrent DOS, a multiuser DOS product. But DR DOS 5.0 goes beyond MS-DOS compatibility by taking up as little as 20 kilobytes of random-access memory, compared with the 70KB or more of RAM that MS-DOS consumes. As a result, this slimmed-down DOS lets user load network and printer drivers, as well as terminate-and-stay-resident programs (TSRs), into available upper memory, freeing more conventional memory to run larger applications.

Digital Research also emphasizes increased DOS functionality. For example, while DR DOS 5.0 works with all IBM PC compatibles, its MemoryMAX memory- management feature can be tailored to take particular advantage of 386- and 486-based PCs by making more than 620KB of conventional memory available for applications. A character-based DOS shell called ViewMAX can also make the system easier to use for beginning users. In addition, an on-line help system and installation routine make the product easier for end users . . .

DR DOS is priced at $199 from Digital Research, Inc., Monterey, California.

As for the CPU, you have probably already seen in your local paper that Advanced Micro Devices has won the lawsuit between them and Intel. The judge ruled that Intel did not properly protect their trademark, allowing AMD to market their clone chip as a 386.

So what do you get when you have a PC not made by IBM, running DR DOS 5.0 on an AM386? You get a PC free of the guilt of past PCs, since neither IBM nor Microsoft nor Intel is making a penny from it. Now if only it worked well!

A little humor

If you decide to rush right out and put together such a PC at one of the build it yourself places, you might consider including a few novelty key caps from Hoolean Corporation to provide some comic relief to your efforts. From their Winter 1990-91 catalog, you can order keys with the following legends:

LET'S || DO || LUNCH
(Black print on a yellow key)

PANIC
(White print on a red key)

I || QUIT!
(Black print on an orange key)

OH || # @ & % !
(Black print on a blue key)

HIT || ME
(Black print on a light-blue key)

MORE || BEER
(Black print on a light-green key)

ANY || KEY
(Red print on a white key)

|| indicates a line break, for instance, ANY || KEY is a key with ANY on the first line, and KEY on the second line. For a free Hoolean catalog, write to Hoolean Corporation, P.O. Box 230, Dept. CW91, Cornville AZ 86325, or phone (800) 937-1337 or (602) 634-7515.

The Computer Journal

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P&M 91-01

When computers were science fiction

Once upon a time, anyone associated with computers was a mad hacker who could be counted on to be a science-fiction reader as well. How far the used-car salesmen and business suits have taken over the computer world was driven home to me by a column in the January 21, 1991 *MicroTimes*. I had missed this originally, but my wife read it and showed it to me.

MicroTimes does an annual issue in which it prints profiles of leading figures in the industry and makes predictions of the coming year. On page 106 of this year's issue the editors recount, with a straight face and no trace of shame, how someone in Sierra Madre has been sending them ballots for two years running nominating Ferdinand Feghoot for one of their Distinguished Achievement Award. Ferdinand, according to the unnamed correspondent, had devised a plan to convert obsolete home computers into SDI smart pebbles (well, at least it's more high-tech than boat anchors).

The editors of *MicroTimes* actually made phone calls to various people trying to find out who Ferdinand Feghoot is! Never mind that the shaggy-dog stories titled "Through Time and Space with Ferdinand Feghoot" have been filling space at the end of stories and making the readers of *The Magazine of Fantasy and Science Fiction* groan for thirty years or more; these business majors have never heard of him! We are come to a sorry pass indeed, friends.

Our own predictions

Reading the "forecasts" in *MicroTimes* led me to write down some of my own. You won't see them anywhere else, but they are *certain* to come true, unlike someone's fifth annual nomination of 1991 as The Year of the LAN, or The Year of CD-ROM. They are:

1. People will go on using CP/M machines.
2. People will go on developing amazing new features for their CP/M machines.
3. Even more salesmen will say "CP/M? What's that?" in 1991 than did in 1990.
4. Even fewer magazines will cover CP/M than did in 1990.
5. Prices of CP/M hardware and software will continue to fall (reliability will remain high).

COMING CHANGES IN THE COMPUTER INDUSTRY

Opinion by Eugene Austin

Technology starts as the province of quasi-priests who mumble incomprehensible incantations to perform miracles. As knowledge spreads, users lose their awe of the priests, who feel threatened and hide behind gobbledegook and protective laws. Users soon learn the technology and leave the specialists eating dust. At that point, the technology changes to fit the needs of the user, rather than the whims of the priestly caste.

Computers are leaving the gobbledegook-protective law (copyright) phase. Public penetration began about five years ago. The signs point towards a resurgence of CP/M.

McGlone put his finger on the reason in the November *Z-Letter* when he said, "If obsolete means that the system cannot do what you need it to do, then for 95% of the people who use computers, CP/M is not obsolete and never will be."

He ways Eagles are "worth zero" out there. An Eagle II recently sold for $250 in Omaha, without program discs or manual, purchased by a user who threw MS-DOS into a closet because it's too complicated and he got no benefit from the extra capabilities.

Our tax accountant won't replace her CP/M machine because MS-DOS is too complex and

performs no needed new functions.

Our newspaper uses a desktop publisher, but ain't about to let go of the CP/M rig he uses for addressing, via a simple dedicated program written by a specialist in a nearby small city.

The most telling indicator comes from my daughter, who has a degree in accounting. When she told her college friends she was working for a programmer who is teaching her programming, they drooled all over her new suede shoes. "It's about time accountants wrote accounting programming!" She says the stuff they write is an internal nightmare but has less than 20% of the usual commands and is therefore very simple to run.

People who look at my unfinished letter writer are all agog over half the manual on screen with lines left over.

Programmers are giving way to users who learn programming to escape pros who try to do everything for everybody, instead of writing dedicated programs that fit individual users' needs.

It's about to happen in hardware. The new desk stuff has dangling strings to go bad and boxes scattered all over the room. Smith-Corona's laptop has a built-in printer, more than nullified by a postage-stamp screen, broom-closet memory, kindergarten programming and a unique drive that uses a unique disc. They won't answer letters about assemblers so I can write my own letter-writer to replace the garbage they sell. Other laptop manufacturers will sell me assemblers, but they all dangle printers on the end of strings.

I ain't about to retire my Eagle till somebody comes up with a laptop with built-in printer that can be removed by the user for replacement or repairs, a 24-line screen, 1 meg or more RAM, standard drive, real-time clock, assembler and BIOS source code. I'd pay $2000 for that before I'd pay $500 to $750 for the junk the circus barkers in computer stores stick in my face.

As I bitch and bellyache, I find that I'm not alone. At least 75% of the users I talk to want almost exactly the same thing I do, with CP/M in ROM. Somebody, somewhere, is bound to take note of this kind of diatribe and make a fortune selling to this market.

THE STATE OF THE ART

A new CP/M laptop

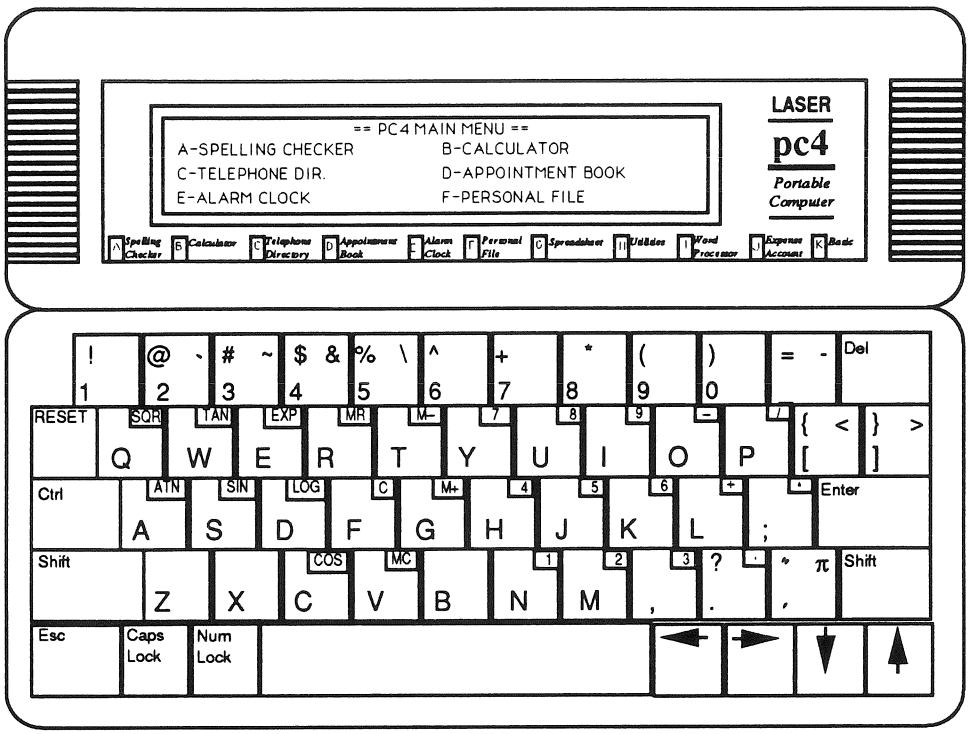
A very lightweight laptop computer touted for its ability to download its files to a PC or Macintosh is in fact the newest CP/M machine. The Laser PC4 contains a 3.58 MHz Z80 processor and runs CP/M.

The PC4 weighs 1 pound 15 ounces with batteries, and measures 7.6 x 10 x 1.3 inches. It stores its programs and dictionary on a 2 MB ROM, and comes with 32 K static RAM for storing files written by the user. One of the options available is 128K memory expansion that replaces the 32K SRAM chip.

The LCD screen is 4 lines of 40 characters each. Laser describes the keyboard as full-travel, typewriter style, which I cannot yet confirm. Ports include a ROM expansion slot, available for custom applications such as those written for the Epson Geneva; Laser invites developer inquiries. The PC4 also has a parallel and serial port.

The PC4 is said to operate for 40 hours continuous use on 4 AA batteries (not included), or 60 days idle storage. It comes with an A/C adapter, parallel printer cable, file-transfer cable, and carrying case. Versions are available with cable and software to talk to (1) an Apple II or Laser's Apple clone, the Laser 128, (2) an Apple Macintosh, or (3) a PC. The latter costs $249.95 in quanitities of one, $719.95 when purchasing three at a time, or $1299.95 for a six-pack.

Built-in software, custom-written for the PC4,



includes the file-transfer utility for the target machine, a word processor, an 80,000-word spelling checker, a spreadsheet, telephone directory, appointment, personal file, expense-account module, advanced-function calculator with memory, alarm clock with 16 alarms, automatic telephone dialer, BASIC, and various utilities, not specified in the brochure sent me by Grant Dahlke, Marketing Communications Director.

Learning aids that come with the PC4 include a Ten Minute Tour, user manual, file-transfer guide, and reference card. A one-year limited warranty is included. Options available are (1) Roget's II Electronic Thesaurus, listing 500,000 synonyms, which works alone or with the word processor, (2) a terminal card, (3) medical and legal dictionaries, (4) the 128K memory replacement. Which of these options precludes the others, and which combinations are possible, was not touched upon in the literature I received.

To pursue this further, contact Laser Computer, Inc., 800 N. Church Street, Lake Zurich IL 60047-1596. Their main switchboard is (708) 540-8086, or (in Canada) (800) 387-9672.

The Laser PC4 should not be confused with the Cambridge Z88, another laptop promoted for its ability to download files to PCs or Macs, or with the Wizard and ZQ series of electronic organizers. The Cambridge Z88 is attractive for having 8 lines of 80 characters each. But it runs 20 hours instead of 40 hours on batteries, and costs $439 apiece (more with RAM expansion options). Size and weight are roughly the same, and the Z88 has a Z80 CPU; but the operating system is custom-written for the Z88.

The Sharp machines are typically very limited in function, with tiny chiclet keyboards. Both the CPUs and the operating systems for the Sharp machines are proprietary Sharp designs.

Lambda adds MagicIndex

Effective immediately, Computer EdiType's MagicIndex can be ordered from Lambda Software Publishing. MagicIndex is the full-featured version of the software line referred to as the MagicSeries. Used as formatting and printing software, it allows full control of laser-printer features while allowing users to retain their familiar word processors for text preparation and editing. This gives the most

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- ZSUS: Z-System Software Update Service, public-domain software distribution service (write for a flyer with full information)
- Plu*Perfect Systems
  - Backgrounder ii: CP/M-2.2 multitasker ($75)
  - ZSDOS/ZDDOS: date-stamping DOS ($75, $60 for ZRDOS owners)
  - ZSDOS Programmer's Manual ($10)
  - DosDisk: MS-DOS disk-format emulator, supports subdirectories and date stamps ($30 standard, $35 XBIOS BSX, $45 kit)
  - JetFind: super fast, extemely flexible text file scanner ($50)
- ZMATE: macro text editor / customizable wordprocessor ($50)
- PCED — the closest thing to ARUNZ and LSH (and more) for MS-DOS ($50)
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- SLR Systems (The Ultimate Assembly Language Tools)
  - Z80 assemblers using Zilog (Z80ASM), Hitachi (SLR180), or Intel (SLRMAC) mnemonics
  - linker: SLRNK
  - TPA-based ($50 each) or virtual-memory (special: $160 each)
- ZMAC — Al Hawley's Z-System macro assembler with linker and librarian ($50 disk, $70 with printed manual)
- NightOwl (advanced telecommunications, CP/M and MS-DOS versions)
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power and flexibility with the least effort on the part of the user.

Four versions are available for computers running CP/M or the Z-System. The SL version is for Spellbinder or other ASCII word processor with an HP LaserJet or other laser printer with a LaserJet emulation. The SD version is for Spellbinder, etc. with a Diablo 630 or compatible daisy-wheel printer. The WL version is for WordStar or a WordStar clone with a laser printer, and the WD version is for WordStar, etc. with a daisy-wheel printer.

Each version available from Lambda costs $100. This is probably the cheapest that MagicIndex has ever been priced. Interested parties can obtain these or other versions directly from Computer EdiType Systems as well, but it will cost much more that way (CES even said I could say so).

Back-issue price goes up

When I raised prices of various items last issue, because of the Post Office's increased rates, I forgot a couple of items. Henceforth, back issues of *The Z-Letter* will cost $3 apiece in the U.S., Canada, and Mexico, and $5 apiece when ordered from anywhere else. That is also the new price of Lambda's Z-Fonts catalog, which is the same size as an issue of *TZL*.

Submissions through Internet, CompuServe

Many companies throughout the world are connected through email (electronic mail). Tandem Computers, for whom I work, is one of them. As I mentioned in issue 8, you can send letters and articles to me at MCGLONE_DAVID@TANDEM.COM, and I will see them when I read my mail. Jay Sage has been sending in his macro column that way, which is very convenient for both of us. If you include your email address in a printed letter, I will try to reply by that means before resorting to the Post Office, if possible.

Now Rob Friedman, the ADAM CP/M sysop for CompuServe, informs me that there is a gateway between CompuServe and Internet. In an experiment, Rob was able to send me a message from CompuServe, and received my reply. I did not learn from him how a CompuServe subscriber would do this (I forgot to ask) in time for this issue; CompuServe subscribers should send a message directly to Rob and ask. His CompuServe account is 76702,417.

Rob believes there is a connection between GEnie and Internet as well, but that hasn't been confirmed yet.

Report from BUSCON/91-WEST

From the point of view of the 8-bit community, I'm afraid that BUSCON is now better described as **BUST**CON. Two years ago, at the last BUSCON I was able to attend, the show was dominated by VMEbus, and the edging of industrial PCs into the process-control arena was evident. Ampro, for instance, was showing their Little Board/286 product.

Fewer exhibitors at BUSCON/91-WEST had 8-bit products. Some former points of interest, such as Ampro and Davidge, were not present at all. Even companies that still sell Z80 and HD64180 single-board computers were emphasizing their PC products. Industrial-control products and embedded systems with 286, 386, and 486 CPUs are now common, and there are even industrial Macs to be found. Chip speeds have climbed to the point where people feel they can talk about real-time PC systems with a straight face, despite basic flaws in the Intel architecture.

The bright spots were:

CμBIT remains a source of boards for the STD bus. Their model 8000, 8020, and 8021 CPU boards feature the HD64180. They also have 6502 CPUs, CRT and I/O controllers, serial and parallel expanders, RAM expansion boards, etc. 340 Pioneer Way, Mountain View CA 94041-1577, phone (415) 965-9355.

Micro-Link, a division of SEA-ILAN, supports a wide range of products with emphasis on VME and STD bus. CPUs available from them include the Z80 and 8085, and operating systems supplied includes CP/M. SEA-ILAN, Inc., 14602 North U.S. Highway 31, Carmel IN

46032, phone (317) 846-1721 or (800) 428-6155.

Micro/sys (1011 Grand Central Avenue, Glendale CA 91201-3010, phone (818) 244-4600) STD hardware, including Z80 single-board computers or STD processors, 8085 and Z80 system-control boards, CRT controllers, floppy-disk controllers, SASI and SCSI hard-disk controllers, and lots more.

Pro-Log sent me their catalog. It lists many Z80 and 8085 CPU cards for STD, battery-backed memory cards, and everything else necessary to assemble an STD system. Write to Pro-Log Corporation, 2555 Garden Road, Monterey CA 93940, or phone (408) 372-4593 or (800) 538-9570 for the distributor or sales representative nearest you.

R.L.C. Enterprises (4800 Templeton Road, Atascadero CA 93422, phone (805) 466-9717) is heavily into products for the 16-bit and 32-bit extensions to the STD bus. But they still list Z80 single-board computers and other 8-bit products on their January 1991 price list, if you look hard enough.

Another way to identify companies with 8-bit products is to look in issue 6 of *SUPERMICRO*, which is extra-thick and costs $25 if you're not a subscriber to the magazine. This issue has a wealth of information relevant to BUSCON, which I'm sure is no accident. There's an article on VME by James L. Turley, MultiBus II by John Hyde, STD by Mark D. Pickerell, and "Desktop buses" (S-100, PC/AT, MCA, EISA, NuBus) by Don Pannell. There's an alphabetical listing of companies, and charts of various products showing who sells which kinds of them. There are many companies tagged as having 8085, Z80, Z180/HD64180, and even Z280 products. OEMs will want a copy.

VersaLogic Corp. sells Z80 development packages to be used on a PC, also 14 models of Z80 processor boards with various combinations of speeds and ports, and a variety of accessory boards for STD. Write VersaLogic, 3888 Stewart Road, Eugene OR 97402, or phone (800) 824-3163.

SCRIPT OF THE MONTH CLUB

MOVE vs. MCOPY by Jay Sage

This month I would like to present my MOVE script. One often wants to move files from one directory to another. Depending on the circumstances, you can choose between two approaches.

You can always just copy the files to the destination directory and then delete the original files. If the destination directory is on a different drive, this is the only way it can be done. However, if the destination directory is just another user area on the same drive, and you have a system based on CP/M 2.2 (e.g., NZCOM) rather than one based on CP/M Plus (e.g., Z3PLUS), then you can use a special utility called MOVE, instead.

The MOVE program, its name notwithstanding, does not really move files at all; it simply modifies the directory entries to assign them to a different user area. (Remember, user areas are a purely logical construct under CP/M. All files on a given logical drive – i.e., a disk letter – are recorded in the same actual directory.) Moving the files this way is much faster than copying them.

The question is, who decides which method to use, and how? The operator can, of course, make the decision, but why should he or she be bothered with this? The matter is quite cut and dried, and the machine, in fact, is in a better position than the operator to make this decision. For example, suppose you want to move files from the current directory to the BACKUP: directory. The appropriate method depends on whether BACKUP: is on the current drive or not, and the detailed location of BACKUP: is not supposed to be the operator's concern.

So, here is my ARUNZ script to handle this. I call the script MOVE but allow it to be

abbreviated to MOV. I can accept MOVE because the program MOVE.COM is not on my search path (you see, sometimes it is advantageous to have a program OFF the search path). If that is not the case on your system, you would have to change the name of the script (or the MOVE program).

```
MOV,E     if eq $td1 $td2
            sys: move $1 $td2$tu2:
          else
            sys: mcopy $2=$1 /x
          fi
```

I've written this in a schematic form; you would enter it into the ALIAS.CMD file on a single line, with semicolons between the five individual commands.

The first line checks the drive letters specified (or implied) in the first two argument tokens. If they are the same, the MOVE program, which I keep in my SYS: directory, is used. If the drives are different, then the copy program MCOPY (or COPY.COM from the ZSDOS package) is used with the **X** option to specify deletion of the source file after a successful copy has been made.

There is a little history showing in this script. The new Z-System MOVE program that Joe Wright wrote would not need the conversion of the destination directory to DU: form, as I have provided here. I think I wrote this script when I was using an older version of MOVE.COM. Now the line could read simply **MOVE $1 $2.**

If you really think about this script, you will see that I am making certain assumptions. In particular, I am assuming that the second token is a directory specification only. If it includes a file name, then the script will get into trouble. Here is a slightly more elaborate form:

```
MOVE,E    if null $tf2
          or eq $tf1 $tf2
          and eq $td1 $td2
            sys: move $1 $td2$tu2:
          else
            sys: mcopy $2=$1 /x
          fi
```

Here we are making use of the extended conditional forms OR and AND available in recent versions of the transient IF.COM. The logic of the script is now:

```
IF no destination file name is specified
 OR the destination name is the same as the
      source
AND the destination and source drives are
      the same
  THEN we use MOVE
   ELSE we copy the file and delete the
        source
ENDIF
```

If we were willing to go to great (quite possibly absurd) lengths, we could try to implement logic that would move a file to one with a different name on the same drive by renaming the file and then moving it with MOVE.COM. (Or would we move it and then rename?) This extension would raise all kinds of tricky issues, which I leave entirely to those readers who enjoy flogging their brains with such intricate issues. (But if anyone works out such a script, I would enjoy seeing it!) For years, I have been quite satisfied with the simple form I gave first.

LETTERS

December 18, 1990

Dear David:

What happened to the consultants? I got a drive going bad, want to see what it would cost to buy a full-height DSDD 96-tpi drive, plug compatible, so I can change it out easy. Maybe Tandon makes one that somebody can wire for me? Then I can ship my poor old orphan Shugart somewhere, get it aligned, and a new stepper motor installed.

The yo-yo who sold me the rig soldered a wire and ruined one plug on my printer string. It takes spells when it leaks across, drives the 1s and 0s nuts and causes GIGO.

Socrates

Z-NODE 32

POST OFFICE BOX 12, SOUTH PLAINFIELD, NJ 07080

modem: (201) 754-9067 24 hours daily

Serving Today's CP/M and ZCPR Users

With the best in 8-bit computing

CP/M Support

You have been told that CP/M is dead. Don't you believe it. To paraphrase a famous quote, reports of our demise are premature. We haven't died; we have transformed!

Since the earliest days, CP/M has attracted the best in programming talent. Some sold their work commercially but many more donated their efforts to the public domain. Today, most commercial programmers have moved on. But the others remain, as active as ever. This presents you with an interesting dilemma: Most of the new programs are free or nearly so, but stores won't carry them! How can you get support?

There are four avenues of support for today's CP/M user:

— Remote Access Systems (BBS's)
— User Groups
— Mail Order Companies
— Magazines and Newsletters

REMOTE ACCESS SYSTEMS

Remote Access Systems (RAS or sometimes called Bulletin Boards), are computers set to automatically answer the telephone. You can send and receive messages, programs and files on a RAS. You need a modem and a communications program.

There are literally hundreds of systems that support CP/M. Most are free to the caller. *Socrates Z-Node 32* is such a system. Some of the most active are listed at the end of this paper. Find one that appeals to you and call. You should be able to find the North American listing of remote CP/M systems on any of these. Ask the sysop if you need help.

One problem with getting support by modem is the cost of the calls. Galaxy Starlink offers an "after hours" service through Tymnet that allows you to make modem calls to some 200 cities for as little as $1.50 per hour plus $10.00 per month. Call 1-505-881-6988 for more information.

USER GROUPS

User groups are excellent sources of help. A comprehensive list of groups is printed in the back of *The Computer Shopper* each month. Groups vary considerably based on their size and the relative experience of their members, so check out the group before you join. Since a group is only as good as its members, you should plan to take on some responsibilities. You will find your efforts amply repaid.

MAIL ORDER COMPANIES

There are many companies that continue to specialize in CP/M. *Chicago's First Osborne Group* publishes a file named CPMSRC-I.LZT which lists most such firms. You can get this list from your user group or on a RAS. Or write to CFUG at Box 1678, Chicago IL 60690. Enclose a couple dollars to pay expenses.

Special mention should be made of the *Z-System Software Update Service*. Users of ZCPR can subscribe for regular updates of the best Z-System programs. Special editions are also available. For example, there is a collection of some 360 command files in a set of six disks for just $36, or over a full megabyte of help files for $20. Send $2 to *Sage Microsystems East*, 1435 Centre Street, Newton Centre MA 02159-2469 to receive a catalog disk. Be sure to tell them what format you have!

MAGAZINES AND NEWSLETTERS

If you want 300 slick pages of full page advertising and press releases disguised as product reviews, you will be disappointed. Our publications reflect the tradition of user involvement in CP/M. You may even find yourself asked to write an article on something you've learned! Some publications to look at:

THE COMPUTER JOURNAL is the top-of-the-line in CP/M periodicals. Topics range from tutorials to advanced work in the operating system. Heavy emphasis on Z-System. Published six times a year. Subscriptions are $18 per year. *The Computer Journal*, 190 Sullivan Crossroads, Columbia Falls MT 59912.

PIECES OF EIGHT is published by the *Connecticut CP/M Users Group*. Great degree of user involvement reflects the diverse interests of the members. Recent articles include making Basic 'Z-Smart', and installing a RAM disk. Membership including newsletter is $15 per year. *CCP/M*, c/o Tom Veile, 26 Slater Avenue, Norwich CT 06360.

SLKUG NEWS is the newsletter of the *St. Louis Kaypro Users Group*. Don't let their name fool you — they support all kinds of CP/M machines. Articles include reviews of new products, offers for group purchases and tips on using applications. Membership including newsletter is $18 per year. *SLKUG News*, 5095 Waterman Avenue, St. Louis MO 63108.

By the way, we are compiling a listing of all CP/M newsletters and periodicals. If you know of one that you feel is of value, let us know! A sample copy would be most appreciated.

CAN WE HELP?

One last avenue of support is *Socrates Z-Node 32*. We will copy any files you want from our system or extensive off-line archives for $6 per disk ($10 for foreign orders). Send $2 for a listing of available files. Please make checks out to Chris McEwen, Sysop, and tell us what format you need. Proceeds go to the support of Z-Node 32.

Chris McEwen

Try one of these Remote Access Systems for support via modem:

Z-Node Central, Los Angeles	CA 213-670-9465	Z-Node 36, Pasadena	CA 818-799-1632
Z-Node 3, Newton Centre	MA 617-965-7259	Z-Node 45, Houston	TX 713-937-8886
Z-Node 4, Salem	OR 503-370-7655	Z-Node 50, Alice Springs, N.T. AUSTRALIA 5750	61-089-528-852
Z-Node 5, Montreal QC CANADA	514-324-9031		
Z-Node 6, Drexel Hill	PA 215-623-4040	Z-Node 58, Oklahoma City	OK 405-943-8638
Z-Node 9, San Diego	CA 619-270-3148	Z-Node 62, Perth, Western AUSTRALIA	61-9-450-0200
Z-Node 10, Mill Creek	WA 206-481-1371		
Z-Node 11, Chicago	IL 312-764-5162	Z-Node 65, Cheyenne	WY 307-638-1917
Z-Node 12, Newington	CT 203-665-1100	Z-Node 66, Costa Mesa	CA 714-546-5407
Z-Node 15, Manhattan	NY 212-489-7370	Z-Node 73, Ballwin	MO 314-821-1078
Z-Node 20, Burnaby, BC CANADA	604-299-0935	Z-Node 77, Austin	TX 512-444-8691
Z-Node 21, S Plainfield	NJ 201-757-1491	Z-Node 78, Olympia	WA 206-943-4842
Z-Node 32, S Plainfield	NJ 201-754-9067	Z-Node 81, Lancaster	CA 805/949-6404
Z-Node 33, Enid	OK 405-237-9282		

I could run the pins and whomp up a schematic if you know somebody who will make one up for me. How much for a special wired 3' or 4' cable? This is an Olympia, which sends extra status signals that have to be cross wired to get into the status port right.

I notice no programming stuff. Are you dropping it?

Eugene Austin
P.O. Box 115
Tilden NE 68781
No telephone

If it seems like I print a lot of letters from Eugene Austin, that's because I ***get*** *a lot of letters from Eugene Austin. They are interesting, and he asks good questions, so expect this to continue. If I could get him to write a column, I would print that (hint, hint, Gene).*

I dropped the Consultants listing that appeared in the old Eagle newsletter because it didn't fit into ***The Z-Letter's*** *format. I asked some of those listed to get me ads that I could print instead. So far, no luck. Jerry Davis of Morgan, Thielmann & Associates is still the person I take most of my hardware work to; readers can phone him at (408) 972-1965, or write to him at 5141 Pharlap Avenue, San Jose CA 95111.*

You haven't seen my programming column lately because I've been extra busy at work, where I'm a software developer for Tandem Computers, and at home getting ***The Z-Letter*** *on a monthly schedule and Lambda on a real business footing. Have a little patience; columns on data-base management, balancing your bank account, and a Senet game for CP/M computers are in the works.*

Programmer: a person with a natural sense of algorithm. From the Glossary of ***Science Made Stupid*** *by Tom Weller, Houghton Mifflin Company, Boston, 1985.*

27 January 1991

Dear Lambda:

I am interested in acquiring a copy of the Spellbinder word processor, but before I shell out $100, I want to make sure that it is compatible with what I now have and can handle the extensive text and data files that I have built over the years under WordStar.

Further, while I have your #6 *Z-Letter* description of Spellbinder, there remain in my mind some questions as to its power vs that of WordStar. But first, my current equipment:

Hardware

Enhanced Apple IIe (128K);
Microsoft SoftCard with Z-80 microprocessor;
Extended 80-Column Text/AppleColor Adaptor Card;
AppleColor Monitor 100;
Apple DuoDisk drive (two 5¼" floppies);
Apple Imagewriter I, interfaced by an Apple Super Serial Card;
Applied Engineering RamFactor (1 megabyte), backed up by RamCharger; and all other slots are occupied (mouse, modem, etc).

Principal Software

Applied Engineering's CP/AM 5.1 operating system (copyright 1986);
MicroPro WordStar release 3.33 (copyright 1983);
Microsoft MBASIC interpreter (for Apple II with CP/M-80);
Microsoft MS-SORT;
Borland's TURBO Pascal, version 3.0 (via Alpha Systems); and other software not germane to this conversation.

Now as to my major questions:

a. Is the Spellbinder configuration program compatible with the monitor, printer, and interface card that I have spelled out above?

b. Can Spellbinder retrieve, edit, and print text and data files previously prepared under WordStar? Those files may contain formatting and font selection commands specific to WordStar and my printer. Will the files have to be revised prior to accessing them via Spellbinder, and if so, how extensively?

c. Can ASCII files prepared under Spellbinder be used as input to MS-SORT and to

MBASIC and TURBO Pascal programs?

d. Can Spellbinder execute "column block moves" as easily as WordStar?

Finally, what is your return and refund policy if Spellbinder doesn't live up to my expectations?

Thank you for your patience. I look forward to your reply because I am eager to install and use it, if it suits my needs.

David H. Fax
6558 Beacon Street
Pittsburgh PA 15217-1843

I believe that the Spellbinder configuration program is compatible with the monitor, printer, and interface card that you described. I have never worked with an Apple II myself, but #16 on the CONFIGSB menu is "Apple II (Microsoft or PCPI)".

Spellbinder can indeed retrieve, edit, and print text and data files previously prepared under WordStar. Text is text, and both WordStar and Spellbinder use dot commands. WordStar dot commands mean nothing to Spellbinder, of course, so you'd have to insert the Spellbinder format commands in place of the WordStar ones. For the more annoying problem of WordStar's crutches, such as setting the high bit of the last character of each word, I use the excellent public domain program FILT to remove WordStar formatting and to unset the high bits. WordStar's other crutch of putting in hard carriage returns at the end of every line is a bit more annoying, but they can be removed by many means; for example, it is very easy to write a Spellbinder macro to strip them out. All this I do when I get material prepared in WordStar for **The Z-Letter.**

Spellbinder files are plain ASCII, so the only thing about them that ever gives programs and compilers trouble is the fact that each line doesn't end in a hard carriage return. However, Spellbinder will insert these when it saves the file to disk, if you tell it to. You do this by saving the file with a /1 after the file name. That is, MYPROG.CBL will give Nevada COBOL fits; but if you save it as MYPROG.CBL/1, the lines end in hard carriage returns, and there is no problem (assuming your program has no errors, that is!). I have written programs in TURBO Pascal, Nevada COBOL, and CBASIC using Spellbinder, and have used Spellbinder files as input to SuperSort and Selector V.

Never having used WordStar, I have difficulty answering whether WordStar or Spellbinder does "column block moves" easier. Spellbinder has a standard macro called MOVEIT which comes with it. Using MOVEIT, you can delete columns from text, remove columns and save them, insert the saved columns into another place, insert a fixed string into a column, etc. These operations can be done on all the lines of a file, or on a range of lines. I have to say that, due to Spellbinder's versatility, column operations are rarely necessary, and due to Spellbinder's extremely powerful and versatile search-and-replace commands, most operations are done very easily this way. Still, MOVEIT is probably the standard macro that I use most often, and it hasn't let me down yet.

I don't have a return and refund policy yet, because I haven't had anything returned. This may be because I set no limits on how much support I will give; I've had phone calls all hours of the day and night (or at least that's how it seems) from some customers. If you purchase Spellbinder and make an honest effort to get past the learning curve of a new word processor that works entirely unlike your old one, and can't stand it, I'll refund your money upon return of the materials.

Let me just add that I've just reduced Spellbinder's price to $60, so it's not as big a bite as it was. This is the cheapest Spellbinder's ever been; the original company that sold it, Lexisoft, charged $60 just for two of the manuals I include in my standard package.

I hope I've answered all your questions. If you think of any others, please write.

February 3, 1991

Dear David:

Thanks for many things: your letter, the ad in *The Z-Letter*, your paragraph on me in the November issue, and your offer of California Computer System Manuals. Yeah, send a copy of each hardware manual *except* the 2065 memory board – I have that. If the "CCS Controller" manual has BIOS listings of hardware descriptions, send that too.

You mentioned an interest in SCSI for the Eagle back at Z-Fest. I have some other paying projects for now, but maybe in the spring. Read the Jan/Feb *Computer Journal* for a possibility. By the way, will *TCJ*'s shift toward Z-System stuff impact your efforts?

Keep me posted on the S-100 world. I am currently well stocked with Compupro and Cromemco stuff: please pass this on to your readers!

Herb R. Johnson
1519 Mt. Everett St.
Colorado Springs CO 80909
(719) 578-0997

Herb's ad for his S-100 business will be back in a new form next issue, along with the first of a series of articles on the S-100 bus. For those unfamiliar with the term, the S-100 bus is the hardware backbone for the MITS Altair and the Imsai systems that were the very first micro computers. S-100 precedes the invention of CP/M; the first systems to run CP/M were S-100 systems.

As for the other question, I do not consider ***The Z-Letter*** *and* ***The Computer Journal*** *to be competitors. I believe that there is more than enough interest in the community to support two "big" magazines, besides all the user-group newsletters. For one thing, we serve different audiences, though they overlap; I see* ***TCJ*** *as a magazine for the advanced, long-time CP/M hacker, whereas* ***TZL*** *has a goal of helping beginning CP/M users. These general purposes won't stop me from printing programming articles, or them from doing articles explaining what the Z-System is, but they help distinguish the two magazines from each other.*

December 24, 1990

Dear Sirs:

I recently purchased an Eagle IIE computer at a garage sale. It is not at all clear to me why someone would essentially give away such a capable machine! I am using the Spellbinder and Ultracalc programs but I have not yet been able to access the CBASIC that is supposed to be on the disk with the CP/M operating system. I wonder if I only have a copy of the original disk because I get a message something to the effect "No .bas file". Could you possibly share with me the filename to input at the CP/M prompt that will bring up the basic program if it is there? The person I purchased the computer from was not the original owner and knows nothing about it. I think that it was originally used in a law office.

Do you still offer support for this machine? Are the CBASIC reference manuals still available? Are there alternate sources that you could recommend that carry programs, etc., for the Eagle CP/M? Any information you can provide me will be greatly appreciated.

James F. Cook
4559 Cinderbed Drive
Jacksonville FL 32257

Jim Cook sent the letter above to a company called Eagle Computers that has the phone number and address of the old Eagle Computer, Inc. that made the CP/M Eagles. Eventually I received it in February, too late to print it last issue. Meanwhile, another letter from Jim got to me by way of the Eagle Computer Users Group. I print them both here, and the answer I sent him, for the edification of other CBASIC users out there.

January 9, 1991

Dear Sirs:

I noticed your users' group listed in the January issue of *Computer Monthly* and thought maybe you could help me with a little problem. I recently purchased a "previously owned" Eagle IIE computer. It came with the Spellbinder word processor and Ultracalc spreadsheet. There is another disk with CP/M and CBASIC. My problem is that I cannot get the CBASIC to load.

Do you know if I have to purchase the CBASIC as a separate disk? The documentation that came with the computer shows that the instructions for use of the CBASIC have to be purchased separately, but it seems to imply that the CBASIC itself is already on the disk that has the CP/M. When I use DIR to look at the files on the disk, there is one called CBAS2.COM. If I type **CBAS2** at the CP/M prompt, I get the following: "CBASIC Compiler Version 2.08,

Copyright 1981 Compiler Sys Inc, No source file .BAS." I have typed in every combination of the word CBASIC I can think of but all I get is the word back at me with a ?.

I have another CP/M machine that has MBASIC and to load it in, all I have to do is type **MBASIC** at the CP/M prompt. That is why I wonder if the CBASIC is even on my disk in the first place. Let me hasten to point out that I know very little about computers. I have purchased several different kinds at garage sales and the like because it is a fascinating yet not too expensive hobby when you buy the older models that others think they have outgrown.

In addition to the above specific question, I would appreciate any other info you might choose to include concerning the Eagle computer that might be of interest to a novice like me, including any companies that still support this particular model. Thank you.

James: Eagle Computer, the manufacturer of your computer, went out of business years ago. Your letter was forwarded to Eagle Computers, Inc., which is a different company that started a couple of years ago (they sell PCs in the U.S.S.R., and wanted a name that sounded "American" – hence the name). Eventually, a lady at that company sent a bunch of letters like yours to Jerry Davis at Morgan, Thielmann & Associates, who is one of the contact points for the Eagle Computer Users Group. ECUG is the only user group around these days for any make of Eagle Computer.

Enclosed you will find one a copy of issue 9 of ***The Z-Letter****. My company, Lambda Software Publishing, publishes* ***The Z-Letter****. See our ad on page 4 for a list of our products, which includes the Eagle manual, the very latest version of Spellbinder for your computer, and back issues and subscriptions to* ***The Z-Letter****.*

On your specific questions:

1. *ECUG supports the Eagle, and I will be glad to answer any questions you may have.*

2. *I don't know any source for CBASIC manuals other than computer-surplus and used-book stores. I have at present some copies which I'm selling for $15 until they're gone.*

3. *Many small companies sell CP/M programs. See the ads in the sample issue enclosed.*

4. *Finally, your questions about running CBASIC. CBASIC is not an "interactive" program like Spellbinder or UltraCalc. You're expecting to type its name and have it come up with a screen, but it doesn't work that way. To write, compile, and run a CBASIC program, the procedure is:*

   A. *Write your CBASIC program, using a word processor such as Spellbinder. Since CBASIC expects every line to end with what Spellbinder calls a "hard carriage return," you must save the source code to disk using the Spellbinder* **autovert** *feature. That is, when you hit the SAVE key on your Eagle and Spellbinder asks you* **WRITE FILENAME>** *you must put a /1 behind the name you give. For instance, you might type* **FRED.BAS/1;** *this will save your program as FRED.BAS, and make sure the lines of the program don't give CBASIC fits.*

   B. *Once you have what you think is a correct program, and have saved it to disk, you have to tell the CBASIC compiler to turn it into machine code. To compile your FRED.BAS, you would type* **CBAS2 FRED.** *CBAS2.COM is the CBASIC compiler, and you tell it what file to compile when you run it. Notice that you don't type the .COM part of the CBAS2.COM file when you run it as a program, and you don't type the .BAS part of the FRED.BAS file when you tell CBASIC to compile it.*

      If you don't tell CBASIC what file to compile, you will get the error message **No .bas file.** *If you give it the name of a file that doesn't exist, for example by mistyping* **CBAS2 FERD** *instead of* **CBAS2 FRED,** *CBASIC will respond* **No ferd.bas file.**

   C. *Once the program is compiled, you will naturally want to run it. CBAS2 compiles FRED.BAS, if there are no errors in your*

program, into FRED.OBJ. To run FRED.OBJ, you type **CRUN2 FRED.** *Again, you will get an error message if there is no FRED.OBJ file.*

D. *The third part of CBASIC is XREF.COM, but you don't actually need it to compile and run programs. Let me skip that for now, OK? That's a subject best left to the CBASIC manual. This should give you enough to get started.*

5 March 1991

Dear Dave:

I just received your February issue (#9); thanks for your encouraging note about *The Staunch 8/89'er* on page 24. Per your item about "free subscriptions" on pp. 5-6, I've enclosed **all** available back issues of *Staunch* and I've added *The Z-Letter* to my circulation database. Please add me to yours for an exchange.

Much of the quality you praised in *Staunch* is because production is done on a Diablo 630 daisywheel. Editing and file preparation is done with old "Magic Wand" (if you remember the package!) and printing is facilitated with custom software written for me by *Staunch*'s creator and first editor, Hank Lotz. (Hank and I swapped places in January of 1988.)

I have a couple other comments. First, I appreciated Lee Hart's traversal of Heath/Zenith's '89/90. In fact, I was considering doing one myself, but Lee is much more familiar with hardware aspects of the machine.

Peter Shkabara of ANAPRO Corp. recently released his Z-System product to me for public-domain distribution. I'm now preparing the package for release through *Staunch*.

Lee also noted the existence of a UCSD p-System package for the '89; as I recall, this was **specific** to hard-sector disks and couldn't even be ported to soft-sector to gain higher-capacity media. (I never bought it, preferring something like Borland's TURBO or Polybyte's Lucidata that would run under existing operating systems. I should also add that CP/M and HDOS versions of the latter Pascal implementations are now available from me.)

Lee also noted the existence of HDOS 3.0 in his write-up. That version is still available (from me). However, with the contributions of several other staunch '89/90 supporters (especially Richard Musgrave, system programmer, Kansas City MO, and Daniel Jerome, technical writer, Burnsville MN), I released version 3.02 of HDOS last summer. This package includes system, utilities, and an 1100-page manual (available printed and/or on disk). Richard Musgrave has made a number of MS-DOS-like enhancements to the system (so Lee's comment on page 13 is somewhat justified), but the most significant improvement is the presence of (more than reasonable) documentation. One of the problems with the earlier version was the absence of a decent user manual; 3.0 **presumed** prior knowledge of HDOS 2.0! Further, HDOS 3.0 and 3.02 preserve upward compatibility of most (but **not all**) software from HDOS 2.0 and earlier. Regrettably, unlike CP/M or Z-System, HDOS **expects** a Heath-compatible platform to bring it up. Base price of the package is $75 postpaid. It's available on 10-hard-sector, 5¼ soft-sector, and 8".

Anyway, thanks for your support to the CP/M community. And I'm considering preparing a full-page ad for *The Z-Letter*.

Kirk L. Thompson
Editor, *The Staunch 8/89'er*
P.O. Box 548
West Branch IA 52358

Kirk: Thanks for all the issues of **Staunch!** *I have added you to my data base for* **The Z-Letter.** *Due to the way my mailing labels are produced at present, for a little while yet your label will say your subscription expires with issue 24, but don't worry, that will change.*

Let's hear it for users of "weird" word processors. Yes, I've heard of Magic Wand, but I think you're the first person I've "met" who uses it still. Who produced it? Is it still available anywhere?

Thanks for your comments on the H89. By all means make up an ad, with Lucidata and ANAPRO and

SPECIFICATIONS

Ampro Z80 Little Board/PLUS

CPU:
4 MHz Z80A, 8 bit-microprocessor

MEMORY:
64 kilobytes of dynamic RAM
4-32 kilobytes of EPROM

TIMER:
Z80A CTC (4 channels)
2 channels not used by Ampro software

SERIAL I/O:
Z80A SIO/0
Two RS-232C compatible ports
Software controlled baud rates
Channel A - 75 to 38,400 baud
Channel B - 75 to 9600 baud
Four standard RS-232C signals per port
Data Out
Data In
Handshake Out
Handshake In
Two ground pins

PARALLEL I/O:
Centronics-compatibile printer port
Ten signals supported
Data Bits 1-8 - Output
Data Strobe - Output
Printer Busy - Input
12 ground pins

DISK I/O:

Drives supported:	1 - 4
Disk Controller:	WD1772
Data Rate:	250k bps (MFM), 125K bps (FM)
Sector Size:	128, 256, 512, or 1024 bytes
Phase locked loop:	digital (8 MHz)

Write precompensation: Software enabled
Drive capacity (formatted):
Type 1 (40 track, 1 side) - 200K bytes
Type 2 (40 track, 2 sides) - 400K bytes
Type 3 (80 track, 1 side) - 400K bytes
Type 4 (80 track, 2 sides) - 800K bytes

SCSI/PLUS BUS INTERFACE:
SASI Compatible
ANSI X3T9.2 (SCSI compatible)
SCSI/PLUS Initiator compatible
Uses NCR 5380 SCSI bus controller

POWER:
Same power connector and voltages as 5¼" disk drives.
+5VDC at 0.95A
+9 to +12VDC at 0.05A

ENVIRONMENT:

Temperature:	0 to 32° C, operating
Humidity:	5 to 95%, noncondensing
Altitude:	0 - 10,000 feet

SIZE:
7.75" x 5.75" x 0.75"

SOFTWARE:
Boot program in 2732 EPROM (standard)
Options (see price list for details)
CP/M 2.2 with ZCPR3 enhancements
Little Board/Plus system utilities
BIOS and utilities source code

DOCUMENTATION: (Optional)
Little Board/Plus Technical Manual
Little Board Plus Software Manual

EXPANSION MODULE:
The Ampro Z80 project board is available for special purpose I/O. The board stacks on top of the Little Board and plugs into the CPU socket and provides breadboard space for wire-wrap applications.

Exclusive manufacturing rights for the Ampro Z80 Little Board have been purchased from Ampro by Davidge Corporation. Technical support and repair service is available directly from Davidge. Ampro no longer supports the product.

OEM PRICE LIST
AMPRO Z80 LITTLE BOARD

Manufactured under license by Davidge

HARDWARE

A60060-2	Ampro Series 1B Little Board Plus Computer	250.00
A60060-3	Ampro Little Board without SCSI	240.00
A60156	Project Board/80	75.00

SOFTWARE

A60101-1	CP/M and ZCPR3 (5¼", 40 track disks)	65.00
A60101-2	CP/M and ZCPR3 (5¼", 80 track disk)	65.00
A60101-3	CP/M and ZCPR3 (3½" disk)	75.00
A60103-1	CP/M, ZCPR3, BIOS Source (40 track disks)	100.00
A60103-2	CP/M, ZCPR3, BIOS Source (80 track disks)	100.00
A60103-3	CP/M, ZCPR3, BIOS Source (3½" disk)	110.00

LITERATURE

A74010	Little Board/Plus Technical Manual	15.00
A74025	Project Board/80 Technical Manual	10.00
A74006	Z80 System Software User's Manual	15.00
A74015	Z80 Hard Disk Software User's Manual	15.00
A74022	Z80 Hard Disk Backup Software Technical Manual	10.00
A74011	CP/M 2.2 Manual	15.00

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whatever else, so that I can print it.

March 5, 1991

Dear David:

May I add a postscript to Jerry Davis' article about upgrading 96-tpi drives? Most manufacturers claim their DSDD 48- and 96-tpi disks are interchangeable. Not always, but most of the time. **DO NOT** use 5¼" IBM or Radio Shack 48-tpi disks in any 96-tpi drive. They won't work in my ancient 96-tpi Shugarts, either.

I talked to IBM's customer service rep. He said their 5¼" 96-tpi disks use more expensive oxide and are smoother finished than 48-tpi. I use only 3M 5¼" DSDD 96 TPI.

Some spooks do not carry IBM 96-tpi and try to sell you 48. If it doesn't say "96 TPI" on both box and disk, it won't work.

I'd like to see Jerry try IBM 96-tpi in his 5¼" half-height drives. They cost a mint and I'll be sending you some stuff on one, so he can try it with mine, which is double backed.

I find it easier to get IBM 5¼" 96-tpi from office-supply houses than computer stores.

You asked about deficiencies in my letter-writing macros. Keeping in mind that this is the first program I ever wrote, starting barely able to find the power cord to plug it in, they are:

1. They are huge. I have a separate macro for each mode, transferring to and from them out of a central control macro, carrying configurations between them in variables. In RAM alongside Spellbinder's huge program, I have to pull up file items one at a time, which works the drives to death.

2. It is almost impossible to jump to a modem and dial a phone number from inside a macro. The only way it can be done is with a software-controlled switch between console and printer.

3. When I go from edit to command mode, the macro interpreter zeroes all numeric variables. Since I use every available variable, that throws the whole mess back to default. This is particularly annoying when zeroing %6 forces a restart.

4. Macros will not generate a mid-screen left margin, to make room for file item line prompts.

5. Cursor positioning ASCII senders in :PR go nuts after the fourth line. With an 11-line file item, that gets messy.

6. Macros cannot generate blinking error displays.

With my experience, I could get the size down to a single macro, but alongside Spellbinder I would still have to pull up items one at a time. Lexisoft sent me a way to jump destinations from inside a macro, but the other problems killed interest. Problems (3), (4), (5), and (6) are inherent in Spellbinder macros. I could live with (6), but am unwilling to tolerate (4) and (5), and I find (3) extremely annoying.

I would have to write an instruction manual that covers order formats. Depending on the mood I'm in, I may or may not.

I'll send you a short article about the Dvorak keyboard with a changeover program that will work in an Eagle II, IIE, III, or IV. It requires no change in BIOS. I will include fully commented source code. (Wait'll you see my source code! Lexisoft drooled over my comment lines!)

A point about Spellbinder 5.3 and printers. It is designed for dot matrix *or* daisy wheel. It will also drive typewriters with computer plugs on the back. I use an Olympia Daisy Wheel that Olympia, the dealer, and Lexisoft said Spellbinder 5.3 couldn't drive. The driver is a hybrid table that combines dot-matrix and daisy-wheel features, includes a screen table, and is 18K long (source code plus test sequences), but it fully drives the printer. It will drive proportional print (newspaper style justification) equipment. There are multiple spacing tables for that mode.

Try this: § ® ± ° ½ ¼ © ² ³ ¶ £ ¢ . (Off-keyboard characters, called "Keyboard 2" in typewriters.) I use elite font with pica characters for addressing, then switch back to pica for text. I have micro font, several LPIs, bold, shadow, halfline super- and subscript, word and full underlining, unidirectional print, etc. written into the driver to make them available (slashout and dashout are in Spellbinder itself). All is available from inside a macro through the Y and YT tables. Most can be imbedded in text.

Spellbinder 5.3 has user-configurable tables for multi-character commands such as "shift out, print special character, shift in" without disturbing character count. The above uses them.

By embedding Y-table changes in text, you can omit reverse video notes from hard copy, but emphasize them on the screen.

There is a printer-translation table that allows me to substitute space for backslash, which is not on my wheel.

The only thing is, 5.3 doesn't begin to drive a graphics printer like the laser stuff.

Sincerely,
Eugene Austin
P.O. Box 115
Tilden NE 68781
No telephone

Gene, thanks for adding your own experiences to the brand-name recommendations Jerry gave. Thanks also for the answers to the questions I asked about the Spellbinder macros you wrote. Do you think you could send them to me on a disk, so I could look at them? I don't want to get into a long discussion of what Spellbinder can and can't do in a macro until I see what you've tried. Some of things you say are impossible I know are possible, because I've done them; they may be difficult to do on an Eagle without more information about the monitor, however.

It's evident from your letters that you are an expert Spellbinder user, even if you did teach yourself. I think it was Isaac Asimov who said that when an expert says something is possible, he is almost certainly right, but when an expert says something is impossible, he is almost certainly wrong. I'm very impressed by your driver for an Olympia. Could I get a copy of that, too? I've been keeping a library of Spellbinder tables for various printers, mostly done by David Banoff. I'd like to add your OLYMPIA.TAB to it.

March 5th, 1991

Gene:

Read your letter in *The Z-Letter*, and thought you'd be interested in knowing that the Eagle already has a Dvorak keyboard. When I got my Eagle IV, I found over 2 Mb of software left on the hard drive. Among all that software was a commericial, copyrighted program called SmartKey II. SK.COM is the program file, and it uses DVORAK.DEF to redefine the keyboard.

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

Ken sent me a copy of this letter to Gene. The catch here is that SmartKey II may not be available any more. Elliam sells a SMARTKEY for $50, but I don't know whether it's the same software.

PERSONAL ADS

Eagle PC manuals and software for sale
MS-DOS manual, GWBASIC manual, and CP/M-86 manual that came with an Eagle PC. Software included. $10 or best offer. Call Burt Sukhov at (408) 269-8420 before 9:30 A.M. or after 3 P.M. Pacific time.

Osborne Executive for sale
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John Coppini at (415) 352-4533 after 7 P.M.

Eagle PC-2 for sale

Working Eagle PC-2 with MS-DOS, PFS:Write, Typing Tutor, and Tandy DMP106 printer. $275. Call Terry Saxe, (408) 947-1975.

MAGAZINE ARTICLES

Computer Monthly address

Don Halford protested that I've been leaving out the address for *Computer Monthly*. Quite right, Don; my apologies. Subscriptions to *Computer Monthly* are $15.95 for one year, or $22.95 for two years, in the U.S. and its possessions; $60 per year elsewhere. The address is Computer Monthly Subscriptions, P.O. Box 7062, Atlanta GA 30357-0062.

Weirder and weirder

I have begun receiving a magazine called *Desktop Communications*, apparently because they've assumed the subscription liability for *PC Publishing*. The most notable thing about this magazine is that it's extremely slick. I mean this in the literal as well as the literary sense; the pages have an extremely high clay content, and the front and back covers seem plastic-coated. If you put this magazine in a pile of papers, the pile WILL slide.

Other than that, there's little to say about the magazine. Its editors and writers seem to have little touch with reality. An article titled "A Hard Font is Good To Find" by Daniel Will-Harris argues that you should run out and buy Bitstream's TypeCity expandable font cartridge, at $349 for the cartridge, and between $99 and $129 for the font cards for it, because "Downloading can eat up more time than you care to count. . . Cartridge fonts are instantly available, and print time can be noticeably faster." As to the former, obviously he is using either a PC, with its flawed I/O architecture, or a Mac, with its needlessly elaborate port protocols. Downloading SoftFonts from my SB180FX to my LaserJet Plus takes very little time. As to the latter statement, there should be no difference in printing times between a SoftFont, once it's loaded into the printer's memory, and a cartridge font.

Other articles were "This Old Computer" by the same author, who "confesses" that the computer he uses most often is a mere 8 MHz 286, as though we should feel sorry for him. I do, but not for the reason he expects. Articles like "Elements of a Copy Flow *[sic]* Management System" and "Buying an Imagesetter" will interest only big companies and rich people. Other articles describe telecommuting (great if your bosses agree to it, and your job doesn't require contact with other people), typesetting service bureaus, and Hypertext.

More crazy collectors

The February 1991 *Smithsonian* covers collectors of old tools in an article by John Neary, with photographs by Eduardo Fuss. It's great fun to read, and any collector (whether of old computers, or something else) will recognize a lot of himself in it. Enjoy!

ERRATA

My personal apologies to everyone for the mistakes that slipped past me last issue. As the editor, every error is a failure on my part.

The Table of Contents last issue referred to Lee Hart's article on the H89 as a *Computer Currents* article, instead of a *Computer Classics* article. No infringement of the trademarked name of the magazine *Computer Currents* was intended.

Even worse, a vital sentence was omitted from

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Nevada Fortran	39.00
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WordStar 4 - Word Processor	120.00
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1 Conversion to Leading Edge WP not supported.

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Jerry Davis' article on alternatives to 96-tpi drives. The initial sentence should have been followed by one that said, "Some computers chose instead the superior 96-tpi (80-track) drives." My apologies to readers confused by the omission.

Finally, the cartoon on the cover, which served as a picture of the H89, is the work of Dan Rosandich. It originally appeared on page 22 of the November 1989 issue of *REMark Magazine*, the newsletter of the Heath User's Group. (Lee Hart suggests that a suitable caption might be "Software available for the one on the right?")

EAGLE COMPUTER USERS GROUP

The Eagle Computer Users Group is one of the few remaining support groups for users of Eagle computers, both the CP/M line and the later 1600 and PC models. Because Spellbinder was bundled with Eagle computers, ECUG is also a Spellbinder users group. Anyone who acquires an Eagle computer is urged to get in touch with ECUG, P.O. Box 3381, Saratoga CA 95070, phone (408) 972-1965.

Meeting place

ECUG meetings are held at Tandem Computers Incorporated, 10435 North Tantau Avenue, Cupertino. To get there, take 280 to the Wolfe Road exit; turn left at Vallco Parkway; turn left at Tantau; go over the bridge; and turn in where it says "Tandem Computers" on the left. Sign in with the guard at the lobby. He will know what room the meeting is in.

Meetings are the second Saturday of every month, from 9 A.M. to Noon. The remaining 1991 meetings will occur on Apr. 13, May 11, June 8, July 13, Aug. 10, Sep. 14, Oct. 12, Nov. 9, and Dec. 14.

March 9 meeting

Our March meeting was attended by David McGlone, Bob Vinisky, Bill Bradley, Dick Dethlefsen, Rudy Stefenel, Ken Thomson, David Banoff, George Oppel, Bob Kowerski, Shirley Welch, Jack Morse, Bill Josephson, Dave Honkala, Gary Gandrud, and Jerry Davis, listed in the order they signed in at the guard station. It was perhaps as well that no program had been planned for this meeting! I was too busy to look around much – I sold two copies of Spellbinder, two copies of Nevada COBOL, several Eagle manuals, and at least one person renewed his subscription at the meeting. But everyone seemed to be busy every moment, giving me stuff for *The Z-Letter*, copying software from our public-domain libraries, getting help with problems from other members, etc. We also explained to a curious Tandem employee what was going on.

Dave Honkala arrived after stopping at the Foothill flea market and told me that someone there was selling Televideo terminals for $6 apiece. That was too much for me to resist. Dave, Rudy Stefenel, and I drove out to the flea market for a very quick sweep through. The terminals were 920s, which I didn't want, but Dave and Rudy each got one, and Rudy got an MS-DOS copy of Spellbinder for a price too ridiculous to repeat here. As for me, I made out like a bandit; for $75 I got an Osborne Executive in perfect working order, complete with software and manuals!

Back at Tandem, I got started on this issue of *The Z-Letter* while waiting for someone to show up for the ZSUG meeting. No one did.

April 13 meeting

9:00 Meeting begins. No presentation is scheduled for this meeting.
12:00 ECUG meetings ends.
12:30 ZSUG (Z-System Users Group) meeting begins.

ECUG library

The contents of the ECUG Library reside at the editor's house. Members may borrow them between one meeting and the next. Either call me evenings at (408) 293-5176 and ask me to bring them to a meeting, or phone to arrange a

time to come over and borrow them.

Computer Craft (formerly *Modern Electronics*), April 1991. Donated by the publisher.

PD Select 1991 Shareware Catalog, PCs only. Donated by PD Select, Inc.

Public Brand Software, shareware catalog & reference guide, Volume 7, Number 1. PCs only. Donated by Public Brand Software.

README.DOC, Journal of the Orange Coast IBM PC User Group. February 1991 issue, Vol. 7 No. 2. Donated by David Banoff.

ECUG software libraries

ECUG has two software librarians. Anyone seeking CP/M or Z-System software should contact Ken Thomson, 71 Rosenkranz Street, San Francisco CA 94110, phone (415) 648-7550. For PC (MS-DOS) software, our librarian is Jack Morse, 7390 Rainbow Drive, #1, Cupertino CA 95014, phone (408) 252-6103.

Please note that, as ECUG is no longer a corporation, the officers of the club do not wish to handle money (except those, like Shirley Welch and myself, who have businesses and do so as part of the business). Therefore, when you request disks from Ken or Jack, send them the floppy disks and the postage to mail them. They will copy the software you request onto your disks and mail them back to you. That way no money changes hands, as would be the case if they continued to charge a fee per disk.

PC software received (donated by the author or company):

AutoRun, described as PC automation software that learns tasks by recording your keystrokes as you do it once and then does it on command, including scheduling it for a particular date and time, or regularly recurring dates and times. Includes ability to run modems and faxes. Contact AutoSoft, Inc., 1850 Lake Park Drive, Suite 105, Smyrna GA 30080, phone (404) 436-7144, fax (404) 436-7143.

FORMULA1, QUIZ-MAKER, ACROSTIX, and *KRYPTO* are games and quizzes created using TutorialWriter, which we received last month. FORMULA1 is a tutor for high-school algebra; QUIZ-MAKER is a program to create and play quizzes, tests, and multiple-choice questions. ACROSTIX converts quotations into acrostics, which the player cracks to recreate the original quotation. KRYPTO is similar to ACROSTIX (does D.C. know their trademark has been violated?), but replaces the letters in the quotation with symbols. Available from Intelligent Educational Software, P.O. Box 189, Houston TX 77244. Shareware.

Z-SYSTEM USERS GROUP

We are still trying to start a Z-System user group in the San Jose, California area. There are no active CP/M or Z-System user groups in the area. The purpose of the group would be to help new owners of CP/M or Z-System machines learn how to use them, pool resources for projects like a West Coast convention, help each other install hard disks, modify BIOS, *et cetera*.

Currently, the afternoons of the second Saturday of every month are reserved at Tandem Computers, 10435 North Tantau Avenue, Cupertino. The last scheduled meeting is April 13. If you can't come Saturday afternoons, but some other time is better, please contact me. If there are a lot of requests for Monday evening, for instance, Monday evening it will be, as soon as I can arrange it. Suggestions for other places to meet, in the event of a different meeting time, are also requested.

If no one shows up at this meeting, we may have to conclude that there is no interest in such a club in our area.