The Z-Letter

Newsletter of the CP/M and Z-System community

DIGITAL RESEARCH™

CP/M®
Operating System
Manual
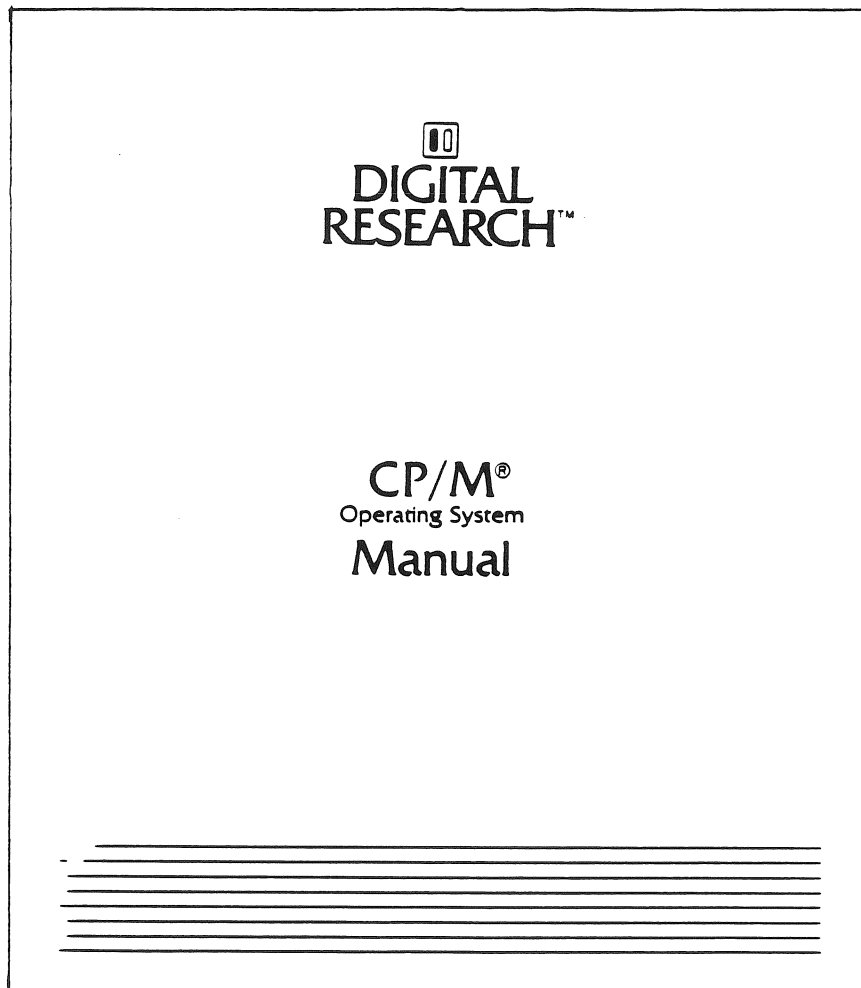
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ABOUT THIS NEWSLETTER

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: 20*. 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 1-18 will be published in February 1992.

THE STATE OF THE ART

Lambda, DRI sign contract

Lambda Software Publishing and Digital Research Inc. have signed a contract making Lambda an official licensee of DRI's CP/M 2.2 operating system. In the past, Lambda has supplied CP/M diskettes to the 8-bit community by buying licensed diskettes and reselling these in the appropriate format and linked to the appropriate BIOS for its customers' machines. The supply of such disks is finite. With this agreement, Lambda has DRI's permission to sell CP/M for any machine. Permission to use their BIOS must still be sought from companies still in business that formerly manufactured computers running CP/M, and is being sought.

The only down side of this development is that the royalties being paid to DRI are more than Lambda was paying for the leftover CP/M disks it sold before. This forces a price increase for the CP/M disk and manual, from $15 to $25.

TeleVideo CP/M, manuals available

From TeleVideo, makers of high-quality terminals and computers, comes good news. Lambda will not be carrying TeleVideo manuals and boot disks, because they are available from TeleVideo! Suzie Khan in Technical Support tells us that a package consisting of the manual and boot disk for the 801, 802, 803, 804, or 806 can be obtained by sending $50 to TeleVideo Technical Support, 550 E. Brokaw Road, San Jose CA 95161. TeleVideo does not manufacture their CP/M computers any more, but still give technical support to owners of TeleVideo computers, and sell the manuals and boot disks. We commend them for this devotion to service, and an unusual dedication to keeping discontinued products useful to their owners.

Foothill flea market reborn

Haltek Electronics, a Silicon Valley new-and-used electronics store, confirms that the September electronics flea market was the last to be held at Foothill College. Due to the budget crunch at Foothill and De Anza, the flea market will no longer be held at Foothill on the second Saturday of each month.

But this is not the end of the flea market. Haltek hosted the flea market on October 12 in its parking lot, and is negotiating for the use of the large, unused lot next door for future flea markets. Haltek Electronics is located at 1062 Linda Vista Avenue, Mountain View CA 94043, phone (415) 969-0510.

Manuals and hardware from Epson

Epson America, the manufacturer of the QX-10 desktop computer (which ran both CP/M and Valdocs), and the PX-8 Geneva (one of the few CP/M laptops made), still sells manuals for these machines, and some hardware and firmware. The following products were listed for us by Shel Michaelson in Technical Support.

For the QX-10:
X-QX10, "QX-10 Operating Manual", $7

Manuals for the PX-8 (Geneva):
H8492025-0, "PX-8 Command Summary", $4.95
PXD-3001-A, "Introductory Flip Chart", $12
PXD-3007, "Documentation (standard)", $21.95
PXD-3013, "System Essentials (advanced)", $14.95
X-PX8BR, "PX-8 BASIC Reference Manual", $7

Hardware for the PX-8:
H107A-A3, Modem unit (baud rate?), $99.95 (*)
PF-10-AA, Floppy disk unit (3½"), $599
PX08011EB, ROM pack, $99.95
PCP-0023, dBase II ROM, $99.95 (*)

*Sale price

Needless to say, these are not all the manuals, nor all the hardware accessories, for either computer. But we thank Epson for keeping them available. They can be ordered from Epson Accessories, Inc., 20770 Madrona Avenue (C-3), P.O. Box 2903, Torrance CA 90509-2903, phone (800) 873-7766.

Lambda is negotiating with Epson for permission to distribute the BIOS and manuals for both the QX-10 and PX-8.

For Sale From:

SMALL COMPUTER SUPPORT

Place your order(s) either by writing Small Computer Support at 24 East Cedar Street, Newington, CT 06111 or by calling the office (voice) 203 666-3139 or (data) 203 665-1100.

The following software may be obtained from Small Computer Support. Please specify your disk format and your terminal requirements (ie. what kind of computer do you use?)

Public Domain Packages

CP/M Game Collection Disk: $15: CHICKEN, CMAZE, QUATRIS, SKUNK, ANIMALS, NIM, OTHELLO, CONCEN2, LIFE, SNAKE and more.

CP/M Wordprocessing Disk: $15: ZDE (Z System Display Editor,) installation program, documentation files, key compiler, help files. Hardcopy of a simplified manual on how to use this WordStar compatible full screen editor. Indexing utility. Spell Checker.

Printer Specialty Disk: $15: Contains BRADFORD, MXPLOT, GOTHIC, RLEPRT and more. Most programs require Epson compatible dot matrix printer with dot graphics.

Time Manager Disk: $15: Contains classic HANDYSYS, the CP/M answer to "Sidekick." To Do Notepad, Calendar, Phone List, Appointments and more.

SIL Compiler Disk: $15: Contains a powerful subset of the C programming language. Compiler, documentation, assembler, linker, sample programs. CP/M hooks. Discussed in back issue of Eight Bits And Change.

NPS Cobol Compiler Disk: $15: Contains compiler, runtime system, documentation, sample programs.

Mailing List Disk: $15: ZDB (Z System Database.) NOTE: Requires Z System. Fast, easy to use. Generates mailing labels. Keeps track of clients. Generates selective listings and more. Understands time if ZSDOS installed. See Z System below.

Spreadsheet Disk: $15: MC (MicroCalc.) Minimal, one sheet spreadsheet, but adequate for monthly records for small business.

Telecommunications Hardware/Software Package

New, 1200 baud Hayes compatible modem, cable, software and easy to
understand hardcopy User's Guide on how to call BBS's, RCP/M's, Z Nodes,
etc. With a modem you can easily download extremely interesting programs
and text. Cost: $90. A computer without a modem is like a home without a phone.

Eight Bits And Change

A bi-monthly computer and humor 'zine (which, we trust, you are, at this
very moment, enjoying ...) Cost: $15 per year ($18 Canada, $21 foreign.)
Contains technical articles on CP/M and Z System, humor pieces, graphics, 8
bit news and events, tutorial material and more. If you like this issue,
subscribe today! Back issues cost $5 apiece. There are currently (as of
9/91) 6 back issues.

Computers and Printers

Office Master 2000 letter quality printer with manual, cable. Almost new.
In perfect working condition. 35 cps. Letter quality. Daisy wheel. Cost:
$150 plus shipping. Call.

Single drive (300k) Royal alphaTronic computer, monitor, manual, cables and
easy to read User Guide. Includes Small Computer Support Starter/Sampler
Disk. Cost $200 plus shipping. Starter/Sampler Disk alone costs $15.

Kaypro II. 3 drives. Many extras. Software. Call for details. $275 plus
shipping.

Epson RX-80 FT Dot Matrix Printer. Call for details. $225 plus shipping.

Z System

Small Computer Support is a Z System distributor. Z System is an extremely
powerful CP/M replacement. NZCOM (for CP/M 2.2 machines) and Z3PLUS (for
CP/M 3.0 machines) costs $75. You get manual, disks. Easy to install. Join
the community of Z System users. In our (admittedly biased) opinion, it's
the best operating system ever written. ZSDOS, BDS Z, ZMAC also available.
Call for details.

Training

Small Computer Support will teach you how to use your CP/M computer. Over
the phone, at our office. $15 per hour. You might be surprised by what your
"obsolete" CP/M computer can do! Give us a call!

Contract Programming

Have a computer program you need written? Call with the specifics and we'll
see what we can do for you.

Other QX-10 and PX-8 sources

Meanwhile, I have received catalogues or brochures from the following companies, who sell QX-10 and Geneva parts, software, etc. I haven't done business with any of them and can make no recommendations.

AAA Micro, P.O. Box 5532, Buena Park CA 90620, (714) 994-6472.

DX Computer Co., Box 189, Hopewell NJ 08525, (609) 466-2092.

SnyderScope International, 1594 Hilltop Drive, El Cajon, California 92020-8227, phone (619) 442-2299.

Star Technology, 900 road 170, Carbondale CO 81623, (303) 963-1969.

Titan Support, 2862 Page Ave., Ann Arbor MI 48104, (313) 971-3544.

Mini Z-Fest 1991

By the time you read this, this year's Z Fest will have come and gone. The latest issue of *Eight Bits & Change* announced this event, which occurred October 18-20 in the Albany, New York area. This issue came out too late for anyone who does not live in the immediate area to attend; I received my copy less than two weeks before the event.

No doubt future issues of *EB&C* will tell us what happened this weekend. I hope there will be more notice next year.

22DISK version 1.37 released

We don't give much space to PC programs in *The Z-Letter*. This is a CP/M and Z-System magazine, and the PC folk can find information almost anywhere. One notable exception is 22DISK, a shareware program that allows a PC to read, write, and initialize CP/M disk formats. The price is only $25, and it has several other advantages over Micro Solutions' UniForm: (1) 22DISK has more formats than UniForm, and is always adding new ones; (2) 22DISK can copy to and from CP/M user areas, whereas UniForm can only deal with files in user area 0; (3) the BIOS changes in DR DOS and in MS-DOS 5 give UniForm trouble; 22DISK, which bypasses the PC BIOS entirely, is unaffected.

Talking to the friendly people at Sydex, I learned about recent improvements to 22DISK. Version 1.37 (June 1991) repairs a small bug that could cause the first block of some CP/M files to be overwritten when copying DOS files to a CP/M diskette already containing files. Version 1.36 (April 1991) compacts the 342 CP/M format definitions in the CPMDISKS.DEF file so that the whole file will fit on even the smallest (360K) PC disk. The CTOC program which I suggested, which would allow direct copying from a CP/M format on one disk drive to another CP/M format on another drive, is scheduled for the next major revision of 22DISK.

Sydex can be reached at P.O. Box 5700, Eugene OR 97405, phone (503) 683-6033. Tell them you heard about them through *The Z-Letter*.

Index to *The Z-Letter*

As of January 30, 1992, I will have been an employee of Tandem Computers eight years, and will be eligible for my second six-week sabbatical. Four years ago I used my first sabbatical to work with Joe Wright, and we printed the first issue of *The Z-Letter*. I have many tasks lined up for this sabbatical, including compiling and publishing an index to *The Z-Letter*. As part of the job of compiling this index, the skeleton text of the magazine will be set up with the MagicIndex commands so that the regular features will automatically be indexed whenever they appear. This will make tagging each issue's text for indexing a monthly chore, so that publishing a true annual index will be much easier.

Lambda Software Publishing
720 South Second Street, San Jose, CA 95112-5820, phone (408) 293-5176

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 used to 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   **$25**
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. Issues 1-6 are available both in the original 5½ X 8½" format, and enlarged to the 8½ X 11" format of issues 7-present, until copies of the older format run out. (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)

D. Customizable diskette carriers $3
These sturdy little carriers hold up to three 5¼" diskettes safe from harm. Ideal to carry diskettes in a briefcase and protect them from your lunch, heavy books, etc. Front and back covers are clear pockets that will hold covers of your design, allowing you to customize these diskettes as you would a binder.

Disk copying – $10 per disk

I can copy most soft-sector double-density 5¼" CP/M formats, including Apple II CP/M. Sorry, no hard-sector formats except Northstar, no single-density formats, no 3½" or 8" formats, and no Commodore CP/M formats yet; some of this will change in the future. Copies can be CP/M to CP/M, CP/M to MS-DOS, or MS-DOS to CP/M; specify the format of the disks you send, and the format in which you want the copies. Both originals and copies will be returned.

Please note that this is a service provided to the CP/M and Z-System community. I assume that you are honest, and that you are the legal owner of material you ask me to copy. I refuse to accept any responsibility should this turn out not to be the case.

Note also that the price quoted above is for software you purchase elsewhere, or data diskettes you own. **There is no charge for copying software you buy from me in the format of your choice!** Software bought from Lambda will be sent to you in the disk format you request at no cost but the price listed for the software, so don't order Spellbinder and send me extra money for disk copying.

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.

Name: Company:
Address:
City, State, Zip:

Home Phone (   )   Business Phone (   )

Computer format in which software should be supplied:

Total money enclosed:

SCRIPT OF THE MONTH CLUB

Scripts that use DosDisk
by Jay Sage

In the last issue I tried to stick to the original terms of the Script of the Month Club, and I provided only the single alias required by the contract. However, an unscrupulous operator immediately tried to undercut my monopoly on this service. I refer, of course, to Bob Vinisky, who, a scant three pages after my column in the last issue, gave away a free ARUNZ alias script. And an excellent one at that! In the face of such fierce competition, I have no choice but to go back to my earlier practice of presenting several scripts in each column.

This month we're going to cover some scripts related to the use of Bridger Mitchell's spectacular DosDisk, the most powerful MS-DOS disk format emulator available for CP/M computers (probably for any computer). When DosDisk is loaded, it provides a driver that makes a MS-DOS disk look like a native CP/M disk. This means that you can work with that disk in almost exactly the same way you would work with a CP/M disk, using all your regular tools. DosDisk even preserves datestamps if the CP/M machine supports them.

There are a few things one has to be careful about. One of them concerns the use of DosDisk under Bridger Mitchell's spectacular BackGrounder ii (I'm sorry to keep using that word *spectacular*, but when it comes to Bridger Mitchell's creations I can't help it). Because of the contortions that DosDisk has to inflict on the operating system, it is not safe to perform a task swap under BGii. Also, DosDisk has to do some things differently when BGii is running, and one must invoke it with a special command-line option. Since I don't always remember whether or not BGii is running on my system (though it almost always is), I let a script take care of these details for me. Here is the script I use to load DosDisk:

```
DOS,DISK= DD= DDON
    IF bg;
        b0: dosdisk g: bg;
    ELSE;
```

```
        b0: dosdisk g: ;
    FI;
    /msg *** drive g = msdos ***
```

It first checks to see whether BGii is running (now you see why I added the BG option to IF.COM). If it is running, then DosDisk is invoked with the command line option BG. This script also takes care of the specification of drive G: as my MS-DOS drive. My system has two floppies, F: and G:. The one mapped to F: is a 96-tpi drive and is not appropriate as a MS-DOS drive. Once DosDisk has been invoked in the proper way, I use the MSG script I described in issue 9 of *The Z-Letter* to place a message in the upper status line of my Wyse 50 terminal.

The following script not only removes DosDisk; it also clears the status-line display.

```
    DDOFF
        b0: dosdisk off;
        /msg
```

Because of the risk of running DosDisk under BGii, I often (for safety's sake) load DosDisk, copy a file, and then unload DosDisk. That way DosDisk is loaded only while I am actively using it. Here is my DDCOPY script, which functions just like the regular ZSDOS COPY program except that DosDisk is turned on just for the time it is running.

```
    DDCO,PY
        /dd;
        b0: copy $*;
        /ddoff
```

DosDisk has one other restriction that one must be careful about. An MS-DOS disk does not know about user areas, and one must refer only to user area 0 on the MS-DOS disk. It would be nice if DosDisk allowed you to map MS-DOS subdirectory areas into user areas. Such a facility would make it very easy to move files among subdirectories. Knowing Bridger, he

probably could have figured out a way to do this, but the code might have been unreasonably long. So, we have to be thankful that DosDisk does at least allow us to map user area 0 into MS-DOS subdirectories using the DOSCD (DOSdisk Change Directory) utility provided with DosDisk.

To avoid the problem of having to specify the MS-DOS disk source or destination properly as G0:, I have two scripts for copying files to or from the MS-DOS disk. Here they are:

```
DDPUT=DDTO
    /ddco g0: =$*

DDGET=DDFROM
    /ddco g0: $*
```

The first one moves any specified list of files to G0: with DosDisk turned on for the duration of the operation. The second one copies a specified file or files from G0: to the currently logged directory with DosDisk turned on only for the duration of that operation.

You may have noticed how often my ARUNZ scripts call other ARUNZ scripts. Since I have a RAM disk, reloading ARUNZ to process another script is extremely fast, usually taking a negligible amount of time compared to that required to load and execute the actual commands. If I did not have a RAM disk, I might repeat the code from the subroutine scripts.

SOUND POTENTIALS CP/M PUBLIC-DOMAIN SOFTWARE CATALOG

We publish a catalog that lists the titles of 720 CP/M library files from which you can pick and choose. The titles are current up to 1990. The catalog lists each title, author, date, size of library, and a description. We charge you a copying fee of only five cents per 1K of library file copied. We can format for over 180 5¼" disk formats, both 48- and 96-tpi, and we charge you no extra for your format. We offer discounts for large orders if your disk format holds over 300K. You receive your selections plus our catalog on disk and a library utility to remove the files.

We also offer a data-copying service to copy data between any of the formats we support. Full details included with the catalog.

As a special introduction to the public domain of CP/M, we have put together a Sampler of some of the best utilities and word processing programs. This large collection is available on your disk format for $10.00 plus $4.00 shipping and handling. We throw in the printed catalog for $1.00 more ($15.00 total). If you just want the printed catalog and other info, send $2.00.

SOUND POTENTIALS, BOX 46, BRACKNEY PA 18812

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.	
Z-Node 5, Montreal QC CANADA 514-324-9031	AUSTRALIA 5750	61-089-528-852
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,	
Z-Node 10, Mill Creek WA 206-481-1371	Western AUSTRALIA	61-9-450-0200
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		

THE COLLECTORS' CORNER

A chart of floppy-disk drives

Some people wear a mask and gun, some just wave their checkbooks around. The low prices for CP/M systems that I've been talking about aren't just in the Silicon Valley area. I was contacted the other day by a guy in New York who just bought an Eagle IV (you know, the model with the 10-Mb hard disk, the double-sided full-height 96-tpi floppy, and the BIOS that can handle two of each?) for only $25! He even got all the software. He wants to get an Eagle manual from me, which will bring his total cost up to $40. Such a deal! Some people would get disgruntled. I prefer to keep all my gruntles, so I just told him congratulations.

Besides, I was also lucky recently. Someone else who works at Tandem wanted to clean out his basement, and offered a gaggle of computer equipment to anyone who wanted it. Apparently I was the only one who responded. For the grand price of zilch, I got an Imsai S-100 system, an Intersystems S-100 system, and a Morrow MD-3, plus a letter-quality printer, some 8" disk drives, a ton of manuals and books, and a bunch of software on 5¼" and 8" disks, including original disks of Spellbinder, MAC, Pascal/MT+ and SPP, dBase II, FMS-80, Ryan/MacFarlane COBOL, besides lots of other software products I never heard of before. I also got another Omron terminal and the full manual for it, which will let me determine whether this one and the other that I've had for years are any good. I guess it was just my day. It took me four pages to list what I got from this guy.

Another find I made was the following list of floppy-disk drives, which the guys behind the counter at Weird Stuff let me borrow long enough to copy. This should help you identify floppy-disk drives at flea markets, etc. If anyone has a more complete list, or information on models missing from this list, please let me know. Thanks to Bob Vinisky, who typed the list to disk for me, and to Deborah Snavely, who helped me check it for typos.

Alps

2124	5¼" SSDD HH	180K
2124A	5¼" DSDD FH	360K
2624 BKI	5¼" DSDD HH	360K
DFC 222 802A	5¼" DSDD HH	360K

Bachelor

FD-104	5¼" DSDD HH	360K

Basf

6106	5¼" SSDD FH	180K
6128	5¼" DSDD HH	360K
6138	5¼" DSDD HH	720K

Burroughs

B9489-1	8" DSDD FH	1.6M

Calcomp

142	8" SSDD FH	800K
143	8" DSDD FH	1.6M

Canon

221	5¼" DSDD HH	720K
531	5¼" DSDD HH	360K

Century Data

140	8" SSDD FH	800K

Chinon

506-L	5¼" DSDD HH	1.2M

C.D.C.

9404	8" SSDD FH	1.6M
9406-3	8" SSDD FH	1.6M
9406-4	8" DSDD FH	1.6M
9408	5¼" SSDD FH	180K
9409	5¼" DSDD FH	360K
9409F	5¼" DSDD FH	720K
9428	5¼" DSDD HH	360K

9428-01	5¼″ SSDD HH	180K
9428-02	5¼″ DSDD HH	360K
9429	5¼″ DSDD HH	720K
9429-01	5¼″ SSDD HH	360K

Epson

170-SMD	3½″ SSDD HH	400K
200P-053	3½″ HH	720K
200P-055	3½″ DSDD HH	720K
200P-073	3½″ DSDD HH	720K
280	3½″ DSDD HH	720K
521	5¼″ DSDD HH	360K
521L	5¼″ DSDD HH	360K
621L	5¼″ DSDD HH	360K
SD 321	5¼″ DSDD HH	360K
SD680L	5¼″ DSQD HH	1.2M
SMD 400P-4	3½″ SSQD HH	720K

Fujitsu

2551 A08	5¼″ DSDD HH	360K
2552 K	5¼″ DSDD HH	720K
2553 K03B	5¼″ DSDD HH	1.2M
2554	5¼″ DSDD HH	720K
902B-0112-B001	3½″ DSDD HH	720K

Hewlett

J455-3	5¼″ DSDD HH	360K
J475-1	5¼″ DSDD HH	1.2M

Hi-Tech

548 25	5¼″ SSDD HH	180K
548 50	5¼″ DSDD HH	360K
548-A	5¼″ DSDD HH	360K
596-10	5¼″ DSDD HH	720K

Hitachi

HFD 305S	5¼″ SSDD HH	360K

IBM

0384-002	5¼″ DSDD FH	360K

JVC

MDP-100	5¼″ DSDD HH	720K

M.F.E.

M700	8″ DSDD FH	1.2M
M750	8″ DSDD FH	2.0M

M.P.I.

501	5¼″ SSDD HH	180K
502B	5¼″ DSDD HH	360K
51M	5¼″ SSDD FH	180K
52M	5¼″ DSDD FH	360K
91M	5¼″ SSQD FH	360K
92M-002	5¼″ DSQD FH	720K
B101M-S	5¼″ SSQD FH	180K
B102M-S	5¼″ DSQD FH	360K
B51S	5¼″ SSDD FH	180K
B52S	5¼″ DSDD FH	360K
B91S	5¼″ SSQD FH	360K
B92M	5¼″ DSQD FH	720K
B92S	5¼″ DSQD FH	720K

Maple Tech

MT-502	5¼″ DSDD HH	360K

Memorex

651	8″ DSDD FH	1.2M

Micropolis

1006-4N	5¼″ DSQD FH	720K
1015-2	5¼″ DSDD FH	360K
1015-4	5¼″ DSDD FH	720K
1015-6	5¼″ DSDD FH	1.2M
1016-2	5¼″ DSDD FH	360K
1115-4	5¼″ DSDD FH	720K
1115-5	5¼″ SSDD FH	360K
1115-6	5¼″ DSDD FH	720K
1117-6	5¼″ DSDD FH	720K

Mitsubshi

2894	8″ DSDD FH	1.6M
2894-63	8″ DSDD FH	1.6M
2896	8″ DSDD HH	1.6M
2896-63	8″ DSDD FH	1.6M
353B-12	3½″ DSDD HH	720K
353B-82	3½″ DSDD HH	720K
355B-82UF	3½″ DSDD HH	1.4M
355B-88UF	3½″ DSDD HH	1.4M
4851	5¼″ DSDD HH	360K

THE STAUNCH 8/89'er
--> Generic CP/M Software <--

ACANAL (By Gary Appel) $6
An electronic analysis program to perform AC nodal analysis on an electronic network. Element
types may be: resistor; capacitor; inductor; transconductance; transmission line, open line
stub, and shorted line stub; coupled inductors (transformer); quartz or ceramic resonator;
two-pole monolithic resonator; and transistor (hybrid PI model). Various input/output and gain
parameters permitted. Calculations are single-precision.

dBASE II PROGRAMMER'S NOTEBOOK (By Steven G. Meyerson) $6
Originally published as a booklet in '83 and '84, this is a collection of tips and routines for
using dBASE II and writing applications in its command language. Included are hints for using
FIND, DO CASE, QUIT TO, semicolons, justification, report column headings, the STR and TRIM
functions, terminal and printer commands, sorting, debugging, displaying logical fields,
linking database files, two-column printing, menus, error checking, and even a flashing display
using H/Z-19/89 terminal codes. As a bonus, it also includes S-MAIL, a mailing list package for
dBASE II that features menu-driven operation; adding, listing, deleting, reviewing and altering
records; printing labels; and archiving deleted records.

FILEBASE (By Tom Markowitz, EWDP Software) $6
A "variable-length field" database manager which EWDP is releasing as shareware. Fields are in
"comma-delimited ASCII" format, such as those created by BASIC and other higher-level languages
or WordStar's MAILMERGE add-on. Defining field length or type (character or numeric) are there-
fore **not** required when setting up a database. Functions include adding fields, appending
records, calculations, indexing, joining existing fields, restructuring the file layout,
sorting, and printing reports and/or labels. Registration information for support and a printed
manual is embedded in the program. But the package is menu- and prompt-driven, so you may never
need the manual.

LUCIDATA PASCAL (By D.Gibby and L.Reeve) Version 3.8 $25
A substantial subset of the Pascal language, the compiler translates your ASCII source code
into a file of p-code ("pseudo"-code). That file is then interpreted by a run-time system (PRUN
or RUNCOM). This results in a language package that is faster executing than conventional
interpreters, yet the p-code file is generally smaller than equivalent code produced by a
conventional assembler. If independence from the run-time system is desired, a command-line
pragmat can combine the run-time system with your p-code file. If execution speed is critical,
a p-code program included with the package will translate p-code files to source code for
Microsoft's M80 assembler and linker. Not as extended as Borland's **Turbo**, nor as fast during
compile. Includes a 100-page hardcopy manual.

MAGIC WAND/PEACHTEXT HELP (By Kirk Thompson, Randall Stokes, and Hank Lotz) $6
This package for Magic Wand, PeachText 9, and PeachText 5000 word processors has three parts.
One is menu-driven online **HELP** set up as an **include** file. This is a command reference to both
EDIT and PRINT. Another is PROCESS, a print preprocessor. This program lets you directly
support the custom features of your dot-matrix printer (such as underlining and italics). The
program, as supplied, supports Gemini printers. Instructions are included for editing the ASM
file and assembling a custom version for your own printer. The third part of this package is
SALVAGE, a utility for recovering a MW/PT file from memory after an abort, BDOS error, or
system reset.

MCOLS (By Hank Lotz) $6
A utility that creates multiple-column listings from a single-column input file. The user
specifies the number of columns (2 to 13), space between them, effective page width and length
and horizontal pitch, and the record to start at. It also lets you direct the output to a disk
file as well as console or printer.

The Staunch 8/89'er General Software Catalog $6
Staunch's holdings are too extensive to list here. An on-disk catalog of software for CP/M and
HDOS is available. Much of the software has been released to **Staunch** by various vendors or
Staunch subscribers.

Note: Prices include first class shipping in the continental U.S. Supported disk formats are
Heath/Zenith soft-sector (H-37) and 10-hard-sector (H-17); most 40-track, single- or double-sided,
soft-sector CP/M (such as AMPRO, Cromemco, Kaypro, Osborne, Televideo, or Xerox); and PC-XT.

4852	5¼″ DSDD HH	720K		**Phillips**	
4853	5¼″ DSDD HH	720K			
4854	5¼″ DSDD HH	1.2M	3121	5¼″ SSDD HH	360K
501A	5¼″ DSDD HH	360K	3132	5¼″ DSDD HH	360K
504A	5¼″ DSDD HH	1.2M	3133	5¼″ DSDD HH	720K
504B	5¼″ DSDD HH	1.2M	3134	5¼″ DSDD HH	1.0M
			FD513	5¼″ DSDD HH	360K
	Mitsumi				
				Qume	
D503	5¼″ DSDD HH	360K			
D506	3½″ DSDD HH	720K	142	5¼″ DSDD HH	360K
1155C	5¼″ DSQD HH	1.2M	242	8″ DSDD HH	2.0M
1165A	8″ DSDD HH	1.6M	542	5¼″ DSDD FH	360K
1165FQ	8″ DSDD HH	1.6M	592	5¼″ DSDD FH	1.2M
FD1035	3½″ DSDD HH	720K	841	8″ DSDD FH	0.8K (1)
FD1165F	8″ DSDD HH	2.0M	842	8″ DSDD FH	1.6M
FD1165S	8″ DSDD HH	2.0M	QT/5	5¼″ DSDD FH	360K
			QT/8	8″ DSDD FH	2.0M
	Okidata				
				Remex	
3305H	5¼″ DSDD HH	360K			
3315B	5¼″ DSDD HH	360K	RFD 2000	8″ SSDD FH	1.0M
			RFD 4000	8″ DSDD FH	2.0M
	Olivetti		RFD 480	5¼″ DSDD HH	360K
4311	5¼″ DSDD HH	360K		**Samsung**	
4311-3	5¼″ DSDD HH	360K			
			SFD500K	5¼″ DSDD HH	360K
	Panasonic				
				Sanyo	
455	5¼″ DSDD HH	360K			
465	5¼″ DSDD HH	720K	500C	5¼″ DSDD HH	360K
475	5¼″ DSQD HH	1.2M	FDA5200	5¼″ DSDD HH	360K
551	5¼″ DSDD HH	360K			
				Seiko	
	Persci				
			3640	5¼″ DSDD FH	640K
277 (6N)	8″ SSDD FH	1.2M			
299	8″ DSDD FH	2.0M		**Shugart**	
	Pertec		SA200	5¼″ SSDD HH	180K
			SA210	5¼″ DSDD HH	360K
FD200	5¼″ SSDD FH	180K	SA300	3½″ SSDD HH	360K
FD250	5¼″ DSDD FH	360K	SA390	5¼″ SSDD HH	180K
FD410	8″ SSDD FH	800K	SA400	5¼″ SSDD FH	180K
FD510	8″ DSDD FH	800K	SA400L	5¼″ SSDD FH	180K
FD511	8″ SSDD FH	800K	SA410	5¼″ SSDD FH	360K
FD514-U2	8″ SSDD FH	800K	SA450	5¼″ DSDD FH	360K
FD650	8″ DSDD FH	1.6M	SA455	5¼″ DSDD HH	360K
			SA460	5¼″ DSDD FH	720K
			SA465	5¼″ DSDD HH	720K
			SA475	5¼″ DSDD HH	1.2M

Ampro Z80 Little Board/PLUS
by Davidge

FEATURES

Little Board/PLUS is a complete 8-bit, Z80-based single board microcomputer. It includes all the circuitry, software, and firmware necessary to construct a functional CP/M-based computer system. Some of the main features are:

- 4MHz Z80A 8-bit microprocessor
- 64K bytes dynamic RAM, 4K-32K EPROM
- Two spare counter/timer channels
- Floppy controller capable of controlling from one to four single- or double-sided, single- or double-density, 40- or 80-track mini or micro floppy drives.
- Two RS232C serial ports
- One Centronics printer port
- SCSI/PLUS multi-master I/O expansion bus:
    - SASI Disk/Tape controller compatible
    - ANSC X3T9.2 (SCSI) compatible
    - Multiple Little Board networking
    - Simple bi-directional I/O (17 lines)
- Mounts directly to a 5¼" disk drive
- Minimum external components
- Power connector and voltages compatible with 5¼" disk drive.

FUNCTIONAL DESCRIPTION

CPU, Memory and Timing
The heart of the Little Board/PLUS is a Z80A 8-bit microprocessor operating at 4 MHz. All system functions are based on a single 16 MHz master clock. System RESET is provided in two ways: upon power-up and via an external RESET switch.

Two types of memory are present: EPROM and RAM. A 28-pin EPROM socket provides from 4K to 32K bytes of firmware space. Jumpers are used to program the socket for a 2732, 2764, 27128, or 27256 type EPROM. The EPROM can be enabled and disabled by software.

System RAM consists of eight 64K x 1 bit dynamic RAM devices. Control circuitry for the RAM is entirely digital (no one-shots or R-C components) and provides a high degree of reliability.

A Z80 Counter Timer Circuit (CTC) provides four programmable counter or timer channels. Two of the CTC channels provide the baud rate used by the two serial I/O ports. The other two CTC channels are available for use as programmable timers in applications programs, for real-time clock functions, etc.

Serial Ports
A Z80 Serial Input/Output Controller (SIO/0) provides two fully programmable, asynchronous serial ports. Each channel has four of the standard RS-232C signals: TxD, RxD, RTS, and CTS. These signals are sufficient for interfacing most serial printers, modems and terminals.

In those cases where other signals are required for one of the serial ports, handshaking signals can be borrowed from the second port (if not needed by that port). Polarity and use of the handshaking signals is defined by the software.

Programmable baud rate clocks are supplied by the CTC for baud rates up to 9600 baud. Additional circuitry provides baud rates of 19.2K and 38.4K baud, for Port A only. Since the two serial ports are otherwise identical, either can be programmed as a terminal, modem, serial printer, or other RS-232C interface.

Parallel Printer Port
The parallel port provides the 10 essential signals of a Centronics-type printer interface: Data Bits 1-8, Data Strobe, and Busy. Both the Data Strobe (output) and Busy (input) handshake protocols are defined by software.

Floppy Disk Controller
A Western Digital 1772 floppy disk controller device provides all the functions required to interface with standard 5¼" "mini" - and most 3½" "micro" - floppy disk drives. The 1772 includes the following capabilities within a single LSI device:

- Digital phase locked loop
- Digital write precompensation
- Motor on start/stop delay
- Software controlled step rates

Timing for the floppy disk interface is derived directly from the 8 MHz system clock, without delay lines, R-C time constants, or one-shots. This again results in a very high degree of system reliability.

SCSI/PLUS Multi-Master Bus
A 50-pin "ribbon cable bus" interface which meets the specifications for the popular Small Computer System Interface (SCSI) - formerly called "SASI" - provides a general purpose multi-master I/O expansion bus. All SCSI Initiator and Target functions are fully supported, including bus arbitration and disconnect/reselect.

In addition, Little Board/PLUS supports the initiator function of AMPRO's innovative SCSI/PLUS extension to SCSI. This allows connection to up to 64 SCSI/PLUS Target devices, rather than the usual eight device limit of SCSI.

Applications include both direct and shared use of a wide variety of controllers and devices, as well as tightly coupled Little Board networks. For example, one or more Little Boards, a SCSI Winchester controller, and modules providing calendar/clock,serial port expansion, RAM disk, etc. might all coexist on the same SCSI/PLUS bus.

The 17 bidirectional I/O signals of the SCSI/PLUS interface may also be used as general purpose, software controlled digital I/O lines, without SCSI compatibility. In this case, the boards's 8-bit SCSI bus ID input register can serve as an additional 8 bit input port.

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

REPAIR SERVICE

Flat rate repair for any serviceable Little Board	75.00

VOLUME DISCOUNTS

10-24 units - 5%; 25-49 - 10%; 50-99 - 15%; 100+ - 20%

Prices are in US dollars. All products shipped FOB Buellton, CA. Prices effective 10-1-90 and subject to change without notice. All orders are shipped UPS Blue, C.O.D. unless other arrangements made at time of order.

Model	Spec	Capacity
SA551	5¼" DSDD HH	360K
SA561	5¼" DSDD HH	720K
SA800-1	8" SSDD FH	1.0M
SA800-1R	8" SSDD FH	1.0M
SA800-2	8" SSDD FH	1.0M
SA800-2R	8" SSDD FH	1.0M
SA800-4	8" SSDD FH	1.0M
SA801	8" SSDD FH	1.0M
SA801-R	8" SSDD FH	1.0M
SA810	8" SSDD HH	500K
SA850	8" DSDD FH	2.0M
SA850R	8" DSDD FH	2.0M
SA851	8" DSDD FH	2.0M
SA851R	8" DSDD FH	2.0M
SA860	8" DSDD HH	1.6M
SA860-1	8" DSDD HH	1.6M
SA900-1	8" SSDD FH	1.0M
SA901	8" SSSD FH	1.0M

Siemens

Model	Spec	Capacity
FDD100-5	5¼" SSDD FH	180K
FDD100-8	8" SSDD FH	800K
FDD200-5	5¼" DSDD FH	360K
FDD200-8	8" SSDD FH	1.0M
FDD100-8D	8" SSDD FH	1.0M
FDD120-8	8" SSDD FH	800K
FDD211-5	5¼" DSDD FH	360K
FDD212-5	5¼" DSDD HH	360K
FDD220-8	8" SSDD FH	800K
FDD121-5	5¼" SSDD FH	360K
FDD196-5	5¼" SSDD FH	360K
FDD221-5	5¼" DSDD FH	360K

Tandon

Model	Spec	Capacity
TM100-1	5¼" SSDD FH	180K
TM100-1A	5¼" SSDD FH	180K
TM100-2	5¼" DSDD FH	360K
TM200-2A	5¼" DSDD FH	360K
TM100-3	5¼" SSDD FH	360K
TM100-3M	5¼" SSDD FH	360K
TM100-4	5¼" DSQD FH	720K
TM100-4M	5¼" DSDD FH	720K
TM101	5¼" SSDD FH	180K
TM101-2	5¼" DSDD FH	360K
TM101-3	5¼" SSDD FH	360K
TM101-4	5¼" DSDD FH	720K
TM50-1	5¼" SSDD HH	180K
TM50-1FS	5¼" SSDD HH	180K
TM50-1M	5¼" SSDD HH	180K
TM50-2	5¼" DSDD HH	360K
TM50-2FS	5¼" DSDD HH	360K
TM55-2	5¼" DSDD HH	360K
TM55-2 FS	5¼" DSDD HH	360K
TM55-4	5¼" DSDD HH	720K
TM65	5¼" DSDD HH	360K
TM65-IL	5¼" SSDD HH	180K
TM65-2	5¼" DSDD HH	360K
TM65-2L	5¼" DSDD HH	360K
TM65-4	5¼" DSQD HH	720K
TM65-8	5¼" DSDD HH	720K
TM75-2	5¼" DSDD HH	360K
TM75-8	5¼" DSQD HH	1.0M
TM848-1	8" SSDD HH	1.0M
TM848-1E	8" SSDD HH	1.0M
TM848-2	8" DSDD HH	2.0M
TM848-2E	8" DSDD HH	2.0M

Teac

Model	Spec	Capacity
55B	5¼" DSDD HH	360K
55BV	5¼" DSDD HH	360K
55F	5¼" DSDD HH	720K
55G	5¼" DSQD HH	720K
55GV	5¼" DSDD HH	720K
55GVF	5¼" DSDD HH	1.2M

TEC

Model	Spec	Capacity
FB501	5¼" SSDD HH	180K
FB503	5¼" DSDD HH	360K
FB504	5¼" DSDD HH	720K

Tecmate

Model	Spec	Capacity
1103	5¼" DSDD HH	3.3M

Texas Periph.

Model	Spec	Capacity
10-5355-001	5¼" SSDD FH	180K

Toshiba

Model	Spec	Capacity
0202A	5¼" DSDD FH	720K
4207 AOK	3½" DSDD 1"	720K
5401	5¼" DSDD HH	360K
5406	5¼" DSDD HH	360K
5426	5¼" DSDD HH	360K
5451	5¼" DSDD HH	360K
5454	5¼" DSDD HH	360K
5471	5¼" DSDD HH	360K
5472	5¼" DSDD HH	360K
5861	5¼" DSDD HH	1.2M

5862	5¼″ DSDD HH	1.2M		N96-12	5¼″ DSDD HH	720K
5863	5¼″ DSDD HH	1.2M				
5882	5¼″ DSDD HH	1.2M				
6471	5¼″ DSDD HH	360K				
6474 T2P	5¼″ DSDD HH	360K				
6882	5¼″ DSDD HH	1.0M				

World Storage

FD100-5	5¼″ SSQD FH	180K
FD100-8	8″ SSDD FH	1.0M
FD200-5	5¼″ DSDD FH	360K
FD200-8	8″ SSDD FH	2.0M

Victor

TM100-3	5¼″ SSDD FH	360K
TM100-4	5¼″ DSDD FH	720K

YE Data

YD180	8″ DSDD HH	1.2M
YD280	5¼″ DSDD FH	720K
YD380	5¼″ DSDD HH	1.2M
YD580	5¼″ DSDD HH	360K

Weltec

M16-A22	5¼″ DSDD HH	1.0M
M16-P12	5¼″ DSDD HH	720K
M16-R12	5¼″ DSDD HH	1.0M
M16-R12/910	5¼″ DSDD HH	720K
M48D-1	5¼″ DSDD HH	360K
M48D-14	5¼″ DSDD HH	360K

Notes:
1. Probably means 800K, but this is what was on the original list.

CP/M Software

For most CP/M computers including the Amstrad PCW

Public Domain Software

100+ Page Catalog. Lists the contents of over 400 disks. $8.50 plus $2.00 S & H

- VDE - WordStar like Word Processor
- Reliance Mail List Program
- IMP Improved Modem Program
- Checks - Checkbook Program
- Touch Typing Tutor
- CHALK - beginning Spread Sheet Program

All of the above Public Domain programs come with printed manuals. Price $15.00 each plus $3.50 per order Shipping and Handling.

CP/M 2.2 MANUAL

Brand new CP/M 2.2 manual from Digital Research in 3" slip case (still sealed) with a registration card. Everything you wanted to know about CP/M and a lot more.

Price $ 19.95 plus $ 4.00 Shipping and Handling.

Commerical Software

BackGrounder - Task Swicher	74.95
BDS 'C' Language	89.95
Checks & Balances - Home Accounting	74.95
CPI Accounting - GL,AR, AP & PR per module	94.95
dBASE II - Database Program	150.00
MBASIC & CBASIC	59.00
Milestone - Project Planner	99.00
MITE - Communications Program	49.95
Nevada COBOL	39.00
Nevada Fortran	39.00
PC-FILE 80 - Database Program	49.95
SuperCalc - Super Spread Sheet	99.00
T/Maker - Integrated WP, S/Sheet, DB, etc.	120.00
TURBO Pascal	65.00
WordStar 2.26 - Word Processor	39.00
WordStar 4 - Word Processor	120.00
ZBASIC - Compiler BASIC	89.95
Z-System - Enhancement for 2.2 & 3.0	69.95
Z-80 Development System	49.95

Please add $ 3.50 per order - Shipping & Handlg.
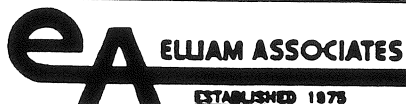
Alpha Systems Corporation
711 Chatsworth Place, San Jose, CA 95128, phone (408) 297-5994

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1. TURBO Pascal   Version 3.0   **$60**
This is the CP/M version of the compiler that changed the standard for Pascal. No longer available from Borland directly. Comes with loose-leaf Reference Manual for insertion into a 5½ x 8½" binder.

2. NZ-COM   Version 1.2d   **$70**
Once the only way to upgrade your CP/M 2.2 computer to the Z-System was to download the assembly-language source files from a BBS, edit them, and assemble them to a binary file. NZ-COM spares you this. The MKZCM program included combines the BIOS of your CP/M system with ZRDOS 1.9 and ZCPR 3.4 to make a dynamic Z-System for you automatically. Then you type NZCOM to run your new system. Comes with a large suite of Z-System utilities, and a manual by Jay Sage and Bridger Mitchell that takes you through the process step by step and introduces you to the Z-System. If you're running CP/M 2.2 or a static Z-System, you need this.

3. ZCPR 3.4 (Source)   **$50**
The assembly-language source code for the latest version of the Z-System command interpreter is available for anyone who wants to customize his system the old way, or customize the command interpreter itself.

4. I/OR   **$40**
Our input/output recorder redirects output that would otherwise go to the console or the printer to the files CONSOLE.FIL and PRINTER.FIL, respectively. This allows you to send the console or printer output to a file, even if it's a CP/M program that doesn't have that option. The console and printer functions are turned on and off separately. 1.5K IOP segment, ZRDOS required.

5. B/Printer   **$40**
Deluxe background single-file printing. 1.5K IOP segment, ZRDOS required.

6. NuKey   Version 2.03   **$40**
This advanced function-key generator redefines the output from your keyboard, using key definitions you create very simply. Different sets of key definitions may be saved as files and loaded for use with different programs and different terminals, letting you customize even programs have no customization procedures, and terminals whose keys are not programmable. Even multi-character function keys may be redefined. 1.5K IOP segment, ZRDOS required.

Please circle each item desired, and write the quantity desired in the margin next to the listing for the item.

Name: Company:
Address:
City, State, Zip:

Home Phone (   )   Business Phone (   )

Computer format in which software should be supplied:

Total money enclosed:

Corvatek *Presents:* KEY-UP

THE KEYBOARD INTERFACE

USE AN IBM STYLE KEYBOARD ON ANY* COMPUTER!

Plug an IBM style keyboard into **CORVATEK'S** KEY-UP interface, plug the interface into your computer, and you are ready to type.

STANDARD FEATURES
COMMON TO ALL MODELS OF KEYUP

- **Reprogrammable Keys** Redefine keys on the keyboard to any character or string of characters. 250 bytes of memory are available. Minimum of five bytes used per definition. Maximum number of definitions is 50. Definitions are permanently stored in memory until erased or changed.
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POWER REQUIREMENTS

- KEYUP and keyboard together draw 700 ma. of current from the host computer. Switch selectable external power jack.

MECHANICAL

- **Size** 7.25" L. x 4.6" W. x 1.25" D. Beige metal box.

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DM-4 for Franklin	$129.00
DM-5 ASCII Universal	$129.00
DM-6 for Apple II	$129.00
Optional AC power adapter (9v d.c. 700 ma.)	$7.50

90 day parts and labor warranty
NOTE: KEYUP is available for computers other than those listed. We also do custom key definitions and applications. Call for more information. Serial models available.

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KB 5150‡	$112.00
KB 5151§	$164.00 *call*
KB 5150 (Dvorak)	$112.00
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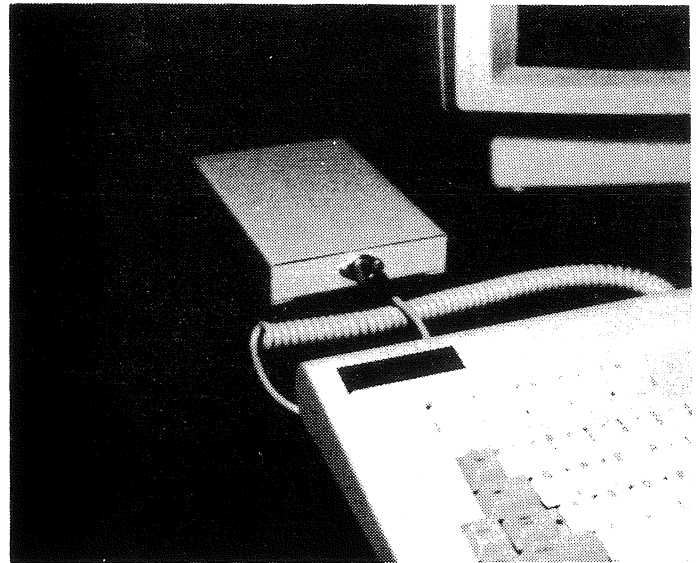
MODELS

DM-1 FOR BIGBOARD
- Cable ready to plug directly into Bigboard's Keyboard connector.
- Bell, Reset-in, Reset-out, and Type Ahead Buffer options available with hardware jumpers on host PC board.

DM-2 FOR XEROX 820
- Cable ready to plug directly into Xerox 820 Keyboard connector.
- Bell, Reset-in, Reset-out, and Type Ahead Buffer options available with hardware jumpers on host PC board.

DM-3 FOR KAYPRO
- Cable ready to plug directly into Kaypro's Keyboard connector.
- AC power adapter included.

DM-4 FOR FRANKLIN ACE 1000
- Cable ready to plug directly into Franklin Ace 1000 Keyboard connector.
- Reset-out, and Type Ahead Buffer.

DM-5 UNIVERSAL†
- ASCII parallel or serial data is presented on a DB-25P connector. The KEYUP interface can be adapted to a variety of computers simply by constructing the proper cable.
- Usable functions:
  - **Reset-in** Host reset of KEYUP and keyboard.
  - **Reset-out** KEYUP reset of host computer using (Alt-Cnt Del).
  - **Bell** KEYUP bell driven by host computer.
  - **Type Ahead Buffer** Requires ACK signal from host computer.
  - **Serial Data** KEYUP can transfer serial data to host computer at 300, 1200, 4800, and 9600 baud. TTL signal level.

The above functions are activated in neg. or pos. TTL logic on the DB-25P connector.

DM-6 FOR APPLE II
- Cable ready to plug directly into Apple II Keyboard connector.
- Reset-out.
- Type Ahead Buffer options available with hardware jumper on Apple II PC board.

PERSONAL ADS

Otrona Attache for sale

One working Otrona Attache portable computer, as described in issue 5 of *The Z-Letter*, except this one has only one floppy currently installed. $100 includes a legal boot disk and good copies of the manuals. Will consider barter for CP/M computers, books, magazines, user-group newsletters, or software that I don't have. Also seeking terminal documentation, especially Zentec Zephyr and Onyx OT-80. Call David A.J. McGlone at (408) 293-5176, or write to Lambda Software Publishing, 720 South Second St., San Jose CA 95112-5820.

Eagles for sale

I would like to sell two of my computers and a hard disk as follows: (1) One Eagle II computer, (2) one Eagle III computer, (2) one Eagle File 40 external hard-disk unit. $350 for all three items. Contact Donald C. Calvello, (408) 947-8117 (daytime) or (408) 377-7129 (evenings).

Eagle PC+ XL for sale

Late-model Eagle PC includes 640K RAM, turbo speedup kit. Best offer. Call Pat Pacholski, (510) 449-1377.

Eagle IV for sale

Make offer to Bob Serrano, (415) 586-5000 (days) or (415) 469-9666 (evenings), or write to 6029 Mission Street, Daly City CA 94014.

Laser printer for sale

H-P LaserJet IIp, Adobe PostScript cartridge, Epson/IBM cartridge, 2.5 Mb RAM. Total page count about 2500. $1100. Bob Kowerski, (415) 574-6262.

Computers for sale

Osborne 1, $50. Dynabyte MP/M computer with 8" drives and VT-100 terminal, plus operating system and manuals, $75. Prices negotiable. Contact R. Olivarez, (408) 985-2268.

MAGAZINE ARTICLES

The following magazines were received in approximately the last month. Articles relevant to the CP/M and Z-System community, if any, are listed for each magazine. Where a magazine is generally of interest to our community, its subscription address is listed, along with the U.S. subscription rate, whether there was a relevant article this issue or not.

The Computer Journal, #52, September/October 1991. *YASBEC, The Hardware* by Paul Chidley includes the schematics and PAL logic, same as his material that we printed last issue. It does not include the parts list we printed, but it does include information about the parts and why they were chosen. *Assembly-Language Programming: ZCNFG*, by Al Hawley. *The NZCOM IOP: A Background Clock Display*, by Terry Hazen. *Programming for Compatibility: Z-System and CP/M*, by Jay Sage. *Z-Best Software: What Summer Doldrums?* by Bill Tishey. *PMATE/ZMATE Macros: 5. Downloading Earlier*

Columns and A Sort Macro, by Clif Kinne. *A Home Heating & Lighting Controller, 3. The Computer Hardware*, by Jay Sage. *The CPU280, A High-Performance Single-Board Computer*, by Tilmann Reh, is a Z280 CP/M Plus system. It sounds interesting, but information on how to order it or how much it costs wasn't given! See the ad elsewhere in this issue for subscription information for *TCJ*.

Computer Monthly, October 1991. *Mail Merge with BASIC* by Paul Fleming, Jr., *Fearless Computing: Can you be happy with an obsolete computer system?* by Nancy A. Black. She says "Yes!", by the way. *The Best of Both Worlds*, by Bob Thomson. *An EOF Trick in BASIC*, by Carl Tenning. *File Transfer between the Osborne 1 and NEC PC-8500*, by George Cox and Daryl Gehlbach. Regular columns for Coleco Adam, Commodore 64 and 128, Apple II, TRS-80, Timex/Sinclair are still present; these machines either run CP/M or can run CP/M in addition to a proprietary operating system of their own.

Bulletin-board listings and ads are also of interest. $15.95 per year from Computer Monthly Subscriptions, P.O. 7062, Atlanta GA 30357-0062.
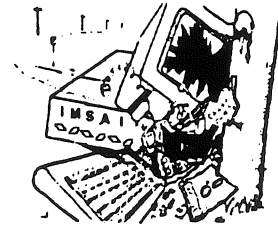
Eight Bits and Change! Vol. 2, Number 1, October/November 1991. Announcement of "Zed Fest 1991", held Oct 18-20 in Albany, NY. *Having an Argument in the Key of C,* by T. Jennings et al. *Blitzing the 128,* by Brian Nalewajek. *Joy of ZEX: Turning Computers into*

Player Pianos, by ??? *Z Gaming: Crazy Maze,* by Lee Bradley. *The MXPLOT Thickens: Dragons and Daisies,* by Larry Schnitger, et al. *ZCNFG: What's It For?* (asked by) Sigurd Kimpel. *Quiz Time* by Brian Nalewajek. See the ad elsewhere in this issue for information on subscribing to *EB&C.*

Silicon Valley Computer Society Journal, October 1991.

SAGE MICROSYSTEMS EAST

Selling & Supporting the Best in 8-Bit Software

- Automatic, Dynamic, Universal Z-Systems: Z3PLUS for CP/M-Plus computers, NZCOM for CP/M-2.2 computers ($70 each)

- XBIOS: the banked-BIOS Z-System for SB180 computers at a new, lower price ($50)

- PCED — the closest thing to Z-System ARUNZ, and LSH under MS-DOS ($50)

- DSD: Dynamic Screen Debugger, the fabulous full-screen debugger and simulator, at an incredible new price, down from $130 ($50)

- 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, $10 for Programmer's Manual)
  - DosDisk: MS-DOS disk-format emulator, supports subdirectories and date stamps ($30 standard, $35 XBIOS BSX, $45 kit)
  - JetFind: super fast, extemely flexible regular-expression text file scanner ($50)

- ZMATE: macro text editor and customizable wordprocessor ($50)

- BDS C — including special Z-System version ($90)

- Turbo Pascal — with new loose-leaf manual ($60)

- ZMAC — Al Hawley's Z-System macro assembler with linker and librarian ($50 with documentation on disk, $70 with printed manual)

- SLR Systems (The Ultimate Assembly Language Tools)

  - Z80 assemblers using Zilog (Z80ASM), Hitachi (SLR180), or Intel (SLRMAC) mnemonics, and general-purpose linker SLRNK
  - TPA-based ($50 *each* tool) or virtual-memory ($160 *each* tool)

- NightOwl (advanced telecommunications, CP/M and MS-DOS versions)

  - MEX-Plus: automated modem operation with scripts ($60)
  - MEX-Pack: remote operation, terminal emulation ($100)

Next-day shipping of most products with modem download and support available. Order by phone, mail, or modem. Shipping and handling $3 per order (USA). Check, VISA, or MasterCard. Specify exact disk format.

Sage Microsystems East
1435 Centre St., Newton Centre, MA 02159-2469
Voice: 617-965-3552 (9:00am – 11:30pm)
Modem: 617-965-7259 (pw=DDT) (MABOS on PC-Pursuit)

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 by writing Lambda Software Publishing, 720 South Second Street, San Jose CA 95112-5820, or phone Morgan Thielmann and Associates, (408) 972-1965. Do not use the old P.O. box, which will soon expire and not be renewed.

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. Try to arrive on time, so that I can let everyone in at once, on months when Tandem has not arranged for a guard.

Meetings are the second Saturday of every month, from 9 A.M. to Noon. The remaining 1991 meetings will occur on October 12, November 9, and December 14.

October 12 meeting and potluck

There was no flea market at Foothill this month, and I didn't find out until the afternoon that Haltek is now hosting them. So Deborah and I slept late and went straight to the meeting.

Attendance was small. Bob Vinisky has moved to Oregon, Jerry Davis had to go to Oregon on business, and a lot of people were just plain missing! Present were David Banoff, Dick Dethlefsen, Pete Holden (a new attendee), Bob Kowerski, Rudy Stefenel, Ken Thomson, Jack Morse, and myself.

Rudy had agreed to trade one of his extra Eagles to Ken for an Osborne 1, as Rudy didn't care which one he gave storage space to, and

Ken wanted the Eagle. Rudy never even got the Osborne 1 home, because while I have an Osborne Executive, every Osborne 1 that's come along either was priced too high or wasn't working. So I traded one of my spare Otrona Attaches (which is even smaller than the Osborne!) to Rudy for the Osborne 1, and it went home with me. Lots of wheeling and dealing here, folks!

Dave Banoff spoke on Lotus 1-2-3 for Windows, complete with comparisons of how long it takes various versions of 1-2-3 on various PCs to load itself, load a spreadsheet, etc. His recommendation was to *never* use Lotus 1-2-3 for Windows on a 286SX system (2 minutes to load it and then load a spreadsheet!). He concluded that the only reason to use Lotus 1-2-3 for Windows would be if you were hooked on the Windows environment and never used anything else, and yet had to keep using your old 1-2-3 spreadsheets and couldn't take the time to import them into Quattro Pro or some competing spreadsheet.

The potluck we had scheduled did not happen. Bill Bradley did not attend the meeting, and there was no answer at his house when we called during the meeting to confirm the time it was to begin. Calls later in the afternoon also went unanswered. Here's hoping Bill and his wife are OK!

November 9 meeting

9:00 Meeting begins.

9:30 No program scheduled. Bring your computers and anything else that you want to show off or ask questions about.

12:00 ECUG meetings ends.

ECUG library

The Eagle Computer Users Group has a library of printed material, including Eagle PC and Eagle 1600 manuals, magazines, and books. Most of it was donated by members, the rest is stuff kept from what shows up in our P.O. box

every month.

This resource has been used perhaps three times in the years I've been maintaining it. I am considering breaking up this collection; if I did so, I would list the contents, so that people could request anything they wanted, and then throw away the remainder. If you feel strongly about this, write and let me know.

Donated by Jack Morse: Eagle Computer GWBASIC/"BASICA" Interpretive BASIC manual and slip case.

Donated by Dave Banoff: *README.DOC*, newsletter of the Orange Coast IBM PC User Group, September 1991.

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.

No software received this month.

For the benefit of Eagle PC and Eagle 1600 users, we present the information on the next page from Ltek, the owners of the rights to Spellbinder and Spellbinder Desktop Publisher.

Users of CP/M and Z-System computers should note that the product described here will not run on their computers. Conversely, owners of CP/M Eagles should be aware that Morgan, Thielmann & Associates also repairs their machines.

Advertisers this issue
Alphabetical by advertiser

Announcing Ltek Print . . .

for the Hp LaserJet II and compatibles

Ltek Print is a powerful printing utility that allows you to automate the production of professional looking documents from plain text files. Print provides this capability with the use of style sheets and powerful page layout commands. By taking a plain text file and combining it with a Print style sheet, you can produce typeset quality documents. Because Print allows you to print a text file with an attached style sheet directly from DOS you can produce documents automatically.

A style sheet allows you to specify all of the format and style information for an entire document in one place, allowing you to design the layout *for each page* without the need to embed those commands within a document. This step makes files easier to read as well as allowing you to save the format for use with other documents to reduce production time. Style sheets also allow you to create custom letterheads, office memorandums, envelopes and many other common business documents.

Print comes with a variety of style sheets on disk so that you can be productive immediately after installation. If you want to create your own style sheets or modify those distributed with the program, you can use Print's comprehensive editor and array of powerful formatting commands. The editing features include but are not limited to inserting, deleting, undeleting, holding, copying, moving, searching and replacing. The formatting commands range in functionality from defining multiple areas, setting margins and columns, importing graphics, to defining the amount of space you want between letters, words and lines. The editing and page layout features are integrated to allow efficient editing of both style sheets and text.

Ltek Print is the premier tool for turning text from word processors, databases, spread-sheets, and electronic mail systems into polished documents. If you want to automate the production of professional looking documents, Print is for you.

Ltek Print for Spellbinder Desktop Publisher and Word Processor Users

In August 1990, Ltek discontinued Spellbinder Desktop Publisher because we felt that it was not adequately meeting the customer's expectations for a desktop publisher. In addition to being character based while the competition was largely graphical, it made extensive use of dot commands for formatting while the competition used menus and point-and-click mouse commands. SDP's strengths simply weren't being appreciated by the desktop publishing marketplace.

Well, SDP is back, not as a desktop publisher, but as Ltek Print, a printing utility. We have taken the technology behind Spellbinder Desktop Publisher and modified some of the features and added new ones. Ltek is offering Print to SDP and Spellbinder Word Processor users at a discount price. Note: Print is compatible with existing SB and SDP files.

We want SDP users to clearly understand that with this change in direction, and the new features in this and future releases of Print, we will continue to support the publishing power that they have with SDP, but also refine and enhance the printing ease and efficiency important to automating the production of laser printed documents. We believe that this is exactly what SDP has always been, a powerful tool for turning text into printed pages.

Ltek Print allows Spellbinder Word Processor users to make full use of their HP LaserJet II without giving up the editing power and speed of Spellbinder. Ltek Print includes a macro file that allows SB users to use Print to automatically view and print directly from Spellbinder. Think of Ltek Print as the ultimate HP LaserJet II printer driver for Spellbinder Word Processor. □

Discount Offer
For Spellbinder Desktop Publisher and Spellbinder Word Processor Users

For a limited time, Ltek is offering Spellbinder Desktop Publisher users the opportunity of purchasing Print at the discount price of $89 and Spellbinder Word Processor users the opportunity of purchasing Print at the discount price of $129. (Discount price valid only for U.S. and Canadian orders and does not include shipping and handling charges).

To qualify for the special discount, you must have a valid Spellbinder Desktop Publisher or Word Processor serial number.

Spellbinder Word Processor 6.10 Application Note

Printing Standard (9.5" x 4") Envelopes With Spellbinder and the HP LaserJet II Printer

Printing standard (9.5" x 4") envelopes with the HP LaserJet II printer involves changing values in the Y and YT Tables. To print envelopes, place the tables listed below at the top of the workspace. Type the desired address (sample below) and issue COMMAND:T/P/FF.

```
.Y 1 90 110 2 0 1 0 65 2 0 1 0 30 5
.YT 0 0 0 0 0 0 0 50 50 38
Publishing Company
555 Desktop Avenue
Hillsview, CA 95555
```

If you want to change the positioning of the address on the envelope, change the following YT Table entries:

ODD PAGE MARGIN	50
EVEN PAGE MARGIN	50
TOP MARGIN	38

NOTE: If the LaserJet is in portrait mode and is switched into landscape mode (as it is with printing with a Landscape font) a page is automatically ejected. To avoid using extra envelopes, print a text page before actually printing your first envelope. This step will only be necessary the first time you print in landscape mode.

Get Version 1.01 Update Free

Ltek realizes that any major release of a software product is bound to have some bugs. Although Ltek tests its software, it is impossible for us to test every configuration that our customers will use. For this reason, any customer that purchases Print 1.00 will automatically receive a copy of Print 1.01 when it becomes available, free of charge.

Ltek Print for the HP LaserJet III and PostScript printers

Ltek is currently selling a version of Print for the HP LaserJet II and compatible printers. In the coming months we will be releasing Print for HP LaserJet III and for PostScript. In order to take advantage of the special features of the different printer types, each printer supported by Ltek requires a separate version of Print. Print will take advantage of each printer's strengths and unique features. For example, the PostScript version of Print will come with mini-programs that allow you to print text in circles, sideways, and at angles.

For a limited time, Ltek will be offering our current users the opportunity of purchasing an additional version of Print for $49.95, for your own use. You will hear more about this offer when we announce the PostScript and LaserJet III versions.

Features Added To SDP to Develop Print

Command Line Printing and Command Issuing

Print allows you to view and print files directly from the DOS command line, returning you to DOS upon completion of the task. The command line feature also allows you to issue the other Command mode commands directly from DOS such as starting Print with a read file or searching and replacing text upon starting Print.

Style Sheets

Print is distributed with a variety of style sheets. These style sheets range in function from letterheads, memos, faxes, and envelopes.

Style Sheet Configuration Program

Some of the distributed style sheets require minor modifications before using, such as the addition of your name, company, address, etc. To simplify the modification process, Print comes with a style sheet configuration program. The style sheet configuration program will walk you through the modifications step by step.

Easier Font Catalog

The new font catalog removes some of the old awkward steps involved in setting up and modifying the catalog. Print allows you to add fonts to the catalog without the time consuming step of typing in the actual filenames. Print does the work for you.

New Installation Program

Print comes with an installation program that guides you through the steps involved in installing your program.

Support for Sub-directories

Print allows you to read files in other directories by including sub-directories in the filename when reading and writing files.

Access Print From Any Directory

You can access the Print program from any directory by simply typing **LP** at the DOS prompt.

Push-ahead Insert Mode

Print uses the industry standard push-ahead insert. When the insert mode is turned on, text typed at the keyboard will appear at the cursor location, pushing existing text to the right.

End of Text Line Scanning

Hitting the Home or Ctrl-S keys will scan the cursor from the beginning of the text line to the end of the text line. The old SDP scan took the cursor from the beginning of the screen line to the end of the screen line.

No Off-end

No more offensive off-end beep!

Save Text Without Losing Cursor Position

The new Write All command allows you to save text without losing your current cursor position.

Recover Deleted Text

Print comes with an undelete command that allows you to retrieve deleted text in a last deleted, first retrieved order.

New Print Format Table

The Y and YT Tables in SDP have been combined to form a Print Format Table (Y Table). Many of the table entries in SDP were unused and so we combined the tables for ease of use. Now, you only need enter the printing parameters in one table. Print still supports the old Y and YT lines that may occur in existing documents.

New Documentation

The new Print documentation comes with complete instructions on using the editing and formatting features of Print. The documentation is in an easy to read 8 1/2" x 11" format and includes print samples for many style sheets.

Support For More Font Cartridges

The following Hewlett Packard LaserJet II font cartridges are supported by Print: font cartridges A, B, D, E, Z, and ProCollection. Note: If you would like to see a particular HP font cartridge supported, please let us know.

Features Removed From SDP in Developing Print

Ltek Print will not be distributed with a spell checker although you may continue to use your current spell checker. Ltek is no longer supporting the SDP macros, however, you may continue to use your SDP macros within Print. The macro programming language remains. The automatic hyphenation commands HA, HM have been removed. Ltek Print does not support the Wyse 700 and the Genius displays. Also, there is no longer a split-screen insert (see paragraph titled Push-ahead Insert Mode).

Features Talked About But Not Implemented

Ltek attempted to increase the SDP workspace in developing Print. We were unable, however, to put this feature into Print version 1.0. We will continue to work on this feature for a future release.

System Requirements

Your computer must meet the following requirements to run Print 1.0

1. IBM PC, XT, AT, PS/2 or compatible computer
2. Hewlett Packard LaserJet II or compatible printer
3. MS-DOS version 3.0 or greater
4. 386K bytes of RAM
5. One of the following graphics cards (or an emulation)
   a. IBM Color/Graphics Monitor Adapter (CGA)
   b. IBM Enhanced Graphics Adapter (EGA), color
   c. Hercules Graphics Card, monochrome
6. Hard disk with one megabyte free disk space

Ltek Customer Support Policy

Ltek provides a written response support policy for the current version of its products. This policy enables Ltek to provide the highest quality of support. In most cases, a product engineer will answer or advise on your support question. Ltek attempts to respond to all support questions within two working days.

To receive support, you can contact Ltek in one of the three ways listed:

■ Mail, send correspondence to:

Ltek, Inc.
Product Support
4546 B10 El Camino Real
Los Altos, CA 94022

■ Fax, our fax number is 415-948-1377

■ Voice Mail, our voice number is 408-496-9554

When requesting product support please provide Ltek with the following information:

1. Name, address and/or fax number
2. Product name, version number, and serial number. Your serial number and version number provide us with important information regarding your product.
3. Computer and printer type.
4. DOS version number.
5. Detailed description of the problem including the steps necessary to reproduce the problem. We must be able to reproduce the problem in order to adequately trouble shoot it. If necessary please send a disk copy of the file with the problem. Sending a disk copy of the file in question assures you the quickest and most comprehensive solution to your problem.

Cut here or photo copy

Ltek Print Order Form

Yes! Send me a copy of Print for the HP LaserJet II and compatible printers.

Name: _____

Company: _____

Street Address _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

Choose your disk size: □ 5 1/4"   or   □ 3 1/2"

□ Spellbinder Desktop Publisher User   □ Spellbinder Word Processor User

Current Serial Number _____
(you can not order print at the discount price without a valid serial number)

Check the price of your Print program and place the cost in **Box 1**:

□ $249 retail price   *(prices valid in the U.S. and Canada only)*
□ $89 SDP users only
□ $129 Spellbinder Word Processor users only

Check your shipping choice and place amount in **Box 2**:

□ $7 UPS Ground shipping *(U.S.)*, $10 UPS Ground shipping *(Canada)*
□ $11 UPS 2nd Day Air shipping *(U.S. only)*

□ California residents please add 8.25% sales tax in **Box 3**:
□ Total the Amount Due in **Box 4**:

To order Print, mail this coupon along with full payment by check or money order *(no Visa or Mastercard, please)* in U.S. funds made payable to "Ltek, Inc." to:

Ltek, Inc.
4546 B10 El Camino Real
Los Altos, CA 94022

Box 1	
Box 2	
Box 3	
Box 4	

Please allow 2-3 weeks for delivery.   Offer expires June 15, 1992.

<u>Services and Systems</u>

PC-CLONE COMPUTER <u>REPAIR & SALES</u> -- On-site or shop
Single user PC's or Multi-user UnTerminal systems.

We service PC-Clone (IBM compatibles) on your site or in our shop.
Support and Configure systems for DR DOS 5.0 & 6.0, MS-DOS 5.0, QEMM 386
memory manager, VM/386 Multi-user and Single-user, & UnTerminal Network.

Samsung PC Systems -- 286-12mhz to 386-33mhz

These systems have proven their reliability to us and our customers.
All MM-xxx systems come with a 1 year on-site service thru US NET.

MM-500-12 $925.00
286-12 w/1meg memory, 40meg HD, DOS 3.3, keyboard, 1.2 floppy, Hercules
board, S&P, Paper White monitor (14")

MM-600-12 $995.00
286-12 w/1meg memory, 40meg HD, DOS 4.01, keyboard, 1.2 or 1.44meg
floppy, built in VGA w/256k memory, S&P, Paper White monitor (14")

MM-610-16 $1050.00
286-16 w/1meg memory, 40meg HD, DOS 4.01, keyboard 1.2 floppy, S&P

MM-716-16 $1235.00
386sx-16 w/2meg mem, 40meg HD, DOS 4.01, keyboard, 1.44 floppy, S&P,
built in VGA w/256k memory

MM-720-20 $1321.00
386sx-20 w/2meg mem, 40meg HD, DOS 4.01, keyboard, 1.44 floppy, S&P
built in VGA w/256k memory

MM-8250-25 $1863.00
386-25 64K memory cache, w/4meg memory, 100meg HD, QEMM-386 memory mgr,
DOS 4.01, keyboard, 1.2 floppy, S&P, desk top case, 200 watt PS

MM-8350-33 $1995.00
386-33 64K memory cache, w/4meg memory, 100meg HD, QEMM-386 memory mgr,
DOS 4.01, keyboard, 1.2 floppy, S&P, desk top case, 200 watt PS

486-33 Tower » *Complete System* « $3062.00
486-33 64K memory cache, w/4meg memory, 120meg HD, DR-DOS 5.0,
keyboard, 1.2 & 1.44 floppy, S&P, IDE HD controller, 230 watt PS,
SVGA board w/1meg, SVGA monitor, built-in Math co-processor

<u>Monitors and boards:</u>
14" Paper White VGA Monitor $160.00
14" Paper White and Hercules type board $168.00
14" Paper White mono and VGA board $275.00
14" Color VGA Monitor $339.00
14" Color VGA and VGA board $445.00
14" Super VGA and VGA board w/512k $495.00
14" Super VGA/Seiko CM-1450/Interlaced/Non-interlaced
    & Super fine DOT Pitch of .26, Monitor & board w/512k $770.00

Morgan, Thielmann & Assoc.   Tel: (408) 972-1965
5141 Pharlap Ave., San Jose, CA 95111