

Saving Our HEATH Eight-Bit Machines!

SETHO JOURNAL

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May, 1988



HEATH COMPANY
20000 N. 10th Ave., Suite 100
Denver, CO 80231

May 11, 1988

Mr. Erik L. Thompson
Editor, The Standard & Star
16 West Branch Road Box 711
West Branch, IA 52256

Dear Mr. Thompson:

Thanks for your nice letter of May 4th.
As you know, Bob Ellerton (of WDC) is handling the H800 3.0 release along with the necessary caveats that must go with it to ensure everyone knows exactly what's there.
It's always our intent to support our products, and our customers, in every way possible... and we fully realize there are many H-8, H-16 and H-16 machines out there still running along productively. They were good horses!
Again, thanks for taking the time to write.

WE/ra
cc: C. Gilmore
B. Ellerton

Sincerely,

HEATH COMPANY
William E. Johnson
President

See pages 5, 6, & 10

MODIFICATIONS, HARD & SOFT!

How To Use The Watzman ROM In A 2732 EPROM

Copyright 1988 by Rick Swenton

106 Melinda Lane
Bristol, CT 06010-7176

Most people upgrade to the HUG/WATZMAN ROM in conjunction with an H19 4Mc/S speed upgrade to take advantage of higher baud-rate capabilities (up to 38,400 baud) and hardware handshake. Unfortunately, the H19 Terminal Logic Board (TLB) uses one of two older-style ROM configurations. The H19A comes standard with an 8332 ROM at U437, or U422 for an older H19. This ROM is a 4x8k device which is compatible with the 2532 EPROM mentioned in Watzman ROM documentation. The 2532 is rather hard to come by and is even harder to find in a version capable of 4Mc/S operation. It is easier to find faster 2716 EPROMs, but you will need two of them and copy the Watzman ROM into them, then reconfigure the TLB jumpers to support this dual ROM arrangement. It makes more sense to adapt the H19 TLB to use a more modern 2732 EPROM. Its' pin assignments are ALMOST the same as the older 2532. Pins 18, 19, 20 and 21 are those which differ. Note: If you leave the jumpers wired as shown on the H19 schematic, you have only to alter jumpers at JP5 on the H19A TLB (JP21 on H19) to use a 2732.

First, remove TLB from computer and cut all existing jumpers at JP5 on the H19A TLB (JP21 on H19). These are 1-2, 4-5, and 2-6 which--is on the board's bottom side. Then connect these jumpers: 2-5 and a wire from 4 to ground (the closest wide foil which runs to a mounting screw pad). That is all there is to it. Now install the MYH19 ROM in U437 (H19A) or U422 (H19) and re-install the TLB. On powering up, listen for one beep (H19 only) or two beeps if an H89/90. If you don't get a beep, check that the OFF LINE key is up, and if it is, check that you didn't forget to plug the speaker connector in on the TLB! Next check that the CRT filament is glowing. If the TLB program ROM isn't working properly, most likely the CRT filament won't glow.

Disclaimer: I do not have documentation for the older H19 TLB. I got H19 data from the Watzman ROM documentation. I do believe jumpers, pin and IC numbers are correct, but I have not yet tested this on an H19. It works properly on my own H19A without problems.

If you use this modification, be sure to use a fast 2732 EPROM. I've used a 200nS version, but I believe a 250nS, or possibly a 300nS version will work. But 450nS EPROMs are too slow to work at 4Mc/S.

If, after modification, your H19 drops characters at higher baud rates you may enable hardware handshake, but that requires changing the CP/M BIOS. (I have no experience with HDOS--sorry!) The H89 is already configured for hardware handshaking. Below are necessary CP/M BIOS.ASM file changes:

```
CRTOS1: CALL    UOS          ; See if UART can take a char
CRTOS1A:JZ      CRTOSB      ; then return flagging BUSY
;
;      IN      H84CRT+6      ; change #1
ANI      10H          ; CTS on?      change #2
JZ       CRTOSB      ; Flag busy if 0 change #3
;
LDAX     D            ; See if any NULLs to send
ORA      A
JNZ      CRTOS2      ; If so, send one
DCR      A            ; else, set READY
RET
CROS2:   DCR      A            ; count this NULL as sent
```

Next, change line at SMSGO: from this

```
SMSG0: DB      CR,LF,LF,0
```

to this:

```
SMSG0: DB      18H,'=',CR,LF,LF,0
```

The BIOS will now transmit the 'ESC=' code, enabling hardware handshaking.

I hope you enjoy the effects of these changes to your H89 as much as I have.

HDOS 3.0 AUTOBOOT

by Bernard L Waltuck

1500 North Dixie Highway
West Palm Beach, FL 33401

HDOS 3.0 is now available and offers certain advantages over version 2.0. These may be the subject of numerous articles to come. But both versions have one very big aggravation for me; that is, on first bootup of the day, I always see: ACTION? <BOOT>! My reaction is: If you didn't want to BOOT, why'd you turn the darned thing on in the first place?!

Several suggestions for altering the HDOS 2.0 boot tracks have been published, but as of this writing, I have not yet seen one for HDOS 3.0. So I did it myself, and here's how you can do it. (Before proceeding be sure you are modifying the boot track on a disc you won't mind unscrewing!)

I used UDUMP--HUG p/n 885-8004--which works in the direct TRACK/SECTOR mode without any noticeable problems (thus far!) with HDOS 3.0, as follows: [Editor's note: You can also use Software Toolworks' SZAP.COM and CP/M to modify HDOS discs!]

1. Locate TRACK 0, Sector 2
2. Enter HEX mode
3. Find bytes 86, 87, and 88, they should be:
CD C4 C27
4. Change these bytes to: C3 F5 25
5. Save the changes
6. Exit UDUMP.

Your disc should now autoboot. Note: If you don't want to type the date, then just enter the day and a <cr>. You don't have to type the whole date; example, to change from 22 to 23, just enter 23<cr>. Or, if that's too much for you, then run 'SET HDOS NODATE' and away you go!

CP/M-80 WORDSTAR-4 KEYPATCH, Etc.

H-89 Journal

On using H89 cursor and function keys with Wordstar Release 4
 Revised Review of CP/Emulator
 Copyright (c) 1988
 R. Kenneth Strum

This is the third installment of my H89 Journal. There's some variation from our original schedule because of Wordstar Release 4 and an updated review of HUG's CP/Emulator-II package. Also, I'll be moving sometime in either June or July so expect your query replies to be slower than you might expect. I'll keep Lenny posted on my current mailing address.

OVERVIEW OF THIS INSTALLMENT

WORDSTAR 4

WHAT YOU MUST DO TO USE H/Z-19 FUNCTION AND CURSOR KEYS

THE EASY WAY TO PATCH WORDSTAR RELEASE 4

THE "BY LABEL" WAY TO PATCH WORDSTAR RELEASE 4

THE ADDRESS METHOD TO PATCH WORDSTAR RELEASE 4

ALTERING KEY RESPONSES

CP/EMULATOR II

PURPOSE

Wordstar Release 4 (described in this article) shows you how to patch the generic version of Wordstar Release 4 so that you can use the function and cursor keys. As far as I know, Micropro is selling only the generic version. You can buy a patch disk, ready to make the alterations I'll discuss here for \$12.50 from SEBHC Journal. The package includes a printed instruction manual, enhanced autopatch file and an assembly source file on disk for altering key responses. The enhanced autopatch file includes a nice ruler line in reverse video. This copyrighted manual and disk offers a lot more information for easy implementation and re-definition of the function and cursor keys.

The CP/Emulation portion of the article is to update material on that program that appeared in an earlier column.

Wordstar Release 4 H/Z-19 function & cursor key patch

The first thing you must do is get the Wordstar Release 4 programs into your particular disk format. I bought my copy of Wordstar Release 4 directly from Micropro in Kaypro II ss-dd format. Heath/Zenith eight-bit disk formats aren't avail-

able from Micropro. I used ANAPRO'S "Emulate" software on my Z-90 to copy the programs to H37 formatted discs. "Emulate" also translates into CDR and Magnolia soft-sector formats.

Next, use WINSTALL (supplied w/Wordstar Release 4) to install the H/Z-19 terminal into a copy of WS.COM. Just follow WINSTALL's directions. I had to use the "-x" option for WINSTALL, and WSCHANGE for it to work properly. While still in WINSTALL, select your printer, page layout margins, available disk drives, operating system (CP/M or ZCPR), and so on.

Now exit WINSTALL and use WSCHANGE on the same WS.COM program. WINSTALL doesn't set up function or cursor keys. You must do that manually. Depending on your requirements there are at least three ways, plus variations, to patch in any changes. The easiest way is to use WSCHANGE'S autopatcher. Only slightly more difficult is patching the changes in by label, or hex code by location address.

One caveat before we actually go through the patch steps: I used Zenith's version of Wordstar 3.3 as my guide for what function and cursor keys do. If you want them to follow another definitions, then leave the "burst" definitions alone. They stay the same regardless of what you define the keys to do. Change the key definitions only.

The easiest patch is WSCHANGE'S autopatch option. One way to create an autopatch file is to use an editor such as NewWord or Wordstar in the nondocument mode, or PIE or TEXT PROcessor to type in and save the listing exactly as shown in Table 3. Name the file anything you want. Type each line exactly as given in Table 3. Each line ends with a carriage return. Once you have the file, call up WSCHANGE and go to the autopatch menu. Select the "read file option". Execute and exit. Your WS.COM has been patched to use the function and cursor keys. Table 1 shows what each key does.

The next easiest way to patch WS.COM to use the H/Z-19 is to use labels. Use WSCHANGE to install the H/Z-19 terminal, and use the "=" option. Follow Table 2 below, type the label at the ":" prompt and then the two-digit codes when the address screen comes up. Don't bother with the other pairs of numbers on the address screen. Just type in the numbers from Table 2 and then type "X" to go back to the "=" option. Type the next label and the codes as before. Continue until you have typed in all the labels. Once complete, exit by saving the changes as explained in the Wordstar Release 4 manual (generally, select "X" on the menus until WSCHANGE asks if you are through making changes, then respond with "Y"). This completes your work--except for testing.

Wordstar Release 4 includes a user area listing as a disk file. I used this to obtain the hex addresses for the labels listed in Table 2. These are the only labels you need alter, once the H/Z-19 terminal type has been selected. Call up the

CP/M-80 WS-4 Patch Etc., Cont'd

hex address through WSCHANGE and type in the response for that label.

What should you do if you want to change function or cursor key responses? Write down what code you want each key to produce. Example: Right arrow key: Control D. Use your technical manual to the H-89 and find the hex code that each function and cursor key produces. Example: f2 produces ESC-T which is hex 1B 54. Next, use WSCHANGE's "change function key" command to browse through the key definitions. The definition will list the hardware code and the current software response. Use the definitions of the hardware codes you looked up earlier to identify the key. Wordstar will not tell you that the key is f2 or left cursor. DON'T CHANGE THE HARDWARE CODE. Just modify the software response according to WSCHANGE's directions. Read the Wordstar manual. The SEBHC JOURNAL patch disk includes an assembly source file which allows quick, and fairly easy change for all function and cursor keys. With this file and instructions provided, you don't have to refer to hardware technical manuals.

Wordstar Release 4 for CP/M is a superb follow-on to New-Word Version 2 and Wordstar 3.3. At about \$100, it is an excellent upgrade. It includes most of the power available in the MS-DOS version of Wordstar Release 4. I'll give a more complete review of Wordstar Release 4 later. Note: This is a high FOUR STAR product.

CP/Emulator II Update

As I suspected earlier, HUG originally sent me an older version of CP/Emulator-II. The updated version has eliminated most of the problems I originally wrote about. The new CP/Emulator-II is much faster than before. The Z100 and H/Z 19 emulation is better. There are two additional programs which greatly increase its' usefulness. One is a serial port utility called TF89. It allows 9600 baud transfer of files from a RS232 port to a PC. The utility even works with non-CP/M machines such as a Tandy 102. Great! There is a RDCPM program which reads H37 48tpi disks to a MS-DOS disk. I did try RDCPM with a IBM PC AT, but couldn't read the 2-90's soft-sector, single-sided, double-density disks. I don't have access to either a Z248 or H150 machine, so the Heath/-Zenith PC clone may work.

I now rate the CP/Emulator II package at THREE STARS, even with the RDCPM problem which I suspect lies with PC-DOS--possibly why TF89 was included with CP/Emulator II.

Table 1 -- Function and Cursor Key Response Definitions

KEY	Code produced	KEY	Code produced
f1	CONTROL D	(These are keypad keys)	
f2	CONTROL P	7	CONTROL R

f3	CONTROL K	8	CONTROL E
f4	CONTROL U	9	CONTROL C
f5	CONTROL N	4	CONTROL S
Erase	CONTROL G	5	CONTROL Q
Blue	CONTROL T	1	CONTROL A
Red	CONTROL V	2	CONTROL X
White	CONTROL B	3	CONTROL F
		0	CONTROL Z
		Enter	CONTROL L

Table 2 -- Labels to Change for Implementing H/Z-19 Function an Cursor Keys

(NOTE: H/Z19 terminal must have been installed before changing these labels)

LABEL	STARTING ADDRESS	NEW VALUE
FUNDLY	0298	1 FF
FUNTBL	029D	See Table 3. Don't type commas.
ERASCR	0386	06 18 45 1B 3D 1B 75
TRMUNI	0386	04 1B 3E 1B 45

TABLE 3
Autopatch File

(NOTE: H/Z-19 terminal must have been installed before installing this auto-patch. You might try installing the patch without typing all zeros after "EXTRA". Just ignore that section--including the word "EXTRA"--and see if it works. Drop me a line at 757 Titus Ave, Rochester NY 14617 and let me know how and if it works.)

```
FUNDLY=01,FF
FUNTBL=03,1B,3F,77,01,12,03,1B,3F,78,01,05,03,1B,3F,79,01,03,
03,1B,3F,74,01,13,03,1B,3F,75,01,11,03,1B
=3F,76,01,04,03,1B,3F,71,01,01,03,1B,3F,72,01,18,03,1B,3F,70,
01,17,03,1B,3F,6E,01,1A,03,1B,3F,4D
=01,0C,03,1B,3F,73,01,06,02,1B,53,01,0F,02,1B,54,01,10,02,1B,
55,01,08,02,1B,56,01,15,02,1B,57,01
=0E,02,1B,4A,01,07,02,1B,50,01,14,02,1B,51,01,16,02,1B,52,01,
02,02,1B,26,02,08,43,02,1B,45,01,15
=00,00
ERASCR=06,1B,45,1B,3D,1B,75,00,00,00,00,00,00,00,00,00,00
TRMUNI=04,1B,3E,1B,45
EXTRA=00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,
00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,
=00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,
00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,
=00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,
00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00
```

[Table 3 is continued on next page]

[Table 3 continued]

[Editor's note: We were forced to truncate most of the above lines so we could squeeze all those characters and zeros in the original disc file to fit our two-column page layout. Trust us, we didn't miss a single thing! Also, we thank this author for submitting his fine articles to us for publishing. We're quite sure that many SEBHC JOURNAL subscribers appreciate what he's done, just as we do!]

BEAT THE SUBSCRIPTION PRICE INCREASE!

SPECIAL... MAY ISSUE SPECIAL... MAY ISSUE SPECIAL... MAY SP

$$--::[[8]]::--$$

Other Staunch 8/89er news: Peter Shkabara, ANAPRO Corp., recently has released several of his software products to the

MAIL BAG, Continued

public domain. These include CLOCK, KRESMOD, PIEPATCH, WAND, and WSPATCH for CP/M, and EPSON for HDOS. These are now in my hands and available for distribution. If anyone is interested, write me and I will send a flyer (reprinted from our issue #7) listing details of ANAPRO's utilities and several which Hank Lotz, myself, and Skip Chamber have written. Skip Chamber produced the OM-DOS clone, which runs under HDOS 2.0.

KIRK L THOMPSON, Editor, The Staunch 8/89er, #6 West Branch Mobile Home Village, West Branch, IA 52358

[By George--Kirk, I think you've done it! We are *delighted* that you were able to convince the folks at Heath Company and ZDS to place HDOS 2.0 into the public domain. And we hope that many loyal SEBHCers were also instrumental in causing Heath and ZDS to release their hold on HDOS. We hope they'll also release all the other HDOS-related software which you listed. If that happens, no telling what'll happen with all those approximately 250,000 "outmoded and obsolete" H/L 8-bit machines and their users! -- ed]

Dear Mr. Geisler,

I use a short MBASIC program,

```
10 LPRINT CHR$(27);CHR$(30);CHR$(7)
   ESC RS n (Vertical Motion Index)
```

```
20 LPRINT CHR$(27);CHR$(31);CHR$(10)
   ESC US n (Horizontal Motion Index),
```

to send ASCII codes to my EXP-400 Silverreed daisy-wheel printer to set pitch and spacing for smaller type called GOTHIC MINI 15. It serves quite well, but it means starting with MBASIC, LOAD "MT", RUN, and SYSTEM just to get the codes into the printer so that I can print CP/M files.

[I think] it would be much simpler to convert the MBASIC "MT.BAS" program to a CP/M MT.COM file, but I have no access to BASCOM to do that job, and no expertise in assembly language programming even of the simplest sort. I think I can copy a simple program and assemble it. Would it be too much trouble to print the .ASM version of the above MBASIC in a future SEBHC JOURNAL?

I also have several MBASIC programs which use the MBASIC IOBYTE for printer access. These programs run ok, but the printer doesn't print because the IOBYTE module hasn't been installed in a CBIOS (I have Magnolia's CP/M 77316 controller board and two 80trk ds drives). All my attempts to patch or employ USER.ASM to install the [necessary] IOBYTE module have resulted in complete disaster. In desperation I called Magnolia and asked if they'd install the IOBYTE module for me if I'd pay for it. I also offered to send them a SYSGENed disc with all of Magnolia's original files on it. But the man who answered my call insisted that my original distribution discs had the IOBYTE and that there was something wrong with my programs. Somehow we were not communicating! [Happens far, FAR too often! -- ed]

I re-read the last paragraph of Magnolia's Operating Manual, page 2.18, "MMS UTILITIES" which said, "See 'CP/M

V2.242 ALTERATION', Section 6, pages 138-9, for information on accessing the IOBYTE from other programs." Again, I took it from pages 138-9 to disaster!

Does anybody have any points or suggestions, or is anyone willing to do the installation job on a disc I provide, for a fee?

DALE CHIDESTER, 1337 E 11th Street, Salem, OH 44460

[Seems to me I've seen other complaints about problems which crop up whenever anyone tries to do Something Very Important with ANY version of CP/M. Is it possible that a guy named Murphy had anything to do with CP/M's development?! All kidding aside, I personally don't know anything about MMS CP/M. And since I'm no whizbang with assembly language (I've been trying to write my own version of SETLP for my Epson LQ-800 printer for two years now), I can't do much more than print your letter in the hope some other SEBHCer can help you. But I do have a shortcut to offer which may be of some use to you. Rather than use your three-step procedure, add this line to your MT.BAS program: (line number) SYSTEM. Now run this modification with the following command string:

```
MBASIC (dvn:)MT<cr> {dvn: means drive name, <cr>
                      means RETURN key}
```

MBASIC will load itself then load, run MT, and exit back to CP/M's ">" prompt. Your printer will now be ready to print at 12cpi whatever you either PIP or LIST to it. Runs quicker than any time you may spend in EDITing your original program. Good Luck! -- ed]

Dear Lenny,

Imagine my surprise as I leafed through the latest issue of BYTE magazine and saw (on page 321) an H89 computer listed for \$179! Hard to believe? You betcha!! But at that price (if it [truly] was what they were claiming) it would be a deal hard to pass up! Curiosity getting the better of me, I called California Digital and was told the following"

"These are new, fully-assembled (by Zenith) H89 computers with serial board installed and configured with hard-sector controllers, and were to be sold with a canned application by an outfit called Carterphone. The only visible difference is that the keypad numeric keys are engraved with application legends useful only to Carterophone customers. [They can be inexpensively replaced by Arkay Engravers, Inc. -- ed] There is no software--including operating system--now being provided for these machines. Also, we do not have any manuals for them, but we are trying to make a deal where we can provide the CP/M operating with a "WordStar-like" application program. We may be able to port software via modem so you can bring a machine up to complete operating potential. We are aware there are many user's groups and newsletters [such as the SEBHC JOURNAL] which provide H89 support; we suggest you contact one of them before buying one so that you're sure of

MAIL BAG, Continued

what you're getting. The base price plus shipping (46 lbs at about \$26) brings the total to just over \$200."

That's it in a nutshell. If anyone wants one, contact the dealer, California Digital, 17700 Figueroa Street, Carson, CA 90248. Order line: 800-421-5041; Technical/California, 213-217-0500. Incidentally, I was informed that it is not uncommon for CD to receive lots of enquiry calls, followed by high sales about a month later. Since the April issue is now on the stands, we don't have very much time to make up our minds. Now, if I can only convince my wife that this is a GREAT Deal...hmmmm? Maybe, if I offered to do the windows?!

LARRY E WORKS, 22253 Brookside, Southfield, MI 48034
PS: Keep the Good Stuff coming!

[Hey, Larry! Looks as if you're doing a proper job of keeping the Good Stuff coming too! I tried to contact California Digital (on a Saturday) while copying your letter onto disc, but got no answer on their 800 number. I'll try later and see what's going on with those babies! And here's another good source of "living ledgends": your local college or university. I've bought several 219s and a couple 289s from the University of Michigan's Property Disposition office for the proverbial "song". How about \$25/ea for "parts" 219s, or \$50/ea for "scrap" 289s or '90s? I'm not about to scrap either of my 8-bit H/Zs, rather I am "expanding our office environment". -- ed]

Dear Len,

When I heard of your publication I decided to subscribe and ordered all the back issues. The whole shebang arrived a couple days ago. The first thing I did was sit down and read every issue from cover to cover--a whole lot of reading! I'm delighted to find that such a publication exists. I am a charter subscriber to REMark, Sextant, and BUSS. Some years back they too were wonderful magazines for we H89ers. [But] today they have all gone sixteen bit and peesee. So the world turns! So we all now [have left to] turn to are [the] SEBHC [JOURNAL] and STAUNCH [8/89er].

You have obtained some great writers for the SEBHC JOURNAL --I was especially pleased to find that Lee Hart is contributing articles. [We don't try to "obtain" writers, they send us stuff on their own! -- ed] He's a great writer, as well as a superb technician and programmer. He has been extremely helpful to me as a customer of TMSI. With the breakup of TMSI, I just do not know where he finds time to do all these things.

I do have a request to make: On receiving the back-issue order, I saw that Vol II #6 was missing. Please send it to me. [Done! -- ed] I don't want to miss a single issue!

And I wish you the greatest success with this publication. You may never get rich, but you should reap great satisfaction from contributions you're making to the 8-bit community.

SAFFORD MAGEE, 234 Oak Street, Audubon, NJ 08106

[Thank you for those kind words! We agree that Lee Hart is a most valuable contributor to the JOURNAL's pages. If Lee had not submitted all those articles to us--and induced several other excellent writers, such as George Ewing and Ross Tobin to contribute also--we wouldn't have been able to do as good a job as we're now doing! We provided the fuel and machinery, and Lee was the spark-plug when the JOURNAL first sputtered into action! Now we are pleased to see Lee is getting TMSI back in action as a sole proprietorship. Maybe One Of These Days he'll send us an ad (which we'll print free, of course) announcing his latest, greatest eight-bit product?! -- ed]

[Editor's note: Whenever we receive written complaints from a subscriber in connexion with non-receipt of an issue, such as H E Polks, above, or (by telephone) James Hamilton, Jacksonville, IL, we check back later by phone before sending a duplicate to find if they've received their copy "in the interim". (This is the main reason we ask our subscribers for their telephone number on the subscription blank!) In subscriber Polk's case, we tried to phone him several times but couldn't get through. Seems that AT&T had a big fire in one of their newest switching centers near Evanston and lots of phones in and around that area were rendered hors'd'combat! When I did get through, friend Polk reported he'd already gotten the copy. He also told me about the fire, news of which had yet not found its way to our TV screen... And according to last night's news, a whole bunch of business and their computers were hit by that communications blackout. The only folks who were getting on almost as usual were those with mobile cellular telephones who could take them into the office. I wonder if any of our subscribers tried using a cellular phone to get online with a bulletin board? If someone was successful with such a lash-up, technical details of how they did it would make a wonderful story for our June issue! (BROAD HINT!)]

Dear Lenny,

Thanks for including my letter regarding 'ADDRBOOK.COM'. I have no objection to your including it with your CP/M-80 CARE package you're putting together.

I'd like very much if your readers will let me know of any particular kind of program they'd like me to write, or what type software they are looking for. It might even be better if readers submit a list of software for the JOURNAL to print and then let other readers accept that as a challenge for writing something. [Why not make it into a contest? -- ed]

If any readers have any interest in C080L, I am available for assistance. If there's enough interest, I could write some articles dealing with C080L. [I'm interested -- ed]

JARED FREEMAN, 600 Ginger Trail, Lake Zurich, IL 60047

[Sounds GREAT! Readers, the ball is now in YOUR court! Send your software lists and entries to us, Right Away! -- ed]

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The CompuMagic Utility Package

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(That's \$40 less than the old prices)

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The CompuMagic Utility Package will make your life easier, too, regardless of what you use your computer for. These programs simply do more and work better than the programs you're currently using. They copy, rename, erase, take directory listings, capture screens, tell you what files are on one disk and not another, and so much more. They don't take a long time to learn and they're not expensive.

The SEARCH program allows you to find any string in any ASCII or word-processor text file without complicated pre-processing or setting up of key-words.

The remarkable \$35 package includes the CompuMagic Utility Package - all 20 programs (plus installation programs) - PLUS the SEARCH programs on your choice of disk formats - soft-sector 5 1/4", 8" CP/M or HEATH Hard Sector - PLUS complete printed documentation.

30 DAY MONEY-BACK GUARANTEE: If these programs don't make your computer easier to use, return the package to us with your comments for a full refund.

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SOME MORE LETTERS

Dear Mr Geisler,

Enclosed please find my check for renewal of the SEBHC JOURNAL and 3 discs.

I enjoy each issue.

Wrote you once before for help with my system dying (II:3, page 9). Your suggestions seemed to clear up the second part of my problem--no longer have trouble getting two beeps and then booting up. I think a part overheats after an hour or so which causes the system or keyboard to lock up, so I STILL need help!!!

Thanks again for your great JOURNAL.

JOHN McWILLIAMS, 1912 Morse St., Houston, TX 77019, phone 713-522-5975

[Dear John, (always wanted to write that!) your problem most likely is caused by--as you described it--HEAT! Somewhere in one of our back issues we described one way to greatly reduce overheating problems. Rather than make you look it up, I'll repeat it here in condensed form:

- 1 - Remove computer cover and disconnect fan power.
- 2 - Dismount fan and aluminium shroud (box) from cover.
- 3 - Get some 3/4-inch wide Scotch-brand masking tape (the kind which comes off after use, NOT the permanent stuff).
- 4 - Get three NEW medium hack-saw blades and fasten them together at one end with a 6-32 screw, lockwasher & nut. Be sure all teeth point toward the bolt end. Wrap bolt end with some masking tape to protect hand and give better grip.
- 5 - Stick a strip of masking tape across back of cabinet top so that it is flush with cabinet back. It's your "stop-cutting guide" so make it nice and tight, and straight.
- 6 - Use ruler or other straight edge and SOFT pencil and draw cutting guidelines extending from slots to masking tape.
- 7 - Lay cabinet top back on some soft material on your workbench with vent slots facing you and masking tape downward.
- 8 - Insert teeth-down hacksaw blades through the left-most slot with 6-32 screw-fastened end facing you and grasp it.
- 9 - Use medium pressure on hacksaw blades while cutting slots one by one down until blade meets masking tape--takes lots of time but it's worth every second! Clear away plastic chips after each cut with a shop vac or equal.
- 10 - Extend FIRST SIX slots to tape, SKIP TWO (avoids cutting fan mount post) then lengthen remaining 28 slots as above.
- 11 - Smooth burrs and chips from all slots after cutting to make job look better and prevent lint or dust from collecting on rough edges. Fair edges to also improve airflow.
- 12 - Locate some spray paint closely matching "Heath grey". Mask out about 1/2-inch around vent slots and LIGHTLY spray 2 coats (1 - 2 hours drying between) to disguise cut areas.
- 13 - Remount aluminium fan shroud, then mount fan so it blows air INTO cabinet, directly cooling power-supply heat sinks.
- 14 - Replace computer top, re-connect fan, close cabinet, and turn on power. Verify fan actually draws cool air into cabinet and warm air exits left slots. Note: Terminal card also runs cooler. Vacuum cabinet interior monthly. Enjoy! -- ed]

Dear Lenny:

This enclosure pretty much wraps up the campaign to save HDOS proper, and has--as you can see! [Heath President Bill Johnson's letter is reproduced on our front page. -- ed]

As you can imagine I am rather pleased with the results of everyone's (myself included) writing Heath and Zenith has achieved. It took a bit longer than I had anticipated, but the unusual nature of our request to fully release HDOS into the public domain was probably the cause of it taking so long to work its way through corporation mazes. I am hoping that Microsoft's release of their HDOS materials will go no less slowly!

I've also enclosed an information copy of our 8/89er software listings which include ANAPRO's public domain releases. [Thanks! I've mailed you some discs and an order. We'll run an advertisement of your stuff in our next issue. -- ed]

Finally, congratulations on the new SEBHC JOURNAL baggie. Please note that we'll continue mailing the 8/89er 1st-class for the foreseeable future, and I'm also reprinting Hank's first two issues to keep up our back-issue stock.

KIRK L THOMPSON, Editor, The Staunch 8/89er
#6 West Branch Mob Hom Vil, West Branch, IA 52358

[Three cheers and an eight-bit bronze star for you Kirk! And the same goes for Bill Johnson! Having worked for an uncountable number of Big Corporations over my last half-century, I was not too sure that us 8-bit machine afficianados could bring about such a major change. But, by George! You gave the effort just that extra bit of push it needed. And about the plastic baggies; numerous subscribers have written and called long distance to express their delight on receiving their JOURNAL copies intact. That alone almost pays for the extra effort and material costs. Now if we can only find a regular "volunteer" we can depend on to work a day or so in our "mail room" (minimum wage, of course), we might be able to get the JOURNAL out nearly on time! (Ah, the stuff dreams of which dreams are made...)

=====

LP NEEDED... HELP NEEDED... HELP NEEDED... HELP NEEDED...

=====

My H17 Wangco Model 82 "flippy" has died and I'm in desperate need of either a replacement or repair. It reads, but don't write to hard-sectored discs. Put it on another Heath system and it's the drive not the controller at fault! Does anyone know of a repair facility near me, or have a similar [40trk, single-sided] drive for sale? I need this type drive to make H/Z-compatible discs for JOURNAL subscribers and other H/Z 8-bit users. Please contact me SOON!

TOM BOHON, P.O. Box 5154, Albuquerque, NM 87185 or phone 505-846-1938 (8am - 5pm) or 505-265-1285 Mountain Daylight Time, evenings.

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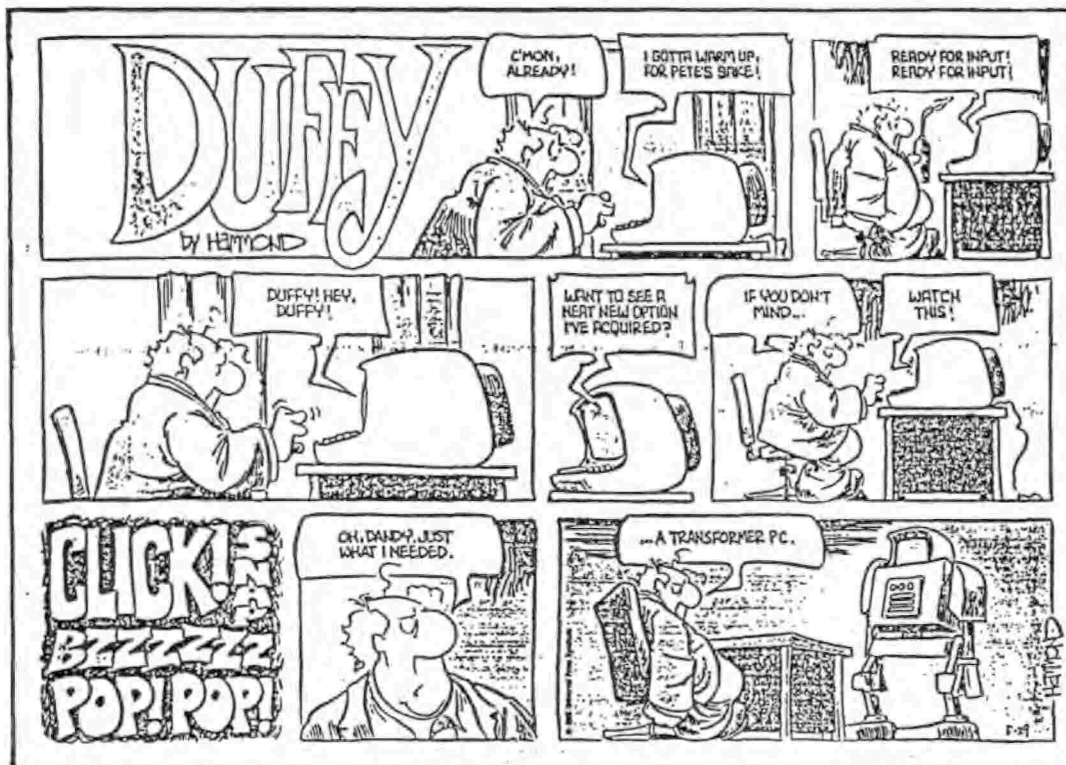
Editor's note: The usual presentation of alpha-numeric conversion tables is numbers first, alphabetical and other characters last. That means one looks for a function/character and then must read backwards! (!sdarwkcab) to find the appropriate codes. But here is the H19 conversion chart with functions and characters FIRST, and then numbers reading in normal left-to-right ascending order. Quicker and easier to find codes for any function or character with fewer goofs!

ASCII To Hex To Octal To Decimal Conversion Chart

ASCII	Hex	Octal	Decimal	ASCII	Hex	Octal	Decimal	ASCII	Hex	Octal	Decimal
NUL	00	000	0	+	2B	053	43	V	56	126	86
SOH	01	001	1	,	2C	054	44	W	57	127	87
STX	02	002	2	-	2D	055	45	X	58	130	88
ETX	03	003	3	.	2E	056	46	Y	59	131	89
EOT	04	004	4	/	2F	057	47	Z	5A	132	90
ENQ	05	005	5	0	30	058	48	[	5B	133	91
ACK	06	006	6	1	31	060	49	\	5C	134	92
BEL	07	007	7	2	32	061	50	]	5D	135	93
BS	08	010	8	3	33	062	51	^	5E	136	94
HT	09	011	9	4	34	063	52	~	5F	137	95
LF	0A	012	10	5	35	064	53	`	60	140	96
VT	0B	013	11	6	36	065	54	a	61	141	97
FF	0C	014	12	7	37	066	55	b	62	142	98
CR	0D	015	13	8	38	070	56	c	63	143	99
SO	0E	016	14	9	39	071	57	d	64	144	100
SI	0F	017	15	:	3A	072	58	e	65	145	101
DLE	10	020	16	;	3B	073	59	f	66	146	102
DC1	11	021	17	<	3C	074	60	g	67	147	103
DC2	12	022	18	=	3D	075	61	h	68	150	104
DC3	13	023	19	>	3E	076	62	i	69	151	105
DC4	14	024	20	?	3F	077	63	j	6A	152	106
NAK	15	025	21	@	40	100	64	k	6B	153	107
SYN	16	026	22	A	41	101	65	l	6C	154	108
ETB	17	027	23	B	42	102	66	m	6D	155	109
CAN	18	030	24	C	43	103	67	n	6E	156	110
EM	19	031	25	D	44	104	68	o	6F	157	111
SUB	1A	032	26	E	45	105	69	p	70	160	112
ESC	1B	033	27	F	46	106	70	q	71	161	123
FS	1C	034	28	G	47	107	71	r	72	162	114
GS	1D	035	29	H	48	110	72	s	73	163	115
RS	1E	036	30	I	49	111	73	t	74	164	116
US	1F	037	31	J	4A	112	74	u	75	165	117
SP	20	040	32	K	4B	113	75	v	76	166	118
!	21	041	33	L	4C	114	76	w	77	167	119
"	22	042	34	M	4D	115	77	x	78	170	120
#	23	043	35	N	4E	116	78	y	79	171	121
\$	24	044	36	O	4F	117	79	z	7A	172	122
%	25	045	37	P	50	120	80	{	7B	173	123
&	26	046	38	Q	51	121	81	|	7C	174	124
'	27	047	39	R	52	122	82	}	7D	175	125
(	28	050	40	S	53	123	83	~	7E	176	126
)	29	051	41	T	54	124	84	DEL	7F	177	127
*	2A	052	42	U	55	125	85				

Bonus, Flip Side

GRAPHICS CHARACTER TO HEX TO OCTAL TO DECIMAL CONVERSION CHART														
Graf	Key	Hex	Oct	Dec	Graf	Key	Hex	Oct	Dec	Graf	Key	Hex	Oct	Dec
♦	0	5E	136	94	▨	i	69	151	105	┆	t	74	164	116
▼	1	5F	137	95	÷	j	6A	152	106	┆	u	75	165	117
|	2	60	140	97	↓	k	6B	153	107	┆	v	76	166	118
-	3	61	141	98	,	l	6C	154	108	X	w	77	167	119
+	4	62	142	99	.	m	6D	155	109	/	x	78	170	120
7	5	63	143	100	!	n	6E	156	110	\	y	79	171	121
J	6	64	144	101	"	o	6F	157	111	-	z	7A	172	122
L	7	65	145	101	#	p	70	160	112	_	{	7B	173	123
r	8	66	146	102	|	q	71	161	123	|	|	7C	174	124
±	9	67	147	103	▴	r	72	162	124	|	}	7D	175	125
→	A	68	150	104	T	s	73	163	125	!	~	7E	176	126
NORREV					NORREV					NORREV				



ONE LAST LETTER!

Dear Mr Geisler,

It was nice talking with you in connexion with the H8 and H9. I found that I do have the X/2-H8 Trionyx board needed for those 64k memory board bank-switching scheme written up in REMark and Sextant. And I also still have the hard-sector disc with the test programs for both HDDS and CP/M. I think it is the original distribution disc. Also, there's another disc which has MTEST2.ASM, MTEST2.COM, WORM.ASM, and WORM.COM on it. Both these programs have been around for a long time.

I don't have any idea of the X/2 board's value. If you've not yet found one, make me an offer. I have all the technical data and other information on how to use it. I even have an assembly manual although it came assembled. To my knowledge, the board was working ok when I removed it.

When we talked about the H9 and you said that the old H-9 terminal had a parallel I/O port on it, I remembered the box full of old parts and boards I had down cellar (basement, if you come from the big city). After I dug out the box and looked through it, I found a number of H9 boards. I have the TPU, I/O, Character Generator, and RAM counter. Some of the chips are missing from the circuit boards, but I think they're standard 74xx series which are available almost everywhere. If you feel these boards are of use I'll give them to you. I even have the old H9 keyboard--hate to throw anything away!

When my H8 is up and running good I have 64k on the Trionyx memory board, and Trionyx soft-sector controller, 280 cpu board, plus their motherboard. Also I have two H17s, 2-782k soft sector drives, an MX-80 printer, and a SigmaSoft Interactive graphic board and controller. The graphic board has 256k memory on it, and the controller has two extra parallel I/O ports. I have the graphics board mounted in the top of my terminal, and I can use it as a RAM drive.

I had wanted to put a NOGDS colour board into my H8, but it seemed a bit overmuch for it--you can get only so many boards in there. Instead, I went with a Commodore. A lot of CP/M stuff for Osborne computers will run ok on the Commodore--for example, the text editor I'm using to write this with.

There's lots of good stuff written for Commodores by hackers, same as for the H8. For example, I just got a program for doing colour graphics in 80-column mode. Commodore said it couldn't be done, just like many things Heath said couldn't be done on the H8. Just say it can't be done, and a hacker somewhere will prove you wrong! My Commodore is quite slow, compared with the H8, but I'm in no hurry...

I like this editor! It just told me I've gone to page 2, line 1. Oops! My screen just jumped to the left about three inches! We must have gotten a power bump. I saved everything and re-booted and the system seems ok.

Back to the H8: I expect to have it up and running again Real Soon Now if the trouble with it is what I suspect, and if that is its' only problem. I have a "new" Heath 280 cpu board for it, plus Quikdata's WH-37 controller and Analytical Product's EMULATE. I'm hoping I shall be able to format some discs which both the H8 and Commodore can read and write to. But if the H8 can only write and the 128 can only read, then I may try going with some kind of modem connection between them--I still like to experiment somewhat. It would be nice to get two completely incompatible computers to talk with each other...

Well, I've rambled on enough for one night. Do keep the JOURNAL coming; I look forward to it every month.

LARRY RIDLON, 10 Enfield Street, Auburn, ME 04210

[Larry, I just found this letter you mailed to me last March buried under a pile of discs I was about to work on with DDEU! One Of These Days, Real Soon Now, I'll Straighten Up My Messy Office! Can you forgive me? And you'll get a phone call from me BEFORE you read this in connexion with that X/2-H8 board. Since I have a Heathkit two-port parallel I/O card for my H8, I don't need the H9 terminal parts, but maybe one of our subscribers will be in touch. In any case, thanks for writing. I hope to receive an article about your success in getting your H-8 and Commodore-128 to talk with each other. Many of our subscribers will be delighted to see that! -- ed]

.....
... HELP WANTED... HELP WANTED... HELP WANTED... HELP WAN
.....

Looking for a copy of the CP/M public-domain terminal program MODEN712.H8 or MODEM7 as it is commonly called. I don't have a CP/M terminal program, so I can't download either utility from a BBS. If anyone has a copy of this or a similar CP/M public-domain modem program, please contact me either here or by mail. Walter J Fonda, 1907 Nicky Drive, Schenectady, NY 12306.

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- * The SEBHC JOURNAL is published twelve times a year and strains to get mailed the 22nd of the month. Editorial deadline: 10th of each month.
- * All advertising is printed free of charge. Vendors will please submit B&W "camera-ready" ad copy, 7" wide by 9" high (one page/issue) no later than the 15th of month in which it's scheduled to appear. All Society members can run one free--new--250-word Want Ad a month.
- * Subscriptions are \$15/year in Canada, Mexico, the U.S.A. and its possessions (all others \$25/yr) and start in month following receipt of application. Please make cheques or money orders payable to L.E. Geisler. Single back-issue copies by special order--allow 6 weeks for processing.
- * Subscribers are automatically Society of Eight-Bit Heath Computerists members. Members' ID# and expiration follows the name on mailing label. The three member classes are: REGULAR (H/Z 8-bit user), ADVERTISING (one vote/vendor), ASSOCIATE (non-8-bit computerist, library, etc.). REGULAR members can vote and hold any Society office. ASSOCIATE members cannot hold office or vote in Society elections. The Society's official meeting coincides with HUG's annual conference; place and time announced in each July JOURNAL issue.
- * The SEBHC JOURNAL is composed, edited and published by L.E. Geisler at 895 Starwick Drive, Ann Arbor, MI 48105. Phone 313-662-0750, 9am - 6pm Eastern Time, Monday thru Friday. Off hours, try 313-769-6052 (home).

SEBHC Journal

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