This is the Year of The Dragon -

HDOS Disc #0 Improved & Revised

NEW: HDOS GAME DISC #1!

Cumulative Index -- Finally!

Details Inside...
READER'S LETTERS

Dear Len,

As an advertiser, I appreciate your policy of free ads for vendors of CP/M-compatible products. As you know, I took advantage of your kind offer last fall, two months running. I haven't sent ads since then because:
1) It takes time and energy to produce good ad-copy
2) Our product mix hasn't changed, so we don't have new products to announce
3) New as well as old subscribers have access to JOURNAL back issues in which our products were reviewed and advertised.

As an alternative, would you consider publishing a monthly listing of companies who still promote CP/M, maybe noting some of the products they offer? I wouldn't mind sending you a postcard each month telling you we're still here. [Sure—consider it a new feature! -- ed]

I have not yet received the diskette you sent, the one with a blurb I could post on BBS's here in Chicago. Want to try again? Or maybe you could send a paper copy. I think your policy of free ads for CP/M vendors should draw some response. [OOPS! I think that disk was one bulk-erased without thinking! A new one is on the way... ed]

Finally, I'd like to compliment Lee Hart for his "who-done-it" article in your January '88 issue. His "How NOT to Fix Delicate, Expensive Equipment" was fun to read, and it passed along some ingenious tips and strategies besides. [Lee will be delighted to read your reaction! -- ed]

The twisted-drive-frame problem he mentioned is one I experienced with my SA-800 8-inch drives. When I started having problems reading the inner tracks, I originally discounted the possibility of a twisted frame. The frames were made of thick steel, and both drives were sitting firmly on top of my IMSAI's case. But when I finally shifted the IMSAI mainframe around, to minimize the possible effect of the swayback in my workbench, the problem disappeared. This was about 8 years ago, and the problem has not recurred.

Thanks again for your lively and useful newsletter.

Ray, I've checked over the software files you sent—thank you very much indeed. I've de-erased the redirect.8rh file—but that's one which will have to wait until after this edition's out the door. It takes me an awful lot of time to put one of these editions together, what with trying to run my analogue computer service business alongside the JOURNAL. But, One Of These Days, Real Soon Now I expect to have someone to help as regular part-time editorial staff and general office assistant. When That Day Arrives, you'll see the JOURNAL getting out the door Much Earlier Than Usual! And I'm Reasonably Sure you'll get the "blurb disc" before you read this. -- ed

Hi Len:

Thanks for another great issue (Feb '88). Have you given any thought to making an index to vol. 1 (or from issue 1 to date)? I'd be glad to pay extra for it, or even have part of a regular issue devoted to it. Or perhaps you could offer it on disc as part of one of your disk packages. You could do it as regular ASCII text files, which readers (users) could access with their favorite text editor.

Strum's forthcoming series looks great! Have you considered editing down some of the letters to make room for more tutorials, product evaluations, etc.?

Hi Len,

Hi Len,

TERRY HALL, Wheaton, IL 60187

Hi Len,

Hi Len,

BOB OLSON, Hemet CA 92343

Hi Len,

I would like to convey my continuing poor experience with Trionyx Electronics Inc. to my fellow SEBHC JOURNAL's readers. Back in 1983 or 1984, when the release of the CHB Universal Floppy Disk Controller was announced, I jumped on it. I think
LETTERS, Continued

of myself as having a little more than a fair amount of patience, but it took me about 6-1/2 months to build the kit version.

Then I sent off a letter ordering the mass memory board for my H-8 and asked if the CH8 could be used with my H-47 system. They responded promptly and told me that it would work under HDOS. But under CP/M I would have to modify the BIOS.

So far so good... I finally got around to installing my CH8 in January of 1987 but without success. I wrote to Mr. Perry asking for suggestions on trouble shooting this board. He sent me a number of suggestions, with the last stating I should send it back to Trionyx for repair.

After a week or two of following my email trace, looking for bad solder joints and triple-checking that the right part is in the correct location, I finally sent the CH8 back to Trionyx (March 1987).

Come June 1987 I sent a SASE to Mr. Perry asking if they received my board and how long they estimated its' repair. They returned my SASE to advise me that they did indeed receive my board and to expect 4-6 weeks' repair time. Well, knowing the past record of Trionyx, I read between the lines and translated that to mean 4-6 MONTHS.

In December of 1987 I sent off a letter asking for the status of my CH8 and placing an order for the Mass Memory Controller card BUT only to make shipment after my CH8 has been repaired. Now its February 1988 and I am still waiting for an answer!

I hope they see this [letter], because I am looking forward to running my H-8 with a memory disk! Although Trionyx has the BEST products for the Heath eight bit world (they even have a connector box to tie an H89 to a 16-bit H8), Trionyx's correspondence with their purchasers is "The PITS!"

I'm writing this up with a few questions for our readers:
1. Will the Magnolia MicroSystems Winchester card (part #77314) take any 20 Meg drive or MUST it be a CORVUS?
2. Is HDOS 3.0 available on any Mid-Atlantic BBS's?

Hope to hear from you soon and Thank You.

ALEX BODNAR JR, C33 Conowingo Circle, Oxford, PA 19363-143

[And thank you, Alex. Now, will our other readers please answer Alex's questions? And how about it, Bill Perry--you folks still in business? If so, send us your 7-inch-wide by 9-inch-high line-copy-only ad for FREE SEBHC JOURNAL inclusion in an upcoming edition. There are at least thirty-five potential customers among our 300-plus paid-up subscribers (myself included) who Really Need or Want your H-8 products! -- ed]

Dear Lenny,

It just keeps getting better! I've just finished [reading] the February JOURNAL. WOW!

In the FOR YOUR INFORMATION department... While looking through a surplus catalogue (government, commercial, etc.) I came across a listing for a Zenith CRT. It was described as a 12-inch diagonal green video display, p/o Heath/Zenith HD/100 microcomputer. It includes an MM1210PS1AU CRT and printed-circuit board with adjustable focus, brightness, vert-size and width. It is NEW with no frame or AC supply and the cost is $12.95. This seems like a good deal for a spare CRT and parts for the '100. [Too bad this tube is too long for our beloved H19/88s! -- ed]

My hat is off to Mr. Henry Fale of QUIKDATA, Inc. After searching for almost 2 years for a copy of MBASIC for HDOS, I found Quikdata, Inc. had one. Although there wasn't any documentation with it, I'm sure I can find it somewhere. Perhaps one of the JOURNAL's readers will have a copy they'd like to sell? Anyway, I can now check out those programs on your HDOS "Programmer's CARE Package" Disc #0 which use MBASIC.

Speaking of discs. Has there been an upgrade to your CP/M GAME DISC #0? While thumbing through Volume II, #4, I read about a program called WOODCUTS.BAS (pp2 & 4). Since I sometimes do a little woodwork I though this program may be of help. I checked my GAME DISC #0 copy and didn't find WOODCUTS on it. If the JOURNAL has an update which includes this program, please let me know so I can send in my disc for the update.

Keep the good "stuff" coming. And a SEBHC JOURNAL 885 sounds good to me. I believe it would nicely complement the JOURNAL!

ALLIE C LINGO, P.P. Box 118, Dierks, AR 71833-0118

[Congrats on your finding a "legal" copy of MBASIC 4.82! If you can't get a "surplus" copy of the manual, I know somebody who'll slip you an "illegal" photocopy of it for a nickel/page or so. What with Heath (and Zenith) abandoning one of their more-popular product lines, this may eventually become the only way any of us can keep our still-working machines going! There probably are a gang of "Legal MENSAS" out there who are ready to lean back in their leather-clad swivel chairs to tell us about all the penalties we may accumulate by ignoring H/Z's copyright notices, but H/Z still has not made any public response to Kirk Thompson's letters! Are you reading us, H/Z? Now, about your HDOS "Programmer's CARE Package" Disc #0 question: Yes, we've revised this disc and have created a companion disc, the "SEBHC JOURNAL HDOS GAMES DISC #1". Both discs sell for $3.00/ea, soft-sector, $3.66/ea, hard-sector. (See our "NEW DISCS DIRECTORY" elsewhere in this issue.) If you or any other reader wants a free upgrade of HDOS Disc #0, send it to us with a US $1 stamp to cover (about half of the) return cost. Or, if you want to get the upgrade AND our new HDOS GAMES DISC #1, forget the $1 stamp and include your cheque to cover GAMES DISC #1 price and we'll upgrade your original disc FREE and send you BOTH discs in the same mailer. How's that for a real, honest-to-goodness bargain?! -- ed]

SEBHC JOURNAL
Volume 11, Number 8, Page 3
Dear Mr. Geisler:

Please find enclosed a check for renewal of my subscription.

And thank you for printing my article on ZCP3 in II:7. I hope your readers found it enjoyable and of some value. If you would like more on the subject of ZCP3 later, I shall be happy to send another report. [Please do! -- ed]

I have been meaning to write an article on yet another speedup modification for the H/189A. This one a friend and I built about six years ago. It's claim to fame is that software patches or changes need not be made (at least, the only program I couldn't run at 4Mc/S was USCD Pascal using p-System) of all the software I've tried. This modification DOES NOT require cutting any printed-circuit traces. Only a toggle switch, costing less than $10 and mounted at the computer's rear, is needed to toggle the system between two and 4Mc/S. Installation shouldn't take more than three hours, even if you have ten thumbs and no fingers! And if you are running at 4Mc/S, the system automatically switches to 2Mc/S when it accesses any hard-sector drive.

I think you are providing a great service to those of us who feel [Don't you mean "know"? -- ed] that the eight-bit world is still alive and well. Keep up the good work, and thanks.

RON EGGEYMER, 2209 N 17th Ave, Phoenix, AZ 85007

[ Ron, check your mailing label on this edition—you're in for a nice surprise! Surely by now you realise that what keeps us at the JOURNAL going is the steady flow of "how-2" or "See Whiz! Look What I Did—Now You Can Do It Too!" articles flowing in from enthusiasts such as yourself. New information is the incentive keeping our subscribers happy and the fuel which keeps their machines Up And Running! -- ed]

Dear Lenny,

It was great talking with you yesterday. Hope all is going well in the "Midwest".

Thanks for holding those H8 memory cards for me. [You are quite welcome! -- ed] You'll find enclosed an IMU for US $79 for 64k of memory cards and one year's extension to my membership/subscription.

What's happening up here [in B.C.]? Lots! My main machine is an H89A with the D-6 Electronics S89 CPU board, H17 inboard dual 273s outboard, and an MX80A running off the serial port. I also have the FBE Spooldisk installed. Quite a lot to cart around when working out of town as I am now. My other H89A—a "stock" machine with 3 H17s (and 2 247s as soon as I get some other things done) and a 3-port serial card with nothing attached—sits at home on my mother's desk running Roots/89. In the "computer room" downstairs in various states of disassembly are a 225 printer, an unbuilt H19A, two H8s, sundry modems, switches, etc. I should also mention the H11A for which I have only USCD Pascal. Anyone out there have a spare copy of the Heath OS (HT-11)?

Those [H8 memory] cards are for me—or a new acquaintance who picked up a working H8 at a swap meet although it has just the CPU and 8k [of memory installed]. I have on hand several H8-4 serial cards, a few H8-5 cassette boards, and an undetermined quantity of surplus memory cards for the H8. Open to offers. Possibly swap for an H8 H17 controller (also willing to buy one).

My current projects are as follows:

a. Using an H8 as a programmable serial switcher - the boxes are fine, but with all the possibilities which I have. ...

b. Programming an H8 or H89A as a security system incorporating the now-discontinued 8SR X10 serial interface...

c. Getting my Prometheus 5 on-line. This is an ancient 5.25-inch hard disk built for the TRS 80 Model I, I'm told. The interface looks like a Western Digital card such as Sigma-soft uses on their system.

d. Adding computerized detection and signalling to my model railway, similar to the CMRI interface described in "Model Railroader" magazine last year.

e. Becoming more fluent in Assembly Language as well as BASIC, FORTRAN, and COBOL. Getting to know USCD PASCAL.

I do have one problem to report. Perhaps you can help, Lenny. My main machine will not print when running CP/M at 4Mc/S using S8910S Version 2.2.10. The machine works fine with CP/M 2.2.04 or 2.2.10 at 2Mc/S, and under HDOS 2.0 at both speeds. Any suggestions?

Keep up your great work on the JOURNAL. Every issue is exciting. Keep those eight-bit machines humming, too. Mine do, all the time.

BRIAL L DOBBIN, 4808 Trafalgar Street, Vancouver, B.C., Canada, V6L 2M9

[Hey Brian! Thanks for the International Money Order! Your subscription just grew another year. And now I've got to dig out those three memory boards, pack 'em, take 'em across the border to Windsor and mail them parcel-post. (If I send that large a package by U.S. Snail it may never get there—especially if it has a customs declaration on it!) As for your "don't print" problem, do you mean you can't send stuff out to LPT: or LST?: I don't have that kind of trouble with my D-6 S89-equipped H89A, just the inboard 40trk double-sided A: drive crashing boot discs every now and then! I do sometimes have problems with the cache memory under HDOS 2.0 when doing a Hoyle & Hoyle QUERY12 SORT routine—then whole gobs of data just vanish into the elsewhen, never to be seen again by mortal eye. How about some of you other SEBHCers getting in touch with Brian, Right Away?! -- ed]

NTED... HELP WANTED... HELP WANTED... HELP WANTED...
ALE... FOR SALE... FOR SALE... FOR SALE... FOR SALE...

H19A with green screen, $100.00 or best offer. Jared Freeman 600 Ginger Trail, Lake Zurich, IL 60047 Phone 312-436-0513, after 6pm CST.

Dear Lenny,

I have moved from my temporary address in Kalamazoo. The new address for me (and TMSI) is:

TMSI c/o Lee Hart
26612 Middle Crossing Road
Dowagiac, MI 49047
Phone 616-782-3980

By the way, I have not received the February SEBHC JOURNAL yet. Has it been sent? [Yes, by bulk mail, but to be quite sure we sent another one first class to your new address immediately on receiving this note. -- ed]

Regarding the letter from Mr. Ridlon in the Dec 87 JOURNAL (printed contrary to your published policy of notifying the vendor first), I STILL have no record of any order from him, he has not contacted me, and he has not answered my letter. You should print a retraction since [to the best of my knowledge] no such order exists.

Regarding the letter from Mr. McFarlane [which] you published in the Jan 88 JOURNAL, I wrote him in mid-January asking for a copy of his order, since I hadn't received anything from my [former] office help on it. On 25 January I received the office records from my old office [in Ann Arbor] and Mr. McFarlane's order was in the delivered stuff. Mr. McFarlane also sent me a copy of his check and order. My old office records verify that his order and check were received in Ann Arbor. I have therefore shipped the Superset to him.

LEE HART for TMSI, Dowagiac, MI 49047

[See, your letter proves that us old-time H/Z 8-bit types are resourceful and ingenious! Keep up the good work. Would you --or someone--take a few step-by-step photos of how you make those hard-sector discs? I think the rest of our hard-sector users would appreciate this kind of hands-on information-I would! We'd be delighted to run your story and pictures in the SEBHC JOURNAL--and of course you'll get a subscription extension as honorarium. Now that "no-name" soft-sector discs are available in bulk for twenty-five cents each, this technique certainly will help cut costs in keeping our equipment up & running. -- ed]

Dear Lennie,

I bought Don Deck's H1000 because I have day-dreamed over the ads for that board for as long as I've seen the ads, and I'm a dyed-in-the-wool H89er! Even though I've had my H89A for six years, I am just now beginning to acquire real programming skills and learn how the computer's guts work.

I don't fancy retracing my learning steps on a newer generation computer—not at my present absorption rate, that is! I really didn't begin to make progress until I acquired Borland's Turbo PASCAL when buying my second (of three) H89s. I heartily recommend this language to all, 'though you should also get "Mastering Turbo PASCAL" by Tom Swan to help you painlessly learn and acquire proficiency in the language.

In my own case I have been able to write a SCREEN program in Turbo PASCAL which you might consider for inclusion in the SEBHC JOURNAL's budding library. Here's what it does:

a. Draws on the screen in normal/reverse graphics using the shifted keypad to position the cursor (including diagonal) with a 25th line help [display].

b. Saves screen to memory upon leaving DRAW mode or within DRAW using Alternate Keypad (a stroke of the RED key).

c. Saves memory to disc or calls File to memory.

d. Prints screen to MPI printer in normal/reverse graphics (doesn't yet intermingle ASCII).
# CUMULATIVE INDEX/Table of Contents

## #1 - August, 1986 -- Premier Edition

- **The Computer Noveice's Choice** -- Lee Hart
  - Fact as fiction; satirical comparison of ibm's peeeece with a standard H/Z-89 (the winner!).
  - Letters from subscribers

- **H89 Scrapbook** -- Dan Jerome
  - Practical Notes on incorporating several different H/Z-89 clock speed modification.

## #2 - September 1986

- **Editor's Comments**
  - Letters from subscribers

- **Earn A Free One-Year Subscription** -- Lee Hart
  - Graphics on the H-89
  - Excellent "how-2" article on producing HZ89 graphics without "Ed-A-Sketch". Illustrated copiously by practical examples!

## #3 - October 1986

- **Editor's Comments**
  - A PIP of a Program (or "Your Obedient Servant") L Hart
  - "How 2" do things you couldn't begin to imagine possible with PIP.COM. A fully-example-illustrated expose of PIP's ins and outs.
  - **SOFTWARE REVIEW -- Write-Hand Man** -- George Ewing
  - Read this, and then buy a copy!
  - **Startup Advice For Novices** -- A. Stapher
  - Recently bought a "previously-owned" H/Z-89/90? Here's how you go about checking it out and getting it to work.
  - **Subscriber's WANT ADS**
  - **LAFFLINES**

## #4 - November 1986

- **Letters from subscribers**
  - A Word From The Editor
  - FILE: AUTO TEXT (Computer Humor)
  - MISCH BITS -- Odd bits, hints, humor, etc.
  - Includes directions on how to make your H/Z-19, '89, '90 run much cooler
  - **SOFTWARE REVIEW -- Checkbook Manager Database** -- A. Stapher
  - A Really Neat Home & Business Checkbook Utility which lets you keep tabs on everything!
  - **SOFTWARE REPAIRMAN -- Chuck Ott**
  - Computer-oriented humorous fiction
  - **OOPS!** -- Lee Hart
  - A page-full of fixes for your suddenly-erratic H/Z-8-bit machine.
  - **PROGRAMMER TIPS (Mbasic Debugging Techniques)**

## #5 - December 1986

- **Letters from subscribers**
  - **Graphics "Easy as PIE" -- George Ewing**
  - Another fine "how-2" tutorial. Who needs Ed-A-Sketch? Lavishly illustrated for novice or skeptical oldtimer alike.
  - **BOOK on a HARD-SECTOR DISK, or On a Clear Disc You Can See forever** -- Lee Hart
  - Intimate secrets of how disc drives and discs work and data is stored on hard-sector discs.
  - **HARDWARE REVIEW -- GRAPHICS-PLUS GP-19** -- Lee Hart
  - A very revealing look at how Northwest Digital's add-on Terminal Graphics Card enhances the H/Z-19 and H/Z-29 terminals plus the '89 and '90. Includes comparisons with Sigma-Soft and Codonics products.

## #6 - January 1987

- **Letters from subscribers**
  - **ELECTRONIC TWO-COLUMN "PASTEUPS" -- L E Geisler**
  - HDOS and CP/M "how-2" article on how to trick your printer into printing two columns of text side-by-side with a center "gutter".
  - **PRODUCT REVIEW -- 19/89 Flicker-Free Kit, 19/89 SuperSet Terminal Upgrade, Terminal Character ROM Upgrade**
  - Details of Technical Micro System's H/219 and '89 hardware fixes to eliminate screen-refresh specks & expand the terminal ROM to four character sets.
  - **PRODUCT REVIEW -- EPSON Printer Retrofit/Upgrade Kit**
  - Describes Düsselhaus Computer Products Dots-Perfect upgrade package for MX and FX printers.
  - **SOFTWARE REVIEW -- TWIST and SHOUT -- Glenn Warren**
  - Describes Spectra Technology's sideways banner utility tried out on an MS-DOS machine for us.
  - **ADDENDUM FOR "A PIP OF A PROGRAM" -- Lee Hart**
  - ACE of ACES (Part one) -- Lee Hart
  - Exciting CP/M Mbasic screen graphics World-War I aerial dogfight game. Runs on HB/H19, H/289, '90 and H/Z-100.

## #7 - February 1987

- **Letters from subscribers**
  - **ACE of ACES (Part two; program listing)** -- Lee Hart
  - Complete CP/M Mbasic listing we didn't have room for in #6. Offered on soft- or hard-sector SEBHC JOURNAL GAME DISC #0.
  - **H/Z-89 CARTOON** by Hart
  - A TINY ASSEMBLY-LANGUAGE UTILITY FOR YOUR PLEASURE! -- L E Geisler
  - CLSASM is a CP/M clear-screen utility which works similar to Jim Texiera's SuperSysMod2 HDOS modification. Clears screen upon your entering CLS<cr>
e. Uses Alternate Keypad for several functions.

I will include the complete source code and a compiled version and any instructions for using it. The biggest drawback is that it will take me all day to shift into graphics mode, and a complete library of Heath graphics characters built into the one that I did for the MPI-99.

Now that I'm the owner of an H1000, I'm interested in the success/failure ratio of other H1000 owners, and would like to see some kind of H1000 special interest group initiated. (I rather fancy the name 'SIG-H-1k' -- ed) It would be quite nice to have a running correspondence with other owners of H-1000s to avoid the trial and error which goes with wondering what will work, what won't, and why [it does or doesn't]. For instance, I've just bought MIX C (for MS-DOS) language, which I'm trying to install--with only limited success--on my '1000. The whole package--Editor, Compiler, and fancy Debugger--only cost $39.95. If I can't get it up and running, it looks so good that I'll probably order the CP/M version. I'm sure that MIX C (which claims 100% full C capability) WILL install on an H89/H90 because it is advertised as one of the standard installation options (I saw it in "Computer Shopper").

Obviously, if I still have an MPI-99 printer, I don't chase after the "Lastest and Greatest" (hardware), and the fact that I went to such great lengths to build my own graphics driver over the course of several years identifies me as pretty cheap. [Not to me, it don't! You are simply conservative, ingenious, and THRIFTY! -- ed] I don't mind spending money on my computer, but by golly, I'll get my money's worth out of it before I chuck it! [You & me both, chum! -- ed] I've just this week finally ordered a 2400-baud modem after five years of 300 baud. So I intend to get used to this H1000, and continue using my other Magnolia-carded H89A. I'll probably continue subscribing to the SEBHC JOURNAL as long as you continue printing it.

ED THOMAS, 4108 Lees Corner Road, Chantilly, VA 22021

[Hey, Eddy! Don't let the clowns bug ya! We've got a long, L-O-O-D-N-G way to travel before our gray boxes gather any scrap-heap potential. Read R K Strum's article--he proves it is cheap & easy to keep your H/Z 8-bit machine humming along! Meanwhile, I'm eagerly awaiting your software "baby". -- ed]
The JOURNAL's CP/M & HDOS DISC-CONTENTS Described Briefly
(See Order Blank on page 15)

CP/M GAME DISC #0

- ACES.BAS (Lee Hart)—World War I aerial dogfight game.
- BLS.COM (Staff)—Cleans screen easier than SHIFT-CTRL-ERASE finger-stretching exercise!
- COPY.COM (from REMark)—Easy to use and smaller than PIP, moves files (incl $SYS files) w/o last changing flags.
- ERRORS.COM (from REMark)—Checks for & lists soft disc errors since last warp boot. Very handy if drives are suspected.
- FOGINDEX.BAS (CodeWorks) Also on HDOS disc, below.
- LABEL.ASM (Staff)—Label your CP/M boot discs and use AUTO COMMAND to display on either cold or warm boot—or both.
- NEWBAD.COM (Pub domain) Non-destructive FINDBAD program to run after FORMAT. Looks out bad sectors on active discs.
- NEWPIP.COM, PIPHELP.ASM, 'HEX (Lee Hart)—Standard PIP but with a help file. See README.1ST file.
- RENAME.COM (from REMark)—Easier to use than resident REN command because it uses English-language command form.
- REMNUM.BAS (CodeWorks)—Does INSIDE* MBASIC to remumber chosen blocks of lines. Serious worker's "Must" utility!*
- SETMX.xxx (from old HUG CompuServe library)—Changes Epson printer fonts from computer keyboard. "Must" utility.
- WOODCUTS.BAS (CodeWorks)—Computes and prints scrapolt cut guide for serious, economy-minded woodworkers.
- XDIR.COM (Genie download)—Lists all files on a disc in 4-column alpha display, displays user areas, file status, file space used & remaining free space. "Help" included.

HDOS 2.0 "Programmer’s CARE Package" Disc #0

- BCH.DVD—Simplified HDOS version of HUG’s KEYMAP.COM. Use with Benton Harbor BASIC as BC.DVD One-key command entry.
- BCH.MOS—MBASIC version. Both programs courtesy of Maurice Desmeules of Montreal, Quebec, Canada HUG.****
- BHZMBAS.BAS—Converts BH BASIC programs to MBASIC format and changes some BH cross-section to MBASIC version. Dr. Wm Campbell.
- BHFILES.BHB—BH BASIC program lets you read directories without exiting BASIC. Duplicates MBASIC "FILE".
- CHECKBOOK.BAS—Computer version of regular checkbook register in MBASIC 4.82. Can work under CP/M. From REM.
- DEVICES.ASM—Checks and displays devices and status on the bootable system disk. Handy if your own memory's weak.
- DISASSEMBLE.COM—Old CompuServe HUG download Works something like ASM, in reverse. No document file, test it on a "junk" file and let us know how to use it!
- EXTRACT.BAS—"CodeWorks" program, self-prompting, extracts stuff from any ASCII file. Must use to appreciate!
- FOGINDEX.BAS—Fine "CodeWorks" program helps you write better English; self prompting, run #before submitting anything to a publisher.
- HC.ABS—(Old CompuServe HUG) Sends H19 or H/289-90 screen to LP: HC.DOC file has instructions.
- MBSORT.ASM—(From pre-BH CIS HUGBB library.) When assembled can be loaded and called from a program. See .DOC file.
- NEWLABEL.ABS—Pat Swayne’s "LABEL.ASM" from REMark with added help file for easier use. Re-labels discs with up to 240 characters/spaces. (INIT only allows 65!)
- OUTLINE.BAS—"CodeWorks" MBASIC programmer's utility, self-prompting, helps you write programs & prints results.
- RENUMBER.BHB—REMark program remumber any BH BASIC program SAVED in standard ASCII format. Similar to MBASIC RENUM function. Self prompting. "Must" BH utility.
- SD.ABS, SD.DOC—(CIS HUGBB) Similar to above CP/M XDIR.COM. Short form prints sorted directory showing space used, flags & space left. Long form shows file creation, last revision dates. Has cryptic help file.
- SEARCH.BAS—"CodeWorks" MBASIC utility, looks for a particular item in an ASCII program file. Self prompting, valuable programmer's timesaving tool. Sends output to LP: SYSPRINT.ABS—(From Maurice Desmeules) prints full-screen graphics display of disc statistics per HDOS 1.6's STAT command. SYSSERR.ABS is "short form" of this utility.
- YNKEYS.BAS—From REMark. Lets you do more with MBASIC 4.82. Appendix to or MERGE in any MBASIC program.

HDOS 2.0 GAMES DISC #1

- BANDITO.BBH (Staff)—Cassette BAS game re-done in BH BASIC. Simulates one-ara bandit. Will run in MBASIC w/few changes. ASCII file. Jazz up "fruits" display & it's a winner! BHZMBAS.BAS (REMark)—Doc Campbell's utility converts BH BASIC program to MBASIC format. Self-prompting.
- CHESS.ABS (Netherlands HUG)—Stand-alone DARMON-type game. Instructions are in CHESS.DOC. Several play levels.
- HEADLINE.BAS (Staff)—MBASIC random sentence generator dup-"National Enquirer" headline style, language. FUNNY! INSULTS.BAS, INSULTS1.BAS (REM w/Staff embellishments)—Another funny language program. More work possible.
- LETTRES.BAS (Maurice Desmeules/Montreal HUG)—A neat FRENCH Language w/graphics program. Can you improve it?
- MICTALK.BAS (Microcomputing/Staff)—More funny stuff! Generates often hysterical simple declarative sentences.
- NOEL.BAS (REMark/M Desmeules)—Nifty version of J. McGraw's animated Christmas graphics program.
- NUMBERS.BAS (REMark/Staff)—Computer-aided instruction graphics program teaches kids simple math. Can be improved.
- WOODCUTS.BAS (CodeWorks)—Cabinet-maker's friend. Eliminates tedious hand-layouts of material cuts for minimum waste.

NOTE: Above discs in ssdd hard-sector or ssdd soft-sector format. See prices on order blank, page 15. Improve any of these programs, send us the new code & maybe earn royalties!
#7 - February 1987, continued
FOR ALL 8-BIT COMPUTER CHEFS -- Staff effort
Two gourmet recipes: Old-fashioned sour-dough bread and Press Secretary Jim Brady’s Genuine Chili Con Carne (sans frijoles). Serves a LOT of folks!
Subscribers WANT ADS 13
SOFTWARE REVIEW -- L E Geisler pp15-16
Spectre Technologies’ new H/2-19,’89 screen graphics utility/toolkit package. Allows the user to create graphic screens of almost unlimited complexity and display them as either static images or as animated slide shows. Also permits saving screens to various EPSON printers. Conclusion is that it’s a very good package at a ridiculously-low price.
YET ANOTHER ASSEMBLY-LANGUAGE UTILITY -- Sigismondo Nebbish pp17
A CP/M program which lets you put a LABEL on your boot disc which is displayed upon cold bootup.

#8 - March 1987
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"MOH BOY--SOMETHING WENT WRONG!" -- Staff 3
Corrections for typos which occurred in previous assembly-language utilities listings.
RENUMBER.BAS -- A Selective BASIC Renumber Program -- pp5-10
Copied from CodeWorks Magazine and modified to run under CP/M. The program is shared which was saved as an ASCII file. A very useful bit of software, gets around an annoying BASIC omission. Complete listing. Modified it runs fine under HDOS BASIC Ver 4.82.
DIVINE PROFIT -- David M Poppe, Arizona Business Gazette 13
A little computer humor makes a day go better!
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Expands program to print a help menu at start of game. (Included in program on CP/M GD#0.)
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A NEW PORTABLE H-89? -- Lee Hart pp13-16
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CP/M TIPS from "ADO> Newsletter" pp8-9
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Titled SETMX.ASM, program gives access to most-used Epson (and compatible) MX-series printer functions.

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An HDOS ASSEMBLY-LANGUAGE UTILITY -- Bernard Helms pp6-8
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TRADE-INS and ODD'n'ENDS
Upgrade your '89 NOW while 8-bit products are still available!

PRINTERS

TI810 "R/O Package" Printer
15" carriage, 150 cps, commercial duty printer, serial interface was over $2000 new, now just $450.

Okidata Microline 82A Printer
8.5" carriage, 120 cps, serial and parallel interfaces. Add $25 for tractor now just $135.

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Single Sheet Feeder for Qume Sprint 5 series BRAND NEW IN BOX. Only $150 if purchased with above printer! over $1000 retail, now just $200

DISK DRIVES

Dual 8" Shugart SA800 Single Sided drives In case, with power supply. Use with MMS 316 Controller or on Z110/120 now just $195.

Dual 8" Tandon TM848 Double Sided drives In case, with power supply. Use with MMS 316 Controller or on Z110/120 now just $395.

30 MByte Winchester Subsystem reduced to just $645.

OTHER STUFF

Serial I/O boards for Z89 overstock our '317 board $35.
2 of 3 ports populated, without DB25 connector cables

Zenith Z89-11 Serial/Parallel I/O board 1 standard (async) serial, 1 synchronous serial, and 1 parallel port as-is $25.

Used Z89 and Z100 Computers, various configurations available Z89 from just $195.
ZW-120-82 Computer $500, Z19 terminal just $95.

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2818 Thorndyke Avenue West
Seattle, WA 98199
(206) 285-7266
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The H-89 series of computers are not for "mainstream computing" as Joe Katz describes peesees. I think that in a few years, the more numerous peesee users will start similar
series when the PS/2 and Mac-II machine types achieve domi-
nation. Peesee users take note: Learn from the H8 and
H89/90 pioneers!

The H-89 can, using the right software tools and hardware
support, perform well as a personal computer for a great
number of tasks. MYCALC for H-DOS or Multiplan for CP/M will
not stand head to head against Lotus 1-2-3. But both MYCALC
and Multiplan will crunch numbers. Rambrandt, a CP/M
program, will take numbers from a spreadsheet and make a
graph. Perhaps not as pretty as Lotus 1-2-3, but very nice
anyway. Also, a four Mc/S 280-equipped H-89, with 19.2KX
terminal setting is a fast machine compared to a 4.77 MHz
8088 peesee. The '89 is extremely fast if it has a RAM disc
(such as the Super Ram 89) installed. The AT class of peesee
will overwhelm the '89 at almost any level of performance
(except if you have to buy one, but don't have the money).

The key to getting best performance out of your '89 is
application programs (tools), vendor support, and utility
(support hardware, operating system, and utilities). There
is a very good selection of all these items for '89 users.
We'll explore some of these tools in the months to come.
First, let's look at two vital support programs that help us
survive in a peesee world.

CPC FILE TRANSFER PROGRAM

CPC, from ANAPRO, is a set of two programs. One formats
DSSD PC-DOS discs on an H-89 with Z-37 disc controller.
The other program is a sweep type program that copies files to
and from both Heath/Zenith soft-sector CP/M and PC/MS-DOS
discs. Powerful stuff. Allows free movement of all types of
files between the two operating systems. Note that you can't
run a MS-DOS program on an H-89. For example, if you have
Wordstar or New Word on your H-89 at home and use them on a
peesee at the office, then you can bring home your work on a
MS-DOS data disc. Use CPC to copy the files to your CP/M
data disc and work away. When finished, use CPC to copy the
updated CP/M file to the MS-DOS disc, then take it back to
work. I've used CPC since it was first announced. It's one
of my most valuable support utilities.

CPC's format program, PCForm, is simple to use. Execute
as: "PCFORM". The program comes up, announces its' version,
(mine is 1.10) and which of the one format(s) available do
you want to use. The currently available format is PC-DOS
2.0 DSSD 48 TPI, with a storage capacity of 360 K. CPC has
the capacity to read many other PC formats. The program
shows side and track being formatted, similarly to PC-DOS
FORMAT. That's it. My PCForm runs under 64 K CP/M-80
(Heath/Zenith 2.2.04) and a 63K z-system on the Super Ram 89.

It doesn't seem to run with less memory. But it also runs
on a plain-vanilla 63K z-system.

The file transfer program is named "CPC". It's patterned
after the sweep and Disk77 programs. Movement of files
across the CP/M and MS-DOS disc formats is very easy. In
moving files you have the capability to:

- Group move (copy) files by tagging them first (what a
  blessing!)
  From MS-DOS to CP/M
  or
  From CP/M to MS-DOS
- Access MS-DOS subdirectories as source (not destination)
- Move individual files
- Erase CP/M and MS-DOS files and subdirectories
- View and print text files
- Rename files
- Debug and adjust disc parameters

CPC will read the following PC disc formats:

PC-DOS 1.0 DSSD 48 TPI (160 K 8 sector)
PC-DOS 1.0 DSSD 48 TPI (320 K 8 sector)
PC-DOS 1.0 DSSD 96 TPI (640 K 8 sector)
PC-DOS 2.0 SDD 48 TPI (180 K 9 sector)
PC-DOS 2.0 SDD 48 TPI (360 K 9 sector) "the standard"
PC-DOS 2.0 SDD 96 TPI (720 K 9 sector)
Eagle 1600 800K 5 sector 96 TPI

Requirements for CPC are: H-89 or H-8 with soft sector
controller. H-37, CDR, and magnolia controllers are support-
ed. CP/M versions for Heath/Zenith 2.2.03 & 2.2.04, CDR
2.91, Magnolia 2.24, and z-system are supported. Both 48 and
96 TPI double sided drives are supported.

CPC is simple to use--just follow the menus. A hint for
its' use: ANAPRO uses the term "move" to denote copying
between CP/M and MS-DOS. Invoke CPC with "CPC". Then,
select the disc type of MS-DOS disc to read from the menu.
Then, when prompted, select which drive will be used for the
MS-DOS disc. You are now at the CPC main menu. It assumes
a MS-DOS to CP/M transfer. If desired select "C" from the menu
and get ready to copy from CP/M to MS-DOS.

CPC has the capability to recover deleted MS-DOS files. I
haven't used that feature so I can't detail its' operation.
According to the CPC manual, it requires some paging through
the MS-DOS disc to find the end of the file you want to
recover. CPC includes tools to locate and isolate the
possible sectors.

Here is a list of CPC main menu commands:

MS-DOS ==> CP/M FILE TRANSFER
B - Back up by one file (also BS & DEL)
N - Next file (also SPACE & RET)
T - [Tag] transfer with same name
## EIGHT BIT SURVIVAL - Continued

R - [Tag] rename before transfer  
U - [Tag] untag  
M - Move tagged files to CP/M  
C - Copy CP/M files to MS-DOS  
V - View the file  
X - Exit (also Q)  
? - More help (also H & ctrl-C)  
F - File recovery  
S - Sort the Directory  
D - Directory display  
L - Log a new MS-DOS disc  
G - Group map  
I - Info on free groups  
J - Set the date and time  
P - Printer toggle  
K - Erase (kill) MS-DOS file  
A - Adjust disc parameters  
% - Toggle deleted files

**CP/M => MS-DOS FILE TRANSFER**

<table>
<thead>
<tr>
<th>Key</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Back up by one file (also BS &amp; DEL)</td>
</tr>
<tr>
<td>N</td>
<td>Next file (also SPACE &amp; RET)</td>
</tr>
<tr>
<td>S</td>
<td>Sort the CP/M Directory</td>
</tr>
<tr>
<td>T</td>
<td>[Tag] transfer with same name</td>
</tr>
<tr>
<td>R</td>
<td>[Tag] rename before transfer</td>
</tr>
<tr>
<td>U</td>
<td>[Tag] untag</td>
</tr>
<tr>
<td>M</td>
<td>Move tagged files to CP/M</td>
</tr>
<tr>
<td>V</td>
<td>View the file</td>
</tr>
<tr>
<td>C</td>
<td>Copy MS-DOS files to CP/M</td>
</tr>
<tr>
<td>X</td>
<td>Exit (also Q)</td>
</tr>
<tr>
<td>P</td>
<td>Printer toggle</td>
</tr>
<tr>
<td>K</td>
<td>Erase (kill) MS-DOS file</td>
</tr>
<tr>
<td>J</td>
<td>Set the date and time</td>
</tr>
<tr>
<td>L</td>
<td>Login new CP/M disc</td>
</tr>
<tr>
<td>%</td>
<td>Toggle deleted files</td>
</tr>
<tr>
<td>?</td>
<td>More help (also H &amp; ctrl-C)</td>
</tr>
</tbody>
</table>

CPC has worked flawlessly for me for nearly a year. It's not complicated. It does just what it's supposed to do. It is an essential package for any H-B9 user who must interface with the peesee world. I rate CPC "FOUR STARS".

## CP/EMULATOR

CP/Emulator is a set of HUG programs that do two things:

1. set up a Z-100 terminal emulator on a PC (ZEmulator)
2. allow CP/M programs to execute under PC-DOS (CPM)

CP/Emulator's virtues include price ($20), 63 K TPA (the memory area where programs execute), partial H-19 graphics support, and for many programs, execution.

ZEmulator alters memory, so be careful. Best to use this in stand-alone mode with CP/M, (that is, don't try to run this package under Windows).

Using CP/Emulator is simple. Set up ZEmulator once in accord with the clear instructions. There's a version for Zenith peseses and one for all others. ZEmulator defines the pessee terminal as a Z-100. This includes the H-19 graphics set. After executing ZEMULATOR, you can run CP/M programs with the command "CPM PROGRAM ARGUMENTS".

"PROGRAM" is the name of the CP/M program you want to run.

"ARGUMENTS" are any command line terms such as switches or file names. The CP/M program will then run.

There are two types of programs that simply won't run under CP/Emulator:

1. Programs that perform a directory on startup
2. Programs that modify or alter (even in memory only) the operating system

For example, you must patch Wordstar or New Word to disable the "Directory on Execution" feature for them to work. Pat Swayne (the author) includes the patch for Wordstar 3.1. New Word users can select "No Directory" with the install program.

Emulation programs usually run slower than the non-emulated versions. CP/Emulator is no exception. On a AT or Z-248 machine, the lag isn't bad.

Sweep programs such as Hug File Manager (HFM), Disk77, and Datsweep won't run, period. Ditto for other programs that automatically make a directory call on startup.

What works best with CP/Emulator? Programs that don't address the directory, don't use overlays (overlays require disc access which slows the program down), and where execution speed isn't important.

The program has paid for itself for me by allowing me to use LONG and LOUD (printing utilities) on a pessee. These very useful programs print banners in large print (using dot matrix printers) and "sideways" (again, using dot matrix printers). I don't use these programs every day, but I've saved money by being able to legally use them on my Z-90 at home and when needed, on my peesee at work. Another program I use, Milestone Project Manager runs fine under CP/Emulator. So, I can use it to help manage my personal and business projects. Rembrandt programs work well under CP/Emulator. I haven't been able to get Thoughtline (an outline processor) to run under CP/Emulator. (Note: I use the programs on one computer at a time, in accordance with the license agreements and copyright laws. If a software company doesn't allow this, I don't use their products.) CP/Emulator has many competitors. This is the only one I've used. The inability to use programs that make directory calls limits CP/Emulator.
EIGHT BIT SURVIVAL - Continued

usefulness. If I could only get Thoughtline and HFM to work...

I rate CP/Emulator "TWO STARS".

EMULATE

Emulate is a program that allows H-8 and H-99 computers using Heath/Zenith CP/M 2.2.03 or 2.2.04 (CP/M-80), Z-System, or CP/M BIOS 2.91 to read other CP/M disc formats. The Heath/Zenith version of H/2-37 controller also has a format capability for those same disc formats!

Unlike CPC, Emulate requires patching or replacement of the standard BIOS. ANAPRO includes several common disc driver combinations ready to replace the standard BIOS. ANAPRO includes support for their four and six MC/S speedup modifications. Patching is needed only if you have customized your BIOS. This is relatively painless since there is a "SUBMIT" type of utility included that will make the patches automatically to your BIOS.ASM file.

The procedure for installing Emulate includes these steps:

- FORMAT & SYSGEN a new disc. It becomes your Emulate master disc.
- Put the following CP/M utilities on the new disc:
  STAT.COM  
  CONFIGUR.COM  
  MOVCPM37.COM  
  SYSGEN.COM
- Copy the Emulate BIOS module from the backup copy you made of the Emulate distribution disc. (You did make a backup, didn’t you?)
- Reset the computer and re-boot.
- Make the BIOS read/write-able with the command:
  STAT BIOS.SYS $R/W <RETURN>
- Erase BIOS.SYS.
- Rename the Emulate BIOS module to "BIOS.SYS".
- Issue the following command:
  MOVCPM37 + BIOS.SYS <RETURN>

Note: The above command will generate a 64K BIOS if you have 64K RAM installed. If you need a small BIOS because you use "overhead memory", then replace the asterisk with the number of K you want the BIOS to be. For example, if I need a 1K overhead for KEYMAP, then I would use the command "MOVCPM37 63 BIOS.SYS".

SYSGEN from the memory image by issuing the following commands and responses:

SYSGEN <RETURN>
<RETURN>
A <RETURN>

Reset and reboot the computer.
CONFUGR to your system parameters.

Your Emulate system disc is now ready to work. And work well, it does. Support includes 48 TPI and 96 TPI drives. There are over forty formats in all. Some of the formats supported are:

Kaypro II SSD
AMPRO SSDD, DSDD, BOTS DSDD
CDR SSDD, DSDD, BOTS DSDD
Magnolia SSDD, DSDD, BOTS DSDD
Osborne I SSD, SSD
TRSO/3 Montezuma SSDD
TRSO/4 CP/M SSDD
TRSO/4 Montezuma SSDD, V1.30 DSDD, V1.32 DSDD, V1.42 DSDD, BOTS DSDD

Emulate works only when you specifically call it up. Otherwise, your system works as normal. When you need emulation, execute with "EMULATE". A menu appears. Choose which drive you want to be which format. Then, exit. If you chose "B" as a Kaypro II drive, then you can put a Kaypro II disc in "B" and read and write to it. You can execute "non-terminal specific" programs from the "B" drive. Whenever you want "B" to be a Heath drive again, run Emulate and chose the "Unpatch" option.

Right now the only limitation with Emulate is its inability to read/write to Kaypro II DSDD format. ANAPRO tells me this is a limitation of the method in which Kaypro used the "side select" feature. They expect a solution in the future. I rate Emulate "THREE STARS".

VENDOR SUPPORT

Vendor support is critical. I relay heavily on ANAPRO and QUIKDATA for the vast majority of my software and hardware upgrades. HUG is an essential support organization, with Pat Swayne as a "Numero Uno" for HUGgies. As we progress through the items I'll discuss vendor support for those items.

APPLICATION TOOLS ARE THE KEY

Despite this month's emphasis on utilities, the true key to survival is using good tools that do what you need doing.
EIGHT BIT SURVIVAL Part 1 End

Those tools might be word processors, spreadsheets, financial analysis packages, banner print programs, etc. Program developers might use Macs, C, Fortran, or Lisp. The support tools have to provide a platform for the application tools. We'll take a look over the next few months at some outstanding tools that will run on the '89.

Some of the application programs (tools) we'll explore:

- "Thoughtline" is an outlining program, designed to be used with a word processor. It uses the Wordstar/NewWord control key sequences. Produces files easily used by those programs. The outlining programs can help a writer home in on a paper's basic points. Thoughtline does its' job very well. I rate it "THREE STARS".
- "Newword" and "The Word Plus" as distributed by ANAPRO was, in my opinion, the best word processing package available. I think it had the right mix of features, performance, and price. The inclusion of "The Word Plus" as a spelling checker weighed heavily in its' favor. I rate it "FOUR STARS".
- "Rembrandt". This is a series of programs that produces business graph charts. It has a driver that allows graphics to be incorporated with wordstar or Newword documents. Particularly impressive. Also, it has utility to read in Ed-A-Sketch files. I rate "Rembrandt" "THREE STARS".
- "Long" and "Loud". Two programs which work separately and give first-class results. Both are simple, menu-driven, and work without modification under CP/Emulator. "Long" allows dot matrix printer users to print "sideways". "Loud" is a banner producer. I rate both utilities "THREE STARS".
- "Milestone". This is a good project-management program which simplifies the Critical Path Method of project management. Generates several fixed reports. Rates "THREE STARS".

CONCLUSION

With ANAPRO'S CPC and Emulate utilities, it's easy to move data to and from the H-89. The other computers can be 16-bit or CP/M machines. "Emulate" also allows you to acquire public domain programs from your friends CP/M machines other than yours. Some vendors sell generic CP/M programs in one format (ex: Kaypro-II). "Emulate lets you buy and use those programs. CP/Emulator allows the limited reverse of CPC-running CP/M programs (including those with H-19 characteristics) on 16-bit systems. Use the right application tools, and the H/289 holds its own against many personal computing jobs run on overpriced 16-bit machines.

***** STAR RATING SYSTEM *****

FIVE STARS - Fulfills promise of powerful, uncomplicated computing and works as advertised. Impossible to lose data. Documentation is superb. Training is included or--better yet--not needed. Price is fair, considering power and usefulness. It's the ultimate Dream Program. I have yet to meet a FIVE STAR program in either MS-DOS or CP/M...

FOUR STARS - Powerful software which lives up to its' advertising. Not as slick as five star program, but stands nose-to-nose with anything similar. Data autosave may or may not be included in the exit routine. Documentation is good, organized for quick access. Little training required and price is fair. Few programs rate FOUR STARS...

THREE STARS - Powerful program which performs pretty much as advertised without undue complication. You may have to make more decisions such as which drive to save on, etc. Useful, though perhaps a bit tougher than four-star version to use. Losing data takes effort, although carelessness may allow you to exit without first saving. Documentation has all the information you need. Little training is required. Price is reasonable for the power and usefulness provided. Really, this is a four star program which is not as highly polished as we'd like. Most successful commercial programs generally fall into this category...

TWO STARS - Here, we really move down a notch. The program is useful, does what it says, although it may not meet expectations. Can, but may not be complicated. Losing data is not easy. Documentation may not be complete, but the most important elements are there. Training may or may not be needed, depending on complexity. If the program is complex, training is needed. Price is high, compared with usefulness and expectations. This is your average program.

ONE STAR - Again, we move down a notch. Program concept is useful, but may not perform as advertised. The program will execute and save data (if data creation is part of its' function). Command structure is awkward, illogical. Documentation may not contain vital information. Price isn't a determinate factor since I won't buy or recommend a ONE STAR program.

NULL DEVICE - Absolute zero. High price, lousy or no documentation, high data loss, etc. NULL DEVICE software is cheap, won't work, or is ridiculously high priced.

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