ZENITH DATA SYSTEMS

(aka Groupe Bull)

OFFICIALLY DUMPS "REMark" Newsletter!

Bob Ellerton, Manager of Zenith Users' Group, gave formal notice to all REMark subscribers that the newsletter's last publication will be the June, 1992 issue. Thus ends fourteen continuous years of outstanding inter-user communications and technical support for a most-loyal computer users' group of individuals dedicated to their Heath/Zenith machines. But Ellerton did say people who have subscribed or purchased a renewal to REMark within the past year will receive a refund based on how many outstanding issues are due them.

Ellerton's announcement won't make REMark readers shout gleefully, but it is far more considerate and honest than the way SEXTANT (another H/Z-only-oriented publication) went out of business. They abruptly folded, no advance notice, or refunds to advertisers or subscribers! (To this day no one has been able to trace the whereabouts of SEXTANT's publsher/editor.)

It's entirely possible there's still hope; Bob Ellerton says there are electronic publications being planned for the ZDS-COM1 bulletin board system (616-982-3956), that current software upgrades, patches, etc., and announcements of developments and changes to ZDS's operation will be made available to any users of the system.

Meanwhile, these publications are still bringing vital information to loyal HUGgies and H/Z computer users:

H-SCOOP/QUIKDATA -- 2618 Penn Circle, Sheboygan, WI 53081-4250;
    ph 414-452-4172. $28/yr (12 issues), $2.95 single copy
"The Double Density Newsletter for Heath/Zenith Computer Support"

The Staunch 8/89er -- Kirk L Thompson, P O Box 548, West Branch, IA
    52358; ph 319-643-7136. $12/yr, $2.50 single copy
"A Six-Issue A Year Newsletter On 8-bit H/Z Computers"

The SEBHC JOURNAL -- L E Geisler, 895 Starwick Drive, Ann Arbor, MI
    48105; ph 313-662-0750. $24/yr (monthly), $2.50 single copy
"Saving Our CLASSIC Heath 8-Bit Machines!"

The Z100 Lifeline - Paul F Herman, Inc., 9317 Amazon Drive, New Port
    Richey, FL 34655; ph 813-376-5457. $24/yr (6 issues), $5/single
"A Professional Journal Exclusively For The Heath/Zenith Z100 Computer"

We strongly recommend that you invest any REMark refund in renewals, or new subscriptions to any--or all--of the above pro-user newsletters. Keep our old-time HUG camaraderie and *esprit de corps* alive and kicking!

READER'S MAILBOX

Dear Len,

The H89 I built in 1981 is now in a landfill somewhere. I couldn't even give it away. So my printer and external floppy drive, along with manuals and disks are gone. It still worked fine, but I needed a more powerful computer. I'm now running a 32-bit machine with SVGA monitor and a printer with graphic capabilities.

Good luck with your 8-bit group, but I think it's a matter of time before all they will all be gone. The kids I know have even more powerful computers than the one I bought in March of this year.

CARL E BERKHEIMER, 521 South Findlay Street, York, PA 17402

[Sigh...So long, Carl; too bad you didn't contact us earlier about wanting to "dump" your H89! Our excellent friend over in Cambridge, MA would gladly have traded several "U.S. Green Stamps" for your hardware, had we been able to publicise your machine before you had it carted off. -- ed]

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BITS, BYTES, BELLYACHES, AND STUMP WATER

Hey, we're printing stuff good enough in the JOURNAL that other newsletters copy and reprint it! I'm referring to our recent article about keeping the area around your disc drives clean, VI:8 pg 4, "An Ounce of Prevention"--to be exact. San Diego HUG's "D&D LITE" reprinted that article almost verbatim in their June 1992 edition.

It's no problem if any Heath group wants to copy stuff from the SEBHC Journal, but, please do give notice where you got it from! Us HUGgies DO have to stick together, don'tcha know?! "'Ole Whitebeard Hissef" often hardcopies some pretty good ASCII in the SDHUG D&D LITE, bits of which we've reprinted in past SEBHC Journals, but always (well, almost always) with due credit given to its' source. We care!

We understand that Bill Johnson (an Honestly Really-Nice Person), is still president of Heath Company. Our mail carrier just dropped off Heath's latest catalogue with a cover which carrys Bill's notification that Heath has essentially dropped all kits and is concentrating instead on expanding their educational products line. So that means that if you bought one of their older EC-packages from the SEBHC JOURNAL, Heath will still accept your finished final exam, grade it, and if you passed, send you an appropriate Continuing Education Certificate which should help you earn a genuine sheepskin union card some college or university of your choice.

Incidentally, Heath is closing out a whole bunch of kits & stuff at pretty good prices, so get on the phone and order a copy of their catalogue which is marked "Prices effective through August, 1992". (Howcome Heath doesn't put a publication date or number on their catalogues? Sure would make it easier to order the correct catalogue!) They also have some respectable volume discounts on "last call orders", so DO IT TODAY! Heath's Customer Service number is 800-253-0570, or contact them on CompuServe by entering GO HTH at any "·" or "OK" prompt.

Woke up the other morning and said to myself, "Hey! Us 8-bit H/Z users are a very special--elite even--bunch of folk. We're generally not rich, nor are we poor, but we do know when we have a good thing in our possesion, and are NOT about to stupidly throw it out, just to make eye-bee-em's purse any fatter. (Did you read that, Carl?!)

Methinks that I shall energetically urge and pursuade all our subscribers to write us their reasons for buying, KEEPING, and continuing to use what prepy and yuppy snobs refer to as 'obsolete junk'. One lady H89 user/new subscriber recently told me, "I bought three H89 kits because I thought Heath Company was to be there forevermore!" Did you not feel the same as she when you bought your H/Z 8-bit engine? Certainly I did!

We don't need any more sad tales of sorely misguided individuals tossing their old grey boxes in some stinking, local landfill because they can't see any future "collector value" to these machines. Call me pig-headed, call me stingy, call me stuck in "them good old days" if you want to, but you'll see me still loyally using my 8-bit machines as long as they can be made to function (or be repaired), for as long as I'm able to pound their keyboards!

Don't get me wrong; I have a fine Heath 120, and scads of Heath/Zenith 16-bit software. My H120 runs MS-DOS Ver 3.1 quite well since installation of Paul Herman's upgraded monitor IC and some other goodies. It's a very good machine to work with, but it just doesn't have that "I Really Mean Business" keyboard feel which both my 8-bit machines have. Also, it has a bilious green CRT! I see red splotches everywhere when I look away after several hour's work. Give me that good old H/Z 8-bit WHITE phosphor any time! (I'd like to put in Paul Herman's "Really Super Colour System" and replace the yucky green CRT with a full colour tube, but from whence comes the necessary time, and--especially--money?!)

I'm still hovering above the Z100 I bought surplus a while back. Can't seem to get the 10Mb hard drive to boot up. And I tried disconnecting all hard-drive stuff and boot from a standard Z100 distribution disc copy, but it still won't communicate; just hangs there, sucking up Detroit Edison's juice! If I'm ever able to get it working properly, I shall make it into our SEBHC BBS node, some day Real Soon Now....

--::<<[[8 BITS 4-EVER]]>>::--

The +55+ GANG, Part Four

by Leonard E Geisler

Last month I had you sysgen a couple of systems discs, on each of which we'll now install useful programmes. These are: EDIT.ABS, BASIC.ABS, and LP.DVD, plus some other handy utilities.

EDIT.ABS is a very primitive text editor which you can use for a lot of things, provided you are willing to spend time learning how to use it. When I first got into computers, I built up an H8 which used Heath's cassette-based operating system which included early versions of ASM. (HASL8), ED., and BASIC.ABS and was really pokey to run. But I was able to do a lot of text work with ED, wrote letters and instruction manuals, plus other job-related things. When I installed the H17 disc system in my H8, the distribution discs contained essentially the same operating system, but it worked a lot faster, and most of the programmes had been greatly improved and upgraded. But EDIT was still pretty much the same as ED. Later, if we have room in this edition, I'll include some instructions on how to successfully use ED (if there isn't room, there's always next month).

I'm still assuming that you have only the single internal 40-track hard-sector drive. If you were lucky and have gotten a machine with two half-height drives replacing the original full-height, or with an external H17 pair of drives, your work can go a lot faster. For one thing, most half-height drives the original owner of your machine installed can read from or write on both faces of discs. Double-sided drives allow you to store much more data on discs, typically twice as much as a single-side 40-track disc, and four times more on a double-sided 80-track disc. Regardless of how many drives you have, I shall proceed as if your machine has only the one single-sided drive. You should be able to work out the rest of this exercise to fit your existing hardware if it isn't the single-drive setup.

Boot one of the two system discs you made last time. Use the one labeled EDIT.ABS BOOT DISC. Note: If the drive LED stays lit and nothing happens after the BOOT<CR> entry, tap the space bar a few times. This tells HDOS what your terminal baud rate is, and BOOT continues from that point. Once BOOT has concluded and the system prompt (>) appears, enter the DIR/S command. You should at least see these thir-teen necessary files listed:

DIRECT	.SYS	HDOSOVL0.SYS	PIP	.ABS	SYSCMD	.SYS
FLAGS	.ABS	HDOSOVL1.SYS	RGT	.SYS		
GRT	.SYS	LP	.DVD	SET	.ABS		
HDOS	.SYS	ONECOPY	.ABS	SY	.DVD		

It is possible that you may also see a file named HELP. or one named ERRORMSG.SYS in the directory. If you don't, not to worry, your system will work o.k. without them for now.

Plow ahead and you'll be just fine.

Find your backup copy of the HDOS 2.0 OPERATING SYSTEM DISC and enter: ONECOPY<CR>. After onecopy's prompt (:OC:_) appears, enter: EDIT.ABS<CR>

ONECOPY will take you through a brief disc swapping flurry which will end with EDIT.ABS appearing in the EDIT disc's directory, and you should see at least 150-170 sectors listed as free.

Now exit HDOS with BYE<CR> and put the disc labeled BASIC.ABS BOOT DISC in the drive. You may have to hit the space bar a few times to finish the (re)BOOT routine. Again load ONECOPY and tell it you want BASIC.ABS copied from the HDOS 2.0 OPERATING SYSTEM DISC. Check the BASIC disc's directory to see if it "made the trip" ok, and to see how much space you have left on this disc. Because BASIC.ABS is bigger than EDIT (42 sectors versus 16), you'll probably find about 144 free sectors, which is enough room for saving a small BASIC program while you're working on it.

Now that you've made two working boot discs (EDIT and BASIC), you may proceed to use the same techniques for them to make that other boot disc for ASM.ABS. But let's just go to the next phase, learning more about HDOS before you try to do anything with EDIT or BASIC (or ASM, for that matter).

First we'll deal with the DO NOT DO items:

* DO NOT give any file a name containing more than 8 letters or numbers in any combination. And the first character in a filename MUST NOT be a number.
* DO NOT try to put more than three letters or numbers in a filename.ext (extension). Only the first three .EXT charact-ers register with HDOS, all extra characters are ignored.
* DO NOT try use any "forbidden" characters in a file name; HDOS WILL BALK AND MAY ERASE YOUR FILE! The characters are:

    ! @ # $ % ^ * ( ) - _ = + " ' : ; < > , . ? / ¦ } { ' ~

Now the DO items:

* DO make up filenames which tend to describe the file's contents. Examples: CHAPTER.ONE (or CHAP1.TXT), BANDIT.BAS (or ONEARM.BAS), COMPUTER.PGM, etc. This names protocol can help later if you make revisions and want to keep track of progress. Also, there are several common conventions for filename extensions, and it's a good idea to follow them as much as possible. Here is a list of the most common exten-sions:

    .ABS -- Absolute binary machine code
    .ACM -- Assembler-common subroutines
    .ASM -- Assembly-language source programs

+55+ GANG Part 4 Continued

.BAS -- BASIC programs
.DAT -- Data files
.DOC -- Documentation (how-2 instructions)
.DVD -- Device driver subroutines
.FOR -- FORTRAN source programs
.PAS -- PASCAL source programs
.REL -- Relocatable programs
.SYS -- Operating system programs

The reason for using these extensions is that HDOS obeys a filename extension argument (or rule) which makes it easy for you to run programs which are stored on disc in files. Programs can be written in assembly language with EDIT.ABS, stored with an .ASM extension, then later be translated into machine code and stored with the original filename, but with .ABS as the extension. For example, EDIT originally started out as EDIT.ASM and became EDIT.ABS upon being assembled. HDOS will recognise and run EDIT.ABS if you enter EDIT<CR> on the keyboard, but if you had typed EDIT.ASM<CR>, you would have gotten an error message because of the .ASM extension. Also, HDOS runs only Absolute Binary Machine code "barefoot"; that is, a program with a .BAS extension must first be loaded into the BASIC interpreter, the HDOS understands and run it.

For now, let's learn a bit about how EDIT works, and how to make it work for you "without pain". To begin at the beginning, when you invoke (a fancy word meaning "load & run") EDIT, it transforms your computer into a very powerful typewriter. This typewriter lets you write text, and its' powerful editing capability permits you to create error-free text and organise it any way you desire, even though you may not be the world's most outstanding typist.

EDIT has many uses. You can use it to enter and edit assembly language programs, BASIC programs, create reports and letters, write manuscripts, and edit all of them as required. Edit also lets you use TABs anywhere in a body of text so it will have a uniform and professional appearance. This allows you to create organised tables of information which stand out from the rest of text on a page. EDIT is versatile; allows you to transfer text stored in computer memory --from an area called a "buffer"--into a disc file. You may also read into EDIT text previously stored on disc which lets you work piecemeal on large text files, much the way those terribly expensive peesee machines do (but MUCH cheaper).

EDIT has:
    15 commands for text-editing versatility
    Terminal control of output and input operations
    Command completion and command error analysis

EDIT supports the entire 96-character ASCII character set, including lower-case characters, Form-Feed, and TAB. You may enter text and commands in lower case. EDIT does not let you use any other control characters within text except these

two: TAB (CTRL-I) and Form-Feed (CTRL-L). (But you can get around that prohibition; I'll explain how later.)

EDIT has two modes of operation called the "Command Mode", and the "Text Mode". These two modes can distinguish between editing commands and text being entered from the keyboard.

The Command Mode:

This mode is subdivided into three area: input commands, output commands, and editing commands. You execute all commands by typing the appropriate one on the keyboard, followed by the RETURN key (hereafter shown as <CR>). Remember to press only the RETURN key whenever you see <CR>. The Command Mode prompt is a double dash (--) in the first two columns (or character spaces) of the screen. The prompt appears thus after every command has been entered and completed with <CR>. It also appears after every complete line of text while in text mode.

The Text Mode:

This mode lets you add text to the buffer from the keyboard--the usual souce for most text. In practice, you type your text on the keyboard, just as you do on a typewriter. The difference here is that there's no paper use until you have finished a job and send it from disc file to the line printer. Once you have created a source file, you can store it in a disc file. Later, you can use that file as a text source to be read into the buffer.

When you're finished typing and want to return to Command Mode, enter a <CR> then a CTRL-C. This saves the last line of text, then puts EDIT into Command Mode. Note: If you do not enter <CR> at the end of your last text line, EDIT simply discards the line. This may cause you to tear at your hair and utter horribly anguished cries.
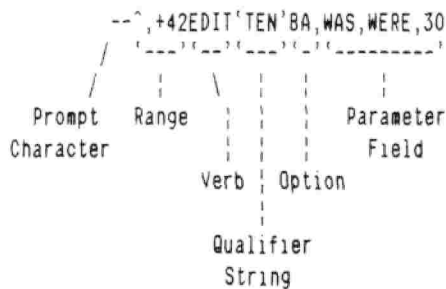
EDIT's Command Structure:

Unlike expensive text or word processors which use the top row of keys (special function keys), EDIT recognises commands typed in at any double-dash (--) prompt and are of this form: [<range>] [<verb>] [<qualifier string>] [<option>] [<parameters>].

RANGE indicates what buffer lines the command affects; the VERB is the basic command. The QUALIFIER STRING limits the command to those lines containing a given string, and the OPTION lets you view the line before or after (or both). The PARAMETERS (parameter field) contains specific instructions for some commands.

Sounds confusing, doesn't it?! But there's an example of a typical command at the top of the next page.

MORE "+55+ GANG"

A command structure example:

```
        --^,+42EDIT'TEN'BA,WAS,WERE,30
       /  '---''--''---''-''---------'
      /      |    \  |  |    |
  Prompt   Range  |  |  |  Parameter
 Character        |  |  |    Field
             Verb |  Option
                  |
              Qualifier
               String
```

Translated, this means:

"Edit all lines between the first line (^) and line 43 (+42) containing the word TEN by replacing a maximum of 30 times the word WAS with WERE and display the line before and after each replacement."

Note that the EDIT string used in the above example range expression or qualifier string must be enclosed in a single quote mark (' and ').

Range Expressions:

Range expressions define buffer lines on which the command is to operate. They may define a single line, or two expressions may be used to define the working range of the command.

A range expression may consist of:

```
    A line expression
    A multiple-line expression
    A null
    A blank
    An equal sign
```

Text must be in the buffer befor EDIT will accept a range expression.   If it isn't, EDIT sounds the terminal bell (beeps). The different range expressions are defined below:

SYMBOL	SPECIFIES
^	The first line (^ is SHIFT-6)
$	The last line
+n	The "n"th line beyond current line pointer
-n	"n"th line preceeding current pointer
+'string'	1st line in text buffer beyond current line pointer containing designated 'string'
-'string'	1st line in text buffer preceding current line pointer which contains designated 'string'

EDIT has a "pointer" which is always pointing to some line of text. After you've inserted text or invoked a text file, the pointer always points to the first line of text. Various range commands are used to reposition the pointer. Once you have used a range expression to specify a line, EDIT reposi- tions the current pointer at the line indicated by the range expression. Here's an example of how this works as you type in the following text:

```
--INSERT <CR>
THIS IS THE 1ST LINE <CR>
MARY HAD A LITTLE LAMB <CR>
THIS IS THE 3D LINE <CR>
ITS' FLEECE WAS WHITE AS SNOW <CR>
THIS IS THE 5TH LINE <CR>
AND EVERYWHERE THAT MARY WENT <CR>
THIS IS THE 7TH LINE <CR>
THE LAMB WAS SURE TO GO <CR>
THIS IS THE LAST LINE <CR>
^C                          (you just typed CTRL-C)
```

Now type (at the prompt symbol):

```
--+1PRINT <CR>
```

EDIT repositions the pointer from the 1st line to the 2nd line and prints:

```
MARY HAD A LITTLE LAMB
```

The pointer is now positioned at the 2nd line, so entering the command:

```
--+1PRINT
```

tells EDIT to reposition the pointer to the line which is one line past the current pointer and print that line:

```
THIS IS THE 3RD LINE
```

From this you can see that once you have specified a line, future range commands should take into account the distance from the current pointer to the line you want to manipulate. Now let's assume you haven't done anything else and the buffer still contains lines starting with "THIS IS THE 1ST LINE" and "THIS IS THE LAST LINE". EDIT responds as shown below to these range commands:

```
--^PRINT <CR>
THIS IS THE 1ST LINE
--$PRINT <CR>
THIS IS THE LAST LINE
--^+2PRINT <CR>
THIS IS THE 3RD LINE
--^+'FLEECE'PRINT <CR>
```

STILL MORE "+55+"!

```
ITS' FLEECE WAS WHITE AS SNOW
--$-1PRINT <CR>
THE LAMB WAS SURE TO GO
--$-'EVERYWHERE'PRINT <CR>
AND EVERYWHERE THAT MARY WENT
--
```

Got it? If you haven't figured it out yet, run through this exercise several times until you see what's going on; it really isn't that difficult to grasp...and practice makes you perfect!

Multiple-Line Expression

Use a multiple-line expression when you want to define a group of lines to be operated on by the command. Use the comma as a delimiter to separate the start line from the stop line. Symbols ^, $, +, +n, -n, +'string', and -'string' have the same meanings as they do with a single-line command. You may use a wide range of combinations to identify the first and last lilnes of a multiple-line expression. For example, you could print the contents of the previous buffer using any of these commands (go ahead, try 'em):

```
--^,^+3PRINT <CR>
------------------

--^+2,+3PRINT <CR>
------------------

--^+'FLEECE',+1PRINT <CR>
-------------------------

--$-'THAT',+'SURE'PRINT <CR>
----------------------------

--$-'THAT',+2PRINT <CR>
----------------------------    Did you see how they work?
```

The BLANK (as a command):

When a command verb is preceded by a single blank (space), the range is the entire buffer. For example, to print out the entire buffer from the text on page 5, you may enter this command:

```
-- PRINT <CR>
   ^
   |          <-- Note that there's a space between "--"
   !              and "PRINT" which you make by pressing
                  the space bar only once.
```

The NULL (as a command):

The NULL expression (absence of any range expression) tells EDIT to apply the command to whatever text is indicated by the current line pointer. The current pointer position is unchanged. For example:

```
--^+2,+'FIFTH'PRINT <CR>
```
makes EDIT print out this:
```
THIS IS THE THIRD LINE
ITS' FLEECE WAS WHITE AS SNOW
THIS IS THE 5TH LINE
```
and
```
--PRINT <CR>
THIS IS THE THIRD LINE
```
tells EDIT to print the current line. Note there is no BLANK between "--" and "PRINT"

In both examples the current pointer position remains unchanged. Go ahead and experiment a little with these and the other command examples below:

```
--^+2,+1PRINT <CR>

--,+2PRINT <CR>
```

The EQUAL (=) sign as a kind of command shorthand:

Example:

```
--$'MARY',+'GO'PRINT <CR>    makes EDIT print this:
AND EVERYWHERE THAT MARY WENT
THIS IS THE 7TH LINE
THE LAMB WAS SURE TO GO
```
and this does the same:
```
--=PRINT <CR>
AND EVERYWHERE THAT MARY WENT
THIS IS THE 7TH LINE
THE LAMB WAS SURE TO GO
--
```

The VERB command:

The verb specifies desired action to be taken by EDIT. For example, commands PRINT or EDIT are verbs within the text editor's vocabulary.

All verbs are command-completed. When EDIT gets enough characters from the keyboard to know that only one command is possible, it prints the balance of the command without more keys being struck.

A verb is refused if it's not valid for the current EDIT condition. If you enter a letter P and the buffer is empty, the command is summarily rejected. But if there is text in the buffer and you enter a P, EDIT knows that no other command begins with P, so EDIT instantly completes the command, PRINT. (BASIC.ABS also completes commands.)   [GOTO page 7]

+55+ WINDUP--FOR NOW....

The Qualifier String:

   This may be added to a Command String Range Expression and is used to cause EDIT to print only strings from the buffer which contain certain words. The word is indicated by being enclosed in single quotes, and includes all normal ASCII characters with the exception of the single quote ('). For example, if you want to see all lines from the above example which contain the word (or string) LINE, you'd enter this command:

```
-- PRINT'LINE' <CR> (The _underline means a blank space)
THIS IS THE 1ST LINE
THIS IS THE 3D LINE
THIS IS THE 5TH LINE
THIS IS THE 7TH LINE
THIS IS THE LAST LINE
```

The Option Field:

   This field contains command characters which let you view a line to be worked on, or the line after it has been reworked, or both. It has three forms, described below:

```
B......  BEFORE option. Displays line before command exe-
cution.
A......  AFTER option. Displays line after command execu-
tion.
BA.....  Displays before and after command execution.
```

   Here's an example of how the BA option works: Assume you had typed the word RED in place of WHITE in one of the previous lines and you want to change it. Enter this command string:

```
--^+'RED'EDITBA,RED,WHITE,1 <CR>
ITS FLEECE WAS RED AS SNOW       (before change)
ITS FLEECE WAS WHITE AS SNOW     (changed)
```

The PARAMETER FIELD:

   This special field is used with EDIT's, NEWIN, and NEWOUT commands, and is discussed further along.

INSERT:
   This command puts EDIT in the text mode and is used to add text to the buffer from the keyboard. Text is added on the next line following the first line in the range expression. (Confused? So am I, a little, but if you hang in there, I'll give you some working examples....)

```
   Example one:
-- PRINT <CR>
THIS IS THE FIRST LINE
MARY HAD A LITTLE LAMB
```

```
THIS IS THE 3RD LINE
ITS FLEECE WAS WHITE AS SNOW
THIS IS THE 5TH LINE
AND EVERYWHERE THAT MARY WENT
THIS IS THE 7TH LINE
THE LAMB WAS SURE TO GO
THIS IS THE LAST LINE
--                       (enter this command:)
--$INSERT <CR>
THIS IS AN ADDITIONAL LAST LINE <CR>
<CTRL-C>                 (finish it with CTRL-C)
--                       (enter another line:)
--^+'5TH'INSERT <CR>
THIS IS A NEW LINE INSERTED AFTER THE 5TH LINE <CR>
<CTRL-C>                 (and another CTRL-C)
--                       (let's take a look:)
-- PRINT <CR>
THIS IS THE FIRST LINE
MARY HAD A LITTLE LAMB
THIS IS THE 3RD LINE
ITS FLEECE WAS WHITE AS SNOW
THIS IS THE 5TH LINE
THIS IS A NEW LINE INSERTED AFTER THE 5TH LINE
AND EVERYWHERE THAT MARY WENT
THIS IS THE 7TH LINE
THE LAMB WAS SURE TO GO
THIS IS THE LAST LINE
THIS IS AN ADDITIONAL LAST LINE
```

   See how it works? Remember, always enter <CR> before typing a CTRL-C. That properly terminates the line which you'd just entered into the buffer.

   There are several more commands which we must discuss before ending this too-brief lesson, but they take more space than we can spare. Therefore, practice with what we've given you thus far.

How to get out of EDIT without switching off your computer

   To end your practice session without saving your work to a disc, just type BLITZ<CR>. EDIT will try to object by asking you, "ARE YOU SURE?" Enter Y<CR>. Now enter BYE<CR> and you'll be returned to HDOS.

   Or, to save what you have been doing to disc, enter:

```
--NEWOUT/PRACTICE.TXT/ <CR>
```

   EDIT may not believe you and demand a Y or N answer. Just enter N<CR> and watch your disc-drive LED glow. When the -- prompt comes back, enter BYE<CR> and you're back to HDOS. Now check the directory to see if the file made the trip. It should be there, and you should be able to read it on-screen with TYPE PRACTICE.TXT<CR>.   More next month....

SOURCES, VENDORS & "FOR SALE"

==> EIGHT-BIT SOURCES, SERVICES, and VENDOR DIRECTORY <==

-> Listing last updated on 24 June, 1992 <-

CDR SYSTEMS, Inc., 7171 Ronson Road, San Diego, CA 92111; ph: 619-560-1272, 9a-5p Pacific Time Zone--ask for Herman....

Chalfant, Rick, 100 Bayberry Drive, Springboro, OH 45066; ph 513-748-1344. H/Z89s, misc parts. Usually RECORD-A-FONE

D-G ELECTRONIC DEVELOPMENTS Co., 700 S Armstrong, Denison, TX 75020; phone 903-465-7805 (Central Time). Bruce Denton, pres. Service & advice available, also H8 and H/Z89 hardware at clearance prices; call for details. --> Bruce is A * Certified * YOU-BETCHA GOOD GUY! <--

DISK MOVERS, 8534 McCormick Blvd, Skokie, IL 60076; phone 708-679-3727 (Central Time)--ask for Miriam. Fair priced bulk HARD & Soft-sector discs for our H/Z 8-bit machines. "VERY NICE, VERY HELPFUL PEOPLE."

GOLDSMITH SURPLUS, 2107 N Adams/PO Box 18676, Indianapolis, IN 46218; 317-545-4747, ask for Phil or Eric. Dealers in "Almost Any Surplus Material You Have (or Need)"!

HOYLE & HOYLE SOFTWARE, 111 Sparrow Drive, Isle of Palms, SC 29451. No longer in business, but SEBHC JOURNAL shall be carrying HDOS, CP/M & MS-DOS versions of QUERY!2 & 3, Real Soon Now. WATCH THIS SPACE FOR ANNOUNCEMENTS!

LINDLEY SYSTEMS, 8139 E Mawson, Mesa, AZ 85207 -- phone: 602-380-9175. Scads of neat 8-bit software. Ask Bob or Bill Lindley for a catalogue. "REALLY FINE FELLOWS!"

MAGNOLIA MICROSYSTEMS, 2818 Thorndyke Avenue West, Seattle, WA 98199; phone 206-285-7266 (Pacific Time). Special memory upgrades and op-systems for H/Z89s & 90s. Quite trustworthy people (but somewhat slow, we've heard).

MICRO COMPUTER REPAIR SERVICE, 2308 Industrial Highway, Ste C Ann Arbor, MI 48104; ph 313-663-3646. FLOPPY DISC DRIVE REPAIRS & SALES. Ask for Mike Morris, "A SUPER GUY"!

MICRONICS TECHNOLOGY, Suite 159, 54 Dalrada Road, Montgomery, AL 36109; phone 205-244-1597 voice, 205-244-0192 bbs CTZ Darrell C Pelan, pres. Soft & Hardware, '89 hardiscs Catalogue & 8-bit help available. A REALLY GOOD GUY!

New Orleans Data General Services, 7230 Chadbourne Drive, New Orleans, LA 70126; phone 504-241-9388-- "Dave" gives

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QUIKDATA COMPUTER SERVICES, Inc., 2618 Penn Circle, Sheboygan WI 53081; 414-452-4172; Henry Fale "Folley", mfgr, sales and H/Z computer parts, support, publishes "H-SCOOP" newsletter, runs 24-hr BBS--HANK'S A REALLY GOOD GUY!

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