NEW FEATURE: ASK RICK

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RICK SWENTON'S CORNER...  ASK RICK...  RICK SWENTON'S CORNER
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Dear Mr Swenton:

I've been following the various articles and letters pertaining to ZCPR systems which have been appearing lately in the SEBHC JOURNAL. (I subsribed to the JOURNAL in August of 1988.) I'm quite interested in Z-System, but have reservations about it after having read some of those articles.

First, let me say that I am NOT a computer engineer, and that I do not have knowledge necessary to write an assembly program, or even modify one with any possibility of sucess. Reading some of the information which has been circulating between yourself and several other correspondants has left me pretty light-headed at times! So I'm looking for a "Guru" to hold my hand and get started on a system which will do what I need, nothing more.

I know that some of the hot-shots look down their collective noses at us types who don't understand all the workings of our machines, but I imagine that there are more of us than there are of the more knowledgeable folk. So I very much appreciate all the information [the JOURNAL has printed] and hope eventually that I shall come to understand everything I read!

Presently I'm using CDR equipment in my '89A--their disc controller and SuperRam board. Also, I'm using their version of CP/M 2.2.0, which they call V2.91--also modified somewhat by Pete Shkabara. Being retired and on fixed income, I didn't buy ZCPR3 which Pete had been selling for a couple of years through Echelon, so now I'm scrounging for some kind of system to use with my hard disc. I'm also using the CDR SCSI system with an Adaptec 4000A controller and 20-megabyte Tandon hard drive. This [setup] works very well, except that some method of linking programs is required in order to take advantage of user areas.

Also, I just subscribed to the Computer Journal, hoping to get some information from that [source].

My main question is: Has anyone used NZ.COM with the CDR system? (When I called Alpha Systems to inquire if NZ.COM was available, the individual I talked with said, "Duh, wots dat?" A Really Knowledgeable Type!)

Any articles or information you may know of covering this subject shall be greatly appreciated, and I--of course--shall be most happy to pay any copying and shipping costs, and for your personal time in making any copies.

STANFORD R EVANS, 44115 Palm Avenue, Hemet, CA 92344

Dear Stanford,

I received your letter and it [really] hit home. It was because of yours and many other's feelings that I prepared my latest article comparing NZ-COM to CP/M for new users.

One of NZ-COM's greatest features is that you DON'T have to be a computer engineer to get ZCPR3 running. In the old days, you did have to have advanced skills to bring up ZCPR3, but this is no longer true. NZ-COM brings ZCRP3 to everyone who wants it.

I realise that we sometimes get carried away with our intense technical dialogue. I too, easily forget how intimidating this can be to the new user and even potential users who are just casually thinking about NZ-COM.

There are a few things about NZ-COM (ZCPR3 and Z-SYSTEM) which are important for the user community consider: NZ-COM provides potentially-great rewards for both novice and expert alike if they experiment just a little bit.

Almost everyone wants to learn and grow, and NZ-COM imposes NO demands on growth rate. And most other NZ-COM users willingly offer assistance to novices. Often some of us NZ-COM users may give the impression that we're "hot-shots" because we understand its' inner workings. I think this happens because we get carried away with pride of our self-built knowledge, rather than a desire to look down on others. I'm especially guilty of this with my MS-DOS friends, most of whom have very little knowledge of their machines and software. We're very lucky, having so much easy access to rich sources of knowledge and hundreds of experienced 8-bit users who still love their unique machines and systems.

Regarding your question about the CDR system, I don't have any first-hand experience with it. But your CDR software is a version of CP/M 2.2 so it will almost certainly support NZ-COM. The amazing part of NZ-COM is its' ability to install itself on top of a running CP/M system. I haven't heard of any problems with NZ-COM running under CDR. (Probably, if I hadn't once been a REMark and Sextant subscriber, I wouldn't have heard of those publications either.) Heath 8-bit computer users are a comparatively small portion of Alpha Systems' NZ-COM market, and an even smaller portion of those users are involved with non-Heath integrations such as CDR, Magnolia, FBE, etc.

As far as I know, there's nothing unusual about integrating NZ-COM with CDR's CP/M V2.91. But if I can be of any further help please don't hesitate to ask.

/RICK/

Dear Rick,

I'm a fellow SEBHC JOURNAL subscriber and recently read your very interesting article in III:4. I have an H8 with H17 and H37 controllers and a H19 terminal.

Do you know of a good source for the "standard SASI XEBEC hard-disc controller"? I believe this is what I need to interface my H8-37's H67 port with a Winchester drive.

I also recently installed Lee Hart's SuperSet modification kit in my H19 (don't have SuperClock yet but hope to get it), and am very pleased so far, except for interlace mode; it's not worth a hoot with a white screen and flourescent lights!

GARY S MELANDER, CPO Mess, USS Saipan (LHA-2), FPO New York, NY 0949-1605

ASK RICK/DOROTHY MATRIX

Hi Gary,

You're correct in saying that you need a 1410 XEBEC controller connected to the H8-37 board's H67 port. And you'll also need hard-disc software to operate the system.

I once purchased some controllers from a company calling itself "The Computer Surplus Store", but I can't find any of my old receipts to get their address from. They've advertised in several magazines such as Microcornucopia and The Computer Shopper. I can't even remember where they're located but I do remember that they offered a Shugart 1610-3 (XEBEC 1410 equivalent) for around $99. Be aware that there are four different 1610 versions and that the "dash number" indicates the emulation mode.

Since you also need software, you might consider getting in touch with our old friend, Henry Fale at Quikdata. It is quite possible that he still has 1410s and Quikstor hard-disc software for CP/M and HDOS for sale.

The Quikstor hard-disc system is very powerful and comprehensive. It's what I use here under CP/M. Documentation is first-rate and covers software as well as hardware installation and configuration. Henry's March 1989 catalogue listed the software for $75, which includes support for CP/M and HDOS on the same hard-disc drive. He does mention that he has all necessary components, so you should write for his price on the 1410. (QUIKDATA COMPUTER SERVICES, Inc., 2618 Penn Circle, Sheboygan, WI 53081; 414-452-4172)

I'm glad that you're enjoying your SuperSet installation. I've installed several of them for friends lately, and all worked just fine. Had a long phone conversation with Lee Hart recently, and I must say that he's quite an inspiration. His intimate knowledge of the Z80 and H19 TLB has allowed him to take the H19 far beyond anything its' original designers ever dreamed of!

Keep in touch and let me know if you need assistance in getting your hard-disc system up and running. Good luck!

RICK SWENTON, 106 Melinda Lane, Bristol, CT 06010-7176

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...  ASK DOROTHY MATRIX...   ASK DOROTHY MATRIX...   ASK DOT
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[Editor's Note: "Ask Dorothy Matrix" is a new feature which is intended to help all SEBHC JOURNAL subscribers and readers with printer problems. This is Ms Matrix's first column and is naturally quite short. But if you have any vexing printer problems no matter how absurd they may be, don't hesitate to write about it or them to Dorothy, Right Away. If She Can't Help You, Nobody Can!]

Dear Dot--

I run Heath's CP/M Magic Wand word processor on my dear old H90 and haven't been able to embed any special printer control codes in text to make my H125 printer do wide characters for headings and so on. I've even tried to use PIE and ED with equally glum results although I tried some tricks I found in The Staunch 8/89er!

Also, I want to print SuperCalc spreadsheets in 132 column format instead of 80 and then scotch-tape pages together but again, how do I tell my printer what I want it to do? Everything I've tried doesn't work. (I do have a copy of Spectre Technology's SIDEWISE, but am afraid to use it--the instruction manual somehow got lost.)

I have HDOS 2, but don't know how to run it, but I do know something about CP/M 2.2.03.

Can you or one of your readers help me?!

DESPERATE IN OKLAHOMA

Dear D-I-OK:

Hate to say this, but I don't know anything about Heath's H125 printer other than it is quite large and VERY heavy!

As for trying to embed printer control codes in Magic Wand text files, you might try using OUT 27 (plus the appropriate pitch character) to send ESCape (x) to your printer, but I'm only guessing about that. The SEBHC JOURNAL did have a very informative article back in one of their earlier issues, Vol I, #3, I think. It was by George Ewing and was entitled "Graphics As Easy As PIE. Why don't you be a dear and look it up, then let me know what you found out?

/DOT/

Dear Dot--

Recently I was running Hoyle & Hoyle's HDOS 2.0 version of QUERY!2, SORTing a large name-and-address database when something terible happened: My terminal sent an "illegal character" to my H8 computer and SORT hung up half-way through!

Luckily, I had made a backup of the original unsorted file on another disc. When I re-booted and tried to read the .dtb file with VIEW, it was all messed up right in the middle of nearly 300 records! The backup file doesn't have any problem but I still have to SORT those records by zip codes!

I'm afraid to try fixing this problem alone; can you help?

PUZZLED, Jackson Hole, WY

Dear PUZZLED:

You're lucky that QUERY!2's .dtb files are one long string of ASCII text which you can read and edit with TeXTPROcessor! Send the messed-up file (it'll take a lot of paper but DO you want to repair this mess?!) to your printer. Now print out the backup file and find the bad SORT records. Load the bad SORTed file into TXTPRO, search through it until you find bad records. Set INSERT mode ON and carefully type into bad records correct data from the backup printout. Use TXTPRO's delete function, erase the bad file then WRITE the patched file to disc. It should now run ok. Good luck!

/DOT/

READER'S MAIL BOX

Dear Lenny,

Finally received the Jan, Feb, and an extra copy of March SEBHC JOURNALs on 17 April. They were postmarked 13 April at Detroit with first-class postage attached, but without being marked as such on the plastic mailer.

In the February issue which carried my hard-sector disc offer I saw that my phone area code number was incorrectly given as 205 instead of the proper one--206. This probably accounts for the minimal response [to my offer].

Now for some technical problems: I have an H125 printer which has the Fina Software Super Chip Set v.2 installed. It has a 256-byte character set, and it greatly enhances printer capabilities. But the Fina modification does not repeat the first 128 characters as the original Heath character-set ROM does. This may account for some of the bizarre printouts I have been getting (samples enclosed).

As you can see from the HUG software's PDIR sample directory printout from your SEBHC JOURNAL CP/M-80 GAME DISC #0, many letters do not appear the same as when printed on screen by DIR19 (HUG's companion of PDIR.COM). For example, ACES.-DOC shows all capital letters on-screen and in the printout, but ACES.BAS on-screen comes out as ACES.bAS! And READTHIS.-1ST comes out as READTHIS.qST! I can't believe that my printer isn't working correctly; it has to be something wrong with your software.

Also, the RELEASE.NOT printout example from my NZ-COM disc is quite odd, being printed in Greek characters instead of standard English letters! And there are many IBM graphics characters mixed into the printout, but the printout of that disc's directory is quite ledgible in spite of some letters having been converted (somehow) from upper to lower case. It looks just as queer [as the printout does] on the screen!

As you know, CP/M normally converts lower-case directory entries automatically to upper case. I can't imagine what is happening here.

Incidentally, please let me thank Terry Hall for so generously supplying me with xerox copies of his JOURNALs while I was waiting for you to send my originals.

FRED A ROSE md, 4206 Ruby Place, Bellingham, WA 98226, =>206<= 671-5495 (Voice or TDD) =>NOTE CORRECT AREA CODE!<=

[Happy to hear that you finally received your back issues. For your information, the nearest postal mass processing center for out-of-state mail is in Detroit, MI. We put your JOURNALs in the Ann Arbor main PO drop box two days earlier than their Detroit postmark indicates. Also, please note that we didn't get the April edition to the post office until 4-May because of many in-house delays. We noted by hand on your copy that it was mailed late to make sure that you'd know about that! In connexion with your printouts: I get PDIR results similar to yours with my dot-matrix printers (that is, an Epson MX-80 with Dots Perfect enhancement ROM installed, a unmodified Epson LQ-800, and a NEC Pinwriter P2200). My Smith-Corona L1000 daisy-wheel printer doesn't

see embedded graphics characters and prints a directory without graphics. I've learned to accept the CP/M PDIR version's ideosyncracies--it's no big deal. Note that the HDOS PDIR version does work somewhat differently than the CP/M version. Just can't imagine why the NZ-COM text file shifted your H125 into ibm's Greek & graphics mode, but since the text file is also scrambled on-screen, there has to be some reasonable explaination. Try writing Pat Swayne at HUG headquarters about your scrambled screen; he's a very knowledgeble and helpful chap. Perhaps one of our other readers can help unscrew this? -- ed]

Dear Lenny,

I'd like to subscribe to the SEBHC JOURNAL, so I'v enclosed a money order for $17.5. [Thanks!]

I'm running a H90 with two 3-1/2 inch drives and one 5-1/4 inch drive under the soft-sector controller, and a 5-1/4 inch drive on the hard-sector controller.

Although I have both CP/M and HDOS, I mostly use CP/M because I haven't yet figured out how to patch HDOS to run soft sector. I also have an H14 printer and a 2400-baud modem. I have quite a bit of software, but some of it is without any documentation. Also I have two H89s and an H19, but the paperwork for some of their programs were forgotten when I acquired these items as spare parts. Two programs without any documentation are MOVE-IT (a CP/M modem-control utility), and the HUG HDOS Small Business Package. In addition, I've been looking for a copy of Software Toolworks' MYCHESS. Too bad that they no longer support H/Z 8-bit format!

DICK BUTLER, RFD #1 Box 303, Springvale, ME 04083; 207-324-8084

[Dick, your "orphan" copy of MYCHESS.COM is probably running on your '90 right now! A nearby subscriber kindly lent me his disc to copy for you, but he doesn't know what happened to the instructions for it. I test-ran the unconfigured MY-CHESS on my '89 and it works just fine. Like the Nederland HUG's CHESS.ABS (a version of SARGON), it has several levels of difficulty, but unlike the Dutch version, I actually won my first lowest-level game! I didn't send you the MYCHESSN version because it does unmentionable things to my computer's screen. It's possible that it is intended for use under ANSI CRT protocol, but who uses that?! Hope to hear again from you Real Soon Now, telling me how you got those itty bitty 3-1/2 inch drives to work for you! And do you have any idea how one can make a newer 5-1/4 inch (or 3-1/2 inch) double-sided 96 tpi ("1.2meg") drive run with the standard WH-37 soft-sector controller? I can't find anyone who knows how to access the extra space these drives are purported to have nor how to make them run as standard "720k" drives.

Dear Len,

I've enclosed a disc copy of CRYPT.BAS for HDOS MBASIC with this note. There's also a README.DOC file on the disc.

Fini — READER'S MAILBOX

Feel free to do what you wish with it. It will please me greatly if I know that someone else is using something I've written!

JACK WERT, 21 High Road, Levittown, PA 19056

[Hey, Jack! I tried your program and it works just fine! So I've included a printout of CRYPT.BAS elsewhere in this issue because I think it's interesting enough that many subscribers will benefit from studying your clever programming style. We'd also like to include it on our next HDOS Game Disc (#2) as soon as possible. Get In Touch Real Soon Now! -- ed]

Dear Mr Geisler,

My original 48k H89 w/one H17 drive has expanded over the years until it now has a H1000 CPU, 256k ram, 20Mb hard disc, 2 H17s, and 2 S37s (SigmaSoft's H37, 1-48tpi, 1-96tpi).

Thanks to SigmaSoft's controller and 20megabyte hard disc, I've stored all my CP/M and HDOS software on this drive.

Does anyone have information on how to install and connect a tape drive to the hard-disc controller?

SigmaSoft's CONFIG.COM (similar to CONFIGUR.COM) handles 96tpi drives.

I read Tony Venticinque's note in III:5, p11 and became interested in obtaining a SigmaBios version of ANAPRO's EMU-LATE utility. I phoned ANAPRO and spoke with Peter Shkabara, who replied to my enquiry, "There isn't enough interest to have this version produced..." (Sigh...)

As for my H1000, I am thankful to Mr Lee Hart to have 64k.

* Wanted item: Heath's ETA-3400 Trainer Manual and schematic diagram of the ETA-3400 trainer.

JAMES CONNELL, 61-779 Papailoa Road, Haleiwa, HI 96712

[Hey, Jim! I can run off a copy of the older ET-3400 trainer manual and schematics (at cost) if they'll do you any good. The 'A' in your part number means that model was "RFI-proofed" to some extent. I'm reasonably sure that the basic system is pretty much the same in both models except for some extra filtration and maybe a little shielding to reduce radiation. I also have a full set of Heath's Micro Processor Learning Course, EE3400-1 which might also be copied (for a modest fee, of course) if you're interested. Get In Touch Real Soon Now! -- ed]

Dear Mr Geisler,

I've enclosed a disc with the ABOVE utility files on it. It's a program which should prove very useful to many H89 users! ABOVE is a SideKick-like program that allows you to do calculations, take notes, re-define keys, and capture the screen. You can also see a disc-directory, type, erase, and rename files. ABOVE uses only 6k of your TPA (or only 4K if you have TMSI's Super-Set and Super-Clock) so you can still run most of your applications (even large ones).

FOR Z3ers: This includes the ZCPR1 CCP as a .PRL file

(techno gab) so... if you can re-assemble and link your ZCPR3 ccp into a .PRL file you can use it in place of CCP.ABV--but this won't work in NZCOM's case.

Also, when I saw Tony Venticinque's letter in the JOURNAL, it made me wonder how many JOURNAL readers own Sigma-Soft IGC's (Interactive Graphics Controller). I've had one for about two years now and make good use of it; I have written some software for it too. Here are a couple examples:

* Sky View, a planetarium-simulator which requires the IGC, 50k TPA, 350k of disk space, and a Logitech mouse.

* A drawing program, and graphics support library for Turbo Pascal (both make use of the C-7 mouse).

If you want copies of these programs just mail me an appropriate number of discs. Any Heath, Magnolia, or BIOS80, 5" hard or soft 80 track disc is fine (sorry, I have NO 40 track drives!). Just remember to format them and include $5.00 (cash/check) to cover shipping and handling. The source code (Turbo Pascal/M80) takes up close to a megabyte so if you want it, include enough discs!

HOWARD J DUTTON, 2924 Hickory Hill Dr, Norristown, PA 19403

[Howie, many thanks for the ABOVE software disc! I haven't had sufficient free time to try out ABOVE, but from your description it seems as if it's almost universally applicable. I MAY be able to print a revew in the June edition. Meanwhile, drop me a line as to how you think we should market ABOVE. Any readers having a SigmaSoft graphics card, please contact Howard directly. -- ed]

Dear Mr Geisler,

You'll find my renewal cheque is enclosed.

In connexion with the hardware "shareware" concept (A Case For Public Domain Hardware, Tom Rittenhouse, III:9), I'd be happy enough to have schematic diagrams and parts lists. If I could actually get a board layout, I'd be delighted. And being able to get any board I need would probably send me into orbit for sheer joy!

CHARLES E F LISS, 9607 Columbia, Redford, MI 48706

[Hey, Charlie! I'm usually beside myself with Joy (my favorite position) whenever I locate hardware or software which I need. As 'whatsisname' sings, "Don't worry, be happy"! - ed]

==> TAX DEDUCTIONS FOR YOUR EXCESS EQUIPMENT! <==

Media Ministries, Inc., a registered, non-profit corporation which uses modern media to promote creative Bible study and teaching, is seeking donation of an MS-DOS computer (preferrably Zenith--but will consider any PC clone--) or a laser printer, or both. We'll pay shipping (or pick up, if within reasonable distance of Chicago), also give you a tax receipt for full resale value of items donated. If you can help us please call: TERRY HALL c/o MEDIA MINISTRIES 516 East Wakeman Wheaton, IL 60187 312-665-4594

MISCELLANEOUS NEWS

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          SEBHC JOURNAL's PBBS PROGRESS REPORT
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With the generous help of D:KUG's Gus Bakalis I finally checked out that battle-weary CORVIS 5Mb drive with his borrowed H/Z90/Corvus interface card and software. Except for the front-panel LEDs not lighting up, it worked ok (maybe that's why it was dumped on me?). We could access only half the drive as our BIOS wasn't configured for two partions. But we could re-format the available partition and then found only sixteen bad blocks, leaving us about 2300 blank sectors. We guess the other partion is about the same but can't check that out until we build a replica of the Corvus interface card and patch our BIOS...

A few days back a former A*SQR*HUG member called and said he had a complete H120-1 working computer setup he'd be willing to let us have for "almost nothing". Checked this out pronto and ended up with a 3rd machine in our computer shack.

It came with ALL software and documentation (a stack two feet high), an internal modem and a Heath SweetP plotter. The unit has two 40trk ds floppies and a 10Mbyte internal hard disc.

Oh, yes! There were TWO H-100 "provisional" service manuals in the two-foot high "docs" stack. Like, you know, wow!

Last-But-Not-Least Notes: Several SEBHC JOURNAL readers have privately informed us that they're willing to lend a hand (or whatever) to get our PBBS up & running. As soon as we are better organised and become familiar with the H120-1 we shall get in touch with all you (enthusiastic-we-hope!) volunteers. Perhaps we may even somehow come together for an informal meeting...but when, who knows?

Be advised that Your Editor doesn't intend to abandon either his H8 or S/H89 just because There's A New (H120) Kid On The Block! We'll keep you informed...

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LAST-MINUTE NEWS

Just received our "exchange copy" of The Staunch 8/89er in which Kirk Thompson has a whole new bunch of HDOS 2 & 3 software advertised, also some Very Nifty Stuff for 8-bit CP/M users. If you are not presently subscribing to The Staunch 8/89er, now's the time to do it; U.S. $12/year (6 issues) or U.S. $16/year foreign. Subscriptions start and end with the calendar year. THE STAUNCH 8/89er, attn Kirk L Thompson, #6 West Branch Mobile Home Village, Rte 1, West Branch, IA 52358; phone 319-643-7136.

HDOS MBASIC CRYPTO SOLVER

CRYPTO.BAS
by
Jack Wert

CRYPTO.BAS is written in HDOS MBASIC. It is a utility to help you quickly solve most typical newspaper cryptograms.

INSTRUCTIONS FOR THE CRYPTOGRAM PROGRAM
::

After loading MBASIC and CRYPTO, the first screen gives basic instructions for using the program to help you solve typical Newspaper Cryptograms.

Be sure to type in your puzzle in all CAPITAL letters (CAPS). The program doesn't accept lower case.

Also, be sure to not type past the mark on each of the three lines, as the working display will be double spaced, and can only accept half a line as entered.

The working screen is also self explanatory, and you should have no problem in following the instructions. In the event you have made a substitution you wish to "rescind", and use the letter for another substitution, replace it with a "space". For example, suppose you have used 'R' to replace 'M', and now want to use 'R' to replace 'U'. Replace 'M' with 'SPACE'. This will put 'R' back into the Letter Pool, and you can then go ahead with your standard replacement procedure.

If you want to change a substitution, merely make the standard entry. The previous substitution letter will be returned to the pool, and the new letter will be substituted.

I think I've taken care of just about all mis-entries with error routines, but--who knows--you may find that something I have not encountered or anticipated may dump you into an MBASIC error message. In such an event, CTRL-C will stop the program at the error line and you can either exit to SYSTEM or try to work your way around whatever caused the error. In case you are able to improve the program please write and let your fellow SEBHC JOURNAL readers and me know about it.

PROGRAM LISTING
::::::::::::::::::

```
5   REM         CRYPTO.BAS    By Jack Wert    July, 1986
7   REM         HDOS 2.0 MBASIC 4.82 or higher
10  REM  A program for aiding in the solution of cryptograms.
12  REM  This program will not solve Cryptograms, but makes it
14  REM  easier through a nice, neat display and allows making
16  REM  any necessary changes without 'messing things up'.
20  REM
80  CLEAR
85  CLEAR 2000
90  E$=CHR$(27)
100 REM         Set up Escape Sequences
500 CA$=E$+"Y":REM            CURSER ADDRESSED DIRECTLY
520 ED$=E$+"E":REM            ERASE DISPLAY
540 EE$=E$+"J":REM            ERASE END OF PAGE
560 EL$=E$+"l":REM            ERASE LINE
580 LE$=E$+"K":REM            ERASE END OF LINE
600 LX$=E$+"x1":REM           25th LINE ON (EXTRA LINE)
620 LO$=E$+"y1":REM           25th LINE OFF
640 CO$=E$+"y5":REM           CURSER ON
660 VR$=E$+"p":REM            REVERSED VIDEO
680 VN$=E$+"q":REM            NORMAL VIDEO
700 GM$=E$+"F":REM            GRAPHICS ON
720 GO$=E$+"G":REM            GRAPHICS OFF
740 DEF FNCA$(X,Y)=CA$+CHR$(31+Y)+CHR$(31+X)
1000 PRINT ED$
1020 PRINT FNCA$(10,4)"This is a program that will help you"@
     " solve Cryptograms."
1040 PRINT FNCA$(10,6)"First you enter the Cryptogram as it"@
     " appears in your"
1060 PRINT FNCA$(10,7)"paper (it will take up to three lines"@
     " of 34 characters,"
1080 PRINT FNCA$(10,8)"which handles most newspaper puzzle"@
     " Cryptos)."
1100 PRINT FNCA$(10,10)"The program will then display it"@
     "double spaced with an"
1120 PRINT FNCA$(10,11)"empty line above each Crypto line"@
     " so the new letters"
1140 PRINT FNCA$(10,12)"will appear above the letters they"@
     " replace, just like"
1160 PRINT FNCA$(10,13)"you do when you work the crypto"@
     "grams in the daily paper."
1180 PRINT FNCA$(10,14)"There are error routines for just"@
     " about every wrong"
1200 PRINT FNCA$(10,15)"entry you can make - giving you a"@
     " second chance."
1220 PRINT FNCA$(10,17)"An alphabet 'POOL' of letters will"@
     " appear at the bottom"
1240 PRINT FNCA$(10,18)"of the screen to keep you posted on"@
     " what letters are"
1260 PRINT FNCA$(10,19)"used and what are still available."
1280 PRINT FNCA$(10,22)"Hit <RETURN> when ready to start."
1300 LINE INPUT S$:REM  Creates pause for reading message.
1320 PRINT ED$:PRINT LX$:REM  Erase screen, turn on 25th line
1340 PRINT FNCA$(15,3)"OK, type in your CRYPTOGRAM,"@
     " using all CAPS."
1360 PRINT FNCA$(2,5)"Type the first line and hit RETURN."@
     " Do not type past";
1380 PRINT " the mark shown below.":REM Print visible pointer
1400 M$="                         !":REM  25 spaces
1420 PRINT FNCA$(6,8)M$
1440 LINE INPUT A$
1460 IF LEN(A$)=0 THEN 1680:@
     REM       ALLOWS RETURN (BY ERROR) WITHOUT CRASHING
1480 C$=MID$(A$,1,1):IF ASC(C$)>90 THEN 3900 ELSE 1520:@
     REM** Test for lower case.
1500 PRINT CHR(7):REM  Ring the bell
1520 IF LEN(A$)>34 THEN 1540 ELSE 1560:@
     REM       Error routine if line is too long.
```

CRYPTO LISTING, continued

```
1540 GOSUB 3760:GOTO 1320:@
  REM        This is the error subroutine.
1560 S$=" ":REM        Next lines double-spaces text,
1580 FOR I=1 TO 35:REM    and assigns a new variable name.
1600 AS$=AS$+MID$(A$,I,1)+S$
1620 NEXT I
1640 GOTO 1680
1660 PRINT FNCA$(1,12)EE$
1680 PRINT FNCA$(10,11)@
  "Now type in the next line and hit RETURN."
1700 PRINT FNCA$(6,12)M$
1720 LINE INPUT B$
1740 IF LEN(B$)=0 THEN 1880:@
  REM   SKIPS TO NEXT INPUT IF LINE IS BLANK
1760 IF LEN(B$)>34 THEN 1780 ELSE 1800:@
  REM   Error routine if line too long.
1780 GOSUB 3760:GOTO 1660
1800 FOR I=1 TO 35
1820 BS$=BS$+MID$(B$,I,1)+S$:@
  REM   Adds spaces for easy working.
1840 NEXT I
1860 PRINT FNCA$(1,15)EE$
1880 PRINT FNCA$(10,15)"And now the last line (and RETURN)."
1900 PRINT FNCA$(6,16)M$
1920 LINE INPUT C$
1940 IF LEN(C$)=0 THEN 2060
1960 IF LEN(C$)>34 THEN 1980 ELSE 2000
1980 GOSUB 3760:GOTO 1860:@
  REM   Subroutine for long line error.
2000 FOR I=1 TO 35
2020 CS$=CS$+MID$(C$,I,1)+S$:@
  REM   Adds spaces for easy working.
2040 NEXT I
2060 PRINT ED$:REM        Clear screen again.
2080 REM  Next 3 lines are for the clear text above the @
  Cypto lines.  They're 67 spaces wide.
2100 A1$="                                          "@
  "             .
2120 B1$="                                          "@
  "             "
2140 C1$="                                          "@
  "             .
2160 PRINT FNCA$(5,2)A1$:
  REM   Next 10 lines display double-spaced cryptogram
2180 PRINT FNCA$(5,4)AS$:
  REM   with empty lines above for new clear text.  Also
2200 PRINT FNCA$(5,7)B1$:
  REM   provides Alphabet "pool" of letters available,
2220 PRINT FNCA$(5,9)BS$:
  REM   and asks for letter to be changed.
2240 PRINT FNCA$(5,12)C1$:
2260 PRINT FNCA$(5,14)CS$
2280 PRINT FNCA$(2,20)@
  "------------------------------------------------------"@
  "------------------":REM    70 underline dashes
```

```
2300 PRINT FNCA$(2,16)@
  "------------------------------------------------------"@
  "--------------------"
2320 P$="A B C D E F G H I J K L M N O P Q R S T U V W X Y Z"
2340 PRINT FNCA$(5,22)"LETTER POOL ->"
2360 PRINT FNCA$(20,22)P$:REM    Displays letter "pool".
2380 PRINT FNCA$(25,25)"When you're finished, hit '#'."
2400 PRINT FNCA$(5,18)LE$
2420 PRINT FNCA$(10,18)"Change which letter? ";:LINE INPUT L$
2440 IF L$="#" THEN 3600:REM        Exit symbol
2460 REM  Next lines allow for direct transfer of @
  punctuation, etc.
2480 IF L$="'" THEN N$="'":GOTO 2820
2500 IF L$="-" THEN N$="-":GOTO 2820
2520 IF L$="," THEN N$=",":GOTO 2820
2540 IF L$="." THEN N$=".":GOTO 2820
2560 IF L$="?" THEN N$="?":GOTO 2820
2580 IF LEN(L$)<>1 THEN GOSUB 4300:GOTO 2400:@
  REM        Test for length
2600 IF ASC(L$)<65 OR ASC(L$)>90 THEN 2620 ELSE 2640:@
  REM        Test for non-letter
2620 GOSUB 4300:GOTO 2400
2640 PRINT FNCA$(40,18)"What is the new letter? ";:@
  LINE INPUT N$
2660 IF N$="#" THEN 3600:REM        Exit symbol
2680 PRINT FNCA$(63,17):PRINT LE$
2700 IF LEN(N$)<>1 THEN GOSUB 4300:GOTO 2640
2720 IF LEN(N$)=0 OR ASC(N$)=32 THEN N$=" ":GOTO 2840:@
  REM        Allows space
2740 IF ASC(N$)<65 OR ASC(N$)>90 THEN 2760 ELSE 2780
2760 GOSUB 4300:GOTO 2640
2780 R=ASC(N$):X=(R-64)*2-1:@
  REM        Assigns value to X for position in pool
2800 IF MID$(P$,X,1)=" " THEN 4020:@
  REM        Tests for availability of letter.
2820 Q=0:REM        Initializes flag, Q
2840 FOR I=1 TO 70:@
  REM        Loop to scan first line of Cryptogram.
2860 IF MID$(AS$,I,1)=L$ THEN 2880 ELSE 2960
2880 Q=1:REM        Sets flag if L$ is in Cryptogram line.
2900 IF MID$(A1$,I,1)=" " THEN 2940 ELSE 2920:@
  REM        Branch for insert or replace
2920 R$=MID$(A1$,I,1):GOSUB 3500:@
  REM        Routine for putting letter back in pool.
2940 MID$(A1$,I,1)=N$:@
  REM   Assigns new letter to position in line of clear text.
2960 NEXT I
2980 PRINT FNCA$(5,2)A1$:@
  REM   Prints first line of clear text with new letter.
3000 FOR I=1 TO 70:@
  REM        Loop to scan second line of Cryptogram.
3020 IF MID$(BS$,I,1)=L$ THEN 3040 ELSE 3120
3040 Q=1
3060 IF MID$(B1$,I,1)=" " THEN 3100 ELSE 3080
3080 R$=MID$(B1$,I,1):GOSUB 3500
```

CRYPTO LISTING CONCLUDED

```
3100 MID$(B1$,I,1)=N$
3120 NEXT I
3140 PRINT FNCA$(5,7)B1$
3160 FOR I=1 TO 70:@
   REM          Loop to scan third line of Cryptogram.
3180 IF MID$(CS$,I,1)=L$ THEN 3200 ELSE 3280
3200 Q=1
3220 IF MID$(C1$,I,1)=" " THEN 3260 ELSE 3240
3240 R$=MID$(C1$,I,1):GOSUB 3500
3260 MID$(C1$,I,1)=N$
3280 NEXT I
3300 PRINT FNCA$(5,12)C1$
3320 IF Q=0 THEN 4160:@
   REM          Routine for typo error entry for L$.
3340 IF N$=" " THEN 2420
3360 REM       Now we remove the letter from pool.
3380 IF ASC(N$)<65 THEN 2400
3400 R=ASC(N$):X=(R-64)*2-1
3420 IF MID$(P$,X,1)=N$ THEN MID$(P$,X,1)=" "
3440 PRINT FNCA$(20,22)P$
3460 GOTO 2420:REM          Go back for next letter
3480 REM  Routine replaces letter in pool whenever @
   it's changed to another.
3500 R=ASC(R$):X=(R-64)*2-1
3520 MID$(P$,X,1)=R$
3540 PRINT FNCA$(20,22)P$
3560 RETURN
3580 REM                   Exit routine.
3600 PRINT ED$
3620 PRINT LO$
3640 PRINT FNCA$(10,12)"Do you have another one to do? "@
   "(Y/N) ";:LINE INPUT Q$
3660 IF Q$="N" THEN 3700
3680 GOTO 80
3700 SYSTEM
3720 END
3740 REM  Error routine for too long an entry from @
   the original Cryptogram.
3760 PRINT CHR$(7)
3780 PRINT FNCA$(10,15)"Oops!! The line is too long."@
   " Don't type past the marker."
3800 FOR N=1 TO 400:NEXT N
3820 PRINT FNCA$(1,15)EL$
3840 PRINT FNCA$(25,15)"Now renter the line."
3860 FOR N=1 TO 250:NEXT N
3880 RETURN
3900 FOR I=1 TO 2
3920 PRINT CHR$(7)
3940 PRINT FNCA$(15,15)"Sorry, we can accept CAPS only."@
   " Try again."
3960 FOR N=1 TO 300:NEXT N
3980 NEXT I
4000 GOTO 1320
4020 REM       Error routine for "letter has been used".
4040 FOR I=1 TO 2
4060 PRINT CHR$(7)
4080 PRINT FNCA$(10,18)"The letter, "N$" has been used."@
   " Try another."
4100 FOR N=1 TO 400:NEXT N
4120 PRINT FNCA$(5,17):PRINT EL$
4140 NEXT I:GOTO 2640
4160 REM  Error routine for entry of letter not in Cryptogram
4180 FOR I=1 TO 2
4200 PRINT CHR$(7)
4220 PRINT FNCA$(10,18);@
   L$;" is not a letter in the Cryptogram.  Try again."
4240 FOR N=1 TO 400:NEXT N
4260 PRINT FNCA$(5,17):PRINT EL$
4280 NEXT I:GOTO 2400
4300 REM          Error routine for improper entry.
4320 FOR I=1 TO 2
4340 PRINT CHR$(7)
4360 PRINT FNCA$(10,18)"You goofed!!  Only ONE Letter!"
4380 FOR N=1 TO 150:NEXT N
4400 PRINT FNCA$(5,17):PRINT EL$
4420 NEXT I
4440 PRINT FNCA$(10,18)@
   "Now try again, but remember, One LETTER Only."
4460 FOR N=1 TO 400:NEXT N
4480 PRINT FNCA$(5,17):PRINT EL$:RETURN
```

FIGURE 1 - TYPICAL NEWSPAPER CRYPTOGRAM

WORD SLEUTH ● Taking Stock

```
S E C U R I T I R B C I D N I
H M A R R B R O K O V N I R S
A D C O A O H D P N S A R E S
R F N R I S T (I N D E X) C K P
I F U E A L H A R S M U I O L
N F U N D C O A C A R N N R I
V U U N E I O F R I V C D B D
E N N U F B V G T E D I O B R
T I L P S I I I S R S N X N A
O B O A D N E T D I O A I U H
B O N U D S E V N I C P C F S
```

Last week's unlisted clue: SHAMPOO.
Find the listed words in the diagram. They run in all directions
— forward, backward, up, down and diagonally. Unlisted clue
hint: LIKE HIGH-PRICED STOCKS.

Indicator	Dividend	Margin	Shares
Crash	Broker	Portfolio	Boards
Index	Bonds	Securities	Invest
Fund	Panic	Split	

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