

Saving Our CLASSIC Heath 8-Bit Machines!

SETHO JOURNAL

The Society of Eight Bit Heath Computerists' Monthly Newsletter

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Subscription Information & Order Blank on Page 11.

**We Wish All Our
Faithful Readers
The Very BEST
HOLIDAY GREETINGS**



SEBHC JOURNAL

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Reader's MAILBAG (And Misc)

Dear Lenny,

Sorry for the delay in renewing my subscription! The last issue you sent me was October's, so if you can renew me up to August '92 again, please send November and December--which should bring me up to date. [Ok, no problem! -- ed]

Thanks for the good work! I always read the JOURNAL thru from cover to cover as soon as it arrives (and it does arrive at least two weeks sooner, thanks to First Class postage).

I've often wondered why the back page refers to official Society meetings announced in each July issue. I've belonged for over three years, and can't recall EVER hearing about an annual meeting!

Blessings for you and yours this holiday season. I especially enjoyed your piece this last year about driving to Cape Cod to help out an H89 user get his machine back into working order.

Rev NELSON HOWARD iii, P O Box 114, East Derry, NH 03041

[Well, Rev, your renewal request has been honoured. Please note that we had hoped to get the November edition out last month (Nov), but numerous un-planned events up-screwed our good intentions--it seems as if that's happening more every day here. And thanks for your kind words about our newsletter, that made one of our days a little less gloomy! But please note that we DO NOT regularly make house calls--that "little" excursion to Cape Cod was necessitated by a JOURNAL's client having extremely bizarre trouble with a pair of 89s bought from us. (And I'm getting much too old to traipse off cross-country these days!) When I left Cape Cod, both of the computers were running just fine. By the time I got back, and before I could assemble an external pair of half-height quad density drives for him, one machine re-developed identical symptoms to those which had triggered the original safari. Later, the other machine fell victim to the same ailment--what a bummer! Eventually some good has come from it, we now know how that wonderfully-refreshing sea breeze can Really Screw Up floppy-drive Read/Write heads by encrusting their magnetic pole pieces with a salt film! (Also, see the FIRE! article elsewhere in this issue.) I'm glad you are getting your JOURNALS earlier than when we were using 3rd class bulk mail. It was much cheaper for us then, but when postage rates went up and our mailing list shrank as well, we were forced to go 1st class. A couple benefits of 1st class mailing are better P.O. handling of folded & stapled JOURNALS, and elimination of sealing copies in plastic bags (that's eight hours of stuffing labour, plus 1-1/2 cents materials cost/copy for every edition). What with our chronic "retrograde cash flow", every farthing we save helps greatly. Now, about that "yearly Society meeting": Once we did seriously intend holding a meeting, but after discussing it with several remotely-located subscribers, we finally dropped the idea as far too expensive to carry out. Perhaps we'll do one next year--maybe tie it in with the Z100 User's convention. Anybody willing to help? Write Real Soon Now! -- ed]

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Looking for the following equipment/accessories/software for my Heathkit H89:

Z-89-11 I/O Board, together with IBM Emulation Software

H-89-6 Backplane
Magnolia RF Modulator
Ham Radio Circuits & software
Glare Filters
Amber CRT

H-1000 TMSI's replacement 8/16-bit CPU Board

GP-29 Northwest Digital's replacement Graphics TLB for the Z-89-FA and Z-89A

H-67 Hard Drive w/cables, HDOS software for same--including diagnostics, archiving, parking, device drivers--whatever!

Please contact: Mark Hunt, P.O. Box 357, Ray Brook, NY 12977

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Kirk Thompson now has a General Software Catalogue file which can be downloaded to your Heath-compatible pre-formatted discs (HDOS or CP/M). Files are recorded "squeezed"; an "unsqueezer" utility is always included for your convenience.

Available disc formats are: Standard (SS/SD), or Double-Sided (DS/SD) 48tpi Hard Sector; Single, or Double Sided 48 or 96tpi Soft Sector for HDOS and CP/M titles. Kirk will sell discs to you at \$6 each if you do not send him your own pre-formatted discs. If you wish, Kirk will pack multiple items on one disc, but will NOT subdivide a disc.

For more details and a copy of his newest catalogue write: Kirk Thompson, c/o "The Staunch 8/89er", P O Box 548, West Branch, IA 52358.

NOTE: Subscriptions to "The Staunch 8/89er" start and end with the calendar year. Now is the prime time to order your own subscription! Costs \$15/year, six editions every year. (Tell him Lenny told you about this in the SEBHC JOURNAL!)

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UN MUY PROSPERO ANYO NUEVE PARA TODOS DE USTEDES!

=====

(Excuse phonetics, please...we can't make our LQ800 write in Spanish in 2-column format!)

=====

F I R E ! (Continued from last mont

By John DeArmond, in "Midnight Engineering" magazine

One very important note: Most all monitored alarm systems notify the central control by autodialing a number over your home phone line. If you have an autodialing alarm installed, insist that the control box be mounted low in your basement (but protected from flooding) as close as possible to your phone "drop", AND insist upon a smoke alarm being installed in the ceiling directly above it. The reason for this is quite simple: By the time my smoke alarm went off the fire had already burned out my phone wiring!

Be especially sure that you get an alarm system with radio backup. If the phone line fails--for whatever reason--the central office will receive a backup call from the radio channel.

If you go with phone-line only, ask these questions:

* How does the system handle a line in use by one of your kids, the missus, or your modem? The better alarms pass your phone line through the alarm box and will dump the house side if it needs to call in an alarm.

* How does it handle busy or no-answers on the other end? How many times and in what intervals will it redial? I consider "demon dialing" (that is, re-dialing as rapidly as possible) as the best, because a fire spreads geometrically. By the time you get a smoke alarm, you have only minutes to take protective action! And how many different numbers will it try? If the line to the primary monitoring station is out what are the alternatives? Will it call a neighbor who'll relay your alarm?

Protective measures other than alarms

* Consider installing a home sprinkler system. Prices for small closed-in areas are not too bad--such as basement/workshop areas, and they can be made to serve as a backup to the smoke alarm in many cases. (Also, having a sprinkler system also helps lower your fire-insurance premiums!)

* Consider installing a home fire hose. These are inexpensive and well worth the cost. In my case, if I'd had one, I could have put out the fire before the firemen had arrived! If you decide to put in a fire hose, buy industrial one-inch ID water hose. It's tough and passes much more water than a garden hose. Also, install an external 90-degree rotation house-supply shutoff valve (rather than the usual garden-hose turn-forever type) and a one-inch industrial dry-pipe hydrant upstream of that valve. It should be in an easily-accessed but frost-free, below-ground location outside and away from the house. The fire hose should be stored out of direct sunlight very close to, and coupled to the hydrant. This ensures that shutoff valve, hose and hydrant are always ready for quick emergency use. The hose uses standard couplings,

but, together with the dry-type pipe hydrant, remains dry until the water is turned on. This passes two to three times more water than a typical 5/8-inch garden hose and standard garden spigot.

Finally, plan out, THEN PRACTICE Fire Drills AND Escape Routes! When a fire happens to YOU, it WILL NEVER resemble any pre-rigged TV show. You won't have time to go rummaging about for flashlights, clothing, valuables, or ANYTHING! Be prepared for the worst at any instant, night or day! Remember: You have only seconds to escape that environment--just ONE mistake can be fatal.

Emotional Considerations

This is probably the hardest part for me to write about as I can only now--after two months--face a computer long enough to write this article. I remember jumping into the salvage operation that afternoon...with enthusiasm. I rationalised that it couldn't be so bad; after all, here is something recognisable, and over there is something that appears OK...but when the third dumpster is filled to overflowing with debris and ruined possessions, the total extent of one's loss begins to sink in.

Even though some papers and data survived, I am completely wiped out! Insurance money won't rebuild my lab facilities, much less give me time to rebuild my product. I have enough cash to carry me for a while, but I am at a complete loss as to proceed (shall I quit R&D, or press on regardless?)....

Since the fire my personal relations are so strained that my partner has broken away, and my wife and I are frequently at each other's throats--being crammed into a two-room apartment for several months has that effect on a formerly-convivial marriage. None of us were prepared for the great social pressures this fire brought upon us. And it has had side effects; people whom I had considered to be friends suddenly became strangers. Others I'd worked or socialised with daily didn't even call. That really hurt. At the same time, other people I'd never felt really close to unselfishly pitched in and volunteered help....To all of them, I say: THANKS, many times over! [eof]

[Editor's comments: You may contact author John DeArmond, who is a software and hardware consultant, at Rapid Deployment Systems, Post Office Box 670386, Marietta, GA 30066, phone 404-578-9547, or via modem--usenet:jgd@rsiatl.uucp. We are most grateful to both Midnight Engineering's editor, Mr William Gates ("no, not THAT one!") and John DeArmond for granting us permission to reproduce this condensed and edited version of John's original article which appeared in Midnight Engineering's July-August '91 edition. We hope John's story will inspire all SEBHC JOURNAL readers--whom, we hasten to advise, should write up their own experiences for publication in future JOURNALS.]

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MBASIC PROGRAMME, Cont'd From VI:4

OSCAR YOHAI'S MATHEMATICS TUTORIAL PROGRAMS
(Part Two)

The following "readme.doc" text was on the disc Oscar had sent us:

* ANNUITY.BAS *

This program is menu driven and allows the user to enter <1>SAVINGS PHASE, <2>ANNUITY PHASE, <3>BOTH (Original listing was in our November, 1991 edition.)

SAVINGS PHASE

You enter an initial deposit amount, compounding periods, interest rate, account name, and years amount shall be on deposit. The information you enter is displayed, then the menu asks you to choose display of savings activity by compounding periods, that is, to screen, printer or neither. NOTE IF COMPOUNDING IS 365, THEN PROGRAM WILL AUTOMATICALLY NOT PRINT TO SCREEN OR PRINTER. It will display the compounded total. The program will display up to 12 compounding periods a year, displaying each amount earned by the specified interest rate and breaks at end of each year

ANNUITY PHASE

You can go directly to this option and enter PRINCIPAL, INTEREST RATE, NUMBER OF COMPOUNDING PERIODS, AMOUNT TO BE WITHDRAWN EACH COMPOUNDING PERIOD, AND NUMBER OF YEARS TO WITHDRAW. Display Options: <Screen> <Printer>

* MENU.BAS *

When loaded and run this program displays a list of these described arithmetic drill programs. A Pupil may then chose the particular drill which meets his needs. Each drill program is written so it also may be run in "stand-alone" mode.

* ADD.PRO *

A program designed for lower elementary level or remedial pupils through which they may practice addition skills. The Pupil indicates how many digits are to be used in the five examples that are generated. The Pupil then answers problems from keyboard, one at a time. The program keeps track of answers, then displays a correction table with Pupil's answers, the correct answer, total correct answers, and score as a percentage of all the problems in that run. The Pupil can then re-run this drill program or chose to run one of the others.

* SUB.PRO *

SAME AS ADD.PRO -- Subtraction Practice

* MULT.PRO *

SAME AS ADD.PRO -- Multiplication Practice

* MULTABLE.BAS *

This is a program for practicing the MULTIPLICATION TABLES from 2x? thru 10x?....

Note: All programmes run under MBASIC V5.2 (CP/M)

LISTING TWO -- (listing one was in November edition)

```
10 REM          MENU.BAS by Oscar Yohai
20 REM          Edited slightly by L Geisler
30 E$=CHR$(27):REM SET UP SCREEN CONTROL CODES
40 CLR$=E$+"E":REM CLEAR SCREEN
50 VON$=E$+"p":REM REVERSE VIDEO ON
60 VOF$=E$+"q":REM NORMAL VIDEO ON
70 PRINT CLR$
80 PRINT:PRINT:PRINT
90 PRINT
  TAB(10)VON$ "MENU OF MATH PROGRAMS ON THIS DISC: "VOF$:PRINT
100 PRINT TAB(10);VON$;" 1> SUBTRACTION ";VOF$:PRINT
110 PRINT TAB(10);VON$;" 2> ADDITION ";VOF$:PRINT
120 PRINT TAB(10);VON$;" 3> MULTIPLICATION ";VOF$:PRINT
130 PRINT TAB(10);VON$;" 4> DIVISION ";VOF$:PRINT
140 PRINT
  TAB(10);VON$;" 5> MULTIPLICATION TABLES DRILL ";VOF$:PRINT
150 PRINT TAB(10)VON$" 6> QUIT "VOF$:PRINT
160 PRINT
  TAB(10)VON$ "Select one -- <1><2><3><4><5><6> "VOF$;:INPUT D
170 ON D GOTO 180,190,200,210,220,230
180 RUN "SUB.PRO"
190 RUN "ADD.PRO"
200 RUN "MULT.PRO"
210 RUN "DIV.PRO"
220 RUN "MULTABLE.BAS"
230 PRINT CLR$:PRINT:PRINT:REM          End this session
240 T$=" Wasn't that Fun?! See you again Real Soon Now... "
250 PRINT TAB(40-LEN(T$)\2)T$
260 PRINT CLR$:SYSTEM
```

LISTING THREE -- Addition Program Segment

```
10 REM          Addition program segment
20 PN$=" WELCOME TO THE ADDITION PROGRAM "
30 DT$=" Written by Oscar Yohai "
40 VN$=" September 15, 1990 "
50 E$=CHR$(27):CLR$=E$+"E":VON$=E$+"p":VOF$=E$+"q"
60 X$=CHR$(105):GRON$=E$+"F":GROF$=E$+"G"
70 GOSUB 280:REM          CLEAR SCREEN
80 GOSUB 310:REM          TURN GRAPHICS ON
90 GOSUB 350:REM          PRINT TOP AND BOTTOM BORDER LINE
100 N=6
110 GOSUB 400:REM          PRINT BLANK LINES
120 M$=PN$:REM          M$ IS TEXT MATERIAL VARIABLE
130 GOSUB 460:REM          PRINT FIRST MESSAGE LINE
140 N=2
150 GOSUB 400
160 M$=DT$
170 GOSUB 460:REM          PRINT SECOND MESSAGE LINE
```

MBASIC LISTING Cont'd

```

180 GOSUB 400
190 M$=VN$
200 GOSUB 460
210 N=3
220 GOSUB 400
230 M$=AU$
240 GOSUB 460
250 GOSUB 350
260 GOSUB 510
270 INPUT "PRESS <RETURN> TO CONTINUE ";R$ : GOTO 530
280 REM          CLEAR SCREEN
290 PRINT CLR$
300 RETURN
310 REM          TURN GRAPHICS ON
320 PRINT GRON$
330 RETURN
340 REM
350 REM          PRINT TOP & BOTTOM BORDER LINES
360 PRINT VON$;SPC(78);VOF$
370 REM
380 RETURN
390 REM
400 REM          PRINT BLANK LINES WITH OUTSIDE BORDER
410 FOR I=1 TO N
420   PRINT VON$;" ";VOF$;SPC(74);VON$;" ";VOF$
430 NEXT I
440 RETURN
450 REM
460 REM          PRINT MESSAGE LINE
470 T=LEN(M$):S=(80-T)/2: REM          CENTERS TEXT ON SCREEN
480 PRINT VON$;SPC(2);VOF$;TAB(S-2);VON$;M$;VOF$;
      TAB(73);VON$;SPC(2);VOF$
490 RETURN
500 REM
510 REM          TURN OFF GRAPHICS
520 PRINT GROF$
530 REM
540 PRINT:INPUT "PRESS <RETURN> TO CONTINUE ";Z
550 PRINT CLR$
560 M=5
570 CO=0
580 WO=0
590 DIM R$(5),N1(5),N2(5),C(5)
600 PRINT VON$;" Please enter your name ";VOF$;:INPUT N$
610 PRINT:PRINT
620 PRINT VON$;
      "How many digits for examples <1> <2> <3>";VOF$;:INPUT S
630 PRINT CLR$
640 FOR I=1 TO M
650 PRINT SPC(2);VON$;I;VOF$;SPC(4)
660 NEXT I
670 PRINT:PRINT
680 REM
690 REM          Data-Processing Section
700 FOR I=1 TO M
710   FOR J = 1 TO M
720     RANDOMIZE PEEK(11)
730     N1(J)=INT(RND(Y)*10^S)
740     IF N1(J) < 1 THEN 720 ELSE 750
750     RANDOMIZE PEEK(11)
760     N2(J)=INT(RND(Y)*10^S)
770     IF N2(J) < 1 THEN 750 ELSE 780
780   NEXT J
790   FOR J=1 TO M
800     PRINT " ";
810     FOR K=1 TO 5
820       IF N1(J)>=10^(S-K) THEN 860
830       IF (S-K)+N1(J)=0 THEN 860
840       PRINT " ";
850     NEXT K
860     PRINT N1(J);TAB(J*10);
870   NEXT J
880   PRINT
890   FOR J=1 TO M
900     PRINT "+";
910     FOR K=1 TO S
920       IF N2(J)>= 10^(S-K) THEN 960
930       IF (S-K)+N2(J)=0 THEN 960
940     PRINT " ";
950     NEXT K
960     PRINT N2(J);TAB(J*10);
970   NEXT J
980   PRINT
990   FOR J=1 TO M
1000  FOR K=1 TO S+3
1010    PRINT "-";
1020  NEXT K
1030    PRINT TAB(J*10)
1040  NEXT J
1050  FOR J=1 TO 1
1060    PRINT
1070  NEXT J
1080 PRINT
1090 FOR I = 1 TO M
1100 PRINT
1110 PRINT VON$;"ENTER YOUR ANSWER FOR EXAMPLE #";I;VOF$;:
      INPUT A(I):PRINT
1120 NEXT I
1130 PRINT CLR$
1140 REM          PRINT RESULTS
1150 PRINT
1160 PRINT VON$;N$;VOF$;" ";VON$;"RESULTS OF YOUR WORK ";
      VOF$
1170 PRINT
1180 PRINT VON$;"EXAMPLE CORRECT ANSWERS YOUR ANSWERS RES
      ULTS";VOF$
1190 PRINT STRING$(45,"-")
1200 FOR J=1 TO M
1210   C(J)=N1(J)+N2(J)
1220   IF C(J)<>A(J) THEN 1260

```

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LISTING Cont'd

```
1230 R$(J)="CORRECT"
1240 CO=CO+1
1250 GOTO 1280
1260 R$(J)="*WRONG*"
1270 WO=WO+1
1280 PRINT USING
      "##)      ###      ###      \      \";J;C(J)
      ;A(J);R$(J)
1290 NEXT J
1300 PRINT
1310 PRINT
1320 NEXT I
1330 REM          PROGRAM TERMINATION
1340 PRINT:PRINT:PRINT VON$;"PRESS <RETURN> TO CONTINUE";VOF$;
1350 INPUT Z
1360 PRINT CLR$
1370 PRINT STRING$(30,"*")
1380 PRINT "*"          SCORE BOARD"
1390 PRINT STRING$(30,"*")
1400 PRINT "QUESTIONS";TAB(15);CO+WO
1410 PRINT
1420 PRINT "NUMBER CORRECT";TAB(20);CO
1430 PRINT "NUMBER *WRONG*";TAB(20);WO
1440 PRINT
1450 PRINT VON$;"YOUR SCORE IS **** ";
      (CO/(CO+WO))*100;VOF$;VON$;"%";VOF$
1460 PRINT STRING$(25,"*")
1470 PRINT:PRINT
1480 PRINT VON$;"PRESS <RETURN> TO CONTINUE";VOF$;:INPUT Z
1490 PRINT CLR$
1500 PRINT:PRINT:PRINT
1510 PRINT TAB(10);VON$;
      " 1> RUN ADD PROGRAM AGAIN ";VOF$:PRINT
1520 PRINT TAB(10);VON$;
      " 2> RUN SUBTRACTION PROGRAM ";VOF$:PRINT
1530 PRINT TAB(10);VON$;
      " 3> RUN MULTIPLICATION PROGRAM ";VOF$:PRINT
1540 PRINT TAB(10);VON$;
      " 4> RUN DIVISION PROGRAM ";VOF$:PRINT
1550 PRINT TAB(10);VON$;
      " 5> RUN MULTIPLICATION TABLES DRILL ";VOF$:PRINT
1555 PRINT TAB(10);VON$;
      " 6> QUIT AND RETURN TO MENU ";VOF$:PRINT
1560 PRINT TAB(10);VON$;" Your selection ";VOF$;:INPUT D
1570 ON D GOTO 1580,1590,1600,1610,1620,1630
1580 REM          CALL & RUN SELECTED PROGRAM
1590 RUN "SUB.PRO"
1600 RUN "MULT.PRO"
1610 RUN "DIV.PRO"
1620 RUN "MULTABLE.BAS"
1630 PRINT CLR$:PRINT "That was Really Fun!":PRINT:PRINT
1640 FOR I=1 TO 500:NEXT:PRINT CLR$
1650 RUN "MENU.BAS"
```

LISTING FOUR -- SUBTRACTION DRILL

```
10 REM          SUB.PRO          by Oscar Yohai
20 PN$ = "WELCOME TO THE SUBTRACTION PROGRAM"
30 DT$ = "WRITTEN BY OSCAR YOHAI"
40 VN$ = "SEPTEMBER 15, 1990"
50 E$=CHR$(27):CLR$=E$+"E":VON$=E$+"p":VOF$=E$+"q"
60 X$=CHR$(105):GRON$=E$+"F":GROF$=E$+"G"
70 GOSUB 280:REM          CLEAR SCREEN
80 GOSUB 310:REM          TURN GRAPHICS ON
90 GOSUB 350:REM          PRINT TOP AND BOTTOM BORDER LINES
100 N=6
110 GOSUB 400:REM          PRINT BLANK LINES
120 M$=PN$:REM          M$ IS VARIABLE FOR TEXT MATERIAL
130 GOSUB 460:REM          PRINT FIRST MESSAGE LINE
140 N=2
150 GOSUB 400
160 M$=DT$
170 GOSUB 460:REM          PRINT SECOND MESSAGE LINE
180 GOSUB 400
190 M$=VN$
200 GOSUB 460
210 N=3
220 GOSUB 400
230 M$=AU$
240 GOSUB 460
250 GOSUB 350
260 GOSUB 510
270 INPUT "PRESS <RETURN> TO CONTINUE ";R$:GOTO 530
280 REM          CLEAR SCREEN
290 PRINT CLR$
300 RETURN
310 REM          TURN GRAPHICS ON
320 PRINT GRON$
330 RETURN
340 REM
350 REM          PRINT TOP & BOTTOM BORDER LINES
360 PRINT VON$;SPC(70);VOF$
370 REM
380 RETURN
390 REM
400 REM          PRINT BLANK LINES WITH OUTSIDE BORDER
410 FOR I=1 TO N
420   PRINT VON$;" ";VOF$;SPC(66);VON$;" ";VOF$
430 NEXT I
440 RETURN
450 REM
460 REM          PRINT MESSAGE LINE
470 T=LEN(M$):S=(80-T)/2:REM          CENTER TEXT ON SCREEN
480 PRINT VON$;SPC(2);VOF$;TAB(S-2);VON$;M$;VOF$;TAB(73);
      VON$;SPC(2);VOF$
490 RETURN
500 REM
510 REM          TURN OFF GRAPHICS
520 PRINT GROF$
```


LISTING, Cont'd

```

530 REM
540 PRINT :INPUT "PRESS <RETURN> TO CONTINUE ";Z
550 PRINT CLR$
560 M=5
570 CO=0
580 WO=0
590 DIM R$(5),N1(5),N2(5),C(5)
600 PRINT VON$;" Please type in your name ";VOF$;:INPUT N$
610 PRINT:PRINT
620 PRINT VON$;"How many digits for the examples <1><2><3>";
    VOF$;:INPUT S
630 PRINT CLR$
640 FOR I=1 TO M
650 PRINT SPC(2);VON$;I;VOF$;SPC(4)
660 NEXT I
670 PRINT:PRINT
680 REM
690 REM          DATA-PROCESSING SECTION
700 FOR I=1 TO M/5
710     FOR J=1 TO 5
720         RANDOMIZE PEEK(11)
730         N1(J)=INT(RND(Y)*10^S)
740         IF N1(J) < =1 THEN 720 ELSE 750
750     NEXT J
760     FOR J=1 TO 5
770         RANDOMIZE PEEK(11)
780         N2(J)=INT(RND(Y)*10^S)
790         IF N2(J) > N1(J) THEN 770
800         IF N2(J) < 1 THEN 770
810         IF N2(J) = N1(J) THEN 770
820     NEXT J
830     FOR J=1 TO 5
840         PRINT " ";
850         FOR K=1 TO S
860             IF N1(J)>=10^(S-K) THEN 900
870             IF (S-K)+N1(J)=0 THEN 900
880             PRINT " ";
890             NEXT K
900             PRINT N1(J);TAB(J*10);
910     NEXT J
920     PRINT
930     FOR J=1 TO 5
940         PRINT "-";
950         FOR K=1 TO S
960             IF N2(J)>= 10^(S-K) THEN 1000
970             IF (S-K)+N2(J)=0 THEN 1000
980             PRINT " ";
990             NEXT K
1000    PRINT N2(J);TAB(J*10);
1010    NEXT J
1020    PRINT
1030    FOR J=1 TO 5
1040        FOR K=1 TO S+3
1050            PRINT "-";
1060            NEXT K
1070            PRINT TAB(J*10)
1080            NEXT J
1090            FOR J=1 TO 1
1100                PRINT
1110            NEXT J
1120    PRINT
1130    FOR I=1 TO M
1140    PRINT
1150    PRINT VON$;"YOUR ANSWER FOR EXAMPLE #";I;VOF$;
        :INPUT A(I):PRINT
1160    NEXT I
1170    PRINT CLR$
1180    REM          ***** PRINT RESULTS *****
1190    PRINT
1200    PRINT VON$;N$;VOF$;" ";VON$;" RESULTS OF YOUR WORK "
        ;VOF$
1210    PRINT
1220    PRINT VON$;
        "EXAMPLE CORRECT ANSWERS YOUR ANSWERS RESULTS";VOF$
1230    PRINT STRING$(45,"-")
1240    FOR J=1 TO 5
1250        C(J)=N1(J)-N2(J)
1260        IF C(J)<>A(J) THEN 1300
1270        R$(J)="CORRECT"
1280        CO=CO+1
1290        GOTO 1320
1300        R$(J)="*WRONG*"
1310        WO=WO+1
1320    PRINT USING
        "##)      ###      ###      \      \";J
        ;C(J);A(J);R$(J)
1330    NEXT J
1340    PRINT
1350    PRINT
1360    NEXT I
1370    REM          ***** PROGRAM TERMINATION *****
1380    PRINT:PRINT:PRINT VON$;" PRESS <RETURN>TO CONTINUE "
        ;VOF$;
1390    INPUT Z
1400    PRINT CLR$
1410    PRINT STRING$(30,"*")
1420    PRINT "*"          SCORE BOARD"
1430    PRINT STRING$(30,"*")
1440    PRINT "QUESTIONS";TAB(15);CO+WO
1450    PRINT
1460    PRINT "NUMBER CORRECT";TAB(20);CO
1470    PRINT "NUMBER *WRONG*";TAB(20);WO
1480    PRINT
1490    PRINT VON$;"YOUR SCORE IS **** ";(CO/(CO+WO))*100
        ;VOF$;VON$;"%";VOF$
1500    PRINT STRING$(25,"*")
1510    PRINT:PRINT
1520    PRINT VON$;" PRESS <RETURN> TO CONTINUE ";VOF$;:INPUT Z
1530    PRINT CLR$
1540    PRINT:PRINT:PRINT

```

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LISTING, cont'd

```
1550 PRINT TAB(10);VON$;
" 1> RUN SUBTRACTION PROGRAM AGAIN ";VOF$:PRINT
1560 PRINT TAB(10);VON$;
" 2> RUN ADDITION PROGRAM ";VOF$:PRINT
1570 PRINT TAB(10);VON$;
" 3> RUN MULTIPLICATION PROGRAM ";VOF$:PRINT
1580 PRINT TAB(10);VON$;
" 4> RUN DIVISION PROGRAM ";VOF$:PRINT
1590 PRINT TAB(10);VON$;
" 5> RUN MULTIPLICATION TABLES DRILL";VOF$:PRINT
1595 PRINT TAB(10);VON$;" 6> RETURN TO MAIN MENU ";VOF$:PRINT
1600 PRINT TAB(10);VON$;" Select one ";VOF$;:INPUT D
1610 ON D GOTO 1620,1630,1640,1650,1660,16??
1620 RUN:REM RE-RUNS SUB PRO
1630 RUN "ADD.PRO"
1640 RUN "MULT.PRO"
1650 RUN "DIV.PRO"
1660 RUN "MULTABLE.BAS"
1670 RUN "MENU.BAS"
```

LISTING FIVE -- DIVISION DRILL

```
1 REM ..... DIVision.PROgram
2 PN$="WELCOME TO THE DIVISION"
3 DT$="DRILL PROGRAM"
4 VN$="WRITTEN BY OSCAR YOHAI 9-15-90"
5 E$=CHR$(27):CLR$=E$+"E":VON$=E$+"p":VOF$=E$+"q"
6 X$=CHR$(105):GRON$=E$+"F":GROF$=E$+"G"
7 GOSUB 28:REM CLEAR SCREEN
8 GOSUB 31:REM TURN ON GRAPHICS
9 GOSUB 35:REM PRINT TOP AND BOTTOM BORDER LINES
10 N=6
11 GOSUB 40:REM PRINT BLANK LINES
12 M$ = PN$:REM M$ IS TEXT MATERIAL VARIABLE
13 GOSUB 46:REM PRINT FIRST MESSAGE LINE
14 N = 2
15 GOSUB 40
16 M$ = DT$
17 GOSUB 46:REM PRINT SECOND MESSAGE LINE
18 GOSUB 40
19 M$ = VN$
20 GOSUB 46
21 N= 3
22 GOSUB 40
23 M$=AU$
24 GOSUB 46
25 GOSUB 35
26 GOSUB 51
27 INPUT "PRESS RETURN TO CONTINUE ";R$:GOTO 53
28 REM CLEAR SCREEN
29 PRINT CLR$
30 RETURN
31 REM TURN ON GRAPHICS
32 PRINT GRON$
```

```
33 RETURN
34 REM
35 REM PRINT TOP & BOTTOM BORDER LINES
36 PRINT VON$;SPC(70);VOF$
37 REM
38 RETURN
39 REM
40 REM PRINT BLANK LINES WITH OUTSIDE BORDER
41 FOR I=1 TO N
42 PRINT VON$;" ";VOF$;SPC(66);VON$;" ";VOF$
43 NEXT I
44 RETURN
45 REM
46 REM PRINT MESSAGE LINE
47 T=LEN(M$):S=(80-T)/2:REM ..... CENTER TEXT ON SCREEN
48 PRINT VON$;SPC(2);VOF$;TAB(S-2);VON$;M$;VOF$;TAB(73);
VON$;SPC(2);VOF$
49 RETURN
50 REM
51 REM TURN OFF GRAPHICS
52 PRINT GROF$
53 REM
54 PRINT:INPUT "PRESS RETURN TO CONTINUE ";Z
55 PRINT CLR$
56 DIM R$(5),N1(5),N2(5),C(5)
57 PRINT VON$;" Please type in your name ";VOF$;:INPUT N$
58 PRINT CLR$:PRINT TAB(20);VON$;
" PROGRAM IS NOW CREATING EXAMPLES ";VOF$
59 PRINT:PRINTTAB(20);VON$;" PLEASE WAIT A FEW MOMENTS ";VOF$
60 S=1:S2=2:M=5
61 PRINT:PRINT
200 REM ***** PROCESSING - CREATE EXAMPLES *****
210 REM
220 FOR I=1 TO M
230 RANDOMIZE PEEK(11)
240 N1(I)=INT(RND(I)*10^S)
250 IF N1(I)<=1 THEN 230
260 NEXT I
270 REM
280 FOR I=1 TO M
290 RANDOMIZE PEEK(11)
300 N2(I)=INT(RND(I)*10^S2)
310 IF N2(I) < N1(I) THEN 290
320 A=N2(I)/N1(I)
330 IF A <> INT(A) THEN 290
340 IF N2(I)>=10*N1(I) THEN 290
350 IF A =1 THEN 290
360 NEXT I
370 PRINT:PRINT
380 REM
390 FOR I = 1 TO M
400 PRINT TAB(10);
410 PRINT GRON$;CHR$(113);STRING$(6,"z");SPC(4);GROF$;
420 PRINT TAB(7);
430 PRINT N1(I);
```


LISTING end -- FOR SALE!

```

440 PRINT GRN$;CHR$(113);N2(I);SPC(6);GRF$;SPC(5);
450 PRINT TAB(30);VON$;"YOUR ANSWER ";VOF$;:INPUT A(I)
470 PRINT
480 NEXT I
490 PRINT:PRINT VON$;"PRESS RETURN ";VOF$;:INPUT Z:PRINT CLR$
500 REM ***** PRINT RESULTS *****
510 PRINT
520 PRINT VON$;"
530 PRINT
540 PRINT VON$;
"EXAMP CORRECT ANS YOUR ANS RESULTS";VOF$
550 PRINT STRING$(45,"-")
560 FOR J=1 TO 5
570 C(J)=N2(J)/N1(J)
580 IF C(J)<>A(J) THEN 620
590 R$(J)="CORRECT"
600 CO=CO+1
610 GOTO 640
620 R$(J)="*WRONG*"
630 WO=WO+1
640 PRINT USING
"##) #### \ ";J;C(J);
A(J);R$(J)
650 NEXT J
660 PRINT:PRINT
670 REM ***** PROGRAM TERMINATION *****
680 PRINT:PRINT:PRINT VON$;" PRESS <RETURN> TO CONTINUE";VOF$;
690 INPUT Z
700 PRINT CLR$
710 PRINT VON$;"HERE IS YOUR REPORT CARD....";VOF$;" ";
VON$;N$;VOF$;:PRINT:PRINT
720 PRINT
730 PRINT "* SCORE BOARD *":PRINT
740 PRINT
750 PRINT "TOTAL # OF QUESTIONS";CO+WO
760 PRINT
770 PRINT "NUMBER CORRECT";TAB(20);CO
780 PRINT "NUMBER *WRONG*";TAB(20);WO
790 PRINT
800 PRINT VON$;"YOUR SCORE IS **** ";
(CO/(CO+WO))*100;VOF$;VON$;"%";VOF$
810 PRINT:PRINT
820 PRINT VON$;"PRESS <RETURN> TO CONTINUE";VOF$;:INPUT Z
830 PRINT CLR$
840 PRINT:PRINT:PRINT
1000 PRINT TAB(10);VON$;"1> RUN DIVISION PROGRAM AGAIN";
VOF$;:PRINT
1010 PRINT TAB(10);VON$;"2> RUN ADDITION PROGRAM";
VOF$;:PRINT
1020 PRINT TAB(10);VON$;"3> RUN SUBTRATION PROGRAM";
VOF$;:PRINT
1030 PRINT TAB(10);VON$;"4> RUN MULTIPLICATION PROGRAM";
VOF$;:PRINT
1040 PRINT TAB(10);VON$;"5> RUN MULTIPLICATION TABLES DRILL";
VOF$;:PRINT

```

```

1050 PRINT TAB(10);VON$;"6> QUIT PROGRAM AND GO HOME";
VOF$;:PRINT
1060 PRINT TAB(10);VON$;"Select one <1><2><3><4><5><6>";
VOF$;:INPUT D
1070 ON D GOTO 1080,1090,1100,1110,1120,1130
1080 RUN
1090 RUN "ADD.PRO"
1100 RUN "SUB.PRO"
1110 RUN "MULT.PRO"
1120 RUN "MULTABLE.BAS"
1130 SYSTEM

```

[We're out of room again! "MULT.PRO" and "MULTABLE.BAS" will therefore appear in our January, '92 edition, For Sure! - ed]

=====

FOR SALE! * GREAT H/Z STUFF * FOR SALE! * GREAT H/Z STU

=====

D-G Electronics Developments Company has several Brand-New Super-89 CPU boards left in stock. At the "Last-Ever HUGCON" (August, 1986) these boards sold at \$450 each w/two 64k RAM banks installed (they hold four, which equals 256k).

The Super-89 CPU is a one-for-one up-grade replacement for the old H/Z-89 or H/Z-90 CPU & lets you run at either 2, or 4Mc/Sec clock speed, provides FOUR extra left side I/O-interface board slots, an extra serial I/O port, and an on-board real time-and-date clock IC chip (output from which is accessible from inside running programs via ANAPRO Corp's HDOS-clone CP/M DATE-STAMPER software).

The D-G Super-89 CPU has an extensive instruction manual, and runs HDOS 2.0 (Ver 3.01--if you change the Monitor ROM IC) and any version of CP/M, ZCPR, or Z-DOS. Once installed, the D-G Super89 CPU makes your dear old grey box into a "Virtual Whizzeroo", giving many peesee owners Connipion Fits!

Both HDOS.SYS and CP/M BIOS.SYS extended-RAM upgrades are available through either Henry Fale (QuikData) or the SEBHC JOURNAL. The upgrade permits accessing the full 256k RAM for use as a Firecracker RAM disc, Hot Shot Cache Memory, or Background printer spooler. At 4Mc/S clock speed, your H/Z-89/90 will run Faster Than A Speeding Bullet (or a Washington DC political rumor)! And what's even better you'll have very few new commands to learn, compared with changing over to a peesee or "clone" (UGH!). A D-G S-89 Plus: All your old 8-bit H/Z software runs with no changes whatever (just faster).

Please call Bruce Denton at D-G Electronics during business hours -- 903-465-7805 CST, and reserve YOUR D-G Super89 CPU board RIGHT AWAY! (Tell him Lenny sent you!)

=====

SEBHC JOURNAL

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EIGHT-BIT & "OTHER" VENDOR LIST

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

Listing last updated on 23 December 1991

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 Stocks H/Z89s, parts, software. Check him out; you might be pleasantly surprised!

D-G ELECTRONIC DEVELOPMENTS Co., 700 S Armstrong, Denison TX 75020; * phone 903-465-7805 (Central Time Zone) * 8-bit "Heartbeat" computer, 8-bit "Super89" CPU upgrade/replacement board. Bruce Denton, president; Service & advice available, also GOOD H8 and H/Z89 hardware at clearance prices; contact Bruce for details. A *Certified* YOU-BETCHA GOOD GUY!

DISK MOVERS, 8534 McCormick Blvd, Skokie, IL 60076; phone 708-679-3727 (Central Time Zone)--ask for Miriam. HARD-SECTOR and soft-sector discs for H/Z8s, '89s in bulk quantities at very low prices! "VERY NICE and HELPFUL PEOPLE." (Do give them a call and mention us!)

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)"! (Please mention that you found them listed here!)

HOYLE & HOYLE SOFTWARE, 111 Sparrow Drive, Isle of Palms, SC 29451. (Answer mailed enquiries only.) Their QUERY-III database runs on H8s thru Z120s. "REALLY GOOD GUYS"!

LINDLEY SYSTEMS, 8139 E Mawson, Mesa, AZ 85207 -- phone: 602-380-9175. All kinds of neat-OH 8-bit software such as PC89LINK--lets you transfer 8-bit stuff to H/Z100s and peesees over a null-modem cable. Ask either Bob or Bill for a catalogue, they're Really Fine Fellows!

MAGNOLIA MICROSYSTEMS, 2818 Thorndyke Avenue West, Seattle, WA 98199; phone 206-285-7266 (Pacific Time Zone). Ask for "Mark". Special memory upgrades and op-systems for H/Z89s & 90s. Trustworthy people.

MICRO COMPUTER REPAIR SERVICE, 2308 Industrial Highway, Ste C Ann Arbor, MI 48104; phone 313-663-3646. D-DRIVE REPAIRS & SALES. Ask for Mike Morris, he's "A SUPER GUY"! (Tell him Lenny sent you.)

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 harddiscs 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". Colour and sound boards for H8, H89. Out of business, but willing to provide tech advice on their products. Dave's ANOTHER GOOD GUY!

QUICKDATA COMPUTER SERVICES, Inc., 2618 Penn Circle, Sheboygan WI 53081; phone 414-452-4172--Henry Fale (Fah-lay) Prop. Mfr, sales, service, 8-bit machine support & parts; publishes H-SCOOP Heath/Zenith user's newsletter, 24-hour H/Z user BBS. Ever busy but "A REAL GOOD GUY!"

SIGMASOFT & SYSTEMS, 2433 Winterstone Drive, Dallas TX 75023-7818; 214-596-0116 (Central Time Zone)--Clay Montgomery--hardware/peripherals mfr, software publisher, hardware & tech support, RAM drives, Hi-Res grafix addons for H/Z89s. Catalog & help; A *FANTASTIC* GOOD GUY!

SKYCASTLE COMPUTER PRODUCTS, Box 1412, San Carlos, CA 94070; 415-254-3931 after 6pm Pacific Coast time--ask for Mike. Calligraphy-II and other FANTASTIC dot-matrix graphic printer software products. A REALLY, SUPER-GOOD GUY!

TMSI/LEE HART, 323 West 19th Street, Holland, MI 49423 616-396-5085 (evenings, weekends--usually) Their motto: "Inovative Products for the H/Z89" Misc. 8-bit hardware items, hardware/software support for '89/90 users. "A NICE GUY & TOP-NOTCH ENGINEER!"

=====

OTHER VENDOR NEWS... OTHER VENDOR NEWS... OTHER VENDOR NEWS

=====

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We urge you to, if nothing else, ask for one of their six-times-a-year flyers. They have fans, power jacks, I-C sockets of all types & description, card-edge connectors, "D-Subs" connectors, coax connectors, modular cords, power supplies, a-c & d-c line filters, battery chargers, project boxes, tools, a-c & d-c relays, switches, capacitors, printer stands, disc drives (floppy & hard), printers, external drive cases, et cetera, and so on and mind-boggling on!

=====

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