Saving Our CLASSIC Heath 8-Bit Machines!

SEBHC JOURNAL

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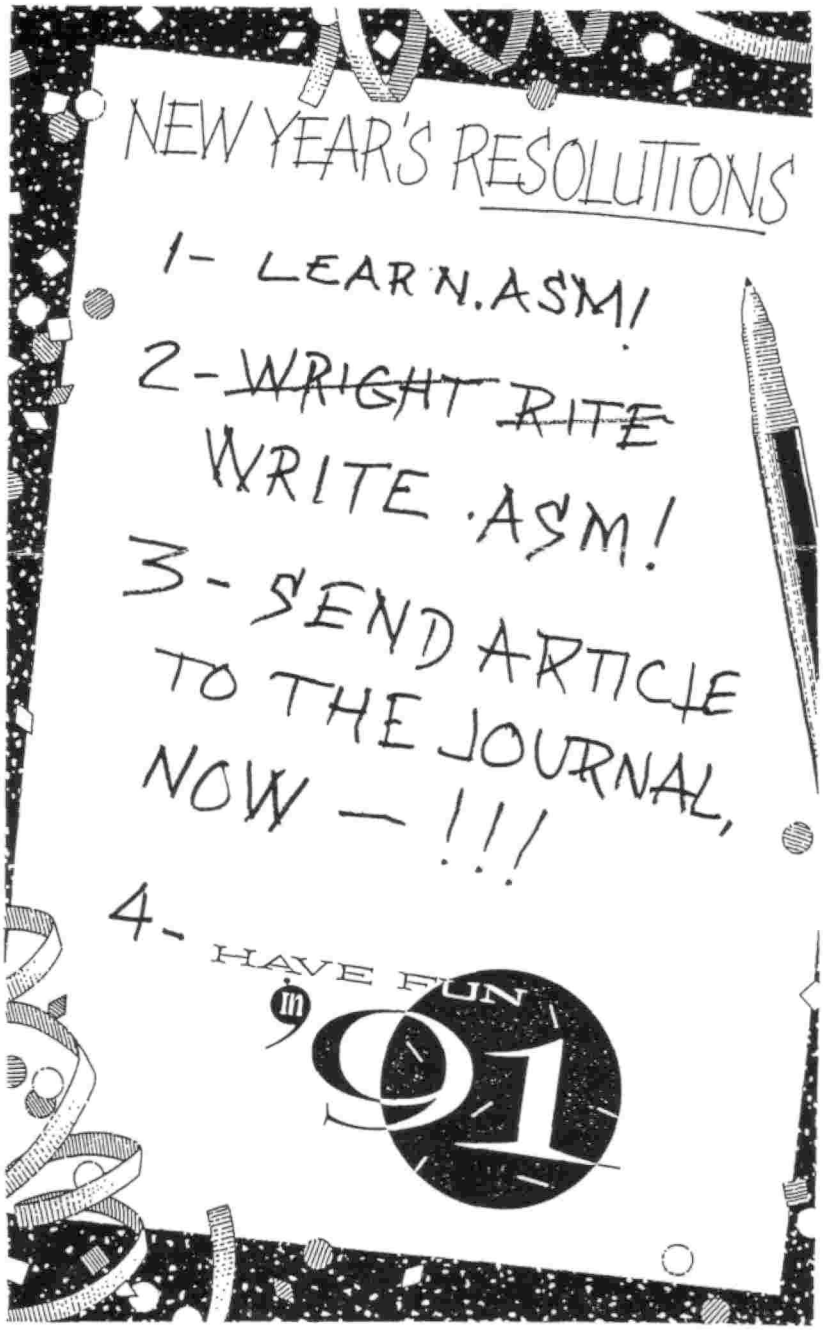


The READER'S MAILBOX

Dear Len,

I've been involved with Rick Swenton, and to some degree, Lee Hart of TMSI in resolving a method to overcome incompatibilies of Lee's Superset terminal EPROMs and the SASIX.COM program included with Henry Fale's Quikstor hard-disc subsystem for the H89 and H8 [machines]. The incompatibilities [surface] when the subsystem is set up to present the BOOT TABLE from the hard-drive's master boot tracks. The code uses an 'auto baud' routine which steps the computer's serial 8250 ACE from 19200 baud down to 300 baud. When the terminal baud setting matches the computer ACE setting, operation starts. This routine works with the original Heath terminal monitor ROM, but doesn't work with TMSI's terminal code.

Henry Fale reprinted Rick Swenton's patch to SASIX.COM in H-SCOOP #128 (Nov-90) which had been sent [earlier] to the SEBHC JOURNAL. This is where I first heard of it and, and so immediately contacted Henry Fale and Rick Swenton, [informing them] that the patch doesn't solve the H8 problem. To be brief, I can say that the collective efforts of all [concerned] that the H8's problem solution was also found, albeit more complicated [than with the H89].

Rick Swenton asked me to send you a copy of the final solution [which I had] sent to Henry Fale. I [also] sent Henry [a list of] the necessary steps, and a coded EPROM containing a patched version of PAM-37 (the last H8 panel monitor code). I've enclosed [copies of] all my documentation which you may use as you see fit.

JOHN TURLEY, 327 Villa Avenue, Buffalo, NY 14216

Here's John's letter to Lee Hart:

"Dear Mr Hart,

"As you remember I've been troubled by problems with Henry Fale's QUIKSTOR software in writing the boot track and partition table (SASIX.COM) and the Superset ROM set for the H19/-H89. I was elated to see your patches via Rick Swenton to you and published in your "COMMENTS FROM LEE" in H-SCOOP #128 (November). After making some changes in both my H89 and H8 systems, the results were the same; it didn't work.

"The patches Rick showed simply removes the "OUT" instruction to the 8250 ACE when the MSB and LSB values are being sent to program the baud-rate generator. Without these instructions, the rate remains at whatever it last was (to start with, anyway).

"In the H89 case the 8250s are programmed through the monitor ROM (and dip-switch settings, 0=9600, 1=19200) at powerup, which in turn activates the 'H:' prompt. Then the relocated hard-disc boot code loads the program (from SASIX) and then begins to loop, first setting the baud [rate] at 19200 and sending out ANSI code. In the loop (via an RLC--rotate bit through carry--instruction) the original LS DIVISOR latch value increments up to step the 8250 baud-rate generator through 19200, 9600, 4800, etc. Something [then] has to signal back from the H19/89 terminal that baud rates have matched, but I haven't yet been able to determine what this is (I don't have any source code).

"In Rick's patch, the baud rate match is made, but a continuous stream of "~" [tilde] characters are displayed across the screen's top. In an effort to bypass this loop, I prevented a CALL at 323h (see attached ZDT listing) and tried both a value of 59h and 4Ah stored at location 27BBh. The result was that the loop doesn't happen, but the terminal didn't initialise correctly in ANSI mode. The line printed then <verbatim> is:

```
;41111m1;3;511;6;7hJ;01HSASIX Hard Disk;01H;18Partition Master Boot -;18H;42H    [Line truncated to fit column size --ed]
```

"I recognised what appears to be corrupted ANSI terminal VT52 sequences, and the terminal is found to be in ANSI mode when checked but a pointer probably wasn't set when I did this.

"In the H8 with Quikstor case, Rick's patch complicated things worse. The H8 PAM-37 front-panel monitor doesn't initialise the 8250 ACE at powerup. The H8 operating system has to test for an 8250 ACE at port 350Q or an 8251 USART at 372Q, then initialise [whichever one] it [finds]. The reason [that] the SASIX boot code worked was that IT DID initialise the 8250 ACE, but the patches remove it." [What DID he want that last sentence to mean? -- ed]

"I got around this by simply setting the MSB to 014Q and replacing the RLC instrucion with NOP, so no matter [what] the ACE is programmed for 9600 baud, but the results now were the same as [with] the H89 above.

"I don't know if Rick was testing on a non-Heath system or terminal, but I'm curious to know why my configuration didn't work. In both systems I'm using your 101-402 EPROM, 101-422 keyboard EPROM, the SUPERFONT 101-431, and the SUPERCLOCK at U436. I thought maybe his SUPERSET was a different version, or some other segment of the SUPERSET used in mine is different that Rick's.

"Henry Fale suggested that I write you again in the hope that you could test this patch (copy attached) on a system there. But you would need the Quikstor, because the code relocated from the boot track is not used when SASIX.COM is run directly from the TPA.

"READER'S MAILBOX" continued

"You know and remember that I have been unable to use the SUPERCLOCK in my H19/H8 since I purchased and installed it 15 months ago. The hardware-paged EPROM you sent, also the paged keyboard EPROM which I made (for some reason for which I'm sure you know that the original ROM code wouldn't work with your 101-422 EPROM, so I had also to page it) does allow me to boot QUIKSTOR with boot-table presentation, then switch to new terminal code, reset, and go. But time and date [either] do not load correctly or at all from the MOSTEK clock and RAM IC (SUPERCLOCK).

"I'd still like a solution to getting UltiMeth's SASIX working with SUPERSET or would be satisfied in getting SUPER-CLOCK to load date and time upon each terminal reset (which latter item you did promise you'd look into sometime back)."

/s/ John Turley

And here's the patch as done with ZDT as mentioned above:

```
A>ZDT SASIX.COM
ZDT VERS 2.0.00 - CPU IS Z-80
NEXT PC
2F00 0100
-L300
0300  INX  B
0301  LXI  D,296A
0304  LHLD 3083
0307  MOV  A,L
0308  ORA  H
0309  JRNZ 033F
030B  PUSH D
030C  MVI  C,03   ;03h sets 8250 LS latch start to 00000011b
030E  XRA  A      ;zero A
030F  OUT  EC     ;8250 modem register sets DTR & RTS to zero
0311  MVI  A,9A   ;line ctrl reg set DLAB=1 value 10011010b
0313  OUT  EB     ;initialise Divisor Latch access
0315  XRA  A      ;zero A for Divisor Latch MS value
0316  OUT  E9     ;send MS value
0318  MOV  A,C    ;move in 03h starting LS value
0319  RLC        ;shift bit left through carry A=06h
031A  MOV  C,A    ;save in C for later bit shift
031B  OUT  E8     ;send LS value, baud gen=19200
031D  MVI  A,1A   ;line cntl reg set DLAB=0 value 00011010b
031F  OUT  EB     ;de-initialise Divisor Latch access
0321  IN   E8     ;empty Rec buffer register
0323  CALL 3A5E   ;go do rest of auto-baud stuff
0326  JRC  0311   ;return w/carry, go back & lower baud rate
0328  MVI  A,59   ;some kind of ID for terminal type?
032A  JRZ  032E   ;if zero flag, 59's ok,
032C  MVI  A,4E   ;otherwise 4E is the value
032E  STA  27BB   ;store here
0331  MVI  A,0B   ;value to set DTR, RTS, and OUT 1 on.
0333  OUT  EC     ;let's do it.
0335  LXI  H,3081
0338  LXI  D,2D7B
033B  CALL 3A78
033E  POP  D
033F  CALL 3AB1
0342  CPI  09
0344  JRNZ 034C
0346  XRA  A
0347  CALL 30A6
034A  JMPR 0355
034C  CPI  08
034E  JRNZ 035B
0350  CALL 3B72
0353  DI
0354  RST  0
0355  LXI  D,4085
```

Here's John's letter to Rick Swenton:

"Dear Rick,

"Thank you so much for the new PAM37-coded EPROMs. The solution of [re]locating the 8250 initialisation routine from the MTR-90 into the PAM37's free space did indeed work here, and all problems mentioned are gone. I'll send a copy of this letter to Lee Hart to release him from working unneces-sarily.

"Henry Fale has asked that I forward my expierences and results to him for inclusion in the next H-SCOOP. You'll be given full credit for the solution. This problem has been nagging me since October 1989. I'm amazed by how simple a solution it was. If I'd had success with the H89 I probably [would] have gravitated toward initialising the 8250 in the H8. Since I'd somehow goofed when testing in the H89, I was convinced it wasn't the path to take. As for the H89, I've not yet had the opportunity to test again, but I'm sure I must have done what you suggested and didn't re-write the boot table. If it works here on the H8, it absolutely must work on the H89.

"I did latch onto a bug in your patch, although [it's] not serious. It came up when I attempted to use the return-to-monitor-ROM option from the boot table (25th line option, White Key). The H8 crashed every time [I tried that]. The solution comes from the fact that PAM37 is written into RAM after powerup. The routine which does that is "XINIT-Exten-ded Intialisation" at [address] 040Eh. When you added code at [address] 08C0h, you essentially increased the size of PAM37. It works initially, since the jump to 0C80 happenes before the EPROM [code] is written to RAM, but the SASIX option seems to use the level-0 reset interrupt vector, and that jump to 0C80 send [the EPROM code] to no-code hell. The cure is to change the value at byte 0435h from 07Eh to 0B0h, extend the length of PAM37 [code] in RAM, and preserve the H89 patched-in routine. I burned a new EPROM, and all is [now] well.

"I sincerely doubt that there are many systems such as mine still in use. But I'd like to make available this solu-tion through H-SCOOP [and the SEBHC JOURNAL] to anyone with

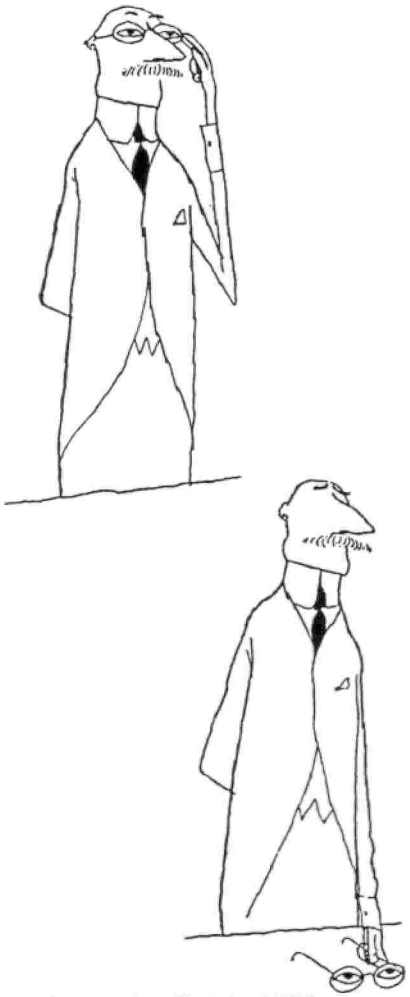
"READER'S MAILBOX" continued

an H8 and QUIKSTOR HD subsystem, and the TMSI SUPERESET. I'm going to [send] documentation to Henry; thanks again."

/s/ John Turley

Lastly, here's the text of John's QBBS letter to Henry Fale:

```
Msg#: 2273 *MAIL*
01-01-91  22:45:18
From: JOHN TURLEY
  To: HENRY FALE (Rcvd)
Subj: FINAL SOLUTION PART 1
;Henry, this is the best solution to resolve that nagging
;problem of mine between the QUIKSTOR SASIX boot table auto-
;baud routine, the TMSI Superset ROMs for the H19/H89 and the
;H8.  Here is a recap of the problem:
;
;1) The SASIX boot table auto baud routine uses ANSI mode in-
;   stead of Heath mode on the terminal.  I imagine that LLL
;   wanted to market this to other than strictly Heath users.
;
;2) The SASIX routine begins by setting the 8250 serial ACE
;   on the computer side at 19200 baud then cycles down to
;   300 baud and back continuously.  After each initializa-
;   tion the terminal is tested for some response at the set
;   baud rate.  To be completely honest I never discovered
;   what the routine was doing at this point.  Whatever it is
;   the original Heath H19 ROMs provide it, but the SUPERSET
;   EPROMs do not.
;
;3) The patch from Rick Swenton published in HSCOOP #128 dis-
;   ables the programming of the 8250 ACE during the cycle
;   mentioned.  The ACE is at the power-up configuration on
;   the H89 and is already matched with the baud of the TLB.
;   So it appears that as long as you satisfy the auto baud
;   routine initially on first test then all is well.  This
;   works OK for the H89 only because the MTR90 monitor
;   initializates the 8250 ACE either at 9600 or 19200 baud
;   depending on the setting of position #6 on the dip switch
;   SW501.
;
;4) Now on the H8 the PAM37 Monitor ROM doesn't initialize
;   the 8250 ACE.  Since PAM37 was for the front panel on the
;   H8 and the terminal could be non-existant on port 372Q
;   (H-8-5) or 350Q (H-8-4).  Rick Swenton solved this by
;   patching in the 8250 initialization routine from the
;   MTR90 code into a free area of the PAM37 code and jumping
;   to that routine first.  By buring a new EPROM and
;   installing on the H8 Z80 CPU card solves the problem for
;   the H8.  However now the status port switch position #6
;   on the HA-8-6 CPU card represents initializating port
;   350Q at 9600 (switch=1) or 19200 baud (switch=0) and must
;   be set correctly and the terminal must be set and ready
;   at the same baud setting.
;
;
;Here is the routine from the MTR90 which is placed in the
;PAM37 EPROM at location 0C80h to 0CAF.  All values are in
;HEX.
;
;0C80   MVI   A,80
;0C82   OUT   EB
;0C84   LXI   H,0CA0
;0C87   IN    F2
;0C89   ANI   40
;0C8B   RRC
;0C8C   RRC
;0C8D   RRC
;0C8E   RRC
;0C8F   RRC
;0C90   ADD   L
;0C91   MOV   L,A
;0C92   MOV   A,M
;0C93   OUT   E9
;0C95   INX   H
;0C96   MOV   A,M
;0C97   OUT   E8
;0C99   MVI   A,03
;0C9B   OUT   EB
;0C9D   MVI   A,00
;0C9F   OUT   E9
;0CA1   LXI   B,3E80
;0CA4   DCR   C
;0CA5   JRNZ  0DA4
;0CA7   DJNZ  0DA4
;0CA9   JMP   040E
;0CAC   DB    0
;0CAD   DB    0C
;0CAE   DB    0
;0CAF   DB    06
;
;Heres the hex dump for above code added to PAM37:
;
;0C80 3E 80 D3 EB 21 AC 0C DB F2 E6 40 0F 0F 0F 0F 0F
                                                >...!.....@.....
;0C90 85 6F 7E D3 E9 23 7E D3 E8 3E 03 D3 EB 3E 00 D3
                                                .o~..#~..>...>..
;0CA0 E9 01 80 3E 0D 20 FD 10 FB C3 0E 04 00 0C 00 06
                                                ...>. ..........
;0CB0 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
                                                ................
;
;
;At location 0003h JUMP is changed.
;
;0003   JMP   0C80      (was JMP   0404)  This causes jump to
;                       initialize 8250 via new code
;
;
;
```



MAILBOX BOTTOM. . . VENDOR DIRECTORY

```
;HEX dump of change
;0000 11 00 00 C3 80 0C FF FF CD 5A 00 16 00 C3 81 00
                                                .........Z......
;0010 CD 5A 00 1A C3 A4 01 FF C3 25 20 50 61 6D 33 37
                                                .Z.......% Pam37
;0020 C3 2B 20 2F 53 41 50 2F C3 2B 20 F5 AF C3 63 02
                                                .+ /SAP/.+ ...c.
;At location 0434h change value in instruction:
;
;0434  LXI   B,0CB0       (was LXI    B,0C74) This allows new
;                         code to be written  to RAM.   0CB0h
;                         represents the new PAM37 size.
;HEX dump of change:
;
;0434 01 B0 0C 11 00 00 1A 12 13 0B 78 B1 ..........x.
;0440 C2 3A 04 01 00 08 11 00 18 1A 12 13 0B 78 B1
                                              C2.:...........x..
;0450 49 04 3A 20 F6 20 32 36 20 D3 F2 11 F9 03 21
                                              I.:6 . . 26 .....!
;0460 0A 20 C3 3B 00 D3 F2 7E 35 BE 78 D3 F2 EB E9
                                              C6 . .:...~5.x.....
;
;Now BEFORE the EPROM is installed use patch from  Rick Swen-
;son on SASIX.COM and REWRITE the master boot  track  on  the
;Quikstor  Hard  Disk.   Then install new EPROM,  set  status
;switch for terminal baud rate and all should be well for H8.
;
;If you like  I can send you a ready to go  modified PAM37 E-
;PROM which you can duplicate from and supply  with  QUIKSTOR
;for H8.  -OR-  I can upload INTEL HEX file of changed  PAM37
;code.
;
;And that's the end of that tune!!  // J.T. , Buffalo, NY.
```

[<SIGH> Take pity on us old codgers; don't make us hand-enter everything, but rather send your text to us as ASCII disc files! And that's the "deep nitty gritty" of how John Turley and Rick Swenton unscrewed the inscrutable problem of making the H19 & H8 and H89 screens operate identically with Henry Fale's Quikdata hardsector disc drive and SASIX.COM disc utility! The more data we publish about any subject, the happier our readers will be! -- ed]

Dear Leonard,

I see you still have Heath software available. Do you or any reader have any ASSeMbly language instruction material as good as, better, or easier than Heath's EC-1108 course? I am willing to buy what's available--if it isn't too "heavy".

ROBERT E STOHR, Rte 1, Box 51, Shelby, Iowa 51570

[Ok, readers, here's your chance to help a fellow 8-bit computerist! Do It Right Away, y'all hear?! -- ed]

--==<<[[8]]>>==--

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SEBHC JOURNAL

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WRITING BASIC(ally)

Part Two -- Structured Programming

by

Editorial Assistant A Stapher

In Part One we presented some of the more important points about outlining Modular Programmes. Now we'll do the same thing with Structured Programming's major points.

The four main structures are:

1 - Sequence structure where one operation is carried out after another until all are finished
2 - Decision structure where a True-False test checks and choses either operation A or operation B then proceeds to the finish
3 - Loop stucture where an operation (or a series of operations) repeat until a parameter has been met
    a - if condition is tested first, it's called a DO-WHILE loop
    b - if condition is tested last, it is called a DO-UNTIL loop
4 - Do-case structure, in which any one of several operations (or series of operations) is performed depending upon the value of a variable or expression

Learning to recognise and understanding how to use these 4 structures results in three advantages:

1 - Program composition, testing, and debugging time is reduced
2 - Program modification is simplified
3 - Program clarity is enhanced

Point three is very important because if a program is expected to be useful, "live" a long time and allow changes by its' various readers, it MUST be clearly written.

An Algorithm is a step-by-step series of instructions for solving a particular problem. It must be

- unabiguous--that is, it must not leave any room for doubt as to what has to be done next
- effective--that is, it must solve the problem
- finite--that is, it must do so expeditiously

The following is an example of an algorithm for soft-boiling an egg:

1. Fill a pot half full with tap water
2. Gently place egg in the water
3. Place pot on a range burner
4. Turn on burner
5. Wait for water to come to a boil
6. Turn off burner and cover pot with lid
7. Wait three minutes (use a timer)
8. Take pot with egg and water to sink
9. Drain hot water, rinse egg with cold water
10. Congratulations! You have soft-boiled an egg.

This algorithm demonstrates the three properties listed above: The procedure is effective, because if you follow it precisely you will soft-boil an egg. It is unabiguous to the point of being somewhat simple-minded, and it is finite, because steps five and 7 limit the amount of time for cooking the egg. And your perfect soft-boiled egg will have a firm white, but soft yolk.

Note: If you wish to hard-boil an egg, simply re-write step seven as, "Wait six minutes", and you'll get a perfect, and thoroughly hard-boiled egg. (If you're really pickey, change line 10 to read: "Congratulations! You have hard-boiled an egg.")

In the following example of program-writing, we're assuming that our readers have a nodding aquaintance with MBASIC. For those who are completely unfamiliar with HDOS or CP/M MBASIC, we still have some copies of Heath's Continuing Education Course, "Programming in Microsoft BASIC" available plus companion HDOS MBASIC copies (see page 8). Note that you can adapt our example programme (below) to B-H BASIC with a little "skull drudgery".

Listing 1 -- The main programme

```
5 REM                    CANDY.BAS       MBASIC Ver 5.2 (CP/M)
7 REM   ACCOUNT PROCESSOR FOR FUND-RAISING CANDY SALES
8 REM           Set up all variable names
10 C$=CHR$(27):UP$=C$+"A":B1$=C$+"D":Y$=C$+"Y":J$=C$+"j":K$=
   C$+"k":EEL$=C$+"K":EL$=C$+"J":F$=C$+"F":G$=C$+"G":P$=C$+
   "p":Q$=C$+"q":X1$=C$+"x1":Y1$=C$+"y1":X4$=C$+"x4":Y4$=C$+
   "y4":X5$=C$+"x5":Y5$=C$+"y5":BEEP$=CHR$(7):Z$=C$+"z"
15 REM         Set up all functions and clear screen for work
20 DEF FND$(V,H)=Y$+CHR$(31+V)+CHR$(31+H):CL$=C$+"E":
   PRINT CL$
30 DEF FNO(C)=(80-C)/2:WIDTH 80:WIDTH LPRINT 80
40 PT$=" CANDY ACCOUNT MANAGER ":ZZ$="$$###.##"
50 C=LEN(PT$):PRINT FND$(8,FNO(C))P$PT$Q$
   PRINT FND$(10,32)"by Raymond Dotson":
   PRINT TAB(30)"214 S. Berkeley Blvd.":
   PRINT TAB(30)"Goldsboro, NC   27530":
   PRINT TAB(33)"(919)  778-4112"
60 PRINT J$X4$X1$FND$(25,34)P$"Hit any Key!"B1$;
   A$=INPUT$(1):PRINT Y1$Y4$K$Q$CL$
70 PRINT FND$(4,27)P$" TALLY FOR THE GIRLS "Q$
80 PRINT FND$(6,20)EL$;:LINEINPUT "# BOXES OF REGULAR CANDY";
   BOX$
90 IF BOX$="" THEN PRINT CL$:GOTO 180
100 BOX=VAL(BOX$):BOXTOT=BOX*24:PRINT FND$(6,19)BOX
    "Boxes at $24.00=";:PRINT TAB(31)USING ZZ$;BOXTOT
```

BASIC(ally) finis...FREEBIES!

```
110 PRINT TAB(20);:LINE INPUT "# BAGS OF 100 GRAND ";BAG$
120 BAG=VAL(BAG$):BAGTOT=BAG*7.5:PRINT FND$(7,19)BAG
    "Bags at  $ 7.50=";:PRINT TAB(31);USING ZZ$;BAGTOT
130 PRINT FND$(8,20);:LINE INPUT "SHE HAS PAID? ";PAID$:PAID=
    VAL(PAID$)
140 PRINT FND$(8,32)"              ";USING ZZ$;PAID
150 PRINT TAB(20);STRING$(20,"-");TAB(46)STRING$(9,"=")
160 OWES=(BAGTOT+BOXTOT)-PAID:PRINT FND$(10,20)
    "SHE STILL OWES      ";:PRINT TAB(30) USING ZZ$;OWES
170 PRINT:PRINT:A$=INPUT$(1):GOTO 80
180 PRINT FND$(4,30)P$" OUR ACCOUNTING "Q$
190 PRINT FND$(6,20)EL$;:LINEINPUT "# CASES OF REGULAR CANDY"
    ;BOX$
200 IF BOX$="" THEN PRINT CL$:END
210 BOX=VAL(BOX$):BOXTOT=BOX*24:PRINT FND$(6,19)BOX
    "Cases at $24.00=";:PRINT TAB(31);USING ZZ$;BOXTOT
220 PRINT TAB(20);:LINE INPUT "# CASES OF 100 GRAND ";BAG$
230 BAG=VAL(BAG$):BAGTOT=BAG*22.5:PRINT FND$(7,19)BAG
    " Cases at $22.50=";:PRINT TAB(31);USING ZZ$;BAGTOT
240 PRINT TAB(20);STRING$(20,"-");TAB(46)STRING$(9,"=")
250 OWES=BAGTOT+BOXTOT:PRINT FND$(9,20)"We owe";:PRINTTAB(30)
    USING ZZ$;OWES
260 TAX=OWES*.05:PRINT TAB(20);"Tax";TAB(46);USING ZZ$;TAX
270 PRINT TAB(20)STRING$(20,"-");TAB(46)STRING$(9,"=")
280 TOTAL=OWES+TAX:PRINT TAB(20)"TOTAL";TAB(46);USING ZZ$;
    TOTAL
290 PRINT:PRINT:A$=INPUT$(1):GOTO 190
```

Please note that author Ray Dotson wrote this program in a very compact and structured form. As an illustration of what you can do with MBASIC, it's great. But this listing is very complex and might frighten away some neophite programmers. Therefore we are now preparing several brief programme modules which we'll print in our next installment. These can be combined in a number of ways to accomplish many different tasks. Unlike Ray's listing above, ours will make use of GOSUBs rather than GOTOs. GOTOs are so very rigid....

Meanwhile, if you copy and run Ray's programme, please let us know how it works for you, and if you have made changes to it for your own application. Since Ray lives in South Carolina, he buried that state's sales tax figure somewhere in the programme. Here's a neat exercise for you "Hot Rock BASIC" programmers: See if you can find where it is and then change it to fit what your state charges. (Of course, if you can figure out how to get your state to repeal its' sales tax law, Write Us Right Away. We all need a programme such as that!)

Remember, we need more of YOUR correspondence all the time, because the SEBHC JOURNAL is--after all--a NEWS Letter. What you send us is REAL News, and deserves the widest-possible distribution!

--==<<[[8]]>>==--

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FREEBIES! FREEBIES! FREEBIES! FREEBIES! FREEBIES!

==========

A Whole Bunch (more than three, less than fifty) of 8-inch, single-sided floppy drives--manufacturers unknown. They may or may not be working, but think of all the * spare * parts! In this pile is just one HEAVY-duty, D-C, 25-amp, 24-volt analogue power supply. No tech data available, but the entire lot is YOURS FREE if you pay packing and shipping costs! [ABSOLUTELY NO INDIVIDUAL ITEMS--YOU MUST TAKE ENTIRE LOT!] Contact Lenny at the JOURNAL 313-662-0750, live between 9am & 5pm Eastern Time, recorder all other times--do please leave your name, phone number, & a short message.

=> DON'T LET THIS ONE GET AWAY! <=

==========

EADER'S MAIL BOX, continued... READER'S MAIL BOX, continued

==========

Dear Mr Geisler,

I have a problem I haven't been able to solve but in reading the JOURNAL I [think] I may have found a way to put it to rest. I'd like to get my H-14 printer working with my (now, don't say this very loud!) XT clone. (Whew! That was tough!)

I simply haven't had time to drag out my scope, breakout box, and so on to experiment [with it], but as I was reading my JOURNAL, it came to me like a flash out of the blue (no, not Big Bleu). I'd seen it so many times before, that it's amazing that it hadn'e occured to me: The possible solution? Ask Rick!

So here it is, Rick: What sort of wiring configuration & protocol setup do I need to get my H14 printer to work with my XT clone? I've [already] tried plugging it into the serial port, but that didn't work, suggesting that there's a communication problem between computer and printer. Any advice [you can give] shall be greatly appreciated.

CHARLES LISS, 34518 Warren S-131, Westland, MI 48185

[Ok, Rick, your work's cut out for you! As I remember my own H14 printer, lines RTS & DTR had to be high for it to receive data, and it had a very--very--small internal buffer (roughly 128 bits) capacity. Beyond lack of lower-case descenders all else I can remember is its' voracious appetite for typewriter ribbons! It would regularly consume at least one every two weeks! Good luck, you guys, and please do write us. -- ed]

[Editor's Note about Postal Rate hike: Anyone who subscribed at the old $17.50/yr rate DURING August, 1990 won't have to pay extra. If you renewed at the new $24/yr rate, you're still ok because we knew the rate hike was coming and allowed for it. Rest easy, we won't let you down! -- Lenny]

The JOURNAL's CATALOGUE PAGE

Discontinued ("Vintage") H/Z Eight-bit CP/M software in Original Factory-Sealed Packages. Warranties WILL BE HONORED by Heath. All "Demo" software runs EXACTLY AS WARRANTIED PACKAGES DO, but updates aren't available (usually won't matter). Continuing Education (EC) packages are complete w/lectures on cassette & final (college-acceptable credits) examination.

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SJ-7	HMS 817-1	CP/M MBASIC-80, hardsector "	* 39.95
SJ-8	173-56-1	MBASIC-80 (CP/M) demo w/manual	* 29.95
SJ-12	173-60-1	Softstuff CPS modem pgm (demo)	3.95
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SJ-14	173-91-1	M-Pro MAIL MERGE w/warranty	9.95
SJ-15	HDR-837-3	M-Pro DESPOOLER w/warranty	9.95
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SJ-24	173-70-1	DATASTAR (w/warranty)	10.95

1 = Prices include shipping inside continental U.S.A. only.
2 - We WILL NOT accept opened returns.
3 - All "Demo" software packages work EXACTLY as warrantied versions except manual pages are red over-stamped. (They're easy to read through a red cellophane overlay.)
4 - Some CP/M programs may not work on non-Heath machines, but usually can be patched with DDT (or equal) & run ok. ALL will run on H/Z-100 series machines on 8-bit side.
5 - On request we'll convert between hard- and soft-sector formats, between H/Z 5.25" and 8" formats (KAYPRO or Magnolia ss,sd 5.25" discs on special order) at $5 each 5.25" target disc. Original distribution disc(s) will be included with converted discs. (Caveat: Some Heath Terminal escape codes aren't Kaypro 8-bit-machine compatable.)

Contact Gus Bakalis at D:KUG.DOC, 313-755-2060, or L Geisler at SEBHC JOURNAL, 313-662-0750 if you need more information. Note: Profits from any software sales made thru D:KUG.DOC go toward D:KUG.DOC's operating expenses.

NOTE: "*" means 10% off both packages if ordered as a pair w/matching course--example: MBASIC & Programming in MBASIC, COBOL & Programming in COBOL, etc.

(Most CP/M-80 runs on H/Z100-series machines under CP/M-85, 6)

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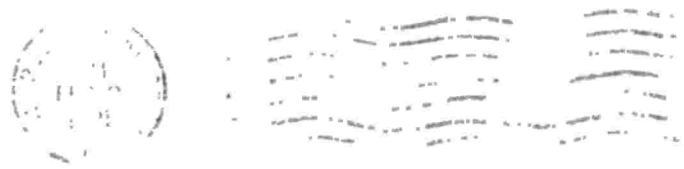

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