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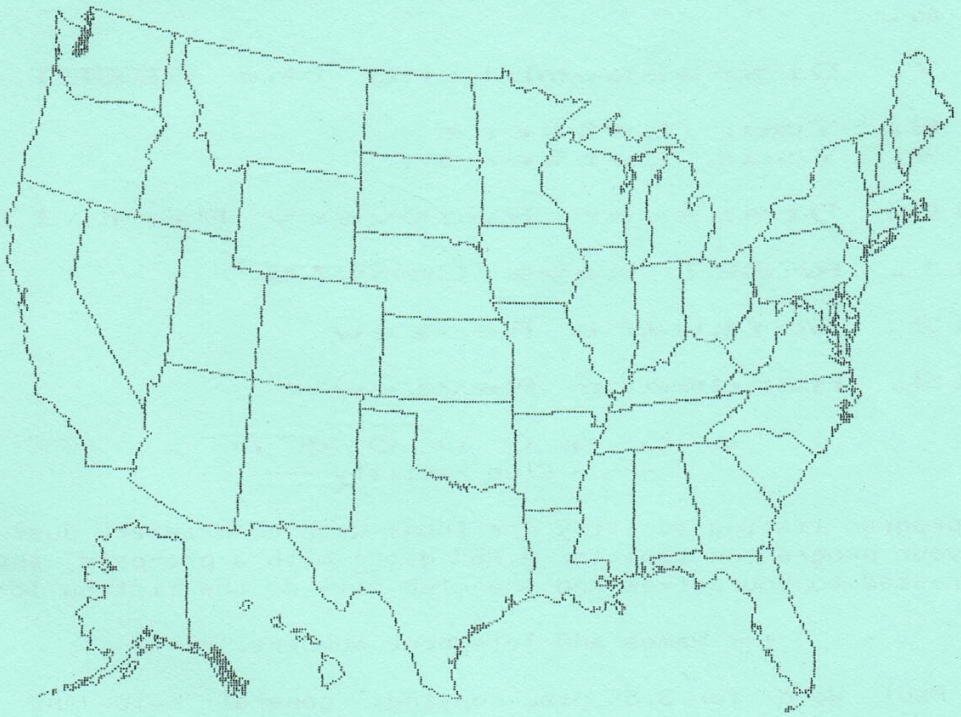
THE MEMOTECH OWNERS CLUB MAGAZINE MEMOTECHNIQUES



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VOLUME 3 ISSUE NUMBER 4

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--- A Club Facility ---

A program listing facility for those with no printer. Just send in your program on tape (or 5.25" disc) with a pre-paid envelope addressed to yourselves and the club will do the listing for you.

--- Names and Telephone Numbers. ---

i. Paul Wood for 3.5" disc copying, general info and Comms specific info.

Tel 0905 52536

ii. Alan Dobson for help with the following adventures:
Alice, The ZOO and Man From Granny
Tel 061-980-6288

If anyone has any good graphics designs for a front cover then we would love to see them!!!

E D I T O R I A L (Jan 1987)

Phil Eyres
23 Denmead Road
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SO2 5GS

This month is a bumper issue, containing more text than ever, also our first page containing graphics (see page ii). This was achieved using a graphics package on an IBM PC at work. Even though I have had many programs this month for the Program Library I did not have the room to include them, they are not forgotten and are most gratefully received, they will be in the next issue along will all the High Scores you achieved over Christmas.

Although I did not have as much free time as I would have liked over Christmas, I have managed to make a start on an A/D convertor that will work on the internal port connector like the other kits. Up until now I have only managed to get a slow convertor to work with the limited facilities offered by the internal port, now I have managed to get one to work that has a maximum conversion rate of 1 million conversions a second, which is faster than the machine can handle. The programming of this will be quite involved and may take some time, especially in assembler.

I have just received details about an Optical Character Reader which I saw advertised as liquided stock in this months PCW, it looks very good and would appear to work on the MTX by just plugging into the RS port. It may also be possible to feed directly into Newword by first telling CP/M to take its input from the RS port instead of the keyboard. It has the ability to read 4 type faces as standard, not dot matrix print out which is a drawback, but from what I know about OCR's even the best seem to struggle with dot matrix so perhaps it's not all that bad. It does have a facility to program it I believe, so perhaps this will help me to read it. I will have a play with it and try and get it to work, I would like it to do other things, like have a digitising mode, due to lack of time perhaps someone would like to have a play with it themselves in the future, if you're interested and have a spare RS port then let me know. Also, if anyone has a Basic program that uses the RS232 port or anything to offer concerning the wiring of it, I would be more than interested to hear from you.

I can read/write only disc's in 5.25" format and up to 500K, if anyone with 3.5" systems would like something from the club or has something to offer on 3.5" format please send to Paul Wood, his address is listed opposite.

I will not be here from 1st February to the 11th February as I am away on a course to do with my work, please bear with us, my mum will be doing her best to supply any thing you require, whilst I will answer letters as soon as I get back.

Our club software, notably being SMGII and REVEAL is now available, both programs are only available for the MTX 512, I hope that does not prove too restrictive and sorry to 500 owners for having to miss out on these two fantastic programs.

As I am more often than not out playing squash on Mondays between 6 and 7 pm, I feel it would be best to move the Hotline to after 7.40pm. I hope this is ok for everyone. The number to phone now is (0703) 466106, ask for Phil. However, feel free to phone any evening after 6pm, if I'm not in then my Mum (good old Mum!!) will take any calls.

If anyone would like back issues they are available for the small remittance of 80p each. At present there are 23 back issues, 10 for volume 1, 10 for volume 2 and 3 for volume 3.

ooo 0-0-0 ooo

THIS MONTH'S NEW HIGH SCORES

Arcadian	14600	Paul Coughlan
Combat	51210	Paul Coughlan
Flummox	37685	Paul Coughlan
Iceburg	32794	Paul Coughlan
Hawkwars	19850	Paul Coughlan
Astropac	183090	Paul Coughlan
Quantum	17	Paul Coughlan
D.Destroyer	79600	J.Quinn
Hunchy	8457	J.Quinn
K.King	9160	J.Quinn
SMG (up)	89760	J.Quinn

LIFE

BY

Mike Frymyer

This is a very interesting program, it is not really a game, more a curiousity. The program is very long, and will take some time to type in, the only point to note is that line 340 will have the number 16831 if you have a MTX 512, this is the decimal value of the assembler label TOP (£41BF Hex) at the end of the assembler. This number will be 33215 decimal (£81BF Hex) on a MTX 500. Here is briefly how to type in the patch of assembler at line 20:-

1. Type ASSEM 20 <RET> <RET>
2. This now puts you in the assembler editor in input mode ready to type in the lines of code. Any mistakes can be corrected later, see page 129 of the Black manual for details.

The program will be included in the Program Library next month.

```
10 GOTO 30
20 CODE
400F ROW:    DB 0
4010 COL:    DB 0
4011 COUNT:  DB 0
4012         NOP
4013         CALL SCR
4016         LD A,£00
4018         LD (ROW),A
401B         LD BC,£FFFF
401E         NOP
401F NL:     LD A,£00
4021         LD (COL),A
4024         LD A,(ROW)
4027         INC A
4028         CP 21
402A         JP Z,FIN
402D         LD (ROW),A
4030 NEXT:   LD A,(COL)
4033         INC A
4034         CP 37
4036         JP Z,NL
4039         LD (COL),A
403C         INC BC
403D         PUSH BC
403E         POP DE
403F         CALL TOTAL
4042         CALL STATE
4045         JP NEXT
4048 FIN:    CALL MOV
404B         NOP
404C         RET
404D MOV:    NOP
404E         LD B,180
4050         LD HL,TOP
4053 V1:     LD A,(HL)
4054         AND A
4055         RRA
4056         AND 85
4058         LD (HL),A
4059         INC HL
405A         DJNZ V1
405C         RET
405D STATE:  NOP
405E         PUSH BC
405F         POP DE
4060         CALL ADR
4063         LD D,A
4064         LD A,(COUNT)
4067         CP 3
4069         JP Z,BORN
406C         CP 2
406E         RET NZ
406F         LD A,D
4070         CALL GET
4073         BIT 0,A
4075         RET Z
4076         CALL BORN
4079         RET
407A BORN:   NOP          ;BC IS ALIVE
407B         PUSH BC      ;GENERATION
407C         POP DE
407D         CALL ADR
4080         PUSH BC
4081         LD B,A
4082         LD C,(HL)
4083         LD A,£00
4085         INC B
4086         AND A
4087         CCF
4088 R1:     RL A
408A         RL A
408C         DJNZ R1
408E         OR C
408F         LD (HL),A
4090         POP BC
4091         RET
4092 TOTAL:  LD A,£00
4094         LD (COUNT),A
4097         LD A,(ROW)
409A         CP 1
409C         JP Z,M1
409F         LD A,(COL)
40A2         CALL D1
40A5         CALL D2
40A8         CALL D3
40AB M1:     LD A,(COL)
40AE         CALL D4
40B1         CALL D5
40B4         LD A,(ROW)
40B7         CP 20
40B9         JP Z,M2
40BC         LD A,(COL)
40BF         CALL D6
40C2         CALL D7
40C5         CALL D8
40C8 M2:     LD A,(COUNT)
40CB         RET
40CC NE:     NOP
40CD         PUSH HL
40CE         POP DE
40CF         CALL ADR
40D2         CALL GET
40D5         BIT 0,A
40D7         JR Z,NE1
40D9         LD HL,COUNT
40DC         INC (HL)
40DD NE1:    LD A,(COL)
40E0         RET
40E1 D1:     CP 1
40E3         RET Z
40E4         PUSH BC
40E5         POP HL
40E6         AND A
40E7         LD DE,37
40EA         AND A
40EB         SBC HL,DE
40ED         JP NE
40F0 D2:     PUSH BC
40F1         POP HL
40F2         AND A
40F3         LD DE,36
40F6         SBC HL,DE
40F8         JP NE
40FB D3:     CP 36
40FD         RET Z
40FE         PUSH BC
40FF         POP HL
4100         LD DE,35
4103         AND A
4104         SBC HL,DE
```

CONTINUED OVERLEAF

```
4106          JP NE
4109 D4:      CP 1
410B          RET Z
410C          PUSH BC
410D          POP HL
410E          AND A
410F          LD DE,1
4112          SBC HL,DE
4114          JP NE
4117 D5:      CP 36
4119          RET Z
411A          PUSH BC
411B          POP HL
411C          LD DE,1
411F          AND A
4120          ADC HL,DE
4122          JP NE
4125 D6:      CP 1
4127          RET Z
4128          PUSH BC
4129          POP HL
412A          LD DE,35
412D          AND A
412E          ADC HL,DE
4130          JP NE
4133 D7:      PUSH BC
4134          POP HL
4135          LD DE,36
4138          AND A
4139          ADC HL,DE
413B          JP NE
413E D8:      CP 36
4140          RET Z
4141          PUSH BC
4142          POP HL
4143          LD DE,37
4146          AND A
4147          ADC HL,DE
4149          PUSH HL
414A          POP DE
414B          JP NE
414E ADR:     NOP           ;CALC ADDRESS
414F          PUSH BC       ;OF CELL DE
4150          LD A,E        ;RETURNING THE
4151          AND 3         ;MEMORY LOCATION
4153          PUSH AF       ;IN HL AND
4154          NOP           ;BIT POSN IN A
4155          LD B,£02      ;DIVIDE DE BY 2
4157 L1:      LD A,D
4158          AND A
4159          RRA
415A          LD D,A
415B          LD A,E
415C          RRA
415D          LD E,A
415E          DJNZ L1
4160          PUSH DE
4161          POP HL
4162          AND A
4163          LD BC,TOP
4166          ADC HL,BC
4168          POP AF
4169          POP BC
416A          RET
416B GET:     PUSH BC
416C          LD B,A
416D          CP 0
416F          LD A,(HL)
4170          JP Z,L2
4173 L3:      RRA
4174          RRA
4175          DJNZ L3
4177 L2:      AND 3
4179          POP BC
417A          RET
417B SCR:     DI            ;PRINT PATTERN
417C          LD BC,£FFFF
417F          LD HL,£1C2A
4182 VRAM:    LD A,L        ;SET VECTOR
4183          OUT (02),A    ;VIDEO RAM
4185          LD A,H
4186          ADD A,£40
4188          OUT (02),A
418A          PUSH HL
418B          LD A,£00
418D LOOP:    PUSH AF
418E          INC BC
418F          PUSH BC
4190          POP DE
4191          CALL ADR
4194          CALL GET
4197          LD D,32
4199          BIT 0,A
419B          JR Z,P2
419D          LD D,79       ;SYMBOL FOR
419F P2:      LD A,D        ;CELL
41A0          OUT (01),A
41A2          POP AF
41A3          INC A
41A4          CP 36
41A6          JP NZ,LOOP
41A9          POP HL
41AA          AND A
41AB          LD DE,0040
41AE          ADC HL,DE
41B0          PUSH HL
41B1          PUSH BC
41B2          POP HL
41B3          AND A
41B4          LD DE,718
41B7          SBC HL,DE
41B9          POP HL
41BA          JP M,VRAM
41BD          EI
41BE          RET
41BF TOP:     DS 170        ;170 MEMORY
4269          RET           ;LOCATIONS
426A          RET
```

```
25 RETURN
30 GOSUB 400
35 DIM M(36,20)
40 GOSUB 380
45 LET R=0: LET C=0: PRINT CHR$(27);"X^";: CSR 1,1
50 PAUSE 50: LET I=ASC(INKEY$): IF I<0 THEN  GOTO 50
70 LET MX=0: LET MY=0
80 IF I=9 OR I=11 OR I=127 THEN  LET MY=-1
90 IF I=10 OR I=12 OR I=21 THEN  LET MY=1
100 IF I=8 OR I=9 OR I=21 THEN  LET MX=-1
110 IF I=12 OR I=25 OR I=127 THEN  LET MX=1
120 IF R+MX<0 OR R+MX>35 THEN  LET MX=0
130 IF C+MY<0 OR C+MY>19 THEN  LET MY=0
140 LET R=R+MX: LET C=C+MY: CSR R+1,C+1
150  IF I=26 THEN  PRINT "£";: LET M(R+1,C+1)=1: LET  I=1:
LET MX=1: GOTO 120
160  IF I=32 THEN  PRINT " ";: LET M(R+1,C+1)=0: LET  I=1:
LET MX=1: GOTO 120
170 PAUSE 20
180 IF I<>13 THEN  GOTO 50
190 GOSUB 290
195 REM**** MAIN LOOP ****
200 LET LI=1
210 GOSUB 20
220 CSR 28,23: PRINT LI;
230 LET LI=LI+1
240 LET I$=INKEY$
250  IF I$<>" " AND I$<>"S" AND I$<>"N" AND  I$<>"C"  THEN
GOTO 210
260 IF I$=" " THEN  GOTO 240
270 IF I$="N" THEN  CLEAR : GOTO 400
275 IF I$="C" THEN  CLEAR : GOTO 470
```

CONTINUED OVERLEAF

```
280 CLS : CSR 15,11: PRINT "CLEARING": FOR Y=1 TO 20:  FOR
X=1 TO 36: LET M(X,Y)=0: NEXT : NEXT : GOTO 40
290 LET AD=100: PRINT CHR$(27);"X_";
300 CSR 5,23: PRINT "      PLEASE      WAIT  ";
310 FOR C=1 TO 20
320 FOR R=1 TO 33 STEP 4
330 LET D=M(R,C)+4*M(R+1,C)+16*M(R+2,C)+64*M(R+3,C)
340 LET A=16831+INT((R-1)/4)+(C-1)*9
350 POKE A,D
360 NEXT : NEXT
370 CSR 5,23: PRINT "LIFE       Generation  0";: RETURN
380 VS 5: PAPER 0: INK 9: CLS
390  FOR Y=0 TO 21: CSR 0,Y: PRINT "X";: CSR  37,Y:  PRINT
"X";: NEXT : FOR Y=0 TO 37: CSR Y,0: PRINT "X";: CSR Y,21:
PRINT "X";: NEXT
395 CSR 5,23: PRINT "     Enter New Pattern   ";: RETURN
400 REM POKE 64862,13
401  PAPER 10: INK 1: CLS : FOR X=3 TO 36: CSR X,1:  PRINT
"*";: CSR X,2: PRINT "*";: CSR X,5: PRINT "*";: CSR  X,17:
PRINT "*";: CSR X,20: PRINT "*";
402  CSR X,21: PRINT "*";: NEXT : FOR Y=2 TO 20: CSR  2,Y:
PRINT  "**";: CSR 7,Y: PRINT "*";: CSR 32,Y:  PRINT  "*";:
CSR 36,Y: PRINT "**";: NEXT
405  CSR 18,7: PRINT "LIFE": CSR 8,10: PRINT "COMPILED  BY
M.C.FRYMYER": CSR 12,13: PRINT "ACKNOWLEDGEMENTS"
407 CSR 19,14: PRINT "TO": CSR 16,15: PRINT "N.BARNES"
410 IF INKEY$="" THEN  GOTO 410 ELSE  GOTO 420
420 PAPER 1: INK 14: CLS
422  CSR  8,4:  PRINT  "'LIFE'  is  not  a  game  in  the
traditional  sense  as there is        no real  object  or
goal to be        achieved."
424  CSR  8,10:  PRINT "The program  takes  a  pattern
which  is designed by the player        and  develops  it
according to        certain rules."
426  CSR  8,16:  PRINT "Similar  to   watching    the
clouds go by.....": GOSUB 550
428 INK 13: CLS : GOSUB 500
430  CSR 5,5: PRINT "1.........A cell  with two (2)":  CSR
13,6:  PRINT  "neighbours  will  stay":  CSR  13,7:  PRINT
"unchanged in the  next"
432  CSR  13,8:  PRINT  "generation.":  CSR  5,10:   PRINT
"2.........A   cell   with   three":  CSR  13,11:   PRINT   "(3)
neighbours will be": CSR 13,12
434  PRINT  "'Born'   in   the  next":  CSR  13,13:  PRINT
"generation.": CSR 5,15: PRINT "3..........A  cell   which
has": CSR 13,16: PRINT "any  other  number  of"
436 CSR 13,17: PRINT "neighbours will die in": CSR  13,18:
PRINT "the next generation.": GOSUB 550
438 CLS : GOSUB 500
440  CSR  6,3:  PRINT  "A cell  is  defined  as  a  single
print space. Examples are shown        below;"
442 CSR 11,6: PRINT "O": CSR 28,6: PRINT "OOO": CSR  28,7:
PRINT "O O": CSR 13,8: PRINT "O": CSR 28,8: PRINT "OOO"
444  CSR 4,10: PRINT "Empty Cell With  Empty  Cell  With":
CSR  5,11:  PRINT "2  neighbours     8   neighbours":  CSR
11,15: PRINT "O": CSR 12,16: PRINT "O"
446 CSR 13,17: PRINT "O": FOR Y=15 TO 17: CSR 28,Y:  PRINT
"OOO": NEXT : CSR 5,19: PRINT "Full Cell With  Full  Cell
With"
448 CSR 6,20: PRINT "2 neighbours     8 neighbours": GOSUB
550
450  INK 10: CLS : GOSUB 520: CSR 5,2: PRINT  "During  the
designing": CSR 3,3: PRINT "of a new pattern;": FOR Y=6 TO
16: CSR 24,Y: PRINT "|";: NEXT
452 CSR 2,7: PRINT "Cursor Keys    'Up'": CSR 17,8:  PRINT
"'Down'":  CSR  17,9:  PRINT "'Left'":  CSR  17,10:  PRINT
"'Right'": CSR 2,12: PRINT "TAB      Up + Left"
454  CSR  2,13: PRINT "INS      Down  +  Left":  CSR  2,14:
PRINT  "DEL       Up  +  Right":  CSR  2,15:  PRINT   "CLS
Down + Right"
456  CSR  26,10: PRINT "Moves  Cursor":  CSR  29,11:  PRINT
"Without": CSR 28,12: PRINT "Affecting": CSR 27,13:  PRINT
"The Pattern"
458  CSR 2,18: PRINT "Home         Prints '£'": CSR  2,20:
PRINT "Space Bar    Erases Mistakes": GOSUB 550
460  CLS  : GOSUB 520: CSR 5,2: PRINT "While  the  program
is running;"
462 CSR 5,5: PRINT "'S'......will start  a new": CSR 12,6:
PRINT  "displaying   a blank":  CSR  12,7:  PRINT  "pattern
screen."
464  CSR  5,9:  PRINT "'C'......takes  the  program":  CSR
12,10: PRINT "to 'choose a colour'": CSR 12,11: PRINT  "to
alter  the game": CSR 12,12: PRINT "format."
466  CSR  5,14: PRINT "'N'......will   return   the":  CSR
12,15:  PRINT  "program  to the very":  CSR  12,16:  PRINT
"begining"
468  CSR  5,18: PRINT "Space....will pause  at  the":  CSR
6,19: PRINT "Bar  currently displayed": CSR 12,20:  PRINT
"pattern": GOSUB 550
470  PAPER  4:  INK 1: CLS : CSR  13,0:  PRINT  "CHOOSE  A
COLOUR":  FOR  X=0 TO 38: CSR X,1: PRINT "*": NEXT  :  CSR
22,7: PRINT "Paper  ?": CSR 22,14: PRINT "Ink    ?"
472 CSR 2,5: PRINT "Black.........1": CSR 2,6: PRINT "Med.
Green....2":  CSR 2,7: PRINT "Lt. Green.....3":  CSR  2,8:
PRINT "Dk. Blue......4"
474 CSR 2,9: PRINT "Lt. Blue......5": CSR 2,10: PRINT "Dk.
Red.......6": CSR 2,11: PRINT "Cyan..........7": CSR 2,12:
PRINT "Med. Red......8"
476  CSR  2,13: PRINT "Lt. Red.......9":  CSR  2,14:  PRINT
"Dk.  Yellow....10": CSR 2,15: PRINT  "Lt.  Yellow....11":
CSR 2,16: PRINT "Dk. Green.....12"
478  CSR 2,17: PRINT "Magenta.......13":  CSR  2,18:  PRINT
"Grey..........14": CSR 2,19: PRINT "White.........15"
480 CSR 30,7: PRINT "      ": CSR 31,7: INPUT "";U: IF U<1
OR U>15 THEN  GOTO 480
482  CSR 30,14: PRINT "      ": CSR 31,14: INPUT "";V:  IF
V<1 OR V>15 THEN  GOTO 482
484 IF V=U THEN  GOSUB 530: GOTO 470
486 GOSUB 380: CSR 6,11: PRINT "THIS IS HOW IT WILL LOOK":
CSR 12,19: PRINT "HAPPY ? 'Y/N'"
```

CONTINUED OVERLEAF

```
488 CSR 25,19: PRINT "     ": CSR 26,19: INPUT "";Z$: IF Z$="Y" OR Z$="y" OR Z$="N" OR Z$="n" THEN GOTO 490 ELSE GOTO 488
490 IF Z$="N" OR Z$="n" THEN GOTO 470
492 PAPER 4: INK 10: CLS : CSR 7,9: PRINT " NOW YOU KNOW THE RULES": CSR 14,11: PRINT "PLAY AT": CSR 17,13: PRINT "LIFE": GOSUB 550: GOTO 35
500 CSR 11,0: PRINT "RULES FOR LIFE": FOR X=0 TO 38: CSR X,2: PRINT "+";: NEXT : RETURN
520 CSR 12,0: PRINT "Control Keys": FOR X=0 TO 38: CSR X,1: PRINT "^";: NEXT : RETURN
530 PAPER 6: INK 10: CLS : CSR 3,4: PRINT "You have made the 'PAPER' and 'INK' colours the same. ": FOR Y=11 TO 17: FOR X=6 TO 32
533 CSR X,Y: PRINT "*";: NEXT : NEXT : FOR Y=13 TO 15: FOR X=12 TO 26: CSR X,Y: PRINT " ";: NEXT : NEXT : CSR 13,14: PRINT "CHOOSE AGAIN"
535 GOSUB 550: RETURN
550 CSR 7,23: PRINT "PRESS ANY KEY TO CONTINUE";: IF ASC(INKEY$)<0 THEN GOTO 550
555 RETURN
```

SOMETHING TO DO AFTER YOU'VE EATEN THE LAST OF THE CHRISTMAS PUDDING

CONVERTING YOUR ASCII DISC FILES TO NEWWORD FORMAT

By Phil Eyres

For some time now I have been able to import text files from other computers and use them in my NEWWORD. This is fine, except that due to the differences in the way all the different wordprocessors store their text, I have to convert all files to ASCII before playing with them. Having done this for a few months, I've been itching to find the time to write a program that will convert an ASCII file into a NEWWORD one.

Initially, I started playing with existing data that had already been used in the magazine, but this proved very difficult, as I was looking for a simple set of rules with which to start converting. To make life simple I made up a simple ASCII file using the CP/M Editor, the file just contained two simple paragraphs of three lines. Before I did anything with it I dumped it to the printer using the CP/M DUMP command. This showed that the file was infact stored exactly as I had typed it in, except for the invisible Carrage Return and Line Feed characters which had been inserted at the end of each line. Just in case anyone is interested in the commands etc I used to do this I'll digress a little to list the commands :-

Create ASCII file TEST.DAT using ED.COM

ED TEST.DAT <RET>
(Machine responds with '*' prompt.)
I <RET>
(Puts Editor into insert mode)
Type in a couple of lines of predictable characters, I used:-

```
AAA AAAA AAAAA AAAAAA AAAAA AAAA AAA
AAA AAAA AAAAA AAAAAA AAAAA AAAA AAA

    BBBB BBBBB BBBBBB BBBBB BBBB
    BBBB BBBBB BBBBBB BBBBB BBBB
```

Typing CTRL Z get you out of insert mode.
E <RET>
To exit Editor and save file.
Typing DUMP TEST.DAT
Displays your file as HEX characters:-
A = 41, B = 42, Space = 20, Carriage Return = 0D,
Line Feed = 0A

Now I wanted to convert this file to NEWWORD format, to see what it looked like. I entered NEWWORD and used the Paragraph Line feature (^N) to ensure that the A's and B's were grouped as separate paragraphs. This file was saved under a different name. I then DUMP'ed that file and compared it. It showed that the last character of every word had 80 Hex added to it and that the Carriage Return/Line Feed within a paragraph had been altered as well. Apart from that everything else was the same.

To make the program of as much use as possible I wrote it in Basic, although I would have prefered Pascal as I feel it would have been somewhat quicker.

Neither of the alterations required much programming, just a lot of string manipulation. Owners of FDX's may like to have a close look at line 550 as this shows the use of the EOF function, which is explained totally differently in the manual, the syntax is:-

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DISC EOF <channel>,<line to goto on EOF>

Also you will notice the fantastic gosub at 300, this one liner was necessary because if you put it in line 590 where it is called, very occasionally the program acts irratically coming up with such claims as the variable A$ is undefined??? (The wonders of Basic!!).

The only pitfall that occurs sometimes, is that the end of my ASCII data file contains garbage, this causes the program to crash. Complete the program manually by typing GOTO 710 to close the files.

The conversion rate is not very impressive at around just over 1000 characters a minute, but it's less manual than using the word processor to do it, especially if you have several to do. The main reason for it being so slow seems to be the very small (128 byte) buffer allocated to opened channels. I wonder if this could be increased, if it were a couple of 'K' then I estimate conversion speeds would double!.

Program Notes

A$ = Buffer for line input from file
B$ = Buffer for Paragraph converted so far
C$ = Modified Carriage Return/Line Feed

A$ or B$ may need to be increased according to the type of file you are converting, but be careful about making A$ to big, results become difficult to predict.

Lines 520 and 530 contain the filenames for the files being used, the first is the output filename, the second the input filename. This could be made more useful if the filename was prompted for by an INPUT statement.

If anyone has something more versatile to offer, I'd love to see it, as this program works well with ordinary text files, but not to good with assembler programs, which for some reason or other, when they are converted to Ascii, become quite dis-jointed.

```
1  GOTO 500
3  REM * * * * * * * * * * * * * * * * * * * * * * * * * * * *
4  REM ***  ROUTINE TO CONVERT ASCII FILE TO NEWWORD   ***
5  REM ***    THE SUBROUTINES ARE AT THE BEGINNING     ***
6  REM * * * * * * * * * * * * * * * * * * * * * * * * * * * *
7  REM
8  REM ** CONVERT CHARACTERS BEFORE SPACE TO CHAR +£80  **
9  REM * * * * * * * * * * * * * * * * * * * * * * * * * * * *
20 IF LEN (A$)=1 THEN  GOTO 130
30 LET B=0
40 IF LEFT$(A$,1)=" " THEN  LET A=LEN (A$)-2: LET  FLAG=1:
   GOTO 80
50 LET A=LEN (A$)-2: LET FLAG=0
60 IF MID$(A$,LEN (A$)-A,1)=" " AND FLAG=1 THEN  GOTO 100
70 LET B=0
80 IF MID$(A$,LEN (A$)-A,1)=" " THEN  GOSUB 200: GOTO 100
90 LET FLAG=0
100 LET A=A-1
110 IF A=0 THEN  GOTO 130
120 GOTO 60
130 RETURN
199 REM  * * * * * * * * * * * * * * * * * * * * * * * * * *
200 LET B=ASC(MID$(A$,LEN (A$)-A-1,1))+128
210 IF B>255 THEN  LET B=255
220 LET A$(LEN (A$)-A-1)=CHR$(B)
230 LET FLAG=1
240 RETURN
299 REM * * * * * * * * * * * * * * * * * * * * * * * * * *
300 DISC  PRINT £2,A$
310 RETURN
499 REM * * * * * * * * * * * * * * * * * * * * * * * * * *
       ***        THE MAIN ROUTINE STARTS HERE       ***
       * * * * * * * * * * * * * * * * * * * * * * * * * *
500 DIM B$(4000),A$(128)
510 LET C$=" "+CHR$(141)+CHR$(10)
520 DISC OPEN£2,"CONVERT","O"
530 DISC OPEN£1,"MOC3.ASC","I"
550 DISC EOF£1,710
560 DISC  INPUT £1,A$
580 PRINT A$
590 IF A$="" THEN  GOSUB 300: GOTO 550
600 GOSUB 10
610 LET B$=""
620 LET B$=B$+A$
640 DISC  INPUT £1,A$
660 PRINT A$
670 IF LEN (A$)<>0 THEN LET B$=B$+C$: LET
    B=ASC(MID$(B$,LEN (B$)-3,1))+128: LET B$(LEN (B$)-
    3)=CHR$(B): GOSUB 10: GOTO 620
680 DISC  PRINT £2,B$
690 DISC  PRINT £2,A$
700 GOTO 550
710 DISC CLOSE£1: DISC CLOSE£2
720 STOP
```

Disabling The RESET Keys

By

Mike Frymyer

On page 11 are two simple diagrams that are to be used in conjunction with this text. They basically show how I've disabled the reset buttons on my machine. (I don't know if anyone else has a problem similar to mine; My kids like the way the screen flickers when the machine resets. Not really my favourite thing when I'm in the middle of some project.)

Anyway, as the picture shows, the switch itself can be mounted above the on-board Centronics port. (one of the minature SPDT are perfect.) As illustrated the switch doesn't interfere with the plug at all.

It isn't a major operation to install the switch, you need to take out the black plastic rear spacer - check your available switch to ensure that it doesn't protrude as shown in the diagram. Also, when you are sure the switch fits, the hole should be marked using the lock nut to ensure that it can be turned.

The wires should be soldered to the switch before mounting. To graft the switch into the cable connecting the keyboard and the main board remove the wire from pin 20 of the plug. This is only a I/O connector so it's pretty easy. Replace that wire with one from the switch. Solder or crimp (whatever) the remaining wire from the switch to the one removed from pin 20 of the plug. One more detail is that the length of the tails used on the switch should (must infact!) be long enough to enable the top and lower sections of the computer to be separated from each other. About 18" is sufficient, it doesn't matter if the leads are very long as there is no strobing on this line.

As I've said before, if you don't have a problem with the machine resetting inadvertently then don't bother!!!

There is also a way of installing an LED indicator to show whether or not the reset is available to be used (using the other contact of the switch). Firstly, the +5 volt supply must be tapped from the mother board because there are no direct connections to the keyboard. I found that this was best picked up by soldering a PCB pin to a resistor lead already on the board. This is rigid enough to allow a socket to be used on the lead going to the keyboard.

There are quite a few close to the connector for the keyboard bus for this but if anyone is so inclined, pad 15 is on the 60 way connector has a place where a similar pin may be installed.(Pre-drilled and all).This has two disadvantages, one is that the main board must be removed to solder in the pin, and also, to leave enough slack wire to allow the top section to be removed with as little trouble as possible would probably leave a part of that wire always wanting to foul on the connector area.(Murphys Rule No.6).

The load resistor comes straight after the connecting socket being the easiest place to solder and insulate.

The LED can be placed inside one of the reset buttons (preferably the left one because that is where the 0v rail is picked up). To mount the LED inside the button entails a bit of fiddling but theres nothing horrific in doing it. The buttons lift out quite easily, by fitting something long and thin under each side and gently prying it loose. It is easier to start with one of the inner accessible ones like the "A" or "2" and working toward the reset because it decreases the possibility of scratching the facade. A three millimetre led is best to mount inside the button for obvious reasons. Super glue, Araldite are all satisfactory for the installation. Thread the wires up into the space where the reset button lives and attach to the LED.

The 0v rail is picked up on the connector side of the reset button, now the resets are disabled the LED has no ground rail. Switching the rear switch connects the 0volt rail to the reset buttons and naturally the LED lights.

Now that I've gone through all that I'll say that is not the way I chose to mount the LED, I opted for drilling the front (top) panel. This gave a very pleasing result and if chosen by others is less fiddly. Looking at the keyboard (from the outside), you will see the paper sticker with Memotech written on the left and MTX... on the right. Along it's length is a Red line which makes for easy alignment of drill holes, also a drill does not tend to dance or run around on the paper.

Anyway, if a small hole (2.5mm) is drilled down through the top and then enlargened from beneath to 5mm but only half way through, an LED can be mounted using a suitable glue. I applied a bead of varnish to the top of the LED after the glue dried. This can be done when the computer is back in service. (Saves on down time!). The varnish does two things, it makes it less likely for the LED to be pushed out and will stop the paper label from lifting at the point of drilling.

See Page 11 For Diagrams

YOUR LETTERS

Answers to last months questions.

1. Does anyone know how the sum (])function works in the 26 * 26 Spreadsheet program. Any help would be much appreciated.

Allan Ayre has this to offer:-

The Example

		1	2	3	4
		TEMP	RAIN	SUN	
JULY	A	17.70	30.00	7.40	
AUG	B	15.70	80.00	6.10	
SEPT	C	14.40	16.00	5.70	
OCT	D	12.80	60.00	4.00	
NOV	E	7.90	48.00	2.60	
DEC	F	7.10	111.00	2.10	
JAN	G	3.30	41.00	2.80	
FEB	H	7.10	62.00	2.10	
MAR	I	6.00	88.00	2.70	
APR	J	10.30	17.00	2.40	
MAY	K	10.70	21.00	7.80	
JUN	L	14.60	137.00	6.30	
	M				
TOTAL	N	127.60	711.00	52.00	
	O				
AV.	P	10.63	59.25	4.33	12.00

ROW	COLUMN	FORMULA
N	1	[A1L1
P	1	N1/P4
N	2	[A2L2
P	2	N2/P4
N	3	[A3L3
P	3	N3/P4

The above example shows the monthly temperature (centigrade), rainfall (mm) and sunshine (hours) for some place called Southampton? (Whitaker's Almanack 1981)

The headings for the rows and columns are put in using CTRL/H (only 5 chars allowed). the information in the columns/rows is put in using CTRL/N.

Once the information is put in, it is safer to save this to tape before using any formula!

Save uses CTRL/S the <RET> and the prompt asks for the name of the file to be be saved (only 8 chars allowed).

Formulae are entered using CTRL/F. The summation example is shown above. E.g. for the TEMP column the total is first obtained by summation of all the values from A1 to L1 by entering the formulae [A1L1 (i.e. the first and last terms). On pressing <RET> the display does not show any figures in cell N1 until CTRL/E is used.

CONTINUED OVERLEAF

As constants cannot be used in formulae, it was necessary to put the value 2 in an unused cell (P4). The average of the TEMP column can then be obtained by using the formula N1/P4.

Other mathematical expressions can be used in formulae as long as they are on "cells" and not on numbers. The formula used in the examples are shown above using CTRL/P. The spreadsheet only prints out the column shown on the screen. The area of spreadsheet being shown is easily changed using CTRI/M and then inputting the ROW/COL you wish to have in the top left corner of the screen.

The only problem with the print out occurs when some of the cells are empty, the result is a ragged print display. Unfortunately the program will not allow just zeros in the cells.

Another problem which I have not overcome is removing a formula from one cell, rewriting the formula as a blank or putting a zero in the cell does not stop the error message.

Generally the program works satisfactorily as long as frequent use of SAVE is used!.

2.Two questions on much the same line.

i. The first from Barry Smith in Australia is :

How can I get some of my discs to auto boot on startup (twin disc system). It would be great if I could place a disc in the drive and have it run programs automatically, rather than having to call them up via the keyboard... I have tried playing around with STARTUP.COM and INITIATE.COM without success. The best I can do is use Submit files, which is less than optimum.

ii. Clive Taylors question is :

How can I make my disc system auto start in Basic?, I have two young children and it would be great if they could use the machine without being confronted with CP/M.

Answers from several members all used the CP/M utility SUB.COM, use the CP/M editor or NEWWORD and save to disc to create the two examples, from these you should find it possible to get round most problems and reduce key presses to an absolute minimum. SUB does not appear to be the fastest program in the world, so by the time you have tried out a couple of dozen variations on those printed below be prepared for wasting a good couple of hours.

This first SUB file is for use with silicon discs on a FDX system, after starting the machine with the system disc, place your Newword disc in the C: and type:-

CONTINUED FROM PREVIOUS PAGE

SUB SIDNEW

SUB reads the file one line at a time, then after reading the last line it executes them in order, first it formats the F:, then copies the system to it, then the Newword related files from the C:, then a few system files, then finally, it coldboots from the F: making it A:, all you have to do then is type in the name of your Newword COM file to start the program.

File name for the lines of text below - SIDNEW.SUB

```
enter format f:\^m
enter syscopy f:
enter pip f:=c:nw%.%[vo]
enter pip f:=config.com[vo]
enter pip f:=sidisc.com[vo]
enter coldboot f:
```

This second SUB file when entered will format the disc in the C:, copy the system files and other utilities which are useful. This one proves very useful indeed when you have a box of discs to do.

File name for the line of text below - NEWCDISC.SUB

```
enter format c:\^m
enter syscopy c:
enter pip c:=pip.com
enter pip c:=config.com
```

Hints And Tips

Anyone with a FDX or one of the 5.25" SDX systems will no doubt have tried out the disc file handling commands, and I bet you struggled like mad with them, before achieving anything useful. One I could never get to work was the EOF (End of File) command. It just would not accept the format offered in the manual, ie

```
10 IF EOF(3)<>0 THEN STOP
```

As it turns out the proper format of the command is:-

```
10 DISC EOF £1,100
```

The syntax for the two parameters after EOF is <channel no> followed by <the line to go to> when EOF occurs.

May I suggest that you put this in the appropriate page in your manual for future reference.

Phil Eyres

Swops and Things

John Quinn has the following software to sell or swop:-

	Sell	or swop for
Hawkwars	£3.00	Mission Omega
Hunchy	£3.00	Goldmine
Kilopeded	£3.00	Agrovator
Snappo	£2.50	Turbo
		Astropac

John can be contacted at:
32 Sancroft Road, Harrow Weald, Middx, HA3 7NT.

For Sale

Graham Nuttall has the following for sale, - he assures me this is not his MTX!

For sale 1 MTX 512 Only £50.00, it is totally new, offers will be considered.

Address: 15 Wroxham Gardens, Potters Bar, Herts. EN6 3DH
Tel: (0707) 57322

Erratum

BANK ACCOUNT TAPE - As it stands there is a bug - no way of getting into the yearly standing orders - a logic loop is missing.

If new lines 532 to 540 are inserted it works as intended.

```
532 PRINT: INPUT "(Y)early or (M)onthly ?";SO$
535 IF SO$="M" OR SO$="m" THEN GOTO 550
540 IF SO$="Y" OR SO$="y" THEN GOTO 1370
545 IF SO$="" OR SO$<>"Y" OR SO$<>"N" THEN GOTO 532
```

Short Bits

Chris Whitelock has this Pascal offering:
While learning Hisoft PASCAL, one of the limitations I have discovered is the lack of a means of positioning the cursor on the screen - ie. no equivalent of the Basic CSR(X,Y) function. A perusal of the list of system variables in the manuals reveals that bytes 2 and 3 of the virtual screen parameters (£FF5D et seq.) contain the current print position within the relevant screen. It is not difficult to use these in a short procedure eg. to position the cursor at X,Y on VS 5:

```
PROCEDURE CURSOR(X,Y:INTEGER);
BEGIN
POKE (£FFA9,X);
POKE (£FFAA,Y);
END;
```

Disaster Recovery Part III

By Phil Eyres

Filenaming & Copying.

A fair amount of thought at an early stage needs to be given to naming files. All related files should be grouped together by relating their file names, this will easily allow you to identify them and also to make the task of copying them easier.

In CP/M a file name is a group of up to 12 characters the first 8 characters are the file name, the 9th a full stop, and the last three the extension. This is slightly different from your Basic file names where you could use a few more characters.

The first 8 characters (or up to 8) are mandatory, the last 4 are optional, but should be used. The file name should give some idea of the files use or contents, where as the extension is used to give some idea of the type/format of the data contained in that file for example :-

.COM .EXE .ASM .PRN

all are standard and in some cases the system can recognise a file and accept or reject it because of the extension, so as a rule do not use any of the above unless you are sure its ok. Some good extensions to use are :-

.BAS for your Basic files
.PAS for your Pascal files
.DOC .TXT .MAG for Newword files

this way you will instantly be able to identify the type of data every file contains.

There are two special characters which often are very handy, they are "?" and "*" these characters known as "wild cards" will allow selection of only certain records when using some CP/M commands.

A "*" means that any character can occupy that position and all remaining positions in the file name or extension for example:-

DIR *.BAS

will list all your Basic files (providing youve given all your Basic files the .BAS extension!!).

DIR NW*.*

will list all your Newword associated program, and overlay files as they all begin with "NW".

A "?" means that any character can occupy that position only for example

DIR A?PHIL.COM

will list

A1PHIL.COM A2PHIL.COM A3PHIL.COM

These 3 files could have been found using :-

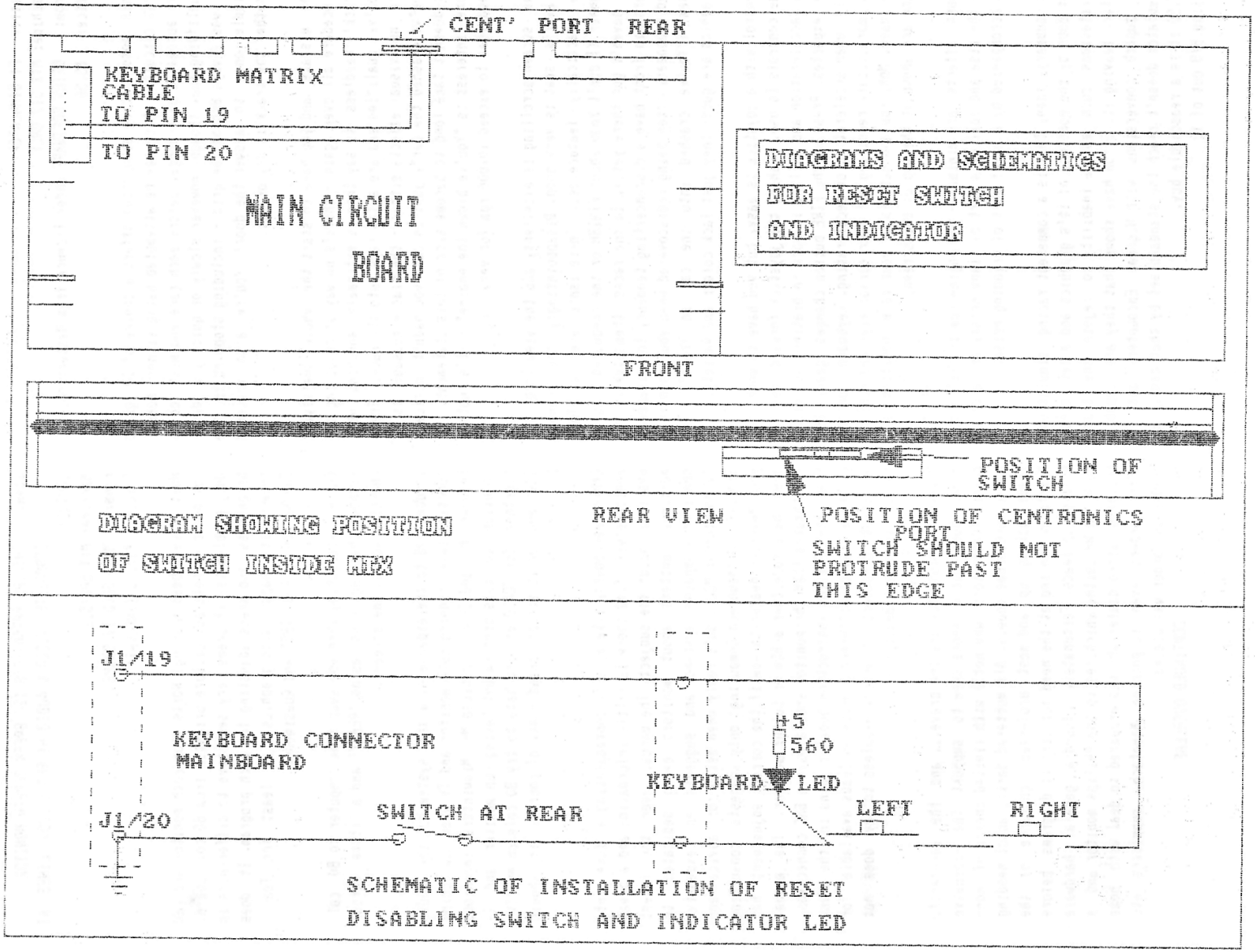
DIR A*.*

but any other files beginning with "A" would have been selected.

Good file naming is the essence of a neat easy to use system, unfortunately, very few people can lay claim to having many such diskettes as the overhead time needed to keep them neat is very great.

One other file it does no harm to have on every disc is a catalogue file, this could contain a list of the files on the disc their size, date written, and a short description also, if the disc is related to others that could briefly be stated.

All in all, I think data storage and Disaster Recovery should take up to 10% of your actual "on computer" time, if it is done properly, the lower this figure gets the more data you lose in the event of a disaster. It is never too late to have a good disc "clean up" but as a precaution make a backup copy of the disc before you start renaming or erasing files as the risk of losing files you actually want is obviously greatly increased.


CENT' PORT REAR
KEYBOARD MATRIX CABLE
TO PIN 19
TO PIN 20
MAIN CIRCUIT BOARD
DIAGRAMS AND SCHEMATICS FOR RESET SWITCH AND INDICATOR
FRONT
POSITION OF SWITCH
DIAGRAM SHOWING POSITION OF SWITCH INSIDE MPX
REAR VIEW
POSITION OF CENTRONICS PORT
SWITCH SHOULD NOT PROTRUDE PAST THIS EDGE
J1/19
J1/20
KEYBOARD CONNECTOR MAINBOARD
SWITCH AT REAR
+5
560
KEYBOARD LED
LEFT
RIGHT
SCHEMATIC OF INSTALLATION OF RESET DISABLING SWITCH AND INDICATOR LED

A Review By Chris Whitelock

Title: F1 SIMULATOR
Machine: MTX 512 ONLY
From: ORION SOFTWARE under licence from Mastertronic
Price: £5.50

This motor-racing simulation offers a choice of 10 grand prix circuits, which may be attempted using either manual or automatic gearchange. Before each race you must do a qualifying lap, though, however slowly or quickly I drove I was always 8th on the grid - including stopping in the middle once to answer the door! You're also informed whether the track is dry or wet.

One mistake and you have to start the whole qualifying procedure all over again - there's no way of rejoining the track! needless to say this is extremely annoying when you've qualified and are a few laps into the race. There are no visual effects either - the simple message is " You've crashed the car", just in case you hadn't noticed. It doesn't take long to become sick of this statement. Of more interest is "You've blown the engine" - it's not a good idea to exceed 10,000 rpm for very long!

The screen scrolling is excellent, and the view from the driver's seat is very good. Disappointingly, the scenery is practically featureless. There isn't even a START banner (I don't know about FINISH or the chequered flag - I haven't got there yet!). In the races themselves, the cars in front have a disconcerting tendency to disappear and reappear, often being rediscovered when you crash into them ("You've crashed into the car in front")! The graphics are good: they just lack colour and variety.

Control with a joystick is easy, but you have to work out the controls to use. Pushing the joystick forward results in acceleration and pulling it back in braking, as might be expected. Pressing the FIRE button changes gear, but only when accelerating or decelerating. Keyboard control is impractical, requiring all four cursor keys and HOME to be used. Mph, rpm and details of your race position and time are shown at the top of the screen.

Sound affects are minimal - the engine rpm is reflected in the rise and fall of a sort of tinny noise, and a crash is accompanied by a brief sort of grinding noise.

In summary, then, this is a competent racing simulation, let down by the monotony of it's graphics and a few minor irritations such as the inability to rejoin the track after leaving it. Orion have shown that they are capable of superb conversions with Highway Encounter, but F1 Simulator doesn't reach the standard set by that game. At £5.50 it is a reasonable buy.
Rating 8/9 out of 10

A Review By Jack Penley-Martin

Item: PHILIPS BM7502/056 12" GREEN SCREEN MONITOR
COMPOSITE VIDEO & AUDIO HI RES (>850 LINES AT CENTRE)
Machine: MTX 500/512
From: MOST GOOD TV SHOPS
Price: £97.75 (INC VAT)

What have I been missing! Works from both monitor and 80 col board sockets but picture brighter from 80 col board. Only problem is, it seems very sensitive to differences in brightness and needs adjusting for each program. It does seem quite happy with graphics - at least for Toado, Chess, Johnny Reb, ISOT and Quasimodo.

Quite interesting when you swap from computer to 80 col. without changing leads, as no 'READY' and a little cursor charging across the screen!.

It does add to the expense of a disc system but the audio function saves running both monitor and TV when switching between MTX and CP/M. I noticed Mr Midwinters ingenious solution to this problem but having run monitor and TV together for TOADO etc I'd hate to try 80 cols on my TV! The monitor is streets ahead - as, of course, it should be.

Other newcomers, like myself, contemplating a move into monitors will find there is little information and a great mystique about the subject. The manual, even the latest edition, mutters about monitors being dedicated to specific computer systems and suggests an expensive TV.Monitor : MCL didn't reply when asked for advice and Sinclair in "Memotech Computing" only suggests consulting your Memotech dealer to see if the correct adjustment has been made to either a B&W or Colour monitor. The manual also states that the monitor should have a BNC connection. Even the Philips instruction booklet joins in the fun, giving a list of differently numbered leads available for different computers... which, needless to say does not include the Black Beauty!

However fortune favours the brave... and the ignorant!. Local home micro shops seem to support the expensive colour TV/Monitors (why not!) with limited choice of non-audio monochrome models. All muttered darkly about needing leads making up and most professed ignorance of the Memotech, hinting at the need for circuit diagrams before making up leads. Fortunately I found a general hardware book in WH Smiths which led to the Philips monitor and a business micro dealer who was prepared to deal with home micro orders even to phoning Memotech, suppliers etc before any order was placed.

CONTINUED OVERLEAF

In the event, it turned out that the mystique is illusory - at least as far as the MTX goes. Owners of Sinclair, Amstrad or Commadore machines may be locked into brand name or special peripherals but MTX seems industry standard. Three cheers for Memotech design!!!. A phone call to MCL produced the info. that BNC and phono connectors were just different types of the same thing so a lead with BNC on one end and phono on t'other would connect the 'monitor' socket to the monitor. However, my computer had to go to MCL for a mod. to fit the 80 col. board and the firm replaced my BNC with a phono socket to match to 80 col. and a visit to my local electrical shop produced a twin screened lead with phono plugs ex stock for the phono and Hi-Fi sockets. They also sell BNC to phono adaptor!.

The only thing I need to do now is to run both "monitor" and 80 col outputs to a switch and a single lead from switch to the monitor itself to make the whole setup permanent and easy to operate. At the moment of course, if I change from disc drive to tape I have to disconnect to 80 col lead from the monitor and plug in the monitor socket lead - not a great chore but a switch would be quicker and reduce wear and tear on sockets.

NB. Unlike many monitors, which seem to discourage intelligent use by having the minimum of accessible controls, the Phillips is well endowed. A concealed panel at the front houses vol., contrast and brightness and at the rear another panel enables you to adjust image width, straighten the image, correct picture slip, adjust image height and move it to right or left. There is also an ON/OFF switch and neon indicator. A support is built into the base which allows the monitor to be tilted if desired.

Highly Recommended.

IDIOTS REPORT ON SDx 3.5" (SYSTEM 2)

BY Jack Penley-Martin

Problem 1 - my MTX 512 was an early version which was essentially an upgraded 500 so the 80 col. board would not fit. MCL offered a conversion for £20 so off it went to Witney. Unfortunately, in their eagerness to return it before Christmas, they omitted to modify the baseplate - Problem 2.

Fortunately, my son was home on leave and, being in the trade, soon had PCB out and the holes drilled. He then left on some trivial errand to pick up a girlfriend - a process that was to be repeated over the holiday period, but what can you expect from a BBC owner!. So it was not until that evening that everything was reinstalled, the drive bolted on and running.

But it didn't... at least everything worked physically but he couldn't access the silicon disc. He spent a couple of hours more on it before going to a party and managed to format my two spare discs, transfer a couple of files to one and get Newword and Supercalc to run but still no joy with SUB, COPY, NCOPY and SCOPY.

So dear old Dad had his first play but Still no joy. Back to the manual, another umpteen attempts and bingo!... SUB COPY did his little job and I had a silicon disc! I'd managed to get CP/M on disc with SYS and then PIP'ed the reset across from drive F. So at last I had a backup disc and on three attempts at SUB COPY gave me two successes. I did enjoy the look on my sons face when he returned home!.

Then we couldn't get it to SUB COPY so we made another back-up with the second spare disc and this works most of the time but occasionally I get a R/O (why?) or BAD SECTOR hang up. Yesterday I spent about 5 hours playing with the system and trying to erase the original back up disc and load NW and Supercalc to silicon disc. Had some different answers when STATing the original disc - it was R/W but when I ERAQed it, I had a R/O raspberry. I did manage to make it R/W with STAT and then ERAQ worked. However, any attempt to fill it was met with BAD SECTOR. Did try a reformat - same result.

I still couldn't get SCOPY and NCOPY to work until after about four - five hours and about to give up, I made a last despairing SUB NCOPY and there was Newword! Can't say why, don't think I did anything different but usually I ended up with a BDOS ERROR. Without disturbing anything I then PIPed the Supercalc files to drive F and the dear old bit of silicon took them all... I ended up with about 50K free!. By this time it was late (about 1.30am) but flushed with success, I was determined to check it out. Twice I NEWed everything, reloaded system backup then NW/SC backup and SUB NCOPYed. IT WORKED!! Did the same thing for SCOPY - again, success. I repeated everything with the master discs - COPY,NCOPY and SCOPY all worked.

And yet as far as I know, I did nothing more than I'd been doing all day. Is it just a question of showing who is BOSS.... I do not think it is connections, since the equipment is bolted together and has not been moved - we've just written off the dining room table for the past week and ate off our knees!!.

Phil-> I too had some problems with COPY, NCOPY and SCOPY when I first tried out the system, I do not recall doing anything wrong, when I made a backup of the master and used it, they all worked ok!!. One thing you must remember to do whenever you change discs at operating system level is to press CTRL C, this informs the system that you have changed discs.

Many Thanks JACK