THE
MEMOTECH OWNERS CLUB
MAGAZINE

FEATURES :—

M/CODE SPRITES

NODDY PRINTER ROUTINE

NEW SOFTWARE REVIEWED

Phil Eyres   Richard Adams
23 Denmead Road   18 Nightingale Rd
Harefield   Pilands Estate
Southampton   Bursledon
SO2 5GS   Southampton

The first thing you'll probably notice is the change of printing technique for this months magazine, due to the excessive time needed to produce the magazines by printer we have changed to duplicating for our magazine printing. This now means that we have pretty-well endless scope for expansion, as you will see we can now print much smaller, getting nearly twice as much on a page, (I hope no-one has any problems reading this text). This month because we had some photocopy paper we used it, this does not give the best copy, hopefully duplicator paper will allow us to print double sided,....if necessary!. If anyone has any suggestions about improving this new print format then please write us a letter.

If you turn to pages 10 & 11 you will see reviews of 4 new items of software, we can supply these items to you at special club prices, see ad at bottom of page.

Thanks to everyone that has used our Hotline on Monday evenings between 6 & 7pm, remember we still look forward to hearing from you, the number to phone is Bursledon (042121) 5489.

If anyone would like back issues they are available from us for the small remittance of 80p.

It should be noted that all articles are the copyright of the sender and M.O.C., anyone wishing to try and get national magazines to publish our article should inform us first.

Program Library

Just for this month the program library will occupy a bit of space on the Editorial, next month it will have a page of it's own. It is intended to expand the library a bit over the next few months to include articles/programs from previous magazines for the benefit of new members, also I am going to try and include some articles programs for CP/M just for the FDX system owners!. Anyway this month the Library looks like this :

1. Hex-Dec-Bin Convertions. (Binary bit in assembler)
2. CGEN Sprite Generator
3. 3D Drawing Board
4. Whist
5. Memory Save. This program will save a block of memory to tape.
6. MTX Drawing Board
7. Logo Drawing Board
8. Simplex Tablaeux. Applications Program
9. Breakeven Applicatioons Program
10. Light Cycles Arcade Game.
The MTX drawing board has been updated to allow the state of the drawing board to be saved to tape and reloaded to continue drawing.

To obtain anything from the library just send a SAE and a couple of spare stamps to cover costs or £1 if you require the program on tape. 2 programs per tape.

```
10 REM ***** PRINTING NODDY TEXT ******
20 CLS : CSR 9,0: PRINT "**** NODPRINT ****"
30 CSR 8,2: PRINT "TYPE > H < FOR HELP"
40 CSR 6,3: PRINT "------------------"
50 CSR 4,6: PRINT "OR > P < TO START PRINTING"
60 IF INKEY$<>"" THEN GOTO 60
70 IF INKEY$="" THEN GOTO 70
80 IF INKEY$="H" THEN GOTO 100
90 IF INKEY$="P" THEN GOTO 130
100 PLOD "INFO"
110 GOTO 20
120 REM ****** RESET PRINTER ******
130 CLS : CSR 8,10: PRINT "IS PRINTER ON LINE"
140 LPRINT CHR$(127)
150 CLS : PRINT " NODPRINT SET TO 24 LINES 40 WIDE."
160 CSR 5,5: PRINT "DO YOU WISH TO CHANGE"
165 CSR 5,7: PRINT "LINE AND PRINT WIDTH"
170 IF INKEY$<>"" THEN GOTO 170
180 IF INKEY$="" THEN GOTO 180
190 IF INKEY$="N" THEN GOTO 270
200 IF INKEY$="Y" THEN GOTO 170
210 CLS : PRINT "TYPE IN NUMBER OF LINES PER PAGE"
220 INPUT A
230 POKE 33577,A
240 CSR 0,4: PRINT "TYPE IN CHARACTER WIDTH"
250 INPUT A
260 POKE 33579,A
270 PLOD "PRINT"
280 GOSUB 360
290 CLS : CSR 0,5: PRINT "**** PRINT ANOTHER PAGE ****"
300 CSR 4,7: PRINT "ANSWER > Y < OR > N <"
310 IF INKEY$<>"" THEN GOTO 310
320 IF INKEY$="" THEN GOTO 320
330 IF INKEY$="Y" THEN GOTO 160
340 IF INKEY$="N" THEN GOTO 310
350 STOP
360 CODE

8322 START: LD DE,7168    8345      OUT (2),A
8325        CALL RAMRD    8347      POP AF
8328        LD D,24       8348      RET
832A NXTL:  LD E,40       8349 VDPIN: PUSH AF
832C PNOD:  CALL VDPIN    834A      IN A,(1)
832F        CALL POUT     834C      LD C,A
8332        DEC E         834D      POP AF
8333        JR NZ,PNOD    834E      RET
8335        LD C,£0A      834F POUT: IN A,(4)
8337        CALL POUT     8351      BIT 0,A
833A        DEC D         8353      JR NZ,POUT
833B        JR NZ,NXTL    8355      LD A,C
833D        RET           8356      OUT (4),A
833E RAMRD: PUSH AF       8358      IN A,(0)
833F        LD A,E        835A      RET
8340        OUT (2),A
8342        LD A,D        SYMBOLS:
8343        AND £3F       START  8322   RAMRD  833E
                          NXTL   832A   VDPIN  8349
                          PNOD   832C   POUT   834F
370 RETURN
```

The function of this program is fully described in the NODDY pages overleaf. These should be typed in along with the directory page (called PAGE) and the two NODDY program pages listed below.

~~~~~~~

```
PRINT   *D PAGE
  ^xx   *E
        *I 0,a *I 1,b *I 2,c *I 3,d
        *I 4,e *I 5,f *I 6,g *I 7,h
        *B xx
  ^a    *D HELP1.   *R
  ^b    *D HELP2.   *R
  ^c    *D HELP3.   *R
  ^d    *D HELP4.   *R
  ^e    *D M/CODE.  *R
  ^f    *D M/CODE2. *R
  ^g    *D PRINT.   *R
  ^h    *D INFO.    *R
```

~~~~~~~

```
INFO    *D HELP1.   *E
        *D HELP2.   *E
        *D HELP3.   *E
        *D HELP4.   *E
        *R
```

~~~~~~~

```
PAGE
        DIRECTORY OF NODDY PAGES

   0  HELP1
   1  HELP2
   2  HELP3
   3  HELP4
   4  M/CODE
   5  M/CODE2
   6  PRINT
   7  INFO
```

~~~~~~~

Read the information on page three concerning the POKE's used in the BASIC program.

2

********** HELP PAGE ONE **********
----

1 This M/code program is to help
  those like myself who can not
  set there printer to enable them
  to print NODDY text.
  If you can not set your printer
  to a print width of 39 characters
  then you need NODPRINT.

2 This program can be set to print
  any number of LINES and any WIDTH.
  It is only meant as a guide to show
  you what can be done.

         >>>>>>> TYPE RET <<<<<<<

********** HELP PAGE TWO **********
----

3 First your asked if you want to
  change the LINE and print WIDTH.
  If yes then you will be asked the
  number of LINES you want, then
  the number of characters in each
  line, (NODDY is normally set to
  24 lines and 40 characters).
  When these have been set you can
  print as many pages as you wish.
  You will see a sample NODDY program
  and page to print.

4 You can only print one page at a
  time because you are actually
  copying the screen to the printer.
  So you will have to display the page
  you wish to send to the printer.
  This is done with a NODDY program
  you will write.

       >>>>>> TYPE RET <<<<<<

********* HELP PAGE THREE *********
----

5 To use my sample program, set
  the LINES to 24 and the WIDTH
  to 40.
  Enter > 1 to 8 < when asked for
  a page number.

6 If you enter NODDY you will see
  by the DIR command there are 4
  help pages, 1 sample page, 1 info
  page, 1 print page, 1 page page
  and 2 m/code pages.

7 The m/code routine controls the
  printing, the BASIC is just to
  demonstrate the principal of how
  to use it.

       >>>>>> TYPE RET <<<<<

********** HELP PAGE FOUR **********
----

8   ****** WARNING ******

  DO NOT change the basic unless
  the POKE's in lines 230 and 260
  are recalculated, and the m/code
  program is reassembled.

  e.g. 33577 Dec = 8329 Hex
       33579 Dec = 832B Hex

  GOOD LUCK TO ALL MEMOTECH USERS

  ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^

       >>>>>> TYPE RET <<<<<<

MACHINE CODE ROUTINE EXPLAINED 1
----

1 First we store the screen address
  in register's DE then call a
  routine * RAMRD * which writes
  this address to the VIDEO DISPLAY
  PROCESSOR, then we set the number
  of lines we want to print, the
  next line sets the number of
  characters in each line.
  We then read in the first char.
  from the screen, this is done by
  the routine * VDPIN * as soon as
  we have this character we call
  the next routine * POUT * which
  sends it to the printer, if it
  is not busy, if it is the program
  waits till it sees the printer
  is ready.

       >>>>>> TYPE RET <<<<<

MACHINE CODE ROUTINE EXPLAINED 2
----

2 After this the number of characters
  is reduced by one and the process is
  repeated until the character count
  is zero, then the printer is sent
  a NEWLINE code, the LINE count is
  reduced by one and the next line
  printed, and so on until the line
  count is zero and then the program
  stops with a prompt which asked you
  if you would like to print any
  more pages.

3 THIS IS A BRIEF OUTLINE OF THE M/C
  CODE ROUTINE ONLY.

Above are NODDY pages for the NODPRINT program. They explain the
use of the program fairly well. This program has a use for those
that can set there printers to 39 columns, it enables the NODDY
page to be displayed on the screen at the same time as it is
printed out, also with a slight modification it can be made to
print out in columns (as above) for that pro magazine image!!

1 VS 4: CLS

and then ASSEM 10. The listing for line 10 is as follows :

```
; Routine to fill graphics screen
; By Nicholas Hill  15.3.85
; Nothing required on entry
; Nothing effected on exit

START:  LD A,0
        OUT (2),A
        LD A,£40
        OUT (2),A
        LD B,24
N1:     PUSH BC
        LD B,32
N2:     PUSH BC
        LD HL,TABLE
        LD B,8
N3:     LD A,(HL)
        INC HL
        OUT (1),A
        HALT
        DJNZ N3
        POP BC
        DJNZ N2
        POP BC
        DJNZ N1
        LD A,0
        OUT (2),A
        LD A,£60
        OUT (2),A
        LD B,24
C1:     PUSH BC
        LD B,32
C2:     PUSH BC
        LD A,£12
        LD B,8
C3:     OUT (1),A
        INC A
        NOP
        HALT
        DJNZ C3
        POP BC
        DJNZ C2
        POP BC
        DJNZ C1
        RET
TABLE:  DB 0,126,65,65,65,65,126,0
```

Listing 1.

1 VS 4: CLS

and then ASSM 10. The listing for line 10 is as follows :

```
;Routine showing use of Sprites
;By Phil Eyres  18.3.85

SPRTE:  CALL CLEAR
        LD A,2
        CALL BLANK
        CALL SSET
        CALL DRAW
        CALL MOVE
        RET
CLEAR:  LD DE,(ATTR)
        CALL VSET
        LD B,32
CLEAR1: LD C,192
        CALL VOUT
        LD C,0
        CALL VOUT
        CALL VOUT
        CALL VOUT
        DJNZ CLEAR1
        RET
BLANK:  CP 32
        RET NC
BLANK1: SLA A
        SLA A
        LD E,A
        LD D,0
        LD HL,(ATTR)
        ADD HL,DE
        EX DE,HL
        CALL VSET
        LD C,208
        CALL VOUT
        RET
DRAW:   LD DE,(ATTR)
        CALL VSET
        LD B,8
        LD HL,YELL
DRAW1:  LD C,(HL)
        CALL VOUT
        INC HL
        DJNZ DRAW1
        RET
SSET:   LD DE,(SGEN)
        CALL VSET
        LD B,16
        LD HL,DIAM
SSET1:  LD C,(HL)
```

```
        CALL VOUT
        INC HL
        DJNZ SSET1
        RET
MOVE:   LD B,247
MOVE1:  LD HL,(ATTR)
        LD DE,5
        ADD HL,DE
        EX DE,HL
        CALL VSET
        LD C,B
        CALL VOUT
        HALT
        DJNZ MOVE1
        RET
VSET:   PUSH AF
        LD A,E
        OUT (2),A
        LD A,D
        OR 64
        AND 127
        OUT (2),A
        POP AF
        RET
VOUT:   PUSH AF
        LD A,C
        OUT (1),A
        POP AF
        RET
ATTR:   DW £3F00
SGEN:   DW £3800
YELL:   DB 101,11,0,11
BLACK:  DB 1,247,1,1
DIAM:   DB 24,36,66,129,129,66,36,24
CROSS:  DB 129,66,36,24,24,36,66,129

100 GOTO 100
```

Listing 2.

Listing 2 Breakdown

SPRTE: Main program loop
CLEAR: Clear Sprite Attribute Table
BLANK: Set end marker (208) to end of sprite plane 1
DRAW: Draw yellow diamond and black cross
SSET: Set-up Sprite Generator Table as :
        Pat 0 Diamond
            1 Cross
        Cont'd Overleaf

MOVE: Move black cross from right to left across screen

VSET: Set VDP Auto increment register and 'write' mode.

VOUT: Output byte held in C to VDP

ATTR: Start address of Sprite Attribute Table.

SGEN: Start address of Sprite Generator Table

DIAM: Genpat for Diamond

CROSS: Genpat for Cross

YELL: Data for Attribute table

BLUE: Data for Attribute table

This months inspiration comes from Nicolas Hill, the program he sent (listing 1) is a demonstration of how it is possible to use the VRAM in graphics mode. After filling the screen with a shape the program then proceeds to colour it in. It is slowed down to Basics speed by the HALT and NOP instructions, removing these speeds it up a little bit!.

Nick's listing lead me to thinking more about sprite control from assembler, so I set about making a program to do this, (Listing 2) whilst mucking around trying to get it to work I solved one problem that I had had for some time, it involved the EQU nn pseudo or in fact the lack of it in the MTX assembler. The EQU nn pseudo is used to assign a label a value, for instance if I wanted the label ATTR to equal the start of the Sprite Attribute Table (£3F00) the normal assembler would look like this :

ATTR: EQU £3F00

To do this in MTX assembler you have to use this line :

ATTR: DW £3F00

The DW pseudo stands for Data Word, Word meaning two bytes, if your data is only one byte long you use the DB peusdo (Data Byte). See Listing 2 for a worked example, all the data is at the end of the program.

I also found that it is necessary to clear the Sprite Attribute Table before you can use it as on 'power-up' the memory can assume some unwanted values. Also I found that clearing the table with all zeros is not a good idea as this will give all sprites a location value of 0,0 (top left hand corner of screen) thus they are visible. It is far better to set the X/Y co-ordinates to 192,0 respectively which means that any none active sprites will be below the bottom of the screen and so invisible.

It is also good practice to 'lock off' the parts of the Sprite Attribute Table that you are not using, i.e. limit the number of sprites you can display. This is done by writing 208 Decimal into the Y position of the next sprite after the last one being used. Again there is a HALT used to slow the movement of the sprite down, removing this speeds things up. BEWARE the cross moves from right to left across the screen (for ease of programming); its far left position is the left hand column of the screen, not visible to you.

Making programs that people understand

A good programmer develops his own programs in subroutines, he does not waste time re-solving problems that he has solved previously, he keeps all his 'standard' routines in a Library, he can then use them as and when he likes. If the routines were totally undocumented they would be useless (especially if you're like me, I can't remember what I did yesterday let alone last week!). So at the beginning of the routine he makes notes, notes that tell him all about the routine. (Documentation). Some ideas on what could be included are :

1. Title of routine and the date.
2. Registers needed on entry, registers efffected on exit.
3. Subroutine dependancies.
4. Any other relevent info.
5. Memory capacity if large.

You can also lay down basic rules for programming, such as :

1. Registers not used to convey data in or out of a routine should be saved on entry and restored on exit.
2. Registers DE,HL,IX & IY are used as pointers to RAM.
3. Registers B and the BC pair are used as counters.
4. All internal references must be by label, to enable the program to run on any MTX, independant of memory capacity.
5. Labels should not be more than 6 characters long.
6. Program data lines should be kept reasonable, no more than 80 characters per line.
7. In general all programs should run on minimum configuration machines. (MTX 500)

See the next two pages for the same sort of principle applied to Basic programming.

Having seen a number of MTX Basic programs in the MOC magazine,Memopad and even Program books, it is very noticable that very few have been written with speed of execution in mind. The speed of the MTX together with sprite graphics allows a number of quite neat little arcade style games to be written in Basic, but with a bit of dirty coding even more is possible.

The main delay in basic programs, apart from interpreting each line as it is executed, is caused by GOTO and GOSUB statements. Each time one of these is encountered Basic searches for the line number starting from the beginning of the program. Richards Ski program in the last issue provides a very good example of how a neat and logically organised Basic program may be re-structured either to be simply speeded up or to allow extra features.

A quick analysis shows a number of blocks:
(i)   Lines 5-30 + Sub 600 - Initialisation (low priority)
(ii)   Lines 35-170 - Run initialasation (Medium priority)
(iii) Lines 200-300 - Main loop   (High priority)
(iv)   Lines 500-520/900+ - End of game   (Low priority)
(v)   Lines 800-850 - Update score   (Medium priority)

The first step is to place high priority blocks at low line numbers, medium priority blocks at intermediate line numbers etc...

This should make a noticable improvement in the speed of execution. It also highlights the areas of the program, which are critical to execution speed. These may now be examined for redundant GOTO's.
For Example :

```
200 IF J<22 THEN GOTO 220
210 IF ASC(INKEY$)=8 THEN ...
```
can be changed to
```
220 IF J<22 AND ASC(INKEY$)=8 THEN ....
```

The listing on the next page shows the SKI program after it has been processed in this manner. The time saved has been used to incorporate skis which turn with the skier and a minor mod so that he descends faster when going straight down. There are also extensions to vary the type of obstacles, provide continuous play and record the high score for the session. Other minor changes are purely to cater for the varying game playing abilities of my wife and myself. Also NODDY has been used for the instructions, because I'm lazy!.

There was one interesting problem I encountered whilst doing this change, which hits on a slightly grey area in the manual. To move right with a MVSPR statement Richard

used direction 8. This works, but if you use a compound function to also change the pattern, the ski's disappear and are replaced by a sack of coal. MVSPR appears to do a direction MOD 8, so you should use direction 0 and pattern 0.

NODDY pages for use with SKI program on next page :

NODDY PAGE - INS

INS   *D I1.
         *R

NODDY PAGE - I1

                SKI RUN

Use the curser left and right arrow keys to control the skier. You must ski from the start gate to the end gate avoiding the hazards.

If you hit a hazard or miss the finish gate you are dead. Each sucessful run scores 100 points. Extra hazards are added after each run

INPUT DIFFICULTY [1-4] ?

The relative proportions of the different types of hazard may be modified by changing the values 1.9 & 1.6 in line 550.

The layout of page I1 is important as the line 40 positions the Basic ? prompt after the string "INPUT DIFFICULTY [1-4].

The program is on the following page and is a direct listing of the running program, so being totally 'bug' free, ... I hope!

```
1 REM SKI II By Paul Schofield 25/3/85
5 GOTO 1000
10 IF J>22 AND ASC(INKEY$)=8 THEN MVSPR 1,1,4: MVSPR 3,2,4: LET J=J-1:
 LET M=1: LET W=W+1
20 IF J<240 AND ASC(INKEY$)=25 THEN MVSPR 1,1,0: MVSPR 3,2,0: LET J=J+
1: LET M=1: LET W=W+1
30 LET W=W+1: IF W=2 THEN GOTO 10
50 LET P=P-1: LET W=0: LET M=0: IF M=0 THEN MVSPR 1,1,2: MVSPR 3,2,2 E
LSE MVSPR 1,1,2: MVSPR 1,2,2: LET M=0
60 IF P=12 THEN GOTO 500
70 LET XX=INT(J/8): LET YY=24-INT(P/8)
80 IF YY=21 THEN LET YY=20
90 IF A(XX,YY)=1 THEN GOTO 700
100 GOTO 10
210 FOR X=1 TO 30: FOR Y=1 TO 23
230 LET A(X,Y)=0
240 NEXT Y: NEXT X
250 RETURN
500 IF J<160 OR J>184 THEN GOTO 730 ELSE LET SC=SC+100: IF SC>HS THEN
LET HS=SC
510 CSR 2,1: PRINT "SCORE";SC;"  HIGH SCORE";HS
520 FOR A=1 TO T
530 LET X=INT(RND*29)+1: LET Y=INT(RND*19)+1
540 IF X<3 OR Y<5 OR A(X,Y)=1 THEN GOTO 530
550 CSR X,Y: PRINT CHR$(147+INT(RND*1.6)+INT(RND*1.9));: LET A(X,Y)=1:
 NEXT A
560 SPRITE 1,5,90,171,0,0,9: SPRITE 2,2,90,167,0,0,5
570 LET T=TT: LET P=171: LET J=90: LET M=0
580 PAUSE 100: GOTO 10
700 CLS : ADJSPR 1,1,0: ADJSPR 1,2,0: CSR 2,8
710 PRINT " You hit a tree,mogul or fence"
720 GOTO 750
730 CLS : ADJSPR 1,1,0: ADJSPR 1,2,0: CSR 2,8
740 PRINT "You missed the finish gate"
750 CSR 2,10: PRINT "...and are dead!"
760 CSR 5,5: PRINT "LEVEL ";TT/3;
770 CSR 2,15: PRINT "High score today =";HS
780 GOSUB 210
800 CSR 2,20: INPUT "Do you want to play again : ";Y$
810 IF Y$<>"y" AND Y$<>"Y" THEN CLS : VS 5: CLS : STOP
820 LET W=0: LET SC=0: LET T=15
830 GOTO 1110
1000 LET X=0: LET Y=0: LET T=15: LET W=0: LET P=0
1010 LET J=0: LET XX=0: LET YY=0: LET TT=0: LET HS=0
1020 GENPAT 1,148,24,24,60,60,126,90,24,24
1021 GENPAT 1,147,0,32,80,4,138,64,60,0
1022 GENPAT 1,149,224,188,231,189,231,189,7,1
1030 PLOD "INS"
1040 CSR 25,16: INPUT X: IF X<1 OR X>4 THEN GOTO 1030
1060 LET TT=3*X: LET SC=0
1070 GENPAT 2,148,207,207,207,207,207,207,111,111
1071 GENPAT 2,147,31,31,31,30,30,30,30,31
1072 GENPAT 2,149,111,111,110,110,110,110,110,110
1080 GENPAT 3,5,24,24,60,126,189,189,165,36
1081 GENPAT 3,2,0,0,0,0,36,36,36,0
1082 GENPAT 3,4,0,4,9,18,36,72,144,32
1083 GENPAT 3,0,0,32,144,72,36,18,9,4
1090 DIM A(30,23)
1100 CTLSPR 2,2: CTLSPR 1,1
1110 VS 4: CLS : PAPER 15: INK 4: CLS
1120 CSR 9,2: PRINT "!   ! START"
1130 CSR 12,22: PRINT "FINISH !   !"
1150 GOTO 510
```

Answers to last months questions

1. Many thanks to Ian Phillips from Broughton in Furness
for his question about Neword embedded printer commands...
which has solved the problem!. This may sound a bit Irish,
but I have been trying to find the solution for ages and
when I read his plea for help, everything seemed to fall
into place. So for everybody's benefit here is the answer.

PRINTER

The dot commands are used to set up the required printer
controls. The format is .XQ or .XR followed by the printer
control codes converted to HEX. E.g. Enlarged printing is
normally code 14 to start and code 20 to end, these being
0E & 14 in Hex. Therefore at the start of your document
inset the dot commands, one per line, as for any other dot
commands, E.g. to use the same example :

```
.XQ0E
.XR14
```

Now, when you come to the part of the text where the
change of print style is required, insert the control
sequences ^PQ and ^PR exactly as you would for an
underlined section (using ^PS). E.g. ^PQEnlarged Text^PR.

The dot commands .XQ & .XR may be used singly or in pairs
and in any order. they may be reset later in the document
to a different printer command simply by placing the dot
commands, on a line each, just before the required change
and then use the control commands as before.

To set printer commands consisting of more than one code,
follow the dot command with the combined HEX conversion.
E.g. Elite printing is usually: CHR$(27);CHR$(66);CHR$(2);
so, with the dot command this becomes :

```
.XQ1B4202  (Don't use any brackets or semi-colons!!!)
```

In a nut-shell you set the printer command with .XQ or .XR
and instigate the change with ^PQ or ^PR.

One final reminder...if you change font pitch in the
middle of a document, then you will also need to change
Neword page offset (.PO) and right margin (^OR), to keep
the margins in line.

                    ******

I wonder how many more functions Neword has, that are not
in the handbook !!!?
Gerald Buzzacott, Harlington, Near Dunstable.
(Ed. ...An absolutely brilliant discovery!!!)

2.More undocumented Neword Printer controls :
1)I never use the "BOLD command on my printer as it is
inclined to smudge... ^P^D instead of triple strike
induces double strike only; this is much neater in my
case.
2)^P^L Forces a New Page at this point.
3)^P^M Forces a New Line from this point.
4)^P^X Will put a dash through subsequent characters, as
in the continental 7's like this 7 7 7 θ ----(Toggle).
So.. if we have any continental Members .
Wilf Ireland, Urmston, Manchester.

3. More about printer controls from Ian Phillips of The
Post Office, Broughton in Furness, Cumbria.

It is surprising that Memotech doesn't give any details of
the Printer facilities in their Neword manual. As in so
many ways they are under selling themselves. Having tried
a few experiments, I feel this is a very valuable utility.
It is possible to use two commands simultaneously, simply
by running them together in the .XQ/.XR Hex coding. It is
also the only way to obtain true underlining as distinct
from underscoring of individual characters which is
available from Neword. Further the commands used can be
varied within the document but not within a line.

As an example, a underlined double width setting can be
set up using the following commands : (but with the "." in
column 1):

```
.XQ1B57011B2D01
.XR1B57001B2D00
```

*** Games High Score Table ***

Game	Score	Player	Game	Score	Player
TOADO	67801*	G.HULSHORST	BLOBBO	68042	M.GILL
NEMO	3600	M.CYTERA	OBLOIDS	60040	M.GELDER
P.PETE	39370*	M.GELDER	MISS ALPH.	43840*	T.PICKSTONE
KILOPEDE	7341	M.CYTERA	GOLDMINE	3042	M.GILL
CONT RAID	10810	M.GILL	STAR COMM.	77700	M.GILL
MAXIMA	252830	M.GILL (In 2 1/2 hours play!!)			
TURBO	23030	M.GELDER			
KNUCKLES	100000*	SALLY STREET			
FELIX	18450*	T.PICKSTONE			
QOGO 2	19240*	PHIL EYRES			

* Denotes New High Score.
(Phil... I thought I would put my high score in before
anyone else has a chance!!!)

Hints & Tips
1. Heres a tip for effectively deleting a character of a string :- To delete the nth character of A$:-

LET A$(N)=CHR$(0)

This doesn't alter the length of A$ but produces the desired effect when A$ is printed. It's a particularly neat way of suppressing the space in front of a number :- E.g.
        10 LET N$=STR$(N)
        20 LET N$(1)=CHR$(0)
        30 PRINT "(";N$;")"
Mike Pike, Great Baddow, Essex.

2. I have had two problems recently which are worth retelling because I also have the solutions and someone else may be similarly placed :

a) An unstable VDU display which was shown by means which I need not go into, to be due to a low mains voltage. I think I may have mentioned this already. The cure lies in a 220 volt PSU which Memotech are happy to provide in exchange for the original.

b) I found it impossible to access Neword. A call of ROM 2 <RET> gave a quick flash of "A Neword", then returned to the "READY" state. The cure, again is readily provided by Memotech in the form of a small nylon washer which has to be fitted under the head of the Allen screw which holds the power transiter in place. This appears to be a standard modification which should be carried out to all computers manufactured prior to a certain time.

Suggestion for a future article
An explanation of how the 512 manages it's memory. The map in the manual says "where" but not "how". for example, do the arrays "leap frog" over Basic if they occupy more than 16K?. When does the machine use ROM mode and RAM mode and when are the extra pages used? (and how?)
                Keep up the good work!!
Mike Pike, Great Baddow, Essex.
(Ed... If anyone can help answer any of these points please write to me. Phil).
I think that the Basic MTX's use ROM mode, i.e. all the machines languages are held in ROM. Whereas the Disc systems have their languages on disc and subsequently loaded into RAM, hence the necessity to have 64K of RAM in order to run the FDX system. (I don't know if this applies to the new 100K & 250K drives).

Questions (and some answers)
1. This month we've had several people asking how to make a program auto-run, well you simply make the program save itself, then when re-loaded the program continues from the point at which it was saved. A routine to do this might look something like this :
999 REM AUTO-RUN SAVE ROUTINE
1000 CSR 3,1: PRINT "DO YOU WISH TO SAVE YOUR PROGRAM"
1010 CSR 17,3: PRINT "(Y/N)"
1020 IF INKEY$="" THEN GOTO 1020
1030 IF INKEY$<>"Y" THEN RETURN
1040 CSR 3,5: INPUT " START THE CASSETTE AND PRESS 'Y'";A$
1050 IF A$<>"Y" THEN GOTO 1040
1060 CSR 17,10 :PRINT "SAVING"
1070 SAVE "PROGRAM"
1080 RETURN

2. How to use the function keys to avoid having to type RUN, LOAD, SAVE, etc.?
I. Teis, Farlington, Portsmouth.
(Ed. How do you re-prorgam the function keys, if it is in fact possible. They seem to be set to the first 16 basic commands.)

3. Has anyone a program to find the day of a given date? for example :- What day of the week was 2.11.22.
S.Kerley, Middle Woodford, Salisbury.

Swop Shop
1.Dave Thompson would like to swop :-
POTHOLE PETE, MAXIMA, KILOPEDE, TOADO anything considered but must be originals.
Phone Dortmund (West Germany) 0231 447681 or write
24008240 ssgt Thompson D.L., 22A.D. REGT., WKSP. R.E.M.E, B.F.P.O 20.

For Sale

Memotech RS128 with FDX disc unit (two 500k drives) plus Zenith amber monitor. Complete CP/M system including various pieces of software: Neword, Turbo PASCAL, COMPAT (disk reformatting utility - reads/writes disks in various formats). Plus Memotech printer cable (fits any standard centronics printer). As new condition, hardly used: few months old (giving up home computing): worth around £1400, will sell the lot for £1000.

Telephone 031-557 3797 and ask for Robert.

9

This month we have a relative feast of new software for you, firstly, I have to successfully apply to become King of the Emerald Isle, battling against all the odds, then overcome three of Megastars six new releases. Also Brunnings new Data File is put through it's paces.

QOGO 2

Publisher	Megastar
Price	£6.95
Outlets	Dealers

This is one of the first from a library of 6 new games from a new company called Megastar. This second version of Qogo - similar also to Cubert - has some marvellous graphics, certainly the smoothest around on a MTX.

The basic idea involves jumping around a lattice-work of squares, taking care not to get in the way of tumbling 'balls', maraulding 'bats' and a guastly little creature that requires some really 'nifty' finger work to avoid. The game has 50 levels (yes that right, 50 levels!), all different and all getting progressively more difficult. I am also assured that when you reach the end something will happen, when you find out what it is, a quick note to Megastar and if your'e the first you could well be on the trail of some new computer equipment. (All they want is you to prove you can do it!!). The sound whilst playing is a somewhat diminutive 'blip' everytime you land on a square, however you don't get a headache with the noise. Whilst it is waiting for your heart to slow down enough to play another game it does play some rather nice chords, but no real tune.

Conclusions

The best arcade game on the market at present. Don't rush out and buy a joystick though, it's played best using the keypad. I don't think anyone will regret buying this one!!

RATING

Playability	= 4
Graphics	= The Best
VFM	= 4
Lasting Interest	= 4

******

Emerald Isle

Publisher	Level 9
Price	£6.95
Outlets	Dealers

Yes, this is another classic adventure from Level 9, this time you find yourself the pilot of a plane driven to destruction by fierce winds in the Bermuda Triangle. You bale out only to find yourself on the Emerald Isle. The strange tribal laws in these regions decree that only one person has the power to leave such a Isle - the ruler of the land - so your quest is unveiled and your challenge is laid down.

Conclusion

Level 9 have progressed well with their adventures, this one with over 200 locations come complete with a hint sheet with some 550 hints and a couple of really colourful posters. It is intended to be slightly easier than previous adventures but no less of a challenge to wit and skill. I found this one to be really good value, the only question is will I survive to produce the next MUC magazine

Rating

Playability	4
Graphics	N/A
VFM	4
Lasting Interest	4

Son Of Pete - MEGASTAR - £6.95

In this arcade style game, you must travel around the 50 rooms collecting spinning keys and some other things. This game involves a lot of skill and thought. It is not a game where you just Zap them out of the sky.

The idea is to guide Pete around the rooms avoiding all the obstacles and pit-falls. All things are possible, it just takes a while sometimes to get it right.

The graphics are fantastic, this appears to be a trade-mark of Megastar, The sound is reasonable by home computer standards, but I still feel that the sound chip is capable of more.

Conclusions

I think the more you play this game the better you will get at it, although it will be sometime before you get anywhere near finishing it. This makes the game of good lasting interest.

Rating

General rating of 4 throughout

ESCAPE FROM ZARKOS - MEGASTAR - £6.95

This game is very similar in style to that of Son Of Pete,
with 100 parts of Alberts spaceship to collect from over
70 different rooms.

I must admit that this my favorite game and the one that I
have spent most time playing. The graphics are fantastic
and the sound is great. Also, added features are user-
definable keys, sound on or off and as on Son Of Pete,
pause game and abort game.

You start off with 10 lives and move around the rooms
trying to get to the parts of the spaceship. One thing
that is particularly good is that if Albert falls off a
ledge but lands on something other than a monster, he is
still alive. In this game there is a limit for each life
which can be extended by eating the odd piece of food
found here and there.

Conclusions

All in all, this must be one of the best games around for
the Memotech.

Rating
Playability   5
Graphics   5+
VFM   4
Lasting Interest   4+

******

DATAFILE

Publisher Brunning Software
           34 Helston Road
           Chelmsford
           CM1 5JF
Price   £12.80
Outlets   As above

Datafile is the latest addition to the Memotech collection
from Brunning Software. Datafile is an excellent program
for storing data and being able to retrieve it by name,
data or number.

After reading through the manual the program itself is
very easy to operate but it is possible to 'hangup' if you
are not used to it.

On start up, the headings for the data are already defined
but can easily be changed to suit the individual need.

This can be from keeping track of your record or software
collection to names and addresses of M.O.C. members!. You
can quickly find the data you need just by looking up the
file. Unfortunately, there is no guide to how many data
files the memory will handle but this will depend on how
long the files are.

The program will control an Epson compatible printer,
putting out the files present or the data itself. You can
control line length and double strike commands from within
the program.

The program handles saving and loading from cassette and a
variety of ways to look for and manipulate information.

In conclusion, the program is up to the high standards we
expect from Brunning (i.e. their Wordprocessor), as the
program is written in assembler and so is very fast. A
useful addition to the software available for
home/business use.

******

C O M P E T I T I O N

The turn out to last months competition was very poor
in fact only oe person even had a go at it.

The answer I was looking for was very simple, in the
manual there is no mention of the Command SQR which the
program used several times, it seems strange to have a
command undocumented.

So, I've awarded the prize to Paul Schofield, I have two
reasons for doing this, first, he was the only person to
have a go, second he contributed the ski article in this
magazine.

I think that for future issues it will be best to award a
prize to one of the people that has contributed to that
months magazine.

...So get writing those articles, remember anything at
all of interest will be considered. If anyone has a pascal
Rom or disc and would like to write an article now and
then, please let me know.