The MEMOTECH Owners Club Magazine

MEMOTECHNIQUES

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EDITORIAL

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This month for the first time we have 'real' pictures. A new device called a 'SCANNER' allows us to 'burn' images onto duplicator stencils ready for printing. This has cost the club a few quid up front, but it has not affected the cost of magazine production.

The scanner will happily scan text and black/white picture images. It will also accept some half-tones (shades of grey). Colour 'piccies' are as yet untried so not really acceptable. So if you wish to have a go at typesetting your own articles/adverts please feel free to do so, so long as they are A4 or smaller we should be able to print them. Also if you have any useful good quality images which may be topical for the mag (and its cover), I'd love to see them, as I am trying to get together a file of 'bits and bobs'.

With the completion of this mag, that is the end of the clubs 4th year, I hope to have the accounts ready to publish by next issue. We are still going strong and so long as there is enough interest for the MTX series we will support it.

Second-Hand hardware sales appear to be very good at present. So if you are contemplating selling some kit, contact Phil on 0703 585106. We have people ready to buy. Especially kit that is not functioning.

This months Software Top Ten

1. Knuckles
2. Chess
3. T. Snooker
4. The Wall
5. Pot Hole Pete
6. Snappo
7. Emerald Isle
8. Escape From Zarkos
9. Roller Bearing
10. MOC Fig Forth

We have on page 10 the initial finding from last months Census. If you have not yet sent it in, and you would like a say in the club's future, please do so ASAP.

As you can see, those of you that have replied would like the magazine to grow larger, and you are prepared to pay more for that to happen. This is no real problem, I think we can add another 5 or 6 sides to the magazine, taking us up to the next posting weight. The biggest single problem is filling the pages with interesting info. If you are interested in writing a regular monthly page/article for the magazine, on any topic you find interesting, please contact us on 0703 585106. If we can get enough interest and commitment before the next magazine goes to press, we will work out a new cost (probably £12-£ 14). If on the otherhand you are totally opposed to an increase in membership fees, please let us know!.

COMPETITION

For the best 'home generated' picture for the next front cover of the magazine we have on offer :-

A free copy of

The WALL

So, on with the thinking caps Chaps! (and Chapesses!)

WANTED

NEWWORD ROM Board

32K RAM Expansion Board

Please contact Phil Eyre on 0703 585106

I should now be in most evenings, except for the odd game of squash. The Club Hotline is between 7 and 8 pm any evening. During the day and after 8.30pm a club answer phone takes over. I hope this is ok for everyone. The number to phone now is (0703) 585106, ask for Phil.

If anyone would like back issues they are available for the small remittance of 80p each. At present there are 39 back issues, 10 for volume 1, 10 for volume 2, 10 for volume 3 and 9 for volume 4.

It should be noted that all articles are the copyright of the sender and M.O.C., anyone wishing to have articles published elsewhere should inform us first.

Phil Eyres

MPG

By Alan Dobson

This is a program that we have had in the Program Library for some time now, (Disc 4 no 61). It is a rather good program so I thought we would print it here and pull it to pieces a bit just to see what it does. I've included some pretty long-winded notes on how to type in the assembler. Some notes are general so may be of use with other programs that contain assembler - especially if you are having problems!. I hope however that they do not bore those that already know most of this.

Firstly, the program will work on any MTX as it is only just over 5000 characters in size.

The program itself is not very well structured. It combines GOTO's and GOSUB's and is not terribly clear as to where one routine ends and the other begins. But it does have some interesting lines of code and it does its job well.

Line 200 is the first of interest. If you refer to page 17 of the MTX manual, you will see that it means set the Character Font to ENGLISH. - So all non-English keyboard users omit this line! and also the same command repeated on line 1610.

Line 1240 - PRINT CHR$(7); - This actually sounds a bell once. The ';' is important, it stops the print command from moving the cursor to the next line (A Linefeed). Which might cause the screen to scroll if the cursor is on the bottom line.

Line 1420 - 1540 Menu System. Nice and simple. Checks for Upper and Lowercase key presses. This could be used on just about any basic program; MTX or not.

Line 1590 - Surprisingly, this is one line that many do not know about. Saying SAVE "NAME" in a basic line saves the program and its exact state of play. So that when you reload it, it carries on from where it was saved automatically, with all the data still intact. This little section could easily be adapted to allow a disc data save and load. As far as I can see the only variables you need to save are N and D.

Now onto the line of assembler. This is only needed if you have a printer. The reason for it being written in assembler is that it is the quickest way to send data to the printer.

How to type in Assembler line 1640:-

It is not a 'must', but probably easiest to type in all the Basic lines first. At this point to program should work ok, and should be saved to tape or disc. (Assembler often causes the machine to hang up if you get it wrong). Assuming you wish to type in the assembler but but do not know how! Use these notes and refer to your MTX manual pages 129 to 133.
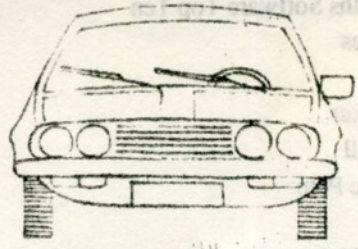
Typing ASSEM 1640 <RET> gets you into the assembler. Hitting <RET> again puts you into insert mode so you can start typing. The four left-most characters should be similar to the listing or be 4000 larger. The numbers may not be identical, that depends on whether the Basic exactly matches the listing or not. Do not worry about the charcters RET, just start typing the code. Press the EOL key if necessary to get rid of the RET characters. When you have finished typing <CLS><RET> gets you to the ASSEM prompt. You can list your assembler by typing L <RET> here. When you have finished a <CLS> <RET> takes you back to basic.

One word of warning:- If you change any line of basic above the 1640 CODE line, you will need to re-assemble the code line by typing:-

ASSEM 1640 <RET>

This applies to any assembler program!!.

Below is the full listing, Happy Christmas. Please let us know if you've got any problems!!.

```
10 REM ***************************
20 REM ***************************
30 REM ***************************
40 REM ***                    ***
50 REM ***                    ***
60 REM ***      M P G         ***
70 REM ***                    ***
80 REM ***         by         ***
90 REM ***                    ***
100 REM **  ALAN DOBSON       ***
110 REM ***                   ***
120 REM *** ========          ***
130 REM ***                   ***
140 REM *** DECEMBER 1986     ***
150 REM ***                   ***
160 REM ***                   ***
170 REM ***************************
180 REM ***************************
190 REM ***************************
200 PRINT CHR$(27);"B1"
210 PAPER 10: INK 1
```

```
211 REM
215 REM ********** INSTRUCTIONS **********
219 REM
220 GOTO 1070
221 REM
225 REM ******** CALCULATIONS ********
229 REM
230 DIM E(190)
240 LET N=0
250 LET G=0
260 LET N=N+1
270 CLS
280 CSR 17-LEN (C$)/2,0: PRINT C$;" MPG."
290 CSR 1,2: PRINT "SPEEDO LAST FUEL"
300 CSR 24,2: PRINT M
310 CSR 1,4: PRINT "DATE THIS FUEL"
320 IF INKEY$<>"" THEN  GOTO 320
330 CSR 24,4: INPUT D$
340 CSR 24,4: PRINT " "
350 CSR 1,6: PRINT "SPEEDO THIS FUEL"
360 IF INKEY$<>"" THEN  GOTO 360
```

```
370 CSR 24,6: INPUT S
380 CSR 24,6: PRINT " "
390 CSR 1,8: PRINT "GALS AFTER LAST
    FILLED"
400 CSR 24,8: PRINT G
410 CSR 1,10: PRINT "COST OF FUEL, #.p"
420 IF INKEY$<>"" THEN GOTO 420
430 CSR 24,10: INPUT C
440 CSR 24,10: PRINT " "
450 CSR 1,12: PRINT "#.p per GAL/LITRE"
460 IF INKEY$<>"" THEN GOTO 460
470 CSR 24,12: INPUT L
```

```
480 CSR 24,12: PRINT " "
490 IF L<1 THEN LET
    L=INT(L/.22*1000+.5)/1000
500 CSR 24,12: PRINT L
510 CSR 1,21: PRINT "Are the above figures
    correct Y/N."
520 IF INKEY$="Y" OR INKEY$="y" THEN
    GOTO 550
530 IF INKEY$="N" OR INKEY$="n" THEN
    GOTO 270
540 GOTO 520
550 CSR 1,21: PRINT "                    "
560 LET G=G+INT(C/L*100+.5)/100
570 CSR 1,14: PRINT "TOTAL GALS TO DATE"
580 CSR 24,14: PRINT G
590 LET X=INT((S-M)/(C/L)*100+.5)/100
600 CSR 1,16: PRINT "MPG LAST FILL"
610 CSR 24,16: PRINT X
620 LET M=S
630 LET Y=INT((S-M1)/G*100+.5)/100
640 CSR 1,18: PRINT "OVERALL MPG"
650 CSR 24,18: PRINT Y
660 CSR 1,22: PRINT "Press any key to
    continue............"
670 IF INKEY$<>"" THEN GOTO 670
680 IF INKEY$="" THEN GOTO 680
681 REM
685 REM ********** DRAW GRAPH **********
689 REM
```

```
690 VS 4: PAPER 15: INK 12: COLOUR 4,10:
    CLS
700 LET YY=60
710 FOR XX=8 TO 23
720 CSR 29,XX: PRINT YY;
730 CSR 0,XX: PRINT YY;
740 LET YY=YY-4
750 NEXT XX
760 INK 13
770 CSR 2,23: PRINT "------------------------";
780 CSR 3,18: PRINT "------------------------"
790 CSR 3,13: PRINT "------------------------"
```

```
800 CSR 3,8: PRINT "------------------------"
810 INK 1
820 CSR 15-LEN (C$)/2,0: PRINT C$
830 CSR 8,1: PRINT "Reg No. ";R$
840 CSR 9-LEN (STR$(M1))/2,2: PRINT "Initial
    Miles";M1
850 CSR 9-LEN (STR$(S))/2,3: PRINT "Current
    Miles";S
860 CSR 9-LEN (STR$(Y))/2,4: PRINT "Overall
    MPG =";Y
870 LET PO=LEN (P$)+LEN (D$)
880 LET PO=PO/2
890 CSR 14-PO,5: PRINT P$;" to ";D$
900 COLOUR 3,1
910 LET E(N)=INT(Y+.5)*2
920 IF E(N)>130 THEN LET E(N)=130
930 IF E(N)<0 THEN LET E(N)=0
940 FOR Z=1 TO N
950 FOR H=0 TO E(Z)
960 PLOT Z+25,H+4
970 NEXT H
980 NEXT Z
990 ATTR 0,1
1000 CSR 0,6: PRINT " Press any key to
     continue......"
1010 ATTR 0,0
1020 IF INKEY$<>"" THEN GOTO 1020
1030 IF INKEY$="" THEN GOTO 1030
1040 CSR 0,6: PRINT "                    "
```

```
1050 VS 5: CLS
1060 GOTO 1410
1061 REM
1065 REM ******** INSTRUCTIONS ********
1069 REM
1070 PRINT "Car Overall Petrol Consumption."
1080 PRINT
1090 PRINT "This programme calculates and
graphically displays a cars overall   fuel
consumption to the nearest MPG,   following each
fuel purchase."
1100 PRINT
1110 PRINT "After first entering the car details, it
is only necessary to input the date,speedo, cost
and price per gallon or   litre as prompted."
1120 PRINT
1130 PRINT "Although the results will in any case
get progressively more accurate it is  better to fill
the tank, or as nearly"
1140 PRINT "so, at each purchase to achieve the
maximum accuracy from the start."
1150 PRINT : PRINT : PRINT "Press any key to
continue.............."
1160 IF INKEY$<>"" THEN  GOTO 1160
1170 IF INKEY$="" THEN  GOTO 1170
1171 REM
1175 REM ******** DATA INPUT ********
1179 REM
1180 CLS
1190 IF INKEY$<>"" THEN  GOTO 1190
1200 PRINT "Input make & model of car.
(Maximum of 30 characters.)"
1210 INPUT C$
1220 IF LEN (C$)<31 THEN  GOTO 1260
1230 PRINT "Sorry, too long!!!"
1240 PRINT CHR$(7);: PAUSE 2500: PRINT
CHR$(7);
1250 GOTO 1180
1260 PRINT
1270 PRINT "Input registration number."
1280 IF INKEY$<>"" THEN  GOTO 1280
1290 INPUT R$
1300 PRINT
1310 PRINT "Input speedometer reading at initial
use of programme."
1320 IF INKEY$<>"" THEN  GOTO 1320
1330 INPUT M
1340 LET M1=M
1350 PRINT
1360 PRINT "Input date of initial fuel purchase."
1370 IF INKEY$<>"" THEN  GOTO 1370
1380 INPUT P$
1390 PRINT
1400 GOTO 230
1410 IF INKEY$<>"" THEN  CSR 1,21: PRINT
"PLEASE TAKE YOUR FINGER OFF THE
KEY.": GOTO 1410
1411 REM
1415 REM ********** MENU **********
1419 REM
1420 PAPER 10: INK 1: CLS
1430 CSR 4,5: PRINT "Press 'R' for next
calculation."
1440 CSR 4,7: PRINT "Press 'S' to save."
1450 CSR 4,9: PRINT "Press 'P' for hard copy."
1460 CSR 4,11: PRINT "Press 'G' for graph."
1470 CSR 4,13: PRINT "Press 'B' to stop
programme."
1480 CSR 1,21: PRINT "                              "
1490 IF INKEY$="r" OR INKEY$="R" THEN
GOTO 260
1500 IF INKEY$="s" OR INKEY$="S" THEN
GOTO 1550
1510 IF INKEY$="p" OR INKEY$="P" THEN
GOSUB 1620
1520 IF INKEY$="G" OR INKEY$="g" THEN
GOTO 690
1530 IF INKEY$="b" OR INKEY$="B" THEN
GOSUB 1680
1540 GOTO 1490
1550 CSR 1,20: PRINT "Press space-bar to save
programme."
1560 IF INKEY$<>"" THEN  GOTO 1560
1570 IF INKEY$<>" " THEN  GOTO 1570
1580 CSR 1,20: PRINT "* * * * * * *  SAVING * * *
* * * *"
1590 SAVE "MPG"
1600 CSR 1,20: PRINT "                              "
1610 PRINT CHR$(27);"B1";: VS 5: GOTO 1420
1611 REM
1615 REM **** HARD COPY TO PRINTER *****
1619 REM
1620 CSR 1,20: PRINT "* * * * * :  PRINTING * *
* * * *"
1630 LPRINT CHR$(27);CHR$(77);CHR$(20);
1640 CODE
```

508C	DUMP:............	CALL SETUP
508F	....	LD B,24
5091	NEWLIN:	PUSH BC
5092	....	CALL CRLF
5095	....	CALL BIT256
5098	....	LD B,32
509A	THISLN:	PUSH BC
509B	....	CALL READ8
509E	....	CALL CONV8
50A1	....	CALL SEND8
50A4	....	POP BC
50A5	....	DJNZ THISLN
50A7	....	POP BC
50A8	....	DJNZ NEWLIN
50AA	....	LD A,12
50AC	....	CALL PCHAR
50AF	....	LD A,7
50B1	....	JP PCHAR
50B4	VRAM:	DS 8
50BC	PRAM:............	DS 8
50C4	READ8:	LD B,8
50C6	....	LD HL,VRAM
50C9	RD8LOP:	IN A,(1)
50CB	....	LD (HL),A
50CC	....	INC HL
50CD	....	CALL PWAIT
50D0	....	DJNZ RD8LOP
50D2	....	RET
50D3	SEND8:	LD B,8
50D5	....	LD HL,PRAM

```
50D8 SN8LOP:........LD A,(HL)
50D9 ................CALL PCHAR
50DC ................INC HL
50DD ................DJNZ SN8LOP
50DF ................RET
50E0 CONV8:..........LD IX,PRAM
50E4 ................LD B,8
50E6 CV8LOP:.........LD HL,VRAM
50E9 ................PUSH BC
50EA ................LD B,8
50EC ................LD A,0
50EE CVILOP:.........RL (HL)
50F0 ................RL A
50F2 ................INC HL
50F3 ................DJNZ CVILOP
50F5 ................LD (IX+0),A
50F8 ................POP BC
50F9 ................INC IX
50FB ................DJNZ CV8LOP
50FD ................RET
50FE CRLF:...........LD A,13
5100 ................CALL PCHAR
5103 ................LD A,10
5105 ................JP PCHAR
5108 SETUP:..........LD A,27
510A ................CALL PCHAR
510D ................LD A,65
510F ................CALL PCHAR
5112 ................LD A,8
5114 ................CALL PCHAR
5117 ................LD A,0
5119 ................OUT (2),A
511B ................OUT (2),A
511D ................RET
511E BIT256:.........LD A,27
5120 ................CALL PCHAR
5123 ................LD A,"K"
5125 ................CALL PCHAR
5128 ................LD A,0
512A ................CALL PCHAR
512D ................LD A,1
512F ................JP PCHAR
5132 PCHAR:..........PUSH AF
5133 PCHRLP:.........IN A,(4)
5135 ................AND #1
5137 ................JR NZ,PCHRLP
```

```
5139 ................POP AF
513A ................OUT (4),A
513C ................CALL PWAIT
513F ................IN A,(0)
5141 ................CALL PWAIT
5144 ................IN A,(4)
5146 ................RET
5147 PWAIT:..........PUSH BC
5148 ................LD B,50
514A PWTLOP:.........DJNZ PWTLOP
514C ................POP BC
514D ................RET
514E ................RET
1650 CSR 1,20: PRINT "                    "
1660 LPRINT CHR$(27);"@"
1670 RETURN
1671 REM
1675 REM ******** END PROGRAM ********
1679 REM
1680 IF INKEY$"" THEN  GOTO 1680
1690 CSR 1,21: PRINT "Have you saved the
programme Y/N"
1700 IF INKEY$="y" OR INKEY$="Y" THEN
GOTO 1730
1710 IF INKEY$="n" OR INKEY$="N" THEN
CSR 0,21: PRINT CHR$(5):: RETURN
1720 GOTO 1700
1730 IF INKEY$<>"" THEN  GOTO 1730
1740 CSR 1,21: PRINT "Are you sure you want
to stop Y/N"
1750 IF INKEY$="y" OR INKEY$="Y" THEN
STOP
1760 IF INKEY$="n" OR INKEY$="N" THEN
CSR 0,21: PRINT CHR$(5):: RETURN
1770 GOTO 1750
```

SOFTWARE

Title	Stock				
26 * 26 SPREADSHEET	Y	MUSIC PAD	Y	SNAPPO	Y
3D TACHYON FIGHTER	Y	NEMO	Y	SNOWBALL	Y
AD.QUEST	Y	OBLITERATION ZONE	Y	T.SNOOKER	Y
AGROVATOR	N	OBLOIDS	Y	SON OF PETE	Y
ALICE	Y	PAINTBOX	Y	STAR COMMAND	Y
ASTROMILLON	Y	PAYROLL	Y	SUPA CODER	N
ASTROPAC	N	PHAID	Y	SUPER BIKE	Y
ATTACK OF KER TOMS	Y	PHYSICS	Y	SUPER MINEFIELD	Y
BACKGAMMON	Y	PONTOON & BLACKJACK	Y	SURFACE SCANNER	Y
BLOBBO	Y	POT HOLE PETE	Y	TAPEWORM	Y
BOUNCING BILL	N	PURCHASE LEDGER	Y	TARGET ZONE	Y
BRIDGE	Y	QUEST 1	Y	THE DESIGNER	Y
CAVES OF ORB	Y	QOGO	Y	THE WALL	Y
CHAMBEROIDS	N	QOGO 2	Y	THE ZOO	Y
CHARMKATZ	Y	QUANTUM	Y	TOADO	Y
CHESS	Y	QUAZZIA	N	TUMBLE TOWER	Y
COMBAT	Y	REVERSI	Y	TURBO	Y
C.ADVENTURE	Y	ROLLA BEARING	Y	USER BASIC	Y
CONT. RAIDERS	Y	RUTHLESS B.	Y	USER BASIC SDX	N
CRYSTAL	Y	SALES LEDGER	N	UTILITIES SDX	N
DENNIS & CIRCUS	Y	SALTY SAM	N	VERNON VAMPIRES	Y
DISASM	Y	SEPULCRI SCELERATI	Y	WORD & PICTURE	Y
DOODLEBUG	Y	SMG	Y	REVEAL	Y
DOWNSTREAM DANGER	Y			SMG2	Y
DRAUGHTS	Y			PUC-MAN	Y
DR FRANKIE	N			MOC FIG-FORTH	Y
DRIVE THE CEE-5	Y			TECH DATA	2.00Y
EDASM	Y				
EMERALD ISLE	Y				
ESCAPE FROM ZARKOS	Y				
EXTENDED BASIC	N				
F1 SIMULATOR	Y				
FATHOMS DEEP	N				
FIG FORTH	Y				
FIG FORTH SDX	N				
FIREHOUSE FREDDIE	N				
FIRST LETTERS 1	Y				
FLUMOX	Y				
GHOSTLY CASTLE	Y				
GOLDMINE	Y				
GRAPHICS	N				
HAWKWARS	Y				
HELI-MATHS	Y				
HIGHWAY ENCOUNTER	Y				
HUNCHY	Y				
ICEBURG	N				
JET SET WILLY	Y				
JUMPING JACK FLASH	N				
KARATE KING	Y				
KILLER TOMATOES	Y				
KILOPEDE	Y				
KNUCKLES	Y				
LITTLE DEVILS	Y				
LORDS OF TIME	Y				
MANIC MINER	Y				
MISSILE COM & ARCADE	Y				
MATHS 1	Y				
MAXIMA	Y				
MEMOCHEQUE	Y				
MEMOSKETCH	Y				
MEMOSKETCH SDX	Y				
MINEFIELD	Y				
MINER DICK	Y				
MISSION ALPHATRON	Y				
MISSION OMEGA	N				

Above is a list of most of the known software titles.

We have marked the titles we can supply, along with new prices.

The other titles we do not have.

Next in line. If you are the owner/writer of the software, then please contact us, we cannot promise high sales, but we do promise to pay 1 for every sale.

Notice also, a list of software available on 500K CP/M and non CP/M systems available from us.

ALL AT £5.00

Disc Software 500K CP/M All Available at 3.00 per program, plus 1.00 for the cost of the disc.(As many programs as you like on one disc!).

Mission Alphatron Knuckles Quasar Turbo Toado Obloids 3DTach Fighter Astropac Star Command Nemo

500K Non-CP/M (Readable on CP/M systems!) Chess Reversi Chamberoids Minefield Pacman Pot Hole Pete Phaid Star Command

GRAYSOFT

MTX BASIC TUTORIAL

This book has been designed to teach the absolute novice the basic skills of programming in Basic, what the commands on the MTX do; and how to use them. This course is also meant for those programmers who would like to improve aspects of their programming. Useful routines are included in the book like FILL (for filling an area on the screen), bouncing ball, true circles; and a host of helpful programming tips.

The book is well and logically set out, easy to read and follow. Many examples are given. Very well presented - professionally bound and attractive.

All this for ONLY £5.95!

ADVANCED GRAPHIC DESIGNER

Create graphic screens otherwise almost impossible to produce by normal programming. It is well presented and can do everything useful - even draws proper circles.

APPLICATIONS: Loading screens, layouts (eg Garden), Scale drawings.

Available on cassette or disc (not 3.5" system). Former price was £13.99 (cassette) and £15.85 (disk).

Price still stands at only £9.99 for cassette or disc.

MTX FRUIT MACHINE

All popular features. One of those games hard to put down. Available on cassette for £4.30 (not for MTX 500 due to lack of memory); or disk (not 3.5" system) for £4.99. Disk version does not have nudge feature due to lack of available memory.

3D SPACE LINES

Try to beat the computer on this puzzle game. Available on cassette for £4.30 or disk (not 3.5" systems) for £4.99; however 3.5" systems can use this program if saving from cassette to disc. Please specify.

MTX CARD BOX

Database to quickly store, retrieve and search for information. Up to 200 separate groups of data can be held at once in memory. This program will only work on disc systems. This package includes bound instructions with the program.

The total cost Only £6.99

TYPING TUTOR

Useful for the Beginner or the Advanced. This will speed up your typing and make it more acdcurate.

Tape or 5.25" Disc Only £6.00

Teach Yourself NODDY

The first MTX guide designed to help you understand how NODDY 'ticks'.

Tape or 5.25" Disc Only £6.00

**CHEQUES PAYABLE TO
JOHN GRAYSON ONLY.**
Orders usually dispatched next day.
4 Byron Court, Hill Lane, Soton.
Tel. 0703 220242

CP/M DISC FORMATS

By
Graham Mitchell

DISC PARAMETER BLOCKS.

Some CP/M users may wish to know how a program written on another machine with totaly different disc formats can access the system tracks on their machine.The answer to this is that each machine has a block of memory allocated to storing the various formats used on that machine.Therefore the program must be written to use these parameters if the disc is not to be corrupted.

This parameter block/s can be found in the following manner.
(1). SELECT THE APPROPRIATE DRIVE USING BDOS FUNCTION 14 (OE hex)
(2). CALL BDOS FUNTION 31 (1F hex).

The location of the parameter block is now stored in the HL register.
Each block of parameters refer only to the selected drive and consists of 15 contiguous bytes.Now follows 2 DPB's for type 03 & 43 (sidisc) drives.

OFFSET (HL+X)	PARAMETER GIVEN	NO. OF BYTES	DATA DRIVE	03	43
0	SECTORS PER TRACK (SPT)	2		001A	001A
2	BLOCK SHIFT (BSH)	1		04	05
3	BLOCK MASK (BLM)	1		1F	1F
4	EXTENT MASK	1		01	01
5	MAXIMUM BLOCKS (DSM)	2		009B	00FD
7	MAXIMUM DIR ENTERIES (DRM)	2		003F	007F
9	DIRECTORY ALLOCATION (AL0-1)	2		8000	8000
0B	DIRECTORY SECTORS (CKS)	2		0010	0000
0D	TRACK OFFSET (OFF)	2		0002	0002

To obtain the desired parameter simply add the offset to the DPB vector returned in the 'HL' register and read the parameter pointed to at the resulting memory location.

Examples of parameter readings for type 03 drive

SPT.   26 Sectors per track
BSH.   '4'= 2X2X2X2 = 16 X 128 Records per block = 2 Kbytes per block
BLM.   '1F'= 15+1 = 16 Records per block
EXM.   '1' = 1+1 = 2 Kbytes block size,therefore 2x16 Kbytes in one FCB
DSM.   '9B'=155+1=156 X 2 = 312 Kbyte capacity
DRM.   '3F'= 63+1 = 64x32 enteries.2 Kbytes or 16 Records
AL0-1   '8000'=10000000 00000000 BINARY.Each bit set denotes 1 x 16 Kbyte
         block used for directory space.
CKS.   '10'=16 x 128 byte records used for directory.
         nb.   This is not used on Sidisc because this is used for checking the
         directory of changable discs only.
OFF.   '2' This offset means that 2 tracks are reserved for system use.
         Tracks 0 & 1.

Using this information it is possible to work out all physical characteristics of any drive used on any machine without the need for custom instaling of the program.

Your Letters

Problems

1. I have an SDX system with 512K of silicon disc. Is it possible to access the extra RAM from MTX or FDXB basic to use it as RAM!. Or infact to utilise it in any way. It seems a shame not be able to use it at all whilst in Basic.

M.Rudkin Isle of Wight

2. I read in the magazine that a member was having trouble saving Noddy programs in FDXB to disc, and your suggested solution which I had previously found by accident.

But I find that saving any program in FDXB to disc is a hit and miss affair. So much so that I always save to tape first. I find that editing a line and trying again often works but I have tried in vain to work out why it will save to disc one time and not another. Once a program has successfully saved it is then possible to add to it and it never again fails. So when developing a program I start by saving the first (say) ten lines and check before going further. Another device is to save under a name already on disc. This usually works. I would find a 'Verify' command more than useful and wonder why it was not included. I don't think this is a hardware fault as Newword and Supercalc programs save every time without trouble.

Jim Spence Musselburgh

Phil - Does anyone have any answers??

Help Lines

1. The following information will be of use if you have a copy of DISASM and an SDX system. I have converted the DISASM program to run on my SDX system as a .RUN file. This is done with the following information.

D000 Hex. Start Address

640 Hex. Length of the code

Putting this information in the first bytes before the DISASM program, as layed down in the SDX manual.

i.e. EFFC - 00 EFFD - D0 EFFE - 00 EFFF - 64 D000 - start of the DISASM program

And saving to disc with USER WRITE "DISASM.RUN",61436,1608. will execute the program from disc.

D.Stewart Lancashire.

2. J.Godson, whose DATA lines sprout unwelcome spaces, has run into one of those unfixed bugs in MTX basic - it is the Basic which is at fault rather than the ROM as the two CP/M interpreters behave similarly. The only solution I know is to use DAT. rather than DATA when typing the line and to edit the keyword back to DAT. when editing it.

The other main bug, which is much less obvious and can cause a lot of swearing if you don't know about it is the way MOD() sometimes returns a value fractionally less than the expected integer. The only answer appears to be the rather messy one of always rounding up the return value before using it.

While I have no experience with non-CP/M disk systems, I wonder whether the NW.RUN problem is due to insufficient memory. Although it is said to be possible to install disk drives on an MTX500, both Newword and Wordstar are normally said to require a minimum TPA of 48K to run at all. In theory it is possible to install Newword for a 40 column screen - the User Area listing shows which parts have to be changed, but I have never heard of a publically available version.

Before members with drive controller problems start looking for service engineers they may like to try dusting the boards with an artists brush barely moistened with a commercial anti-static fluid. The SDX is one of a number of computers liable to develop peculiar and persistant faults which seem to be a result of having a lot of CMOS chips and no internal fan so the local accumulation of dust and grease can cause very sensitive CMOS devices to misbehave. This has several times saved me unnecessary bills and may be worth trying.

Brian Houghton Warley, West Midlands.

For The Future

1. How about a series of articles on DISC DRIVES - The possibility of adapting some of the reasonably priced drives on offer in the various computer magazines. Any brainy members able to help the masses??

2. Please could you tell me how I would go about programming Robotics in a MTX 512 and how to connect them, thankyou.

M.Wright Co.Durham.

Phil- Although brief, this sounds really interesting. Has anyone bought a little robot and interfaced it with the MTX??. We would be very interested to hear from you. If somebody is interested in trying to find a cheap robot, have a go at interfacing it, writing a few articles about it for the magazine along the way. We are interested in helping fund the buying of one. Give me a ring. (I know it is not easy to find me in these days!! - Pressures of work!!)

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THE CENSUS Report
by Alan Hamilton

A disappointing low response to the Census which we ran in the September issue of the magazine surprised the three of us (myself, Phil and Paul). We were expecting an almost 100% turnout since it was the first time we had given all of you the chance to express your views and have a hand in the contents of the club and magazine.

From the responses which did pop through the door, it appears that the club has a very wide spread of ages and an even wider spread of opinion. The majority of users own the 64K version of the '512 with the next most popular being the 256K. Next came the MTX500 and surprisingly, the RS128 last. Many members have expanded their system to include internal expansion boards, the most popular of which was the RS232, followed closely by memory expansions.

Just over half of you own printers, almost all of which dot matrix with Memotech DMX80s and Panasonic KXP-1081s being most popular. As we thought, no-one owns a laser printer along with a large zilch on ink jets (but included it just in case anyone did).

On the subject of expansions to the magazine, you are united. Almost all (94%) of you want an expanded magazine with more issues per year and you are willing to pay for it. The average price willing to be paid is £12. Phil and I will be working out exactly how many pages £14 will give us with twelve issues and see what we can do.

The issue of a national meeting which failed in the past seems feasible (assuming all those who said would come do), the majority location being the Midlands. As a result, Paul has kindly offered to get it organised, but requests that all those wishing to go write to him, giving two possible weekends in February which they could attend. It will probably be held in Worcester or thereabouts in a hotel or something like that. All Scottish and North of England members wishing to come I would request that they first of all let Paul know that they would go and secondly get in touch with me so that I can get numbers for hiring a minibus/coach for transport to and from.

Onto the contents of the magazine now and as was thought, most people want more of everything. The biggest votes were for more Assembler, BASIC and CP/M programming. A substantial number of people would like more Pascal and some more Forth. Competitions met with a cool response with the votes being very close. One member suggests that we tailor competitions more towards the advancement of software production...a point we will be taking up.

Look out for some alterations to the format and running of the club over the next few months, all designed to make it more to the majority views of you, the membership.

As I have said, we're a bit disappointed with the response, it is your chance to air your views. We may run another census next year, to see how much, if any your views have changed.
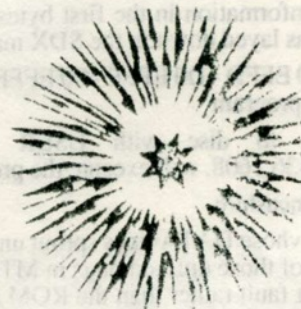
Draughts
A Boardgame By Chris Whittington

This is another in Continental software's range of board-games for the Memotech, released in 1983.

Most of you will know the rules of draughts, but, for the few of you who don't, the idea is to capture all of your opponent's pieces by jumping over them. You may only move one space at a time, unless you are taking. To take a piece, you jump over it to a free space directly behind it. The pieces may also only move on squares of one colour (in this version the green ones). The game is played on a chess board and all your pieces start at one end, if you can get them to the other your piece is 'kinged' (meaning it can move both ways on the board), represented by a cross on top of the piece.

The board is viewed from above, with a circle representing
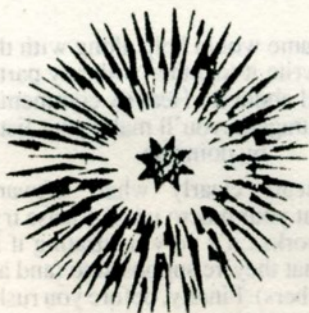
each of the pieces. When the game is loaded you are given the choice of level (0-9); colour (black always moves first) and if you would like full capture search or not (although this has no effect as far as I can see). Movement is effected in a similar way to chess i.e. you enter the co-ordinates of the piece you wish to move, followed by where you wish to move it to, if this move is illegal you will be told and asked for a different move.

The computer is a good opponent and quickly responds to your moves on the lower levels. But, as can be expected, the response time lengthens with higher levels of difficulty (eg. I haven't seen it move on level nine yet!).

Unfortunately my copy had no instructions with it so I can't comment on them - but it would have been a good idea to have some on screen.

SUMMARY This is a good adaption of a well known board-game, with no bugs that I discovered. In my opinion a better program than Continentals 'Chess'. If you like boardgames get it.

VFM 70%
Graphics 60%
Overall 70%
Price £5.00 from MOC.

Life. The Universe and Everything
An Adventure By A.Key

This adventure is based on the third part of Douglas Adam's four part "Hitch Hikers Guide" trilogy which follows Arthur Dents misadventures in time and space across the galaxy.

In the game you play the character of Arthur, and your mission is to save the Universe. You start the game in a cave on Prehistoric Earth with only a rabbit skin bag, a towel and a copy of THE Guide for company. After wandering around a bit you meet up with FORD and travel to present day Lords, by SOFA. Here you meet Slartibartfast who informs you of your mission; which takes you all over the Galaxy, trying to stop the Krikket Robots from reassembling, and using the key to the WIKKET gate, on the way picking up Trillian and Zaphod Beeblebrox, as well as meeting all sorts of weird entities (for example THOR) and, of course, learning to fly (Not necessarily in that order).

The Input Parser normally only accepts the usual Verb-Noun Input, but on occasion a more complicated command is necessary (eg. PUT BALL IN BAG).

There is limited interaction with the other main characters (Trillian,Ford,etc), but they can provide clues from time to time. The Guide is an invaluable aid and often more helpful than the HELP command - which even sometimes refers you to the guide and seems to be the same in any one location, no matter what stage of the game you have reached.

Movement is effected - and limited - by the normal conventions (ie points of the compass, Up & Down) but may be abbreviated to first letter only.

This game will appeal to Adventures and Douglas Adam's fans alike as it follows the book fairly closely but still has a fair level of difficulty - necessitating much use of the fast and effective SAVE command, on the disc version, probably not as good on the tape versions. Screen updating is very quick with no noticable hesitation when responding to commands. Overall an excellent piece of software and a worthy adaption of the book. Get it! - If you can.

Vocabulary 80%
Addictiveness 85%
VFM 80%
Overall 90%
Price £5.00 from MOC.

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MACRO LIBRARIES

After the census results were compiled and Paul, Phil and I managed to have a look at them, we have found that just about everyone wanted more on at least one particular area of programming. The easiest way to fulfill these needs and to benefit all is the creation of macro libraries.

I started off, in association with Nigel Cooper, a pilot scheme with Pascal in the hope of getting some favourable response. Sadly though, such a response was not forthcoming and it has faded out of the limelight for the present (but it's still there if anyone is interested!). Anyway, we feel that the extension of such a macro library to include all languages (you name it, we'll do it) might be of some use.

Still wondering what a macro library is? Fear not! Macro libraries are computer jargon for a library of routines (similar to the Software Library) which come on paper which do handy things. For example, one such macro I have, which John Hodgson wrote, blocks out error messages when trying to access disc files in CP/M BASIC. A macro is portable from program to program and takes much of the work out of software development.

What we'd like to see is a library of macro listings for all languages which programmers and beginners alike can refer to. For example, say I wrote a program which did an A4 printer dump and you were writing a program and wanted to be able to dump a graphics screen to a printer. What is the point of slaving away attempting to write something which I have already done. Let's face it, you might not succeed in writing your printer dump routine and give up the whole project in disgust...it has happened! You could order the printer dump from the macro library and incorporate it into your program and we'd all benefit from new software, either from the MOCPDSL or commercially.

Beginners should not take offence. They could use such a facility to see how things are done, and probably be improved.

We would operate the macro library by charging 50p per listing (inc P & P & VAT) and would send the macro to you on paper. We would produce a separate catalogue for macros which would be available from the MOCPDSL (free of charge!!!). What do you think?

OK, so have I engaged your enthusiasm? Are you going to send me all those routines you have festering away in a drawer somewhere? If you do wish to send something, try not to make them too big, remember we are trying to supply routines not programs. We would be grateful if you could send us your offering in any one of the following formats:

1) Newword disc file

Any memory capacity. 5.25" users send their offering to me. 3.5" users send it to Paul.

2) Pro-Word tape file

On cassette (stating baud rate)

3) On paper

Typed, printed or written (legibly please, in capitals wherever possible)

4) On cassette

BASIC, Assembler or Noddy programs can be listed out by myself and used.

Apart from the program, what information do I have to give?

Well, your name would help along with the computer set-up you used to write it together with any particular notes you would like to add about it. Heavily commented programs are vigorously encouraged...you'll make your listings much more understandable by doing so.

Please indicate clearly what software package/language/system that your macro uses. Please try and make sure that the macro works...it's very frustrating if listings given to you do not do what they're supposed to (and a waste of 50p to your fellow members). Finally, before you rush off down to the post office to send me your material, a few notes for particular users:

1) HiSoft Pascal ROM Users.

I cannot read source files written by the HiSoft ROM. However, Nigel Cooper has kindly agreed to lend a hand to print out any Hisoft Pascal macros (the source code, not the assembler) which are tape based you'd like to offer. Please send anything of this nature to Nigel, his address is: 93 Francis Road, Leyton, London, E10 6PL.

2) Small C or Aztec C Users.

Where you use #include statements to include external files, it would be appreciated if you included the external files also. Chances are we will have a copy of it but it's better to be safe than sorry!

3) Newword, dBase II & SuperCalc.

INTERFACING PROJECTS

Why not get into the exciting world of micro electronics. Infact what better way to start than with an MOC D.I.Y. kit. Everything you need is supplied, except a soldering iron, wire cutters and of course a few hours of your time!!. So why not order now.

Interface price list A full set of components and instructions for the LED kit#6.95

A full set of components and instructions for the Speech Synthesiser kit#19.00

Connecting cable for the internal port (needed for projects)#4.50

All prices are fully inclusive.

Please allow 14 days for delivery and make cheques payable to MOC.

Any Merge-Print programs for Newword, Command files for dBase or programs for SuperCalc are sought after!!

I can help with the writing and running of macro programs for the following software packages on CP/M (but will also take any others which I can't directly run):-

ZBASIC, MBASIC 5.2 or less, dBase II, SuperCalc, Newword, Write- Hand-Man, Aztec C, Forth-83, Turbo Pascal 3 or less, Pascal-80, Nevada Fortran IV, CIS Cobol, E-Prolog, any files requiring the use of MicroSoft M80, Small C.

I look forward to hearing from you!

Alan Hamilton

Gap Filler 1
By Mr G.Carter
62 Wyke Road
Trowbridge
Wilts
BA14 7NP

P.s. For Nigel Cooper (This is Mr Carters address!!).

The following routine converts Hex to Decimal or Decimal to Hex. Simply enter decimal number (between 0 and 65535) or if hex preceed with a hash with a max of 4 hex numbers (#****). The routine can be relocated anywhere in memory and called using USR command.

```
1 GOTO 500
10 CODE
4010 .....................RST 10
4011 .....................DB #4F
4012 AGN: ...............CALL #1B85
4015 .....................CALL #001B
4018 .....................LD A,(DE)
4019 .....................PUSH AF
401A .....................CALL #1ACD
401D .....................POP AF
401E .....................CP #23
4020 .....................JR Z,HEX
4022 .....................RST 10
4023 .....................DB #81,#23
4025 .....................CALL #1B50
4028 .....................JR REP
402A HEX: ...............CALL #0DD0
402D .....................CALL #02E8
4030 REP: ...............RST 10
4031 .....................DB #67,#8C
4033 .....................DB " Y TO REPEAT"
403F .....................CALL #1A66
4042 .....................JR Z,AGN
```

```
4044 .....................RET
20 RETURN
500 REM START HERE
600 GOSUB 10
610 STOP
```

Gap Filler 2
By Mr G.Carter

The following routine allows the use of Commas and Quotation Marks in strings input via the EDITOR command.

```
500 EDITOR XS
510 LET P=64331
520 LET AS=""
530 LET A=PEEK(P): IF A=255 THEN GOTO 600
540 LET AS=AS+CHRS(A)
550 LET P=P+1
560 GOTO 530
600 VS 5: CLS: PRINT "AS= ";AS
620 PRINT: PRINT: PRINT "XS= ":XS
```

SYSTEM VARIABLES
PART III

We have the system variables stored on Newword diskette. If you have any updates too these variables, please send them to us. The updated document is available is available from the program library.

FD4E USRRST   DS 3

This location is examined on calling RST 38 or a Non-maskable   Interrupt. Normally it contains RET .

FD51 USERIO   DS 3

This location is examined on calling KBD at #0079 . KBD reads   the keyboard and leaves the result in Register A .

FD54 USERROR   DS 3

This location is examined before an Error message is displayed .

FD57 CLOCK   DS 7

Real Time Clock . Contains time in format :

Byte No: 1 2 3 4 5 6 7

   H H M M S S X

Where X counts up from 48 to 173 in 125 ths of a second . The   data is displayed in PANEL as ASCII .

FD5E INTFFF   DS 1

See Information Section at end .

FD5F CASBAUD   DS 1

CASSETTE BAUD RATE .

FD60 MIDDVAL   DS 1

Contains a reference value for Tape Save ,Load, & Verify . Varies   with different Baud Rates ; eg if the length of a "1" pulse is   100 units and that of a "0" pulse is 50 then MIDVAL will be   approx 75 units for that Baud Rate .

FD61 RETSAVE   DS 4

Start address for auto load .

FD65 VAZERO   DS 2

Virtual address of bottom of BASIC .

FD67 VERIF   DS 1

Flag for VERIFY or LOAD .

FD68 TYPE   DS 1

Flag for SAVE or LOAD .

FD69 CONTFLG   DS 1

Continue Flag . 0 implies cannot continue after BREAK key pressed   or STOP command .

FD6A CONTAD   DS 2

Address of BASIC line to continue from after BREAK key or STOP .

FD6C CONTPG   DS 1

Pape Number for CONTAD .

FD6D ASTACK   DS 2

Contains address of the Machine Stack used by PANEL

FD6F TMPHL   DS 2

Stores HL during page switching .

FD71 TMPA   DS 2

Stores A during page switching .

FD73 STACCT   DS 2

Temporary variable used by Maths routine .

FD75 ORPL   DS 1 (See Information section at end

FD76 IOPR DS 1 (

FD77 AUTOIN   DS 2 (Increment for Auto line .

FD79 AUTOST   DS 2

Start value for Auto line .

FD7B AUTOCT   DS 1

Counter for Auto Repeat .

FD7C LASTKY   DS 1

Last key pressed .

FD7D LASTASC   DS 1

ASCII of last key read .

FD7E LASTDR   DS 1

Current drive line in use in keyboard scan. See Information Section at end

FD7F RNSEED   DS 2

Seed for Random number routine .

FD81 BREAK   DS 1

BREAK KEY FLAG .

FD82 COMMAND DS 2