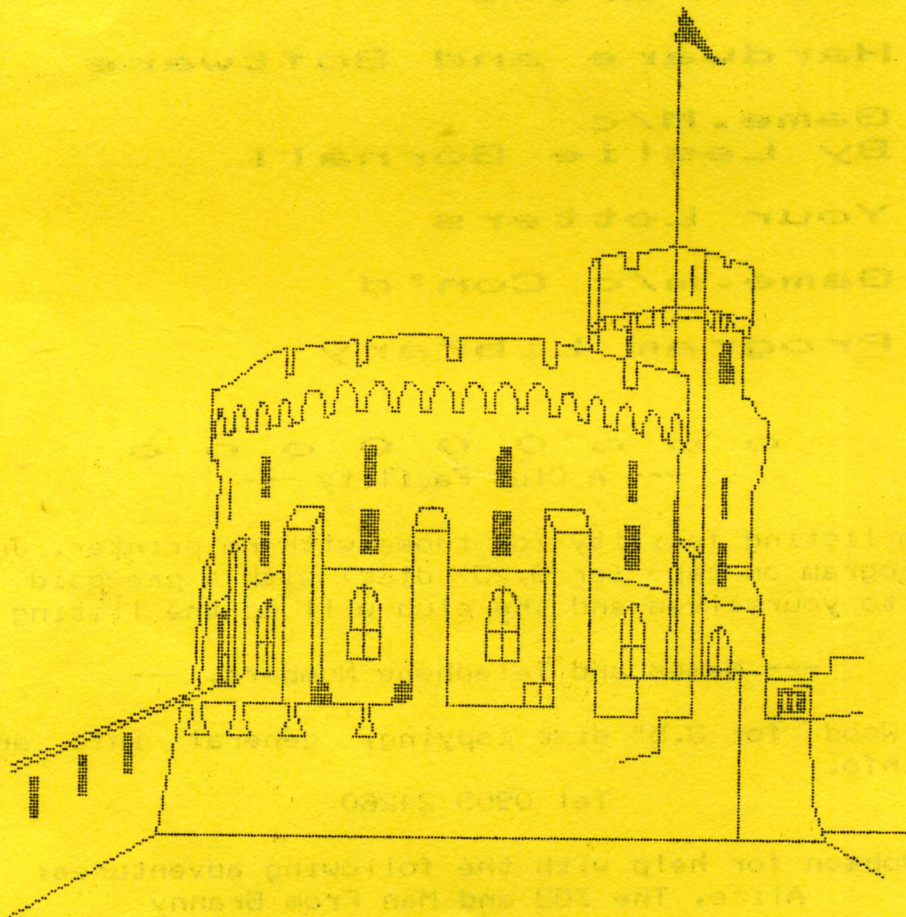


VOL 3 ISSUE 8

JUNE 1987

THE
MEMOTECH OWNERS CLUB
MAGAZINE
MEMOTECHNIQUES



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o o o o o o o o o
--- 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 24260

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!!!

EDITORIAL (June 1987)

Phil Eyres
13 Copse Road
Townhill Park
Southampton

Firstly, thanks to everyone for sending all the mail to my new address. Things have just about settled down now, and I hope to get onto some serious computing in the next month or so.

Has anyone heard anything of Memopad and Syntax?, I have an outstanding order with Syntax which I can not get resolved, I have tried phoning them but to no avail. A 'mole' phoned the other evening and with no prompting from me, suggested that Keith Hook was pulling out and that Genpat were perhaps closing up. I wonder if this is so?, as mags have been a bit erratic over the past year.

Last months competition!, well I was snowed under with the two responses!. I think it only fair to offer them both a copy of MTX Fruit Machine. The entrants were:-

Stephen Hughes of Abingdon, Oxon.
Brian Clarke of Luton Beds.

The correct answers are :- A=3, B=7, C=1, D=4, E=2, F=6, G=5.

I have another competition to offer you all, much on the same lines as last month but a bit more difficult.

E + C - H - G = F
+ * - * - All numbers 1 - 8
H - G + B - A = C Not Boolean
- - - - - Each result is read across/down as a
F - D + C + E = H whole number, but may be -ve.
- + + * +
B / A + D - F = E
= = = = =
G - B - A + D = A

Clues

- The final answer is lower than average.
((1+2+3+4....8)/8=4.5) therefore A=1,2,3 or 4
- Both D and E > A
- Finally, if you spent more than three hours on it:-
E=8; B & G > A < D

...I look forward to the flood of replies. The winner to receive a copy of Highway Encounter.

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.

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) 585106, ask for Phil. However, feel free to phone any evening after 6pm.

If anyone would like back issues they are available for the small remittance of 80p each. At present there are 27 back issues, 10 for volume 1, 10 for volume 2 and 7 for volume 3.

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.

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Software

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Doodiebugs	£6.00	Super Bike	£6.00
J.J.Flash	£6.00	Ed/Asm	£8.50
Cee-5	£7.00	MTX Asm Lang Cse	£10.00
Highway Encounter	£8.50		

Some late news, Ron Gladwin has available a piece of hardware he is calling a V-ROM!, it is specifically for FDX owners who wish to have 64K basic when running under disc basic. The product is infact the SDX basic ROM, which is used instead of the FDX disc basic. He suggests that he will also have available the MTX 500/512 service manual on disc, with photocopies of the diagrams. The items will cost £11.95 and £6.95 respectively. We have been promised review copies, so hopefully more on this next month.

Ron's number is 0793 695034.

SPACESHIP

by John Grayson, GRAYsoft

The purpose of this is to illustrate how to create a program from scratch.

When typed in and run, you will see a spaceship which can be moved clockwise or anticlockwise, fire in 16 directions; and as in real life, once a spaceship starts moving it continues unless an equal and opposite force is imposed upon it.

Reflect what has to be done for a moment:

- 1) The ship has to rotate smoothly in 16 directions.
- 2) Movement is continuous, as occurs in space.
- 3) Firing must be straight and along the correct angle it started.

This month's edition will give the program and comments for making a spaceship appear on the screen, when run, to react as has been described above. Next month we shall make it more interesting by additional problems - like asteriods which try to destroy the ship; and a docking base which must bedocked accurately. Until then, experiment with the program, get the hang of moving and controlling it. The better programmers among you may consider creating a game by moving a sprite around the screen so the ship can persue it and destroy it.

BREAKDOWN OF PROGRAM, AND HOW IT ALL WORKS:

LINES COMMENTS

100-196 Define all 8*8 characters to form spaceship.

323 and 'FIRE' has three states as follows:

10000-10080 0) Fire key just pressed. Calculations will then be performed calculating the position and direction of the missile.

1) Firing in progress.

99) Ready to fire when user presses the fire key.

370-445 Horizontal and vertical movement of spaceship. Changes ship direction and acceleration.

504-505 Provides threshold of acceleration. Without this the spaceship would jump around the screen.

10100-10250 Angle for missile to move along.

T - Angle of ship (which sprite is displayed).

FIRE - Reports on fire key (see above).

HOR and VERT - Horizontal and vertical coordinates of ship.

FIREH and FIREV - Horizontal and vertical coordinates of missile.

H and V - Horizontal and vertical increment / decrement values to vary the ship's direction and acceleration.

Program Printed Overleaf

```

0 REM                                     <SPACESHIP>
1 REM                                     <PROGRAMMED BY JOHN GRAYSON,GRAYSOFT>
2 REM
3 REM                                     <<PROGRAM TO MAKE A SPACESHIP>>
4 REM
20 VS 4: PAPER 1: CLS : PAPER 1: COLOUR 4,1: INK 12: FOR T=1 TO 25: PLOT
INT(RND*256),INT(RND*192): NEXT T
29 LET INCREMENT=1: LET DOCK=0: LET DOCKH=0: LET DOCKV=0: LET DV=0: LET DH=0
30 LET SCORE=0: LET N=1: DIM AH(4),AV(4): LET T=0: LET FIRE=99: LET FIREH=0: LET
FIREV=0: LET H=0: LET V=0: LET HOR=128: LET VERT=96
90 CTLSPR 2,32: CTLSPR 6,0
100 GENPAT 3,0,1,14,22,98,132,72,40,16: GENPAT 3,1,4,12,28,36,68,72,40,24: GENPAT
3,2,16,16,56,40,40,68,68,124
110 GENPAT 3,3,32,48,56,36,34,18,20,24: GENPAT 3,4,128,112,104,70,33,18,20,8
120 GENPAT 3,5,0,0,248,103,33,18,12,0: GENPAT 3,6,0,7,57,225,57,7,0,0: GENPAT
3,7,0,12,18,33,103,248,0,0: GENPAT 3,8,8,20,18,33,70,104,112,128
130 GENPAT 3,9,24,20,18,34,36,56,48,32: GENPAT 3,10,124,68,68,40,40,56,16,16: GENPAT
3,11,24,40,72,68,36,28,12,4
140 GENPAT 3,12,16,40,72,132,98,22,14,1: GENPAT 3,13,0,48,72,132,230,31,0,0: GENPAT
3,14,0,224,156,135,156,224,0,0
150 GENPAT 3,15,0,0,31,230,132,72,48,0
160 GENPAT 3,16,0,0,20,8,20,0,0,0
195 GENPAT 3,20,46,81,129,66,66,129,154,100: GENPAT 3,21,0,0,12,18,18,42,20,0
196 GENPAT 3,22,255,255,195,195,195,195,255,255
310 SPRITE 1,T,HOR,VERT,0,0,9
311 GOSUB 10000
312 IF ASC(INKEY$)=25 THEN LET T=T-1: IF T<0 THEN LET T=15
320 IF ASC(INKEY$)=8 THEN LET T=T+1: IF T>15 THEN LET T=0
323 IF FIRE<>1 THEN IF ASC(INKEY$)=26 THEN LET FIRE=0
325 LET VERT=VERT+V: LET HOR=HOR+H
326 IF HOR>255 THEN LET HOR=0 ELSE IF HOR<0 THEN LET HOR=255
327 IF VERT>191 THEN LET VERT=0 ELSE IF VERT<0 THEN LET VERT=191
330 SPRITE 1,T,HOR,VERT,0,0,9
340 IF ASC(INKEY$)<>11 THEN PAUSE 100: GOTO 310
370 IF T=0 THEN LET H=H+.15: LET V=V+.15: GOTO 500
375 IF T=1 THEN LET H=H+.1: LET V=V+.15: GOTO 500
380 IF T=2 THEN LET V=V+.15: GOTO 500
385 IF T=3 THEN LET H=H-.1: LET V=V+.15: GOTO 500
390 IF T=4 THEN LET H=H-.15: LET V=V+.15: GOTO 500
395 IF T=5 THEN LET H=H-.15: LET V=V+.1: GOTO 500
400 IF T=6 THEN LET H=H-.15: GOTO 500
405 IF T=7 THEN LET H=H-.15: LET V=V-.1: GOTO 500
410 IF T=8 THEN LET H=H-.15: LET V=V-.15: GOTO 500
415 IF T=9 THEN LET H=H-.1: LET V=V-.15: GOTO 500
420 IF T=10 THEN LET V=V-.15: GOTO 500
425 IF T=11 THEN LET H=H+.1: LET V=V-.15: GOTO 500
430 IF T=12 THEN LET H=H+.15: LET V=V-.15: GOTO 500
435 IF T=13 THEN LET H=H+.15: LET V=V-.1: GOTO 500
440 IF T=14 THEN LET H=H+.15: GOTO 500
445 IF T=15 THEN LET H=H+.15: LET V=V+.1: GOTO 500
500 LET HOR=HOR+H: LET VERT=VERT+V
501 IF HOR>255 THEN LET HOR=0 ELSE IF HOR<0 THEN LET HOR=255
502 IF VERT>191 THEN LET VERT=0 ELSE IF VERT<0 THEN LET VERT=191

```

Listing Continued on Page 4

Listing Continued From Previous Page

```

504 IF H>2 THEN LET H=2 ELSE IF H<-2 THEN LET H=-2
505 IF V>2 THEN LET V=2 ELSE IF V<-2 THEN LET V=-2
550 SPRITE 1,T,HOR,VERT,0,0,9: GOTO 310
10000 REM <FIRE>
10050 IF FIRE=1 THEN GOTO 10500
10060 IF FIRE=99 THEN PAUSE 80: GOTO 11000
10070 LET FIREH=HOR: LET FIREV=VERT
10080 LET FIRE=1: LET TIMER=0
10100 IF T=0 THEN LET FH=4: LET FV=4
10110 IF T=1 THEN LET FH=2: LET FV=4
10120 IF T=2 THEN LET FH=0: LET FV=4
10130 IF T=3 THEN LET FH=-2: LET FV=4
10140 IF T=4 THEN LET FH=-4: LET FV=4
10150 IF T=5 THEN LET FH=-4: LET FV=2
10160 IF T=6 THEN LET FH=-4: LET FV=0
10170 IF T=7 THEN LET FH=-4: LET FV=-2
10180 IF T=8 THEN LET FH=-4: LET FV=-4
10190 IF T=9 THEN LET FH=-2: LET FV=-4
10200 IF T=10 THEN LET FH=0: LET FV=-4
10210 IF T=11 THEN LET FH=2: LET FV=-4
10220 IF T=12 THEN LET FH=4: LET FV=-4
10230 IF T=13 THEN LET FH=4: LET FV=-2
10240 IF T=14 THEN LET FH=4: LET FV=0
10250 IF T=15 THEN LET FH=4: LET FV=2
10300 LET FIREH=FIREH+FH: LET FIREV=FIREV+FV
10500 LET FIREH=FIREH+FH: LET FIREV=FIREV+FV: LET TIMER=TIMER+1
10510 SPRITE 4,16,FIREH,FIREV,0,0,4
10515 IF TIMER=13 THEN LET FIRE=99: SPRITE 4,16,888,999,0,0,0:
    SPRITE 5,18,778,889,0,0,0
10520 IF FIREH>255 OR FIREH<0 THEN LET FIRE=99: SPRITE
    4,16,888,999,0,0,0: SPRITE 5,18,998,889,0,0,0
10530 IF FIREV>191 OR FIREV<0 THEN LET FIRE=99: SPRITE
    4,16,888,999,0,0,0: SPRITE 5,18,999,889,0,0,0
11000 RETURN
    
```

ooo000 More Next Month 000ooo

```

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```

SORTING IT OUT

PART I

By Phil Eyres

For a long time now the logic behind how a particular sort works has intrigued me. I thought that perhaps I would run a couple of articles on the subject, firstly a simple bubble sort then next month a slightly more complex one, which up to now has had some 7 hours work on it and it still does not function as a sort should. (It will by the next issue; I hope!).

Sort procedures are really all about speed (and that they sort correctly!), simple sorts like the Shell sort or the Bubble sort have a computational time algorithm of N^2 where N is the number of items to be sorted. This is ok for small values of N , but for even numbers around the middle hundreds the going gets very heavy and computation takes for ever. The sort procedure I am working on works on the algorithm of $N \log(N)$, since for large N , $\log(N)$ is very much smaller, this sort should be impressively faster. Further more, the larger the number to be sorted the larger the gain.

If anyone has any sort procedures lingering about, please send them in to me, even if they are not written in MTX basic, I would not mind having a go at them.

```
10 REM          ----- BUBBLE SORT -----
20 DIM A(5000)
30 INPUT "NUMBER OF ITEMS TO SORT (1-5000)";N: IF N>5000 THEN
GOTO 30
40 RAND 1000
45 PRINT
50 FOR I=1 TO N
60 LET A(I)=INT(ABS(RND*50)): PRINT A(I);
70 NEXT I
75 PRINT : PRINT : PRINT "          "; PRINT "...SORTING":
PRINT
80 CLOCK "000000"
89 LET IL=1: LET IH=N
90 GOSUB 1000
100 PRINT "    TIME TO SORT";N;" NUMBERS =";TIME$: PRINT
105 FOR I=1 TO N: PRINT A(I);: NEXT I
110 STOP
999 REM BUBBLE SORT ROUTINE
1000 IF IH<=IL THEN RETURN
1010 FOR J=IH-1 TO IL STEP -1
1020 FOR I=IL TO J
1030 IF A(I)>A(I+1) THEN LET T=A(I): LET A(I)=A(I+1): LET
A(I+1)=T
1040 NEXT I: NEXT J
1050 RETURN
```

0000000000

HARDWARE AND SOFTWARE PRICE LIST

Basic Computer

256K Computer + Tape operating System £99.95

System One

1 Mbyte 3 1/2" Drive + I/F £166.00

System Two

1 Mbyte 3 1/2" Drive + I/F
512K Silicon Disc, 80 Col.
+ CP/M + Neword £264.00

HX12 Green Screen Monitor £95.00

Twin RS232 Serial Interface £29.95

We can offer DMX 80 printer ribbons for only £7.00 each, so why not order one today and be prepared for the day your ribbon finally 'bites the dust'!!!

The MTX FIG-FORTH requires an MTX512 or expanded 500, the dictionary associated with Forth is held as part of the Ram-Disc which can be saved separately, fairly quickly. The Ram-Disc allows for 24 'edit' screens to be created and in memory simultaneously. A tutorial will be necessary for the beginner, for this the club has obtained a quantity of the publication Fundamental Forth (This may vary according to availability).

Fig-Forth Program £6.00
Tech Data Sheets £2.00
Tutorial Book £7.50 (240 pages)

Cheques payable to MOC please, orders from stock normally despatched by return, else, please allow 2 working weeks.

Ron Gladwin of UK Home Computers, (Tel 0793 695034) has on offer a Spectrum Loader that will convert your 512 into a 40K Spectrum, this will allow you to type in Spectrum programs, it is also said to load some Spectrum software. At £2.95 you may find it worth a try.

Ron also has some FDX Silicon disc's on offer, he has both 256K and 1Meg boards. The 1 Meg boards are only £100 and are available from us. Just think, you could be running your Supercalc or Newword at 3 to 4 times the speed you are used to.

Two other goodies on offer from UK Home Computers are MTX 512's for £43 and RS128's for £68. Please contact Ron directly.

All 'SUPER CHEAPIES' will be despatched by return of post.

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PUC-MAN is only £5.00

Don't forget to order your copy of Fruit Machine from Graysoft today!!!!

GAME - M/C

By Leslie Gornall

This is the basis of a machine code games program in the style of Pote Hole Pete. As it stands the program only does some very basic things, but there should be plenty of little routines to keep everyone interested for a few hours.

5 CLS : CLEAR	4107	NOP	;*****		
10 REM ***** SPRITE ANIMATOR *****	4108 END:	RET		4173	LD (COUNTUP),A
20 REM *****	4109 LEFT:	LD A,(X)		4176	LD A,(UPDOWNANIMATION)
30 REM *****	410C	CP 22		4179	CP 0
50 CTSPPR 2,32: CTSPPR 6,2	410E	JR Z,END		417B	JR Z,U2
60 VS 4: COLOUR 4,3: COLOUR 2,3: CLS	4110	LD A,0		417D	DEC A
200 CODE	4112	LD (COUNTRIGHT),A		417E	LD (UPDOWNANIMATION),A
40A2 CALL PRINTSCREEN	4115	LD (COUNTUP),A		4181	LD HL,DOWNDATA
40A5 BEGIN: CALL #79	4118	LD (COUNTDOWN),A		4184	CALL P1
40A8 CP 8	411B	CALL DECX		4187	RET
40AA CALL Z,CHECKLEFT	411E	LD HL,COUNTLEFT		4188 U2:	INC A
40AD CP 25	4121	LD A,(HL)		4189	LD (UPDOWNANIMATION),A
40AF CALL Z,CHECKRIGHT	4122	CP 0		418C	LD HL,UPDATA
40B2 CP 11	4124	JR Z,L1		418F	CALL P1
40B4 CALL Z,CHECKUP	4126	DEC (HL)		4192	RET
40B7 CP 10	4127	LD A,0		4193	NOP
40B9 CALL Z,CHECKDOWN	4129	RET		4194 END3:	RET
40BC CP 27	412A L1:	LD A,8		4195 DOWN:	LD A,(Y)
40BE JP Z,END1	412C	LD (COUNTLEFT),A		4198	CP 180
40C1 JP BEGIN	412F	LD A,(LEFTANIMATION)		419A	JR Z,END3
40C4 NOP	4132	CP 0		419C	LD A,0
40C5 END1: RET	4134	JR Z,L2		419E	LD (COUNTLEFT),A
40C6 RIGHT: LD A,(X)	4136	DEC A		41A1	LD (COUNTRIGHT),A
40C9 CP 255	4137	LD (LEFTANIMATION),A		41A4	LD (COUNTUP),A
40CB JR Z,END1	413A	LD HL,LEFT1		41A7	CALL INCY
40CD LD A,0	413D	CALL P1		41AA	LD HL,COUNTDOWN
40CF LD (COUNTLEFT),A	4140	LD A,0		41AD	LD A,(HL)
40D2 LD (COUNTUP),A	4142	RET		41AE	CP 0
40D5 LD (COUNTDOWN),A	4143 L2:	INC A		41B0	JR Z,D1
40D8 CALL INCX	4144	LD (LEFTANIMATION),A		41B2	DEC (HL)
40DB LD HL,COUNTRIGHT	4147	LD HL,LEFT2		41B3	RET
40DE LD A,(HL)	414A	CALL P1		41B4 D1:	LD A,8
40DF CP 0	414D	LD A,0		41B6	LD (COUNTDOWN),A
40E1 JR Z,R1	414F	RET		41B9	LD A,(UPDOWNANIMATION)
40E3 DEC (HL)	4150	NOP		41BC	CP 0
40E4 RET	4151 END2:	RET		41BE	JR Z,D2
40E5 R1: LD A,8	4152 UP:	LD A,(Y)		41C0	DEC A
40E7 LD (COUNTRIGHT),A	4155	CP 6		41C1	LD (UPDOWNANIMATION),A
40EA LD A,(RIGHTANIMATION)	4157	JR Z,END2		41C4	LD HL,DOWNDATA
40ED CP 0	4159	LD A,0		41C7	CALL P1
40EF JR Z,R2	415B	LD (COUNTRIGHT),A		41CA	RET
40F1 DEC A	415E	LD (COUNTLEFT),A		41CB D2:	INC A
40F2 LD (RIGHTANIMATION),A	4161	LD (COUNTDOWN),A		41CC	LD (UPDOWNANIMATION),A
40F5 LD HL,RIGHT1	4164	CALL DECX		41CF	LD HL,UPDATA
40FB CALL P1	4167	LD HL,COUNTUP		41D2	CALL P1
40FB RET	416A	LD A,(HL)		41D5	RET
40FC R2: INC A	416B	CP 0		41D6	NOP
40FD LD (RIGHTANIMATION),A	416D	JR Z,U1		41D7	NOP
4100 LD HL,RIGHT2	416F	DEC (HL)		41D8	RET
4103 CALL P1	4170	RET		41D9	NOP
4106 RET	4171 U1:	LD A,8		41DA P1:	LD B,96
				41DC	LD A,0
					41DE OUT (2),A
					41E0 LD A,120
					41E2 OUT (2),A
					41E4 PP1: LD A,(HL)
					41E5 OUT (1),A
					41E7 INC HL
					41E8 DJNZ PP1
					41EA RET
					41EB DECX: LD HL,Y
					41EE LD B,3
					41F0 LD DE,4
					41F3 PP2: DEC (HL)
					41F4 ADD HL,DE
					41F5 DJNZ PP2
					41F7 CALL OUT
					41FA RET
					41FB DECX: LD HL,X
					41FE LD DE,4
					4201 LD B,3
					4203 PP4: DEC (HL)
					4204 ADD HL,DE
					4205 DJNZ PP4
					4207 CALL OUT
					420A RET
					420B INCY: LD HL,Y
					420E LD B,3
					4210 LD DE,4
					4213 PP3: INC (HL)
					4214 ADD HL,DE
					4215 DJNZ PP3
					4217 CALL OUT
					421A RET
					421B INCX: LD HL,X
					421E LD B,3
					4220 LD DE,4
					4223 PP5: INC (HL)
					4224 ADD HL,DE
					4225 DJNZ PP5
					4227 CALL OUT
					422A RET
					422B OUT: LD B,12
					422D LD HL,Y
					4230 LD A,0
					4232 OUT (2),A
					4234 LD A,127
					4236 OUT (2),A
					4238 OTT1: LD A,(HL)
					4239 OUT (1),A
					423B INC HL
					423C DJNZ OTT1
					423E RET

Continued From Page 7

423F	NOP	;****	42BC	LD IX,(STORE)			
4240	ROUNDLEFT:LD A,(X)		42C0	LD A,(IX+0)	433B	LD IX,(STORE)	43C4 TMS: LD B,32
4243	LD (XSTORE),A		42C3	CP 20	433F	LD A,(IX+1)	43C6 STM: CALL GETCHARACTER
4246	CALL ROUNDX		42C5	RET NC	4342	CP 20	43C9 CALL CH1OUT
4249	LD A,(XSTORE)		42C6	LD A,(IX+32)	4344	RET NC	43CC CALL CH2OUT
424C	LD (X),A		42C9	CP 20	4345	LD A,(IX+33)	43CF DJNZ STM
424F	LD (X1),A		42CB	RET NC	4348	CP 20	43D1 LD A,(VALUE)
4252	LD (X2),A		42CC	LD A,(IX+64)	434A	RET NC	43D4 DEC A
4255	RET		42CF	CP 0	434B	LD A,(IX+65)	43D5 LD (VALUE),A
4256	ROUND: LD HL,0		42D1	RET Z	434E	CP 0	43D8 JR NZ,TMS
4259	LD DE,0		42D2	LD A,(IX+65)	4350	RET Z	43DA RET
425C	CALL ROUNDX		42D5	CP 0	4351	LD A,(IX+66)	43DB GETCHARACTER:LD HL,(CHPOINTER)
425F	CALL ROUNDY		42D7	RET Z	4354	CP 0	43DE LD A,(HL)
4262	LD A,(XSTORE)		42D8	LD A,(Y)	4356	RET Z	43DF INC HL
4265	LD B,3		42DB	ADD A,10	4357	CALL RIGHT	43E0 LD (CHPOINTER),HL
4267	FBF: CALL C,CLEAR		42DD	LD (YSTORE),A	435A	RET	43E3 LD HL,0
426A	RR A		42E0	CALL ROUND	435B	CHECKUP:LD A,(Y)	43E6 LD L,A
426C	DJNZ FBF		42E3	LD IX,(STORE)	435E	ADD A,2	43E7 CALL MULT16
426E	LD E,A		42E7	LD A,(IX+0)	4360	LD (YSTORE),A	43EA LD DE,CHSTART
426F	LD A,(YSTORE)		42EA	CP 20	4363	LD A,(X)	43ED ADD HL,DE
4272	LD L,A		42EC	RET NC	4366	LD (XSTORE),A	43EE LD (CHDATAPINTER),HL
4273	LD B,2		42ED	LD A,(IX+32)	4369	CALL ROUND	43F1 RET
4275	NEXTX: SLA L		42F0	CP 20	436C	LD IX,(STORE)	43F2 CH1OUT: LD DE,(SCREEN1)
4277	RL H		42F2	RET NC	4370	LD A,(IX+32)	43F6 CALL OUTDE
4279	DJNZ NEXTX		42F3	LD A,(IX+64)	4373	CP 0	43F9 LD HL,8
427B	ADD HL,DE		42F6	CP 0	4375	RET Z	43FC ADD HL,DE
427C	LD DE,SCDATA		42F8	RET Z	4376	LD A,(IX+33)	43FD LD (SCREEN1),HL
427F	ADD HL,DE		42F9	LD A,(IX+65)	4379	CP 0	4400 PUSH BC
4280	LD (STORE),HL		42FC	CP 0	437B	RET Z	4401 LD B,8
4283	RET		42FE	RET Z	437C	CALL ROUNDLEFT	4403 LD HL,(CHDATAPINTER)
4284	ROUNDX: LD A,(XSTORE)		42FF	CALL LEFT	437F	CALL UP	4406 MMM: LD A,(HL)
4287	SRA A		4302	RET	4382	RET	4407 INC HL
4289	SRA A		4303	CHECKRIGHT:LD A,(Y)	4383	CHECKDOWN:LD A,(Y)	4408 OUT (1),A
428B	SRA A		4306	ADD A,3	4386	ADD A,3	440A DJNZ MMM
428D	SLA A		4308	LD (YSTORE),A	4388	LD (YSTORE),A	440C POP BC
428F	SLA A		430B	LD A,(X)	438B	LD A,(X)	440D RET
4291	SLA A		430E	LD (XSTORE),A	438E	LD (XSTORE),A	440E CH2OUT: LD DE,(SCREEN2)
4293	LD (XSTORE),A		4311	CALL ROUND	4391	CALL ROUND	4412 CALL OUTDE
4296	RET		4314	LD IX,(STORE)	4394	LD IX,(STORE)	4415 LD HL,8
4297	ROUNDY: LD A,(YSTORE)		4318	LD A,(IX+1)	4398	LD A,(IX+64)	4418 ADD HL,DE
429A	SRA A		431B	CP 20	439B	CP 20	4419 LD (SCREEN2),HL
429C	SRA A		431D	RET NC	439D	RET NC	441C PUSH BC
429E	SRA A		431E	LD A,(IX+33)	439E	LD A,(IX+65)	441D LD B,8
42A0	SLA A		4321	CP 20	43A1	CP 20	441F LD HL,(CHDATAPINTER)
42A2	SLA A		4323	RET NC	43A3	RET NC	4422 LD DE,8
42A4	SLA A		4324	LD A,(IX+65)	43A4	CALL ROUNDLEFT	4425 ADD HL,DE
42A6	LD (YSTORE),A		4327	CP 0	43A7	CALL DOWN	4426 MMS: LD A,(HL)
42A9	RET		4329	RET Z	43AA	RET	4427 INC HL
42AA	CHECKLEFT:LD A,(Y)		432A	LD A,(IX+66)	43AB	PRINTSCREEN:LD HL,SCDATA	4428 OUT (1),A
42AD	ADD A,3		432D	CP 0	43AE	LD (CHPOINTER),HL	442A DJNZ MMS
42AF	LD (YSTORE),A		432F	RET Z	43B1	LD DE,16384	442C POP BC
42B2	LD A,(X)		4330	LD A,(Y)	43B4	LD (SCREEN1),DE	442D RET
42B5	DEC A		4333	ADD A,10	43B8	LD DE,24576	442E MULT16: CALL C,CLEAR
42B6	LD (XSTORE),A		4335	LD (YSTORE),A	43BB	LD (SCREEN2),DE	4431 RL L
42B9	CALL ROUND		4338	CALL ROUND	43BF	LD A,22	4433 RL H
					43C1	LD (VALUE),A	4435 RL L

YOUR LETTERS

Questions

1. Can anyone supply the club with the address of a dealer/shop selling CP/M programs in MTX formats??.
2. "MTX owners have for years complained justifiably that the MTX has been given poor support and a poor service.

Two years ago I set up GRAYsoft to produce quality software at a reasonable price, as most software available was barely worth playing. Since then I produced "Assembly Language Course" which sold over 210 copies - most of which were sold from Syntax. More recently "MTX Fruit Machine", "Advanced Graphic Designer" and "3D Space Lines" have been marketed, with little response. Over a month ago I ensured that everyone in the MOC received a copy of my software catalogue to peruse. The object of this was so all users could see the quality of the goods, and what they are all about before buying.

Only five of you to date have ordered. The software is excellent, reasonably priced, and you can be sure that all orders are dispatched very quickly - typically at your doorstep 5 postal days after receipt of order. Unlike other MTX software producers I could mention I give good service, delivery and after sales service.

If users really care about value for money and support, then I suggest you look again at the catalogue sent to you in the last edition of the MOC, because if poor sales continue, then I shall be forced to cease supporting the MTX.

Any queries about the software, please do not hesitate in writing to me.

John Grayson, GRAYsoft. Soton 260385

Help

1. I spend quite a bit of time working with alternative fonts for my Canon PW 1080 printer (there is an equivalent machine, the Taxan Kaga), and do my own Eprom "blowing" to make font ROMs for maximum convenience. I would be quite happy to do custom EPROM blowing for club members without the facility, or even to provide ready-made font ROMs for those who might have a Canon or Kaga printer, for a very modest charge.

At the moment, I can handle only 2764s and 27128s, but hope shortly to include 2716s and 2732s as well.

Ken Rendall 30 Saint Baldred's Road, North Berwick, East Lothian. EH39 4PY. Tel 0620 2282.

4437	RL H	45E3	UPDATA: DB 3,7,4,0,96,96,0,0,0,0,0,0,0,0,0,0,224,240,16,3,3,0,0,
4439	RL L		0,0,0,0,0,0,0,0
443B	RL H	4603	DB 0,0,0,0,3,103,127,63,1,7,31,63,120,112,0,0,0,0,0,0,
443D	RL L		227,247,252,248,192,240,188,30,15,6,0,0,3,7,3,0,0,0,64,62
443F	RL H	462B	DB 0,0,0,7,128,240,112,0,224,240,224,0,0,2,4,56,0,64,160,
4441	RET		16,1,7,7,0
4442	OUTDE: LD A,E	4643	DOWNDATA:DB 3,7,4,192,192,0,0,0,0,0,0,0,0,0,0,0,224,240,16,0,
4443	OUT (2),A		3,3,0,0,0,0,0,0,0,0,0,0,0,0,0,195,199,127,63,1,7,7,31,60,56,120,0
4445	LD A,D	4673	DB 0,0,0,0,224,247,255,254,192,240,184,60,30,14,0,0,3,
4446	OUT (2),A		7,3,0,0,0,64,62,0,0,0,3,4,0,120,120,224,240,224,0,0,0,60,0,64,128,
4448	RET		0,0,14,14,14
4449	CLEAR: CCF	46A3	UPDOWNANIMATION:DB 0
444A	RET	46A4	LEFTANIMATION:DB 0
444B	CHPOINTER:DB 0,0	46A5	RIGHTANIMATION:DB 0
444D	SCREEN2:DB 0,0	46A6	COUNTLEFT:DB 0
444F	SCREEN1:DB 0,0	46A7	COUNTRIGHT:DB 0
4451	CHDATAPOINTER:DB 0,0	46A8	COUNTUP:DB 0
4453	VALUE: DB 0	46A9	COUNTDOWN:DB 0
4454	YSTORE: DB 0	46AA	JUMPCOUNT:DB 0
4455	XSTORE: DB 0	46AB	JUMP: DB "N"
4456	STORE: DB 0,0	46AC	CHSTART:DB 0,0 ;BLANK
445B	Y: DB 85	46BC	DB 48,48,48,48,63,63,63,48,48,240,240,240,240,240,240,240,240
4459	X: DB 120	46CC	DB 12,12,12,12,252,252,12,12,240,240,240,240,240,240,240,240
445A	DB 0	46DC	DB 8,28,12,28,28,28,28,126,9,9,9,7,7,7,13
445B	COL1: DB 11	46EC	DB 24,36,36,36,8,8,56,56,160,160,160,160,160,160,160,160
445C	Y1: DB 86	46FC	DB 7,15,25,53,109,229,225,255,224,224,224,224,224,224,224,224
445D	X1: DB 120	470C	DB 240,248,156,174,183,151,135,255,224,224,224,224,224,224,224,224
445E	DB 4	471C	DB 252,252,255,117,53,29,13,7,224,224,224,224,224,224,224,224
445F	COL2: DB 1	472C	DB 255,254,254,92,88,120,96,192,224,224,224,224,224,224,224,224
4460	Y2: DB 87	473C	DB 90,165,165,255,170,85,238,187,112,195,62,224,224,224,224,224
4461	X2: DB 120	474C	DB 0,127,125,121,120,126,126,124,175,175,175,175,175,175,175,175
4462	DB 8	475C	DB 0,254,142,14,30,62,126,126,175,175,175,175,175,175,175,175
4463	COL3: DB 13	476C	DB 125,121,127,63,31,15,7,0,175,175,175,160,160,160,160,160
4464	RIGHT1: DB 7,15,24,16,1,0,0,0,0,0,0,0,0,0,0,16,0,3,192,224,0,0,0,	477C	DB 190,62,254,252,248,240,224,0,175,175,175,160,160,160,160,160
	192,0,0,96,112,112,0,64,128,128,64	478C	DB 1,3,7,15,30,62,126,253,80,80,80,80,80,80,80,80
4484	DB 0,0,7,12,0,31,55,55,59,60,63,31,15,31,28,0,0,16,240,	479C	DB 128,192,96,112,248,252,254,255,80,80,80,80,80,80,80,80
	16,0,192,192,128,128,0,224,160,96,112,184,0	47AC	DB 192,248,125,62,31,15,7,1,80,80,80,80,80,80,80,80
44A4	DB 7,8,18,31,0,8,8,4,3,0,0,0,96,96,60,28,224,0,224,0,0,	47BC	DB 241,15,254,252,120,176,224,192,80,80,80,80,80,80,80,80
	0,0,0,128,0,0,0,0,0,124,124	47CC	DB 8,28,28,28,28,28,28,144,144,144,144,144,144,144,144
44C4	RIGHT2: DB 7,15,24,16,1,0,0,0,0,0,0,0,0,0,16,0,3,192,224,0,0,0,	47DC	DB 28,28,28,127,127,28,28,8,144,144,144,96,96,96,96,96
	192,0,0,96,112,112,0,64,128,128,64,0,0,7,12,0,31,55,55,59,60,63,31,	47EC	DB 255,66,36,24,36,66,66,255,96,128,128,128,128,128,128,96
	15,31,28,0	47FC	DB 84,171,171,189,90,38,28,4,192,195,80,80,80,80,80,80
44F4	DB 0,16,240,16,0,192,192,128,128,0,224,160,96,112,184,	480C	SCDATA: DB 0,0
	0,7,8,18,31,0,8,8,4,3,0,0,0,96,96,60,28,224,0,224,0,0,0,128,0,0,0,	482C	DB 0,0
	0,0,124,124	484C	DB 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,2,0,0,0,0,0,0,0,0,0,0
4523	LEFT1: DB 3,7,0,0,0,7,0,0,24,56,56,0,0,0,0,0,240,248,24,8,128,	486C	DB 0,0,0,0,0,0,0,0,0,20,20,20,20,20,20,20,1,2,20,20,20,20,20,20,
	0,0,0,0,0,0,0,0,0,0		20,20,0,0,0,0
4543	DB 0,4,7,4,0,7,15,7,7,0,7,7,15,31,12,0,0,0,192,32,0,240,	488C	DB 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,2,0,0,0,0,0,0,0,0,0,0
	184,184,120,248,248,184,184,120,56,0	48AC	DB 0,0,0,0,5,6,0,0,0,0,0,0,0,0,0,0,1,2,0,0,0,0,0,0,0,0,0,0
4563	DB 3,0,3,0,0,0,0,0,7,0,0,0,96,115,60,28,224,48,80,240,0,	48CC	DB 0,0,0,0,7,8,0,0,0,0,0,0,0,0,0,0,1,2,0,0,0,0,0,20,0,0,0,0,0
	64,64,128,0,0,64,64,132,68,124,56	48EC	DB 0,0,0,0,0,0,0,0,0,0,0,0,0,1,2,0,0,0,0,1,2,0,0,0,0,20,0,20,0,21,21,0
4583	LEFT2: DB 3,7,0,0,0,7,0,0,24,56,56,0,0,0,0,0,240,248,24,8,128,	490C	DB 0,0,0,0,0,20,20,20,20,20,20,1,2,20,20,20,20,20,20,20,20,20,0,0,21,
	0,0,0,0,0,0,0,0,0,0,4,7,4,0,7,15,7,7,0,7,7,15,15,14,0		21,21,0,0,0,0,0
45B3	DB 0,0,192,32,0,240,184,184,120,248,248,248,124,188,24,	492C	DB 0,0,0,0,0,0,0,0,0,0,0,0,0,1,2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
	0,3,0,3,0,0,0,0,0,7,0,0,0,48,62,30,224,48,80,240,0,64,64,128,0,0,0,	494D	DB 0,0,0,0,0,0,0,0,0,0,1,2,0,0,0,0,0,4,0,0,0,0,0,0,0,0,0,0,0,0
	128,67,103,30,24	496D	DB 0,0,0,0,0,0,0,0,0,0,1,2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0

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498D  DB 0,0,0,0,0,0,0,0,0,0,0,1,2,0,0,0,0,0,0,0,1,2,0,0,0,0,0,0,0,0,0,0,0,0,0,0
49AD  DB 0,0,0,0,0,0,0,0,0,20,20,20,20,20,20,20,20,20,20,1,2,21,21,21,  20,20,20,20,20,0,0,0,0,0,0,0,0,0,0
0,0,0,0,0,0
49CC  DB 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
49ED  DB 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
4A0D  DB 0,0,0,10,11,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
4A2D  DB 0,0,0,12,13,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
4A4D  DB 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
                                4A6D  DB 0,0,0,0,20,20,20,20,20,20,20,20,20,20,20,20,20,20,20,20,20,20,20,20,
                                20,20,20,20,20,0,0,0,0,0,0,0,0,0,0
                                4A8D  DB 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
                                0,0,0,0,0,0,0
                                4AAD  DB 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
                                0,0,0,0,0,0,0,0
                                4ACD  DB 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
                                0,0,0,0,0,0,0,0
                                4AED  DB 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
                                0,0,0,0,0,0,0,0
                                4B0B      RET Z

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PROGRAM LIBRARY
£1.20 Per Cassette, 2 Programs per Cassette

This month no new programs to offer, although there are a few more undocumented programs on diskette three, which I have left as they are functioning perfectly and may be of interest to others. Remember that reviews of all the programs are available, just send in an A4 stamped addressed envelope.

1. Basic & Assembler Programs

All programs available on cassette, 2 programs per cassette, £1.20 per cassette. Or on disc, £2.50 per disc, please enclose a disc, stating capacity. (Some programs are only available on cassette!).

---- Diskette Three ----

62.Account	The Third Money Manager
63.Mastermind	Another Good Game
64.Connect4	Two Player Game
65.Journey Into Danger	Adventure Game
66.Connect4 Version 2	As for number 64
67.MTX DRAWv1.8	As for number 6
68.Patience	Card Game
69.Life	Curious Puzzle
70.Enigma	Like Mastermind
71.FKEY	Function Key Definer
72.Skydiver	Graphical Game
73.Digger	Graphical Game
74.MPG	Calculates MPG
75.F16-FORTH (Cass)	RAM Disc
76.Optics/Colours	Educational Programs
77.Elements	Educational Programs
78.Dbase3 (Cass)	Database

3. Articles From Previous Magazines

(Available as listings, please provide sufficient postage to cover club costs. TA!)

1. PANEL2 Utility. An updated version of PANEL1, which includes a second feature.
2. Undocumented Neword dot commands. (Vol 1 Iss. 7)
3. Hisoft Pascal Review (vol 1 Iss. 8)
4. Neword Rom Review (Vol 1 Iss. 5)
5. RST10 Codes Explained (Vol 1 Iss. 3)
6. VDP Explained Using assembler (vol 1 Iss. 4, 5, 6)
7. System Variables (Not Previously Published!)
8. SDX Disc Review.

4. CP/M Programs/Utilities

(!!! Available only on 5 1/4" disc !!!, please send in a formatted disc (stating capacity) for each item and enough postage to cover - £2.50 per disc).

1.A simple mail label system for up to 3 across labels, written in EBasic. Disc includes Ebasic compiler and run-time program. Consists of a suite of half a dozen programs. Includes a sort routine.

2.PLOT33 A new graphics plotting package for Turbo Pascal owners. Create and print your own graphics. Set up for DNX type printers but will support most others. Must be seen to be believed. Please ensure you have at least two weeks free when ordering this one, you'll need it!!.

3. Z80.ASM This is a Z80 assembler to replace the ordinary CP/M assembler which uses the 8080 mnemonic command set. Z80.ASM supports all the features of the notable Ed/Asm, especially macro libraries and a slightly more standard Z80 mnemonic command set. The disc also contains a Z8 assembler.

4. SMALL C COMPILER. This is from the Swiss user group, it is however written in English so easily understandable. You will need to buy a Tutorial to use it, but even so it offers unbeatable value for money.

5. BASIC-E PROGRAMS. All the 'good old' text style games, originally designed for teletype style displays, non-the-less some good games. 10 games in all, including Startrek. Disc includes Basic-E compiler and Run time program. Also included are several .PIC files with interesting pictures to print out - including a PINUP.PIC file, I wonder what that could be a picture of?? a drawing pin!!maybe?