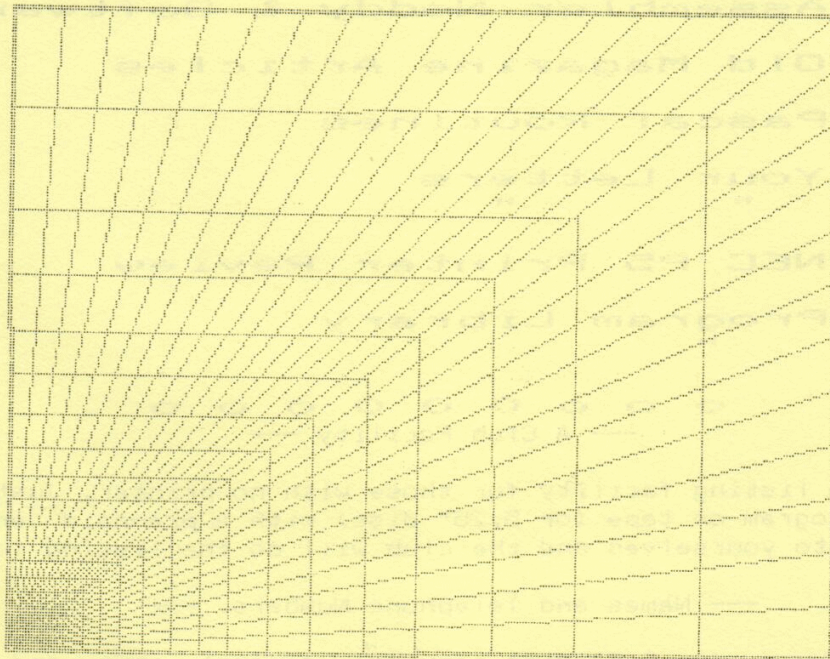


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CONTENTS

1. Editorial
2. Bill Rippon's
3. Squares
4. Assembler Noddy
5. To Be, Or Not To Be
6. Assembler Noddy & Software
7. Old Magazine Articles
8. Pascal Routines
9. Your Letters
10. " "
11. NEC P5 Printer Review
12. Program Library
13. "

o 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!!!

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

Phil Eyres
23 Denmead Road
Harefield
Southampton
SO2 5BS

This month Memotech's new Series 2 machine is available, I am not totally sure exactly what enhancements you get on the basic 256K MTX (£99.95). It would appear at first sight that it is basically the same machine with 256K memory chips installed instead of the normal 64K ones. Mike Frymeyer appears to have one of these machines and has this to say:-

I have come across a few curious things about the operating system in general. The machine I did get is supposed to have 256K on board. Fair enough I thought, PEEK (64122), and I see "4" printed on the screen. Personally I did expect to see a "7". I'll reserve my judgement until I get more information. (Any ideas?)

That was the first thing that struck me as being odd. When I decided to buy myself a disc system I had prepared myself for the fact that it would be different from what I had been used to. At any rate I didn't prepare enough. While working on one program, which I already had saved to tape, I decided to load it using the "40" column disc basic instead of the ROM based system that the program was originally written on. The program was duly found and loading commenced, as expected, but I was disappointed when I came back to the computer, after hearing the auto stop on the tape operate, and there was no ready message at the bottom of the screen. Suspecting a bad load I tried again, and again. I switched back to the ROM based basic and tried again, it worked!!.

Sitting back a moment it dawned on me that something similar had happened to me before. That was when I tried to expand a program past 32K, which was the limit on my machine. OK, so I reset the computer and invoke the assembler, in the ROM basic I saw the expected location, £4007. However, on both 40 and 80 column versions of disc basic I saw the familiar £8007 indicating 32K available. Now I accept that to access the rest of the RAM that a paging routine is needed, but what I'm interested in finding out is what's taking up all the extra space? Perhaps it's the NODDY or the assembler/Panel that's held in ROM normally?. Also, as far as I can see it would mean that a program written on a 64K ROM based machine won't run while the machine was running on disc basic. I'm not sure, but I think that this could cause some problems in the area of setting up the computer to coldboot straight

into a menu driven mode as proposed by yourself, Barry Smith and Clive Taylor in the December issue. (something to think about!?).

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.

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

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

If anyone would like back issues they are available for the small remittance of 80p each. At present there are 23 back issues, 10 for volume 1, 10 for volume 2 and 4 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.

ooo 0-0-0 ooo

Software

Software prices for the best and most popular software:-

Zarkos	£7.00	Chamberoids	£7.00
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Cee-5	£7.00	MTX Asm Lang Cse	£10.00
Highway Encounter	£8.50		

PROGRAM OF THE MONTH

```

1 REM *****
2 REM SQUARES BY BILL RIPPON JAN 87
3 REM *****
10 VS 4
20 GOSUB 5000
30 INK 1: PAPER 15: DLS
40 COLOUR 0,8: CSR 2,0: PRINT "£££"; COLOUR 0,15: PRINT " ££"; COLOUR 0,8: PRINT
"£"; COLOUR 0,15: PRINT " £££ ";
50 COLOUR 0,8: PRINT "£"; COLOUR 0,15: PRINT "££ £££ £"; COLOUR 0,8: PRINT "££":
COLOUR 0,15
60 PRINT " 1£££ 2££"; COLOUR 0,8: PRINT "£"; COLOUR 0,15: PRINT " 3£££ 4"; COLOUR
0,8: PRINT "£"; COLOUR 0,15: PRINT "££ 5"; COLOUR 0,8: PRINT "££";
70 COLOUR 0,15: PRINT "£ 6£"; COLOUR 0,8: PRINT "££": COLOUR 0,15: PRINT " £££
££"; COLOUR 0,8: PRINT "£": CSR 12,2: PRINT "£££": CSR 17,2: PRINT "£"; COLOUR 0,15
80 PRINT "££ "; COLOUR 0,8: PRINT "££"; COLOUR 0,15: PRINT "£ £££"
90 PRINT : PRINT " "; COLOUR 0,8: PRINT "££"; COLOUR 0,15: PRINT "£ £££": PRINT "
7"; COLOUR 0,8: PRINT "££"; COLOUR 0,15: PRINT "£ 8£";
100 COLOUR 0,8: PRINT "££": COLOUR 0,15: PRINT " £££ £"; COLOUR 0,8: PRINT "££"
110 FOR X=4 TO 22: FOR Y=13 TO 28 STEP 5: CSR Y,X: PRINT "&": NEXT Y: NEXT X
120 FOR X=4 TO 22 STEP 6: CSR 13,X: PRINT "££££££££££££££££": NEXT X
130 LET A#=""
140 FOR X=1 TO 8: LET A#=A#+CHR$(INT(RND*8)+49): NEXT X
170 FOR Z=1 TO 8: LET A=VAL(A#(Z)): LET GO=-1: GOSUB 1000: NEXT Z
210 COLOUR 1,1: CSR 1,9: PRINT "CHANGE 1 - 8": CSR 1,16: PRINT "A for ANSWER": COLOUR
1,8
220 LET S#=A#: LET C#=A#
230 IF INKEY#="" THEN GOTO 230 ELSE LET A#=INKEY#
240 IF A#="A" THEN GOSUB 2000
250 IF A#>"8" OR A#<"1" THEN GOTO 230
260 LET A=VAL(A#): LET S#=S#+A#
280 GOSUB 1000
290 IF INKEY#<>"" THEN GOTO 290
300 GOTO 230
1000 COLOUR 0,15: COLOUR 1,8: LET GO=GO+1
1010 IF A=1 THEN GOSUB 1100: GOSUB 1200: GOSUB 1300
1020 IF A=2 THEN GOSUB 1300: GOSUB 1600: GOSUB 1900
1030 IF A=3 THEN GOSUB 1700: GOSUB 1800: GOSUB 1900
1040 IF A=4 THEN GOSUB 1100: GOSUB 1400: GOSUB 1700
1050 IF A=5 THEN GOSUB 1400: GOSUB 1500: GOSUB 1700: GOSUB 1800
1060 IF A=6 THEN GOSUB 1200: GOSUB 1300: GOSUB 1500: GOSUB 1600
1070 IF A=7 THEN GOSUB 1100: GOSUB 1200: GOSUB 1400: GOSUB 1500
1080 IF A=8 THEN GOSUB 1500: GOSUB 1600: GOSUB 1800: GOSUB 1900
1090 GOSUB 4000: RETURN
1100 CSR 14,5
1110 IF SPK#="" THEN GOTO 1130
1120 FOR X=5 TO 9: CSR 14,X: PRINT " "; NEXT X: RETURN
1130 FOR X=5 TO 9: CSR 14,X: PRINT "%&&&": NEXT X: RETURN
1200 CSR 19,5
1210 IF SPK#="" THEN GOTO 1230
1220 FOR X=5 TO 9: CSR 19,X: PRINT " "; NEXT X: RETURN
1230 FOR X=5 TO 9: CSR 19,X: PRINT "%&&&": NEXT X: RETURN
1300 CSR 24,5
1310 IF SPK#="" THEN GOTO 1330
1320 FOR X=5 TO 9: CSR 24,X: PRINT " "; NEXT X: RETURN
1330 FOR X=5 TO 9: CSR 24,X: PRINT "%&&&": NEXT X: RETURN
1400 CSR 14,11

```

```

1410 IF SPK$=" " THEN GOTO 1430
1420 FOR X=11 TO 15: CSR 14,X: PRINT "  ": NEXT X: RETURN
1430 FOR X=11 TO 15: CSR 14,X: PRINT "%&&&": NEXT X: RETURN
1500 CSR 19,11
1510 IF SPK$=" " THEN GOTO 1530
1520 FOR X=11 TO 15: CSR 19,X: PRINT "  ": NEXT X: RETURN
1530 FOR X=11 TO 15: CSR 19,X: PRINT "%&&&": NEXT X: RETURN
1600 CSR 24,11
1610 IF SPK$=" " THEN GOTO 1630
1620 FOR X=11 TO 15: CSR 24,X: PRINT "  ": NEXT X: RETURN
1630 FOR X=11 TO 15: CSR 24,X: PRINT "%&&&": NEXT X: RETURN
1700 CSR 14,17
1710 IF SPK$=" " THEN GOTO 1730
1720 FOR X=17 TO 21: CSR 14,X: PRINT "  ": NEXT X: RETURN
1730 FOR X=17 TO 21: CSR 14,X: PRINT "%&&&": NEXT X: RETURN
1800 CSR 19,17
1810 IF SPK$=" " THEN GOTO 1830
1820 FOR X=17 TO 21: CSR 19,X: PRINT "  ": NEXT X: RETURN
1830 FOR X=17 TO 21: CSR 19,X: PRINT "%&&&": NEXT X: RETURN
1900 CSR 24,17
1910 IF SPK$=" " THEN GOTO 1930
1920 FOR X=17 TO 21: CSR 24,X: PRINT "  ": NEXT X: RETURN
1930 FOR X=17 TO 21: CSR 24,X: PRINT "%&&&": NEXT X: RETURN
2000 LET A$=S$: LET B$="": CSR 1,16: PRINT "  "
2010 FOR X=1 TO LEN (A$)-1
2020 FOR Y=X+1 TO LEN (A$)
2030 IF A$(X)=A$(Y) THEN LET A$(X)=" ": LET A$(Y)=" "
2040 NEXT Y: NEXT X
2050 FOR X=1 TO LEN (A$): IF A$(X)<>" " THEN LET B#=B#+A$(X): NEXT X
2080 LET GO=-10: LET B$=LEFT$(B$,10)
2090 COLOUR 1,1: CSR 4,18: PRINT "TRY": CSR 1,20: PRINT B$: LET B=1
2100 IF INKEY$="" THEN GOTO 2100 ELSE LET A$=INKEY$
2110 IF A$>"8" OR A$<"1" THEN GOTO 2100
2120 LET A=VAL(A$): CSR B,20: LET B=B+1: PRINT "  ": GOSUB 1000
2130 IF INKEY$<>" " THEN GOTO 2130 ELSE GOTO 2100
4000 FOR X=14 TO 24 STEP 5
4010 FOR Y=5 TO 17 STEP 6
4020 CSR X,Y
4030 IF SPK$="&" THEN RETURN
4040 NEXT Y: NEXT X: IF GO=0 THEN GOTO 130
4050 IF GO<0 THEN GOTO 4070
4060 CSR 13,10: PRINT " WELL DONE !": CSR 15,12: PRINT GO;" MOVES"
4070 CSR 4,18: PRINT "      P TO PLAY AGAIN"
4080 IF INKEY$<>" " THEN GOTO 4080
4090 IF INKEY$="" THEN GOTO 4090 ELSE LET A$=INKEY$
4100 IF A$="P" THEN GOTO 30
4110 STOP
5000 PAPER 5: INK 15: CLS
5010 CSR 12,1: PRINT "SQUARES": CSR 12,2: PRINT "====="
5020 CSR 3,4: PRINT "THE AIM OF THIS PUZZLE IS TO CHANGE ALL THE SQUARES TO WHITE."
5030 PRINT "  EACH NUMBER (1 - 8) SELECTS A BLOCK OR LINE OF
SQUARES AND REVERSES THEIR COLOUR CHANGING RED TO WHITE AND
WHITE TO RED."
5040 CSR 5,16: PRINT "PRESS ";CHR$(34);"P";CHR$(34);" TO PLAY"
5050 GENPAT 0,35,255,129,129,129,129,129,129,255: GENPAT
0,38,255,255,255,255,255,255,255,255
5060 IF INKEY$="P" THEN RETURN ELSE GOTO 5060

```

The Fastest NODDY Page In The West

The program below was sent in by Liam Redmond and updated by Phil Eyres. It is designed to do a simple task, display NODDY screens, do I hear you say:- "But you can do that with the PLOD command", true enough, but for us assembler programmers it's a bit slow. The program will display a NODDY page 'like lightening'. The program uses the USER command, so no SDX disc systems please.

As you can see from line 30, the program is called using the USER command and a number, the number relates to the NODDY page according to the NODDY DIR command, the first page is 0, the second 1 and so on.

The program seems very simple, in principle, you take the page number required, move down from the TOP of NODDY (&FAA7) to find the beginning of the page, then print it.

A slight complication is that NODDY pages are only 39 characters wide, the left most character being not written to, so when an end of line is reached, a space character has to be written to the screen.

When the program is run, only the first five lines of assembler are executed, these set up the USER command ready for use. The Editor screen (VS 5) is set up to be the whole screen, and you are left at the NODDY prompt. Type in a couple of pages of NODDY. Then if you type GOTO 30, line 30 will be executed, this will display the second page you typed in. To break out of the program press the break key, this is because the program is looping at line 40, so that you can see the NODDY screen displayed. If line 30 was USER 0, it would display the first screen you typed in.

10 CODE

```

4007 LD HL,START
400A LD DE,&FAB7
400D LD BC,5 ;SET UP USER COMMAND
4010 LDIR
4012 RET
4013 ERR: LD A,0 ;PARAMS
4015 JP &18AF
4018 START: DB 201,6
401A JP START1
401D START1: RST 30 ;GET SCREEN NO
401E LD C,A
401F LD A,01 ;VRAM WRITE AT
4021 OUT (2),A ;BEGINNING OF TEXT
4023 LD A,&1C ;SCREEN 7168(DEC) 1C00(HEX)
4025 OR 64
4027 OUT (2),A
4029 LD HL,&FAA7 ;START OF NODDY MEMORY
402C FIND: LD A,C ;CHECK COUNTER
402D CP 0
402F JP Z,SCRUP
4032 FIND1: LD A,(HL) ;FIND NEXT SCREEN
4033 INC HL
4034 CP 255
4036 JP NZ,FIND1
4039 LD A,(HL) ;IF NUMBER OF SCREENS IS TO
403A CP 255 ;HIGH THEN PRODUCE AN ERROR
403C JP Z,ERR
403F DEC C
4040 JP FIND
4043 SCRUP: INC HL ;OUTPUT SCREEN
4044 INC HL
4045 INC HL ;INCREMENT HL TO CORRECT
4046 INC HL ;LOCATION
4047 INC HL
4048 INC HL
4049 PUSH HL
404A LD HL,&1C01 ;INITIALISE SCOUNT TO
404D LD (SCOUNT),HL ;TOP LET OF SCREEN
4050 LD HL,&1C2B ;AND SCA TO END OF LINE
4053 LD (SCA),HL
4056 POP HL
4057 SC1: LD A,(HL)
4058 INC HL
4059 CP 128 ;IF CHAR GREATER THAN 128
405B JP NC,SPACE ;OUTPUT A-128 SPACES
405E OUT (1),A ;ELSE OUTPUT CHAR
4060 PUSH HL
4061 PUSH DE
4062 LD HL,(SCOUNT) ;ADD 1 TO SCREEN COUNT
4065 LD DE,1
4068 ADD HL,DE
4069 LD (SCOUNT),HL
406C LD DE,(SCA)
4070 EX DE,HL ;COMPARE SCREEN COUNT TO END
4071 SBC HL,DE ;OF LINE COUNT
4073 LD A,L
4074 POP DE
4075 POP HL
4076 CP 0
4078 CALL Z,SINC ;IF EOL CALL SINC
407B JP SC1 ;NEXT CHARACTER
407E SPACE: CP &FF ;OUTPUT SPACES
4080 RET Z ;RETURN IF END
4081 SUB 128
4083 LD B,A
4084 SLOOP: LD A,32
4086 OUT (1),A
4088 PUSH HL
4089 PUSH DE

```

CONTINUED ON PAGE 6

**HORIZON
TO BE, OR NOT TO BE**

BY
JOHN GREEN

This is for anyone who saw the Horizon program that was televised just as the last magazine went to print.

Below is a short programme to simulate the monkeys at a typewriter trying to write a line of Shakespeare. The idea comes from the book by Dr. Richard Dawkins, the "Blind Watchmaker" where he uses computer generated patterns to show generic mutation.

Line 5 of the program sets up the variables with variable S counting the generations.

Line 10 inputs the quotation which you want the computer to arrive at randomly (well, almost).

Line 15 to 30 set up random string of the same length as the quotation. I have used CHR\$(91 to 93) to provide spaces.

Line 35 to 55 compare the random string to the quotation and keeps any letter or space which lands in the correct place. You might call this retained selective mutation.

Line 60 compares the current state of the random line with the input string. If these are identical the program stops and prints out the number of generations to reach the desired goal. Otherwise the program loops back to line 35 to repeat the process.

The example line used is from "The Merchant of Venice", shown is only the first *** and the last *** lines found on my test run.

```
5 DIM A$(200),B$(200): LET S=0
10 INPUT "QUOTATION ";A$
15 FOR N=1 TO LEN (A$)
20 LET B$(N)=CHR$(65+29*RND): IF B$(N)="[" OR B$(N)="\" OR
B$(N)="]" THEN LET B$(N)=" "
25 NEXT N
30 PRINT B$
35 FOR N=1 TO LEN (A$)
40 IF B$(N)=A$(N) THEN GOTO 50 ELSE LET B$(N)=CHR$(65+RND*29)
45 IF B$(N)="[" OR B$(N)="\" OR B$(N)="]" THEN LET B$(N)=" "
50 NEXT N
55 PRINT B$
60 IF B$=A$ THEN PRINT S,"GENERATIONS" ELSE GOTO 70
65 GOTO 65
70 LET S=S+1: GOTT 35
```

EXAMPLE:-

```
THE QUALITY OF MERCY IS NOT STRAINED
AYAU YPINAKOM TYLBLEPRLFPPEXNRN MGDF S
LRXXTBJOWEUEGHYBIMNECT FKOMSTG WJABF
ooo000ooo
THE LUALITY OF MERCY IS NOT STRAINED
THE WUALITY OF MERCY IS NOT STRAINED
THE QUALITY OF MERCY IS NOT STRAINED
108 GENERATIONS
```

CONTINUED FROM PAGE 4

```

408A LD HL,(SCOUNT) ;SAME AS ABOVE
408D LD DE,1 ;IF END OF LINE PRINT A SPACE
4090 ADD HL,DE ;NEEDED BECAUSE NODDY PAGES
4091 LD (SCOUNT),HL ;ARE ONLY 39 CHARS WIDE
4094 LD DE,(SCA)
4098 EX DE,HL
4099 SBC HL,DE
409B LD A,L
409C POP DE
409D POP HL
409E CP 0
40A0 CALL Z,SINC
40A3 DJNZ SLOOP
40A5 JP SCI
40A8 RET
40A9 SINC: LD A,32 ;32 IS A SPACE CHAR
40AB OUT (1),A ;OUTPUT TO SCREEN
40AD PUSH HL
40AE PUSH DE
40AF LD HL,(SCA) ;POINT SCA TO END OF NEXT
40B2 LD DE,(SCONST) ;LINE
40B6 ADD HL,DE
40B7 LD (SCA),HL
40BA LB HL,(SCOUNT)

40BD LD DE,1
40C0 ADD HL,DE
40C1 LD (SCOUNT),HL
40C4 POP DE
40C5 POP HL
40C6 RET
40C7 SCONST: DB 40 ;LENGTH OF LINE
40C8 SCA: DW £1C27 ;VALUE OF END OF LINE
40CA SCOUNT: DW £1C01 ;SCREEN LOCATION POINTER
40CC RET

Symbols:
START 4018 ERR 4013
START1 401D FIND 402C
SCRUP 4043 FIND1 4032
SCI 4057 SPACE 407E
SLOOP 4084 SCOUNT 40CA
SCA 40C8 SINC 40A9
SCONST 40C7

20 CRVS 5,0,0,0,40,24,40: NODDY
30 USER 1
40 GOTO 40

```

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PRICE LIST

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System £99.95

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OLD MAGAZINE INDEX

BY

Mike Kohnstamm

This may be of interest to anyone who has hoards of old magazines propping up the bed!!!

Mastering MTX code	PCN	9 Jun 84	Keith Hook	MC Graphics
Screen Studies of an MTX	PCN	25 Aug 84	Keith Hook	MC Graphics
MTX Plus	PCN	17 Nov 84	Stephen White	5 Utilities
(with corrections/improvements in PCN 5 & 19 Jan 85)				
Assembly Tune	PCN	5 Jan 85	DJ Miles	MC Sound
The Sound of Music - Not specifically MTX				
	CT	Apr 85	Bill Horne	Music Theory
Useful Tips For MTX Owners	PCN	1 Dec 84	Nic Joynson	
(Also a letter about printers)				
Add Commands - MTX	Which Micro	Oct 84	Eric Roy	'Old & Merge'
Renumber - MTX	Which Micro	Nov 84	Eric Roy	
Anyone For Tennis	PCN	6 Apr 85	K.H. M.Gant	MC Tennis
MTX Life	CT	Jan 85	Nigel Barnes	Life Game
MTX Database	PCW	Sep 85	Dave England	
MTX Toolbox	CT	Nov 84	R.Sargent	
MTX Magic	CT	?	Early (Enthusiastic)	Rev
Take A Memo	PCN	28 Jan 84	K.Hook	Mode II GR
Noddy Takes A Letter	PCN	7 Jul 84	Chris Goddard	Noddy
Mix n Match	PCW	Oct 85	R.Sargent	Speccy
MTX Disc Drives	DME	Aug 85	D.Leslie	
MTX Tape Controller	DME	Oct 85	John Baker	
Interface the MTX	DME	Aug 84	R.A.Penfold	Port Info
Centronics to Serial	DME	Aug 84	R.A.Penfold	
MTX 8 Channel A to D	PE	Jul 85	R.A.Penfold	
Useful But Not Especially MTX				
Bubble Sort (Z80 Assembler)	E	Sep 85		
Eight Circles (BBC)	PC	Dec 84	Mark Calloway	
A to D Converter (Spectrum)	DME	Aug 85	D.Leslie	

*** PCN = Personal Computer News
 *** CT = Computing Today
 *** DME = Digital and Micro Electronics
 PCW = Personal Computer World
 PE = Practical Electronics
 E = Electronics and Computing Monthly
 PC = Practical Computing

*** No longer seem to be published
 (Happens to all the best mags for MTX articles!!!)

ooo000ooo

SOLVIT2

By

L. F. REYNOLDS

This 'little' maths routine was sent in by Len Reynolds from Sheffield. The copy he sent in was for use with HISOFT Pascal and as such allows the facility to print output to a printer by selecting CTRL P as the programs suggests, for anyone using TURBO Pascal this will not work, if you require a printout, you will have to include a 'LST' in all the WRITELN statements.

A few notes for using SOLVIT2.

- 1) Do not omit leading zeros during data entry.
e.g. use 0.001 or 1.0E-3 (not .001)

```
PROGRAM SOLVIT2(INPUT,OUTPUT);
VAR
A,N,X,E,C,ESTIMATE,PREC,V,DYBYDX,X1:REAL;
BEGIN
  WRITELN('SOLUTION OF (AX^N) + EX + C = 0');
  WRITELN;
  WRITELN('USING NEWTON-RAPHSON ITERATION');
  WRITELN;
  WRITELN('BY L.F.REYNOLDS,DEC.1986');
  WRITELN;
  WRITELN('CODE PRODUCED USING *****');
  WRITELN;
  WRITELN('RUNTIME ROUTINES');
  WRITELN;
  WRITELN('COPYRIGHT HISOFT 1983,4. ');
  WRITELN;
  WRITELN('ENTER COEFFICIENT, A (E.G. 5.0)');
  READ(A);
  WRITELN;
  WRITELN('ENTER EXPONENT, N (E.G. 4.0)');
  READ(N);
  WRITELN;
  WRITELN('ENTER COEFFICIENT, E (E.G. -0.5)');
  READ(E);
  WRITELN;
  WRITELN('ENTER COEFFICIENT, C (E.G. 0.0495)');
  READ(C);
  WRITELN;
  WRITELN('ENTER ESTIMATE FOR X (E.G. 1)');
  READ(ESTIMATE);
  WRITELN;
  WRITELN('ENTER PRECISION (1.0E-06 MINIMUM)');
  WRITELN;
  WRITELN('WHEN "PRECISION" IS ON SCREEN, ');
  WRITELN('PRESS CTRL P TO SEND RESULTS TO PRINTER, ');
  WRITELN('IF REQUIRED, THEN PRESS <RET>');
  READ(PREC);
  BEGIN
    X:=ESTIMATE;
  END;
  WHILE ABS(X-X1)>=PREC DO
```

2) Use BS and spaces bar to correct data during entry.
(Use of DEL or cursor keys may force a program to halt due to a (M)ath (C)ail error).

3) If program halts, re-RUN in Basic or re-compile in Pascal as appropriate.

4) Some functions can have several valid solutions, as in example data shown in program.

Various solutions can be found by varying value of "Estimated X" during data entry, since the iterations will usually converge to the solution nearest to "Estimated x".

```
  BEGIN
    X1:=X;
    V:=N*LN(X1);
    V:=EXP(V);
    V:=A*XV;
    V:=V+(E*X1);
    V:=V+C;
    DYBYDX:=LN(X1);
    DYBYDX:=(N-1)*DYBYDX;
    DYBYDX:=EXP(DYBYDX);
    DYBYDX:=A*N*DYBYDX;
    DYBYDX:=DYBYDX+E;
    X:=X1-V/DYBYDX;
  BEGIN
    IF X<=6.0E-38 THEN
      WRITELN('X EFFECTIVELY <=0;');
      WRITELN('SOLUTION NOT POSSIBLE ');
      WRITELN('WITH THIS PROGRAM!');
    END;
    WRITELN(X);
  END;
  WRITELN('SOLUTION OF FUNCTION');
  WRITELN;
  WRITELN('AX^N + EX + C = 0 WITH: ');
  WRITELN('A = ',(A));
  WRITELN;
  WRITELN('N = ',(N));
  WRITELN;
  WRITELN('E = ',(E));
  WRITELN;
  WRITELN('C = ',(C));
  WRITELN;
  WRITELN('X ESTIMATE = ',(ESTIMATE));
  WRITELN;
  WRITELN('PRECISION = ',(PREC));
  WRITELN;
  WRITELN('IS AS FOLLOWS:');
  WRITELN;
  WRITELN('X = ',(X));
  END.
END.
```

YOUR LETTERS

** Games High Scores Table **

AGGROVATOR	107872	*N.DUNCAN	MINER DICK	22520	R.SIDDALL
ARCADIAN	14600	*P.COUGHLAN	MISS ALPHA	53320	P.CRUGHTON
ASTRONILON	36660	C.WHITELock	M OMEGA	4400	T.NEAL
ASTROPAC	183090	*P.COUGHLAN	NEMO	14650	P.CRUGHTON
BLOBBO	71233	T.PICKSTONE	D.ZONE	847740	A.DOBSON
B.BILL	219610	A.DOBSON LEVEL 1	OBLIDS	80110	P.CRUGHTON
B.BILL	158334	A.DOBSON LEVEL 9	PHAD	5285	M.FIDLER
CAVES OF ORB	496/500	V.STEPNEY	P PETE	41190	A.DOBSON
C-5	9918	V.STEPNEY	QUANTUM	17	*P.COUGHLAN
CHAMBERIDS	19 MINS	P.ERIKSSON	QUAS1	6200	G.CAMPBELL
COBRA	5634	A.DOBSON	QUAZZIA	41020	V.STEPNEY
COMBAT	51210	*P.COUGHLAN	QO60	11440	M.FIDLER
CONT RAID	10810	M.BILL	QO60 2	255000	R.SIDDALL
CRYSTAL	35507	A.LYNCH	ROLLA BEAR	27741	V.STEPNEY
DR FRANKY	14925	N.CRUGHTON	SEPULCRI	6975	*N.DUNCAN
D.DANGER	8627	A.DOBSON	S.M.G.Rt	26280	V.STEPNEY
D.DESTROYER	79600	*J.GUINN	S.M.G.Lt	11830	V.STEPNEY
EMERALD ISLE	1000	G.CLAY	S.M.G.Up	89760	*J.GUINN
E. ZARKOS	90 OBJ	R.SIDDALL	SNAPPO	84060	A.DOBSON
F. DEEP	3720	A.DOBSON	SNOWBALL	1000	P.COUGHLAN
FELIX	20600	P.COUGHLAN	S OF PETE	16153	A.PAGE
F.FREDDIE	15560	M.FIDLER	STAR COMM	131690	P.CRUGHTON
FLUMMOX	37685	*P.COUGHLAN	SUPERBIKE	20.7KM	A.FIDLER
GOLDMINE	6308	M.FIDLER	S W/FIELD	829	M.GELDER
HAWKWARS	19850	*P.COUGHLAN	S SCANNER	11970	G.CLAY
H. ENCOUNTER	28990	A.LYNCH	T FIGHTER	3260	V.STEPNEY
HI-LO	8700	G.CAMPBELL	TAPEWORM	168515	A.DOBSON LEVEL 1
HUNCHY	8457	*J.GUINN	TAPEWORM	150500	A.DOBSON LEVEL 9
ICEBURG	32794	*P.COUGHLAN	T ZONE	22925	N.DUNCAN
JUMP' J FLASH	2970	T.NEAL	TOADO	107549	N.GOODING
KARATE KING	9160	*J.GUINN	TURBO	23030	M.GELDER
KILOPEDE	70000	N.CAMPBELL	THE WALL	2310	P.ERIKSSON
KNUCKLES	488650	P.CRUGHTON			* Denotes new high score
L OF TIME	950	R.SIDDALL			
MAXIMA	501250	R.SIDDALL			

Questions

I. G.Bailey from Abingdon:-

Listed in the Memopad software for the past 12 months is 00099 Cribbage Card SCPR 2.95 'Expected'. In April last year I wrote to Syntax enquiring if this was available along with other items. They said yes and I ordered it. They didn't send it and when I rang, they said, 'Oh yes, it was expected in stock again soon'. Needless to say it never has been. As a Cribbage player I was, and still am interested in getting hold of a copy. Presumably it was in stock once, and some other member may have a copy they are willing to sell. Can M.D.C. help?

Phil-> Has anyone got/had a copy of this program, I'd be most interested to hear more.

A Short Program

Remember a couple of months ago, we had a program published that displayed the different colours available to you on an MTX, well, this program below does the same sort of thing (in a different sort of way). Try it out and see, it seems to have the odd colour mix or two available. It uses GENPATS to generate the colours so you may find you have difficulty in colouring the whole screen any one colour. Of course, if you use only a black and white monitor, it may well prove to be a complete waste of time!!.

Program Overleaf

```

11 REM
12 REM " PALETTE " BY BILL RIPPOD
13 REM
14 VS 4: PAPER 15: INK 1: CLS
20 CSR 10,12: PRINT "CURSOR KEYS TO": CSR 10,13: PRINT
"SELECT COLOUR": CSR 10,15: PRINT "C to CONTINUE" 30 CSR
1,18: PRINT "GENPAT 1,X,A,B,A,B,A,B,A,B" 40 CSR 1,19:
PRINT "GENPAT 2,X,C1,C,C1,C,C1,C,C1,C"
50 CSR 1,20: PRINT "(where X=147-154:A=170 and B=85"
60 GENPAT 1,150,170,85,170,85,170,85,170,85
70 FOR X=1 TO 255: LET A=0: LET B=2: CSR B,A: PRINT X; " ":
LET B=B+6: FOR Y=1 TO 255
80 GENPAT 2,150,X,Y,X,Y,X,Y,X,Y,X,Y
90 CSR B,A: PRINT CHR$(150)
100 IF INKEY$(">") THEN GOSUB 150
110 IF INKEY$("<") THEN GOTO 110
120 LET B=B+1: IF B=29 THEN LET A=A+1: LET B=3
130 NEXT Y: NEXT X
140 GOTO 70
150 LET P=A: LET Q=B
160 CSR 29,P: PRINT "<": CSR Q,10: PRINT "^"
170 GOSUB 250
180 IF ASC(INKEY$)=10 AND P<9 THEN CSR 29,P: PAUSE 200:
PRINT " ": LET P=P+1: GOTO 160
190 IF INKEY$="C" THEN CSR 29,P: PRINT " ": CSR Q,10:
PRINT " ": RETURN
200 IF ASC(INKEY$)=8 AND Q>3 THEN CSR Q,10: PAUSE 200:
PRINT " ": LET Q=Q-1: GOTO 160
210 IF ASC(INKEY$)=11 AND P>0 THEN CSR 29,P: PAUSE 200:
PRINT " ": LET P=P-1: GOTO 160
220 IF ASC(INKEY$)=25 AND Q<28 THEN CSR Q,10: PAUSE 200:
PRINT " ": LET Q=Q+1: GOTO 160
230 GOTO 180
250 LET C1=X
260 IF P>A THEN LET C1=C1-1: IF C1<1 THEN LET C1=1
270 IF P=A AND Q>B THEN LET C1=C1-1: IF C2<1 THEN LET
C1=1
280 LET C2=Y
290 IF Q>B THEN LET C2=C2+Q-B: IF C2>255 THEN LET C2=255
300 IF Q<B THEN LET C2=C2-(B-Q): IF C2<1 THEN LET C2=1
310 IF P>A THEN LET C2=C2+26*(P-A)
320 IF P<A THEN LET C2=C2-26*(A-P): IF C2<1 THEN LET
C2=1
330 GENPAT 2,150,C1,C2,C1,C2,C1,C2,C1,C2
340 CSR 3,15: PRINT CHR$(150);CHR$(150);CHR$(150): CSR
3,16: PRINT CHR$(150);CHR$(150);CHR$(150): CSR 3,17: PRINT
CHR$(150);CHR$(150);CHR$(150)
350 CSR 3,21: PRINT "C1=";C1;" and C=";C2;"
360 RETURN

```

Short Bits

Chris Whiteflock has another short Pascal offering:-

To go with the routine printed last month about cursor positioning using Pascal.

```

PROCEDURE CURSOR (VSN,X,Y:INTEGER);
VAR XLOC,YLOC:INTEGER;
BEGIN
  XLOC:=EFFSE+VSN*15;
  YLOC:=XLOC+1;
  POKE (XLOC,X);
  POKE (YLOC,Y);
END;

```

The input parameters VSN, X and Y must of course be supplied by the statement calling the CURSOR procedure.

Questions

I.M.Collier Romford, Essex.

Could you please help me with a problem, it's to do with ROM calls; in my SDX manual it says to use ROM 5 to 'soft reset' after a disc error, but when ever I do this the FRONT PANEL comes up, so I end up using ROM 3 instead. I noticed in the black manual it says under ROM, that if the correct ROM is not actually present then damage can be done, do you know what 'damage' is actually done?

Phil-> I do not know why you find you have to use a different ROM call from that suggested, I would be grateful for other members offerings on this subject. I do not see how using a ROM call can do any physical damage to a machine, at worst the machine will just totally hang up and require switching off for a few seconds to allow its circuits to clear.

For Sale

FOR SALE

Memotech MTX500 in mint condition, in original box with manual; plus 8 software titles, and two years of owners club magazines.

£49.00 for the lot

Contact: Mick Sayer on
MEDWAY (0634) 362904

Swaps

John Grayson has the following software to swap:-
Highway Encounter, 3D Tachyon Fighter
and copies of MTX Fruit Machine.

for other software.(With the exception of MTX Fruit Machine I have only one copy of each of the others - the originals!).

John Grayson, Cambait, Potters Heron Lane, Ampfield, Romsey, Hants. SO51 9BW.

The NEC P5XL Printer

Supplier : NEC Business Systems (Europe) Ltd
Price : £1100 excluding tractor feed (£280)
Machine : Any MTX. (Centronics port)

The P5 is one of the latest generation of 24 pin dot matrix printers, capable of producing letter quality text. The printer itself is fairly large, having a footprint of 580mm * 375mm, it is designed to take 80 column or 132 column stationary, and optionally a sheet feeder or tractor feed unit can be fitted. The unit is very robust and very heavy, the reason for the weight, is that when working 'flat out' at 264 cps, the acceleration of the head would cause it to go 'walkies' across the table, given half a chance.

The 'front operator panel' has 5 touch sensitive pads. The first is the usual On-Line or Select button and the second a Line feed/form feed button. Then there are three unusual buttons.

- i. A draft/letter quality selector.
- ii. A Font Select button allowing you to select :
10,12,15,17 and 20 cps.
- iii. A quiet select button, which reduces noise (and speed).

Unusually, the printer comes with 3 printer ribbons:

- i. A 'normal' 3.1 million char fabric ribbon.
- ii. A black multistrike ribbon 300,000 char life.
- iii. A 4 colour fabric ribbon, allowing the machine to produce 8 colours in all.

The colour ribbon is very useful for producing pretty headings in text documents, or really outstanding graphics.

Whilst on the point of graphics, the machine excels in this department, the quality can be anything from 'quick draft' at 60 dots per inch, to high density at 360 dots per inch.

Conclusion

This machine is only for those with large volumes of print to produce, it eats text as if there is no tomorrow. The buffer-size is only 2K, I always find this a let down on any machine, a 64K buffer is needed to free the computer for further tasks. Obviously this machine, at £1100, is not for the faint of heart, it is for the serious user with plenty to do. I think it would seemingly last for ever. It's very well made, and it shows!!.

Reviewed By Phil Eyres

PROGRAM LIBRARY
£1.20 Per Cassette, 2 Programs per Cassette

This month we have for the first time in many months, a full list of 'whats available' from the Program Library. It includes several new Basic and assembler programs, some of which have been printed previously in the magazine. I still have a couple more waiting to be included, but I have run out of both space and time to include them in this magazine.

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!!).

Reviews of all programs are available, please send a large SAE. All Swiss User Group programs are prefixed with 'Sw'.

--- The First Disc Starts Here ---

- 1.Hex-Dec-Bin (Binary Bit In Assembler)
- 2.CBEN Sprite Generator.
- 3.3D-Draw Rotate a skeleton of a cup & saucer in 3D.
- 4.Whist. The Card Game
- 5.Mem-Save. This Utility will Save a block of memory to tape and retrieve it.
- 6.MTX-Draw Two basic drawing boards, MTX DB has more
- 7.LOGO-Draw extensive commands.
- 8.Simplex Tableaux. Applications Program.
- 9.Breakeven. Applications Program.
- 10.Statistics. Applications Program.
- 11.An Unsolved Prbm Applications Program.
- 12.Radio Routines Applications Program.
- 13.Light Cycles. Arcade Game
- 14.Hex/Dec/Bin Conversions using USER commands!
- 15.Renumber II Renumbers Including GOTO's etc
(14 & 15) are Utilities and as such reside high in memory transparent to the user.
- 16.RELOC Relocs Assembler Properly!!
- 17.Character Editor Yepp!! Another Sprite Gen!!
- 18.Quasimodo Excellent Arcade Game
- 19.Planner YASG (Yet Another Sprite Generator)
- 20.Hanoi Classic Puzzle (Brilliant simple use
- 21.Noble Simple Text Game of Graphics)
- 22.Hi-Lo Just like Bruce's Play Your Cards Right
- 23.Composer Our First Sound Generator!!
- 24.Anova Applications Program
- 25.CASHFLOW Applications Program
- 26.RenumIII Utility !!!26,27 & 28 cassette only!!!
- 27.Merge Utility
- 28.Money Manager Applications program
- 29.Word Word Processor
- 30.Reversi Strategy Board Game
- 31.Full Time Football Manager Game
- 32.PANEL3 Panel extensions

--- The Second Disc Starts Here ---

- 33.Texted Word-pro
- 34.SwMice Swiss Arcade game written in Basic
- 35.INITIM Assembler arcade game.
- 36.Sw3D-FUNC.1 First of two. Saturn!!!
- 37.Sw3D-FUNC.2 Second of Above. Sinpr?.
- 38.SwSpr-Ed YASG.
- 39.SwZ-Wand! Number Base Conversion Prog.
- 40.OXO Noughts & Crosses.
- 41.Solitaire Strategy Game.
- 42.Cross-Num Excellent strategy game!!
- 43.Avoid Seven Dice Game
- 44.Numerology Analyse your name!!
- 45.Chemin Another Dice Game!
- 46.Dice Another, Another Dice Game!!
- 47.SwMathe Arithmetic Tester.
- 48.Reversi2 Assembler of no. 30. Great!!
- 49.ISOT A really good maze game.
- 50.DBaseI Simple Data Base
- 51.DBaseII Requires MTX Util Tape
- 52.Money 2.1 An update of no 28
- 53.Kam Disc Better than sliced bread
- 54.RDisc Source Source for above. (Ed/Asm)
- 55.Diary Diary & Address program
- 56.Terminal Em. Comm's via Rs232 & Modem.
- 57.Skittles Keeps league tables
- 58.Card-Ind Produces Card Index's
- 59.Chemements Applications (Chemistry)
- 60.2 * H&W Large char. printing
- 61.Hangman A classic
- Diskette Three ----
- 62.Account The Third Money Manager
- 63.Mastermind Another Good Game
- 64.Connect4 Two Player Game
- 65.Journey Into Danger NEW Adventure Game
- 66.Connect4 Version 2 As for number 64
- 67.MTX DRAWv1.8 ***NEW*** As for number 6
- 68.Patience ***NEW*** Card Game
- 69.Life ***NEW*** Curious Puzzle
- 70.Enigma ***NEW*** Like Mastermind
- 71.FKEY ***NEW*** Function Key Definer
- 72.Skydiver ***NEW*** Graphical Game
- 73.Digger ***NEW*** Graphical Game
- 74.MPG ***NEW*** Calculates MPG

Continued Overleaf

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. (Vol1 Iss.7)
3. Hisoft Pascal Review (vol1 Iss.8)
4. Neword Rom Review (Vol1 Iss.5)
5. RST10 Codes Explained (Vol1 Iss.3)
6. VDP Explained Using assembler (vol1 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 DMX 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?

5. Program Reviews

67. MTX Draw v1.8 By Phil Eyres

This is an update to the program that I wrote some 2 years ago. The assembler at the beginning of the program now has a feature which allows the screens to be Saved/Loaded separately from the program.

68. Patience By Alan Dobson

As the title suggests this is a game of patience. Another really nice graphical game from Alan, right from the information screen at the beginning you can tell it's going to be good. The text scrolls very neatly on pressing the space bar to show the next paragraph of text.

An interesting game, where the object is to cover 2 of the 9 displayed cards, that add together to total 11, etc.

69. Life By Mike Frymyer

A very interesting program, it is difficult to say what category it would fall into, it is really general interest, if you like the Horizon/Q.E.D. type T.V. programs then try this one. Printed in Vol 3. Issue 4.

70. Enigma By Mike Frymyer

Based on the board game mastermind, this one was printed in the club magazine issue 3 Vol 3.

71. FKEY - Sorry lost the author

Function Key Definer program, written in assembler allows you to redefine your function keys. A very handy program and fun to play with if you're 'into' assembler.

72. Skydiver By Warren Seyle

Printed in Vol 3. Issue 1.

Has some nice features, using Sprites and sound. Nice large graphics to suit a 'youngster', fairly interesting to play, but really suited to younger 'budding' arcadians.

73. Digger By Bill Rippon.

This is Bill Rippons first attempt at an MTX Program. It is very long and totally in Basic. The code is well written in easily recognised sections, allowing alteration if you wish. The initial screen is brilliant, I won't say why, else it will spoil it. The game is really good and would suit those that are not too at the cavern type game. Again the younger generation could be 'kept quiet' with this for a fair while. Really well worth having in your collection.

74. MPG By Alan Dobson.

Car Overall Petrol Consumption.

This program calculates and graphically displays a cars overall fuel consumption to the nearest MPG following each fuel purchase.

After first entering the cars details, it is only necessary to input the date, speedo, cost and price per gallon/litre.

This programme is 'mega brill', it really is, anyone with a car might like to try it. It shows my Sierra is averaging 37.75 MPG over the last month. I now intend to have a tune-up, and see if this figure increases enough to warrant the cost of the tune-up.