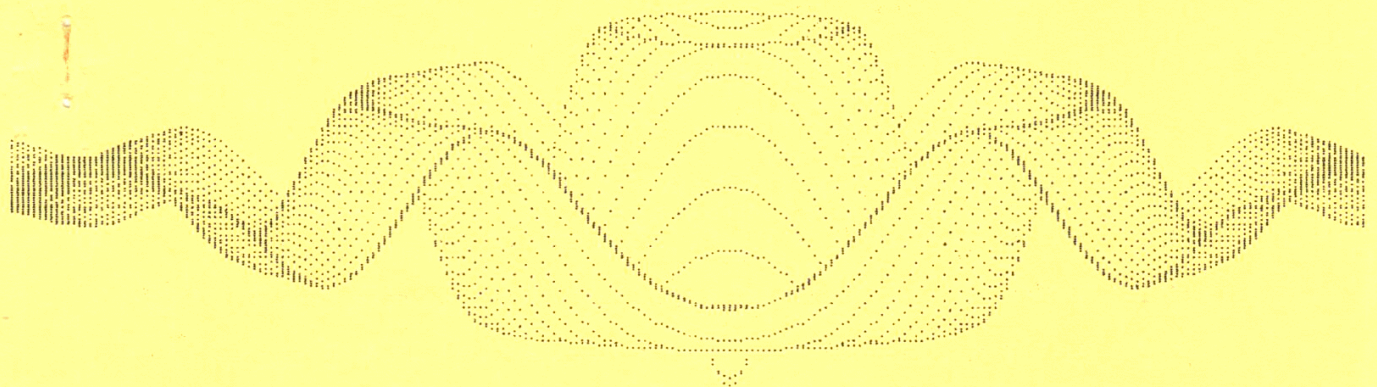


VOL. 2 ISSUE 2

OCTOBER 1985

THE
MEMOTECH OWNERS CLUB
MAGAZINE



FEATURES:-

DBASE PART IV

ASSEMBLER 16BIT MULTIPLY

PASCAL PROCEDURES

ASSEMBLER PANEL EXTENSION!

! PUBLISHED BY MEMOTECH OWNERS CLUB
! 23 DENMEAD ROAD
! HAREFIELD SOUTHAMPTON
! ~~~~~

CIRCA ...237 ish

M.O.C.

VOLUME 2 ISSUE NUMBER 2

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E D I T O R I A L (October 1985)

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I hope that we being on holiday for two weeks did not mean too long a wait for answers to your letters. Well, now it's all over (the holiday, that is) we can get on with a serious winters programming.

This months magazine is the biggest 'bumper' issue yet, it's taken quite some effort to get it done on time, but now it's finished, it seems worth it. I hope that everyone will find something of interest to them, as I've tried to put in an even spread of Basic/Assembler programs, News, Reviews, Letters etc. This month also sees the first Pascal article from Wilf Ireland. Already I can see problems with compatibility between ROM and Disc based Pascals, so please, anyone sending in Pascal routines for the Hisoft ROM, only send them in listing form, as I can not read the tapes.

Quite a few things have happened in the past month, not the least of which was our trip to Memotech which was cancelled. We will try and book an alternative time in the not too distant future. Our membership renewals have continued at the same level which is heartening. New members are slow in arriving but we welcome anyone who has just joined. In an effort to drum-up some interest we have decided to offer an incentive, the prize will be a Speculator add-on, an advert has been placed in the next issue of Memopad offering anyone enrolling for a years membership a ticket in a free christmas draw for the Speculator, this is extended to any member of MOC enrolling a new member between now and the draw date of December the 10th.

Also, so as to make this draw open to all MOC members, anyone sending in:-

1. An article of at least one page.

or

2. A program included in the program library.

will be included in the prize draw!!. Now we are not only looking for 'mind-blowing' innovations, but anything of interest, especially to beginners, for instance, a couple of ideas for articles could be,

a) A simple explanation of how a utility works. ie. one that is held in high memory and called when required.

b) An insight into how adventure games are made.

c) A m/code arcade game

So come on!!, why not send something in, you never know your luck.

Memotech's hardware prices have gone tumbling yet again, see page 6 for the latest prices, I am a little bit worried about the size of the price drop, as this must reduce their profit margins to almost strangulation point, I just hope for their sake that they have done their homework and calculated things right.

Remember any member enrolling a new member will have his/her membership increased by two issues. So far a few have taken up this offer but I feel sure that there are more of you out there.

Anyone interested in finding out more about the Speculator should look in the October issue of PCW page 176, under the title of 'Mix and Match'.

Megastar have informed us that there will be 9 new releases in time for christmas, we hope to have some review copies in time for the next mag.

The winner of this months prize draw is :-

Wilf Ireland of Urmston Manchester, who will receive a copy of Maxima for his Pascal article.

...remember all you have to do to be included in this free draw is have something published in the magazine.

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

If anyone would like back issues they are available for all past magazines for the small remittance of 80p.

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

L BASIC PART IV

Firstly, there is a small errata to last months data Save & Load V2.0, for each occurrence of the word DISC, substitute the word USER. This error came about due to my FDXB (Disc Basic) changing the word USER to DISC (without telling me) when the program was saved to disc. So to anyone with discs, don't save the MTX data Save & Load on them as it will be corrupted. Onto this months task, the Display option, number 7 on the main menu. I have gone to quite some trouble with this option, as I feel that data display is very important, to this end I have created three options, details of which follow:-

Option 1:-Complete listing for address labels.

This will produce a listing of the complete file and is designed primarily for use with address labels, A printer 'Toggle' is provided to switch output to either Screen or Printer. Another feature is a line-up routine, this is very useful for getting your labels in the correct position prior to printing.

Option 2:-Listing of 1 field from each record.

This is handy for obtaining selected information from your data file, whether it be peoples names, stamp values or whatever. Again the printer Toggle option is available, to channel your output to a print device.

Option 3:-Find & display option.

Handy for finding out information about one particular record, or for finding matching occurrences of words throughout a file. Your input is checked against each field, if it matches, the record to which that field belongs is printed. N.B. I have intentionally made this option only to the Screen as I feel that this option is only intended to obtain a quick reference to a particular file and not for lasting reference.

General Notes

The design of the screen used for the display option is different to that used previously, what I have done, is create a second text screen using the CRVS command which is smaller than the 24 * 40 whole screen (V55), it is infact 15 * 36 characters, this I have 'laid' over the

normal text screen roughly in the middle. What this has done for me is to create a window onto which I will display my data, leaving the rest of the screen free, ie the title at the top, the printer toggle option and the return option. Thus when data is displayed to the screen it will only scroll in the window and not in the whole screen, leaving my titles etc free from scrolling. N.B. the scroll is set to 'Page' mode, this means that it will pause when data is printed on the last line until you press any key to make it continue, pressing PAGE on the keypad will toggle this option off and allow the scrolling to continue un-interrupted.

Please note that you will have to include the new variable WORD\$(1,30) in your list of DIM'ed variables at the beginning of the program. The reason for this new variable is to do with the Find and Display option, matching string variables turned out to be quite complicated and would take a page or so to explain, so for now suffice to say that comparing strings for equality is not straightforward, infact it gave me quite a bit of 'jip!'. More about this in a future issue. (Ed-) I've made a note about it on a spare piece of paper I just happen to have laying around)??...

Notes

There is no reason why you cannot update the sub-menu to include any options for data display that you may require, as always I would be grateful if you would send them in so that I can include them in my program and pass them on to others.

Next month...Amending your records.

```
5 REM-----
10 REM DBASE BY PHIL EYRES V2.0
20 REM-----
30 DIM FILE$(100,6,30)
40 DIM FNAME$(6,20),REC(1)
50 LET REC(1)=0
60 DIM FIELD(1),DUMMY$(1,30)
70 DIM Z$(30),WORD$(1,30)
```

CONT'D OVERLEAF


```

6997 REM-----
6998 REM PRINT FILE
6999 REM-----
7000 VS 5: CLS : LET TOG=0
7010 CSR 14,1: PRINT "PRINT - FILE"
7015 FOR P=1 TO FIELD(1)
7020 CSR 5,21: PRINT "'R' RETURN TO MAIN MENU"
7030 CSR 5,22: PRINT "'T' PRINTER TOGGLE OFF"
7040 IF REC(1)=0 THEN CSR 12,5: PRINT "!!! FILE EMPTY !!!": PAUSE 500
0: RETURN
7050 CRVS 2,0,2,5,36,15,40
7060 VS 2: CLS : PAPER 5
7070 CSR 5,1: PRINT "1. DISPLAY ALL RECORDS"
7080 CSR 5,3: PRINT "2. DISPLAY ONE FIELD IN EACH"
7090 CSR 5,4: PRINT "RECORD"
7100 CSR 5,6: PRINT "3. FIND FIELD AND DISPLAY"
7110 CSR 5,8: INPUT "ENTER CHOICE";CHOICE#
7120 IF CHOICE#="T" AND TOG=0 THEN LET TOG=1: VS 5: CSR 24,22: PRINT
"ON ": VS 2: GOTO 7110
7130 IF CHOICE#="T" THEN LET TOG=0: VS 5: CSR 24,22: PRINT "OFF": VS
2: GOTO 7110
7140 IF CHOICE#="R" THEN RETURN
7150 LET CH=ASC(CHOICE#)-48
7160 IF CH<1 OR CH>3 THEN GOTO 7110
7170 ON CH-1 GOSUB 7200,7600,7800
7180 GOTO 7000
7199 REM *** OPTION 1 ***
7200 VS 2: CLS
7205 IF TOG=0 THEN GOTO 7500
7210 CSR 5,5: PRINT "HOW MANY LINE-FEEDS"
7215 CSR 5,6: INPUT "BETWEEN LABELS?";LAB
7220 VS 2: CLS
7230 CSR 10,1: PRINT "LINE-UP ROUTINE"
7240 CSR 5,5: PRINT "MAKE SURE PRINTER IS ONLINE"
7250 LPRINT "*****"
7260 LPRINT "*"
7270 LPRINT "*"
7280 LPRINT "*"
7290 LPRINT "*"
7300 LPRINT "*****"
7320 CSR 15,7: INPUT "OK(Y/N)?";CHOICE#
7330 IF CHOICE#<>"Y" THEN GOTO 7240
7339 FOR A=1 TO LAB: LPRINT : NEXT A
7340 VS 2: CLS
7350 CSR 15,10: PRINT "PRINTING..."
7370 FOR I=1 TO REC(1)-1
7380 FOR P=1 TO FIELD(1)
7390 LPRINT FILE$(I,P)
7400 NEXT P
7410 FOR A=1 TO LAB: LPRINT : NEXT A
7420 NEXT I
7440 CSR 8,7: PRINT REC(1)-1;" RECORDS PRINTED"
7450 PAUSE 5000
7460 RETURN
7500 FOR I=1 TO REC(1)-1
7510 FOR P=1 TO FIELD(1)
7520 PRINT FILE$(I,P)
7530 NEXT P

```

CONT'D OVERLEAF

```

7540 PRINT
7550 NEXT I
7560 CSR 15,10: PRINT REC(1)-1;"RECORDS PRINTED"
7570 PAUSE 5000: RETURN
7599 REM *** OPTION 2 ***
7600 VS 2: CLS
7610 CSR 9,1: PRINT "DISPLAY FIELD OPTION"
7615 IF REC(1)=0 THEN CSR 5,5: PRINT "FILE EMPTY": PAUSE 5000: RETURN

7620 CSR 8,4: PRINT "WHICH FIELD WOULD YOU"
7630 CSR 11,5: PRINT "LIKE DISPLAYED"
7640 CSR 12,7: PRINT "FROM 1 TO";FIELD(1);: INPUT NUM
7650 IF NUM<1 OR NUM>FIELD(1) THEN GOTO 7600
7655 IF TOG=1 THEN GOTO 7710
7660 CLS
7670 FOR I=1 TO REC(1)-1
7680 PRINT FILE$(I,NUM)
7690 NEXT I
7700 PAUSE 5000: RETURN
7710 CLS : CSR 10,10: PRINT "PRINTING..."
7720 FOR I=1 TO REC(1)-1
7730 LPRINT FILE$(I,NUM)
7740 NEXT I
7750 RETURN
7799 REM *** OPTION 3 ***
7800 VS 2: CLS
7810 CSR 8,1: PRINT "FIND AND DISPLAY OPTION"
7820 CSR 10,5: PRINT "TYPE IN STRING OF"
7830 CSR 10,6: PRINT "CHARACTERS TO BE"
7840 CSR 15,7: PRINT "FOUND"
7845 CSR 15,9: INPUT WORD$(1)
7850 CSR 10,9: PRINT "SEARCHING FOR ";WORD$(1)
7860 LET SEARCH=1: LET FLAG=0
7870 LET COUNT=1
7880 IF FILE$(SEARCH,COUNT)=WORD$(1) THEN GOSUB 7940
7890 LET COUNT=COUNT+1: IF COUNT>FIELD(1) THEN LET SEARCH=SEARCH+1 ELSE
GOTO 7890
7900 IF SEARCH>REC(1)-1 AND FLAG=0 THEN CSR 10,12: PRINT "!! WORD NOT
FOUND !!": PAUSE 5000: RETURN
7905 IF SEARCH>REC(1)-1 THEN GOTO 7920
7910 GOTO 7870
7920 INPUT "      OK TO RETURN TO MENU (Y/N)";CHOICE$
7930 IF CHOICE$="Y" THEN RETURN ELSE GOTO 7920
7940 IF FLAG=0 THEN CLS
7950 FOR I=1 TO FIELD(1)
7960 PRINT FILE$(SEARCH,I)
7970 NEXT I
7975 PRINT
7976 LET FLAG=1
7980 RETURN

```

!!! THAT'S ALL 'TILL NEXT MONTH !!!

16 BIT MULTIPLICATION USING ASSEMBLER

As probably most 'budding' assembler programmers will agree, shuffling data around memory is quite easy as is integer additions and subtractions, so long as they occupy no more than two bytes. But what of multiplication and subtraction?, well most will probably know that shifting or rotating left, multiplies a number by two, like-wise, shifting or rotating right divides by two. But, what if you want to multiply 7 and 10, or even worse, 50 and 60, where your answer will have to occupy 2 bytes (16 bits). Well, life does become somewhat complicated, but of course it is possible, and below is a listing of a short routine that will do the multiply for you.

The data byte ICAND (multiplicand) should be loaded with one number, IER (multiplier) should be loaded with the multiplier, when run the data word ANS will hold the answer. The answer will be held in (last in first out) format ie £F001 will look like this £01 £F0. Multiplicand, Multiplier and Answer are in Hex, as we did not want to make this unnecessarily complicated.

```

                LD D,0
                LD HL,IER
                LD C,(HL)      ;LOAD C WITH MULTIPLIER
                LD HL,ICAND
                LD A,(HL)
                LD E,A        ;LOAD DE WITH MULTIPLICAND
                LD HL,0       ;SET HL TO 0, IT WILL HOLD ANSWER
                LD B,8        ;8 LOOPS
NEXBIT:        SRL C          ;
                JP NC,NOADD   ;
                ADD HL,DE     ;
NOADD:        DEC B          ;ROUTINE TO MULTIPLY
                JR Z,DONE     ; DE BY C
                RL E          ;
                RL D          ;
                JR NEXBIT    ;
ICAND:        DB £FF        ;LOAD WITH MULTIPLICAND
IER:          DB £FF        ;LOAD WITH MULTIPLIER
DONE:        LD (ANS),HL
                RET
ANS:         DW 0           ;THE ANSWER IS STORED HERE IN 2 BYTES

```

Next month we'll print a routine to do a 16bit division, the technique of which is much the same. Perhaps now the evenings are drawing in, you might like to try and solve this one for yourself.

Please do not ask me to explain floating point maths, as at the moment I have not even managed addition and subtraction. No doubt I will 'crack' it one day.

HARDWARE AND SOFTWARE PRICE LIST

Prices have dropped yet again at Memotech, they have informed us that they do not foresee another price drop, we have taken this to mean that they have cut their prices to the bone. If you look at the new prices you will probably think (like us), how the hell are they making any profit, a computer that a year ago cost £315 is now selling for £130. I do hope that this does not mean they are just clearing remaining stocks, with a view in mind to leaving the British market.

But anyway, here are the latest price lists, you might like to look at them as a Christmas shopping list, since the prices are now so low!!

MEMORY EXPANSION BOARDS

32K	£40.00
64K	£50.00
128K	£80.00

SPECULATOR	£40.00
NEWWORD ON ROM	£40.00
PASCAL ON ROM	£40.00

DMX80 PRINTER	£200.00
(INCL. CONN. CABLE AND P & P)	

SDX500K +I/F	£250.00
SDX1MB +I/F	£300.00

SDX500K +I/F	
+80 CDL,+CP/M	
NW & SC	£400.00

SDX1MB	
(AS ABOVE)	£450.00

FDX 1 * 500K	£600.00
FDX 2 * 500K	£650.00

SILICON DISCS 500K	£165.00
SILICON DISCS 1MB	£499.00

We have hung on to the very last minute to print this page in the hope that the software price lists promised from Syntax Soft would arrive, but alas time has run out, we have waited three weeks and can wait no longer, this page must go to print. So for another month we have no real software to advertise. We are sorry about this but it is out of our control.

This is all that we have in stock to offer at the moment :-

Zarkos	£6.00
Dogo2	£6.00
Surface Scanner	£6.00
Chamberoids	£6.00
Fathoms Deep	£6.00
Dungeon Adventure	£6.50
Colossal Advent.	£6.50

!!! Super Cheapies !!!
(Only from stock)

First Letters	£3.00
Felix Factory	£3.00
Obloids	£3.00
Music Pad	£3.00
Maxima	£2.50

Interfacing Kits From MOC

We have two kits available at present, with plans for a further kit in the offing, this will be an A to D converter, should it get off the ground. However, at present this is what we have to offer:-

Internal Connecting lead	£4.50	Cheques to MOC please
LED interface kit	£6.50	
Speech Synthesiser Kit	£18.00	

PROGRAM OF THE MONTH PANEL FIND

By

Ian Heath

Below is the listing of my 'Find' routine for PANEL. It relocates itself at \$F000, and uses FEXPAND (\$FA9E) to add two new commands to the Panel. These are "F" which allows a series of one byte Hex numbers to be entered (one at a time, up to a maximum of eight) which are then searched for. "N" looks for the next occurrence of the byte(s). Note: As the numbers are entered one at a time, <RET> on it's own terminates the series of numbers. (Eg. to search for C3 followed by D2, you type: C3 <RET> D2 <RET> <RET>). When saving any program after using Find, it is a good idea to Reset \$FA9E to \$C9 as FEXPAND is saved with the system variables and will mean the machine will crash if Panel is entered after reloading the program without Find in memory.

```

; Panel FIND by Ian Heath
; Uses System Variable FEXPAND ($FA9E),LASTASC ($FD7D)
;                               MEMPOINT ($FDA1).
; Code relocated from $F000 to $F0B0.
    LD A,$C3
    LD ($FA9E),A ;SET SYSTEM VARIABLES
    LD HL,$F000
    LD ($FA9F),HL
    LD HL,START
    LD DE,$F000
    LD BC,$80
    LDIR ;RELOCATE PROGRAM INTO HIGH MEMORY
    RET
    RET
    RET
START: LD A,($FD7D) ;START OF FIND ROUTINE
    SET 5,A
    CP "n" ;READ KEYBOARD TO SEE IF "n" KEY
    JR Z,SEARCH ;HAS BEEN PRESSED
    CP "f" ;OR "f" KEY?
    RET NZ
    XOR A ;IF "f" KEY CONTINUE
    LD B,A ;"n" GOTO SEARCH
    LD ($F06F),A
    LD DE,$F070
LP1: PUSH DE
    PUSH BC
    RST 28 ;CALL TO DISPLAY ROUTINE
    DB $AB,"Fin", $E4 ;DATA FOR DISPLAY
    POP BC
    POP DE
    JR Z,ENDF
    LD A,L
    LD (DE),A ;INPUT UP TO 8 HEX BYTES
    INC DE ;$F06F HOLDS NO. OF BYTES ENTERED
    INC B
    LD A,B
    CP 8
    JR NZ,LP1
ENDF: LD A,B ;CONTINUED OVERLEAF

```

```

SEARCH:  LD (#F06F),A
        LD A, (#F06F)
        CP 0
        RET Z
        LD DE, (#FDA1) ;LOAD DE WITH 'DISPLAY' VALUE!
        LD BC, #FFFF ;LOAD BC WITH TOP OF MEMORY
        INC DE
LP2:    PUSH BC
        PUSH DE
        LD A, (#F06F) START OF ACTUAL FIND
        LD B, A
        LD HL, #F070
LP3:    LD A, (DE)
        CP (HL)
        JR NZ, NEXT
        INC DE
        INC HL
        DJNZ LP3
        POP DE
        POP BC
        LD (#FDA1), DE ;WHEN MATCH FOUND SET DISPLAY
        RET ;VARIABLE TO MEMORY LOCATION
NEXT:   POP DE
        POP BC
        INC DE
        DEC BC
        LD A, B
        OR C ;CONTINUE FIND
        JR NZ, LP2
        RST 10 ;NO MATCH!
        DB #6F, #8A, "Not Found."
        LD B, 0
LP5:    HALT ;PAUSE DISPLAY FOR A 'BIT'
        DJNZ LP5
        RET
        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
        DB 00,0,0,0,0

```

!!! THANKS IAN HEATH !!!

(Ed-> Those that remember the Panel utility printed in issue 4, volume 1 (or see section 3 of program library!) may like to try and merge these two utilities into one!.

The only way I can think of to improve this routine, would be to make it totally memory independant, this would mean giving the data bytes at the end DB 0,0,etc. a Label and call that instead of #F06F.

...And for the beginners, this program is entered via your assembler (See you manual) it is then RUN, this relocates it and sets the variables. To use it enter your Front Panel and type "F" and all should come clear if you follow the instructions at the beginning of the program).

YOUR LETTERS

*** Games High Score Table ***

TOADO	107549	N.GOODING	BLOBBO	71233	T.PICKSTONE
NEMO	11080	P.CRIGTON	OBLOIDS	60040	M.GELDER
P.PETE	39630	A.DOBSON	MISS.ALPH	43840	T.PICKSTONE
KILOPEDE	33440	P.CRIGTON	GOLDMINE	6025	P.CRIGTON
CONT RAID	10810	M.GILL	STAR COMM	90410	P.CRIGTON
MAXIMA	252830	M.GILL	TURBO	23030	M.GELDER
QOGO 2	191680*	P.COUGHLAN	ASTRO PAC	69390	A.DOBSON
COBRA	5634	A.DOBSON	SNAPPD	67100	A.DOBSON
T FIGHTER	2350	N.CRIGTON	S M/FIELD	829	P.CRIGTON
ASTROMIL.	3070	A.DOBSON	PHAID	1965	A.DOBSON
SON OF PETE10542*		P.ERIKSSON	F.DEEP	1290	A.DOBSON
S.SCANNER	7340	A.DOBSON	ICEBERG	17431	A.DOBSON
KNUCKLES	488650	P.CRIGTON			
FELIX	20600*	P.COUGHLAN			
TAPEWORM	168515	A.DOBSON	AT LEVEL 1		
	150500	A.DOBSON	AT LEVEL 9		
BOUNCING BILL	219,610	A.DOBSON	LEVEL 1		
BOUNCING BILL	158,334	A.DOBSON	LEVEL 5		
SNOWBALL	1000*	P.COUGHLAN			
AGROVATOR	61828	A.DOBSON			
HAWKWARS	15850*	P.COUGHLAN			
CHAMBERIDS19 MINS*		P.ERIKSSON			
TARGET ZONE	7610*	P.ERIKSSON			
FLUMMOX	3830*	P.ERIKSSON			
SNAPPD	79300*	P.ERIKSSON			

* Denotes new high score.

Hints & Tips

1. Ken Fernandies of Moray Scotland sends in this dealers name and address in the hope that it will be of some use to other members:-

JKL Computers
7 Windsor Street
Uxbridge
UBB 1AB Tel. (0895) 51815

2. ALICE hints for a MTX 500

Load Alice! ...press RESET keys

A.10 <RET>

8007 RET

Type in the following code (It will print out everything that the Alice program does!)

(It tells you all the commands locations, objects and helps!)

8007 LD HL,£840D

START :LD A,(HL)

INC HL

CP 32

JP C,START

CP 35

JP Z,RET

CP 36

JP Z,CLS

CONT'D AT TOP OF PAGE

LD (CHAR),A

RST 10

DB 129

CHAR: DB 0

JP START

RET: RST 10

DB 130,13,10

JP START

CLS: CALL £157C

CALL £1595

JP START

3. Mario Cremona has this SOUND advise :-

Here is a program demonstrating the good sounds of the Memotech. When finished the program I noted that the SBUF command was not placed as suggested by the manual. If you list the program you will notice that the SBUF has a very small value, infact only 2. The way 0 SBUF was inserted after the FOR command effected the time parameter too. Because when placing the SBUF after the FOR statement the 6th Sound parameter (time) has no effect. Instead a pause was inserted afer the Sound command. The disadvantages are that both channels run simultaneously and the advantage is that the value of the SBUF (255) can be exceeded (I believe!). In the second part of the tune another channel is introduced without altering or adding the data. This was done by assigning channel 2 to read the same data and multiply it by 2 so that the main tune has an octave lower pitch running with it. The only problem I had was how to stop the sounds. 0,0,0/1,0,0/2,0,0 for stopping the sounds of channels 0,1 and 2 had no effect so I placed a very high pitch note number 8. This is not a very good method if the 5th sound parameter is not 0. For instance how can I stop this sound routine :-

10 SBUF 4

20 FOR A=1 TO 4

30 READ CHO

40 SOUND 0,CHO,240,0,0,35,1

50 NEXT

60 DATA 4048,2024,1012,506

Ed->The sound buffer takes time to empty after you fill it up with data, because of this it is necessary wait a while before entering the command SOUND 0,0,0.

Please find Mario Cremona's tune program printed overleaf. I strongly recommend that you take the time to enter this program in and get it running, the end result is well worth it.

P.S. The tune lasts about 2 and a half minutes!!!

```

1 VS 4: REM Set screen
2 PAPER 2: CLS : COLOUR 4,12: INK 1
3 COLOUR 3,15: LINE 0,191,255,191: LINE 0,0,255,0
5 CSR 2,6: PRINT "Recuerdos De La Alhambra"
6 CSR 2,7: PRINT "-----": CSR 2,10: PRINT "Composed
by": CSR 2,13: PRINT "Francisco Terrega (1852-1909)"
7 CSR 2,15: PRINT "arr.by Mario Cremona"
8 CSR 7,19: PRINT "Please turn vol. on": PAUSE 5000: CSR 7,19: PRINT "
": PAUSE 5000
20 REM RECURERDOS DE LA ALHAMBRA
22 REM BY MARIO CREMONA
25 GOSUB 30: GOSUB 29: GOSUB 210
26 CSR 7,19: PRINT "Press BRK to stop": PAUSE 5000: RUN
29 RESTORE 100
30 FOR A=1 TO 120: REM Start of first peice
40 SBUF 2
50 READ CH0,CH1
60 SOUND 0,CH0,800,0,0,5,1
70 SOUND 1,CH1,960,-.6,0,5,1
80 PAUSE 380
90 NEXT
100 DATA 6064,2024,4048,2024,2552,2024,4048,2024,2708,2272,4048,2272,6
064,2552,4048,2552,3032,2552,4048,2552,2708,2272,4048,2272
110 DATA 6064,2024,4048,2024,2552,2024,4048,2024,2552,2024,4048,2024,6
064,2024,4048,2024,2552,2024,4048,2024,2272,1912,3400,1912
120 DATA 5104,1704,3402,1702,2024,1702,3402,1702,2272,1912,3402,1912,5
104,2024,3402,2024,2552,2024,3402,2024,2272,1912,3402,1912
130 DATA 5104,1704,3402,1702,2024,1704,3402,1702,2024,1702,3402,1702,
5104,1704,3402,1702,2024,1702,3402,1702,2024,1702,3402,1702
140 DATA 3824,1276,2552,1276,1516,1276,2552,1276,1702,1354,2552,1354,3
824,1516,2552,1516,1912,1516,2552,1516,4544,1354,1912,1354
150 DATA 8024,1516,2708,1354,2024,1609,2708,1609,2024,1609,2708,1609,8
096,1609,2272,1609,2024,1609,2272,1609,2024,1609,2272,1609
160 DATA 6064,1432,2412,1432,2024,1432,2412,1432,2024,1516,2412,1516,4
824,1702,3032,1702,2024,1702,3032,1702,1912,1516,3032,1516
170 DATA 4544,1702,2024,1516,2272,1912,3032,1912,2272,1912,3032,1912,4
544,1912,3032,1912,2272,1912,3032,1912,2272,1912,3032,1912
180 DATA 4544,2024,3032,2024,2708,2024,3032,2024,2708,2272,3032,2272,7
648,2552,4296,2552,3032,2552,4296,2552,3032,2272,4048,2272
190 DATA 8096,2552,4048,2272,3218,2708,4048,2708,3218,2708,4048,2708,
8096,2708,4048,2708,3218,2708,4048,2708,3218,2708,4048,2708
200 RETURN : REM go back to start first part again
206 REM Start of second peice
210 FOR B=1 TO 137
215 SBUF 2
220 READ CH0,CH1
230 SOUND 0,CH0,800,0,-.5,5,1
240 SOUND 1,CH1,960,-.8,0,5,1
250 SOUND 2,CH1*2,288,-.6,0,5,1
251 PAUSE 363
360 NEXT
370 DATA 6064,2024,4048,2024,2412,2024,4048,2024,2708,2272,4048,2272,6
064,2412,4048,2412,3032,2412,4048,2412,2708,2272,4048,2272
380 DATA 6064,2024,4048,2024,2412,2024,4048,2024,2412,2024,4048,2024,6
064,2024,4048,2024,2412,2024,4048,2024,2412,2024,4048,2024
390 DATA 6064,1807,3614,1807,2272,1807,3614,1807,2272,1807,3614,1807,6
064,1136,2272,1136,1354,1136,2272,1136,2272,1807,3014,1807
400 DATA 6064,1807,2272,1609,2412,2024,4048,2024,2412,2024,4048,2024,6
064,2024,4048,2024,2412,2024,4048,2024,2412,2024,4048,2024
410 DATA 7228,1516,3614,1516,3032,1516,2412,1516,3032,1516,3614,1516,6
436,1609,3218,1609,2552,1609,2148,1609,2552,2148,3218,2148
420 DATA 4824,1807,3216,1807,2412,2024,3218,2024,2412,2024,3218,2024,4
824,2024,3218,2024,2412,2024,3218,2024,2412,2024,3218,2024
430 DATA 5416,2272,7648,2272,3824,2272,4544,2272,4048,2272,3834,2272,8
096,2412,4048,2412,8096,2412,4048,2412,8096,2708,4544,2708
440 DATA 6064,2708,4048,2412,8096,3032,4048,3032,3614,3032,3218,3032,6
064,3032,4048,3032,4824,3032,4048,2708,3032,2412,2708,2272
530 DATA 6064,2024,4048,2024,2412,2024,4048,2024,2708,2272,4048,2272,6
064,2412,4048,2412,3032,2412,4048,2412,2708,2272,4048,2272
540 DATA 6064,2024,4048,2024,2412,2024,4048,2024,2412,2024,4048,2024,6
064,2024,4048,2024,2412,2024,4048,2024,2412,2024,4048,2024
560 DATA 6064,1516,4048,1516,2412,1516,4048,1516,2412,1516,4048,1516
570 DATA 6064,1516,4048,1516,2412,1516,4048,1516,2412,1516,4048,1516,6
060,1516,6064,1516,6064,1516,6064,1516,8,8
580 RETURN

```

Reviews... Reviews... Reviews... Reviews... Reviews... Reviews...

SOFTWARE REVIEWS

QUANTUM - By Jim Thoms.
Publisher SyntaxSoft
Price \$5.95

Play 'Ye Olde Worlde' Breakout - Syntaxsoft's variation on the old arcade game.

Hint : obtain a good book and a comfortable chair - title screen produced using Memosketch - then settle down for 3.5 minutes while the program loads.

The screen is divided into quadrants with a king hiding behind a castle wall in each. You, the knight, must deflect the cannon-ball, in true breakout style, and knock out the bricks to expose the poor king and kill him.

When all 4 kings have been disposed of a new screen is presented, or rather a variation on the first screen. Game two consists of just trying to kill the 2 kings on the right of the screen !

You are given just 1 life and even if kings and castles have been destroyed, and you are into game 2, the screen is completely restored and game 1 restarts. This makes for S L D W progress. A clock decrements to mark the end of your 'turn' but as there is no high score kept and no facility for two players this seems unnecessary.

The knight can be killed by a cannon-ball to the rear, so to speak, and running into the returning missile. Two speeds are offered at the start of each new game. There is one other feature that I will let you find out for yourselves, but it is of little consequence.

This is a good game ruined by careless design, the display is bright and colourful with reassuring clangs and bongs for sound effects. As it stands it is rather crude compared to other games of this type and the continual dropping back to the start on losing a life is irritating and unnecessary; a pity I enjoy breakout type games.

Marks out of 5

Playability - 3 (joysticks are a must)
Lasting Interest - 2
Graphics - 3 Reviewed by Tony Street & Co.
VFM - 2

Dr Frankie
Publisher Syntaxsoft

The first thought that struck us after the loading sequence had ended was: Oh no! Not another Pothole Pete! and we were right. All the elements are there, collapsing platforms, assorted meanies, objects to be collected etc. But even with this, we found that the game gave us no real incentive to have just one more go. To complete the game, you only have to negotiate twelve screens. Each room is well designed, but let down by the quality of the graphics which, on the whole, could only be described as average.

Another disappointment was the lethargic nature of the game making Dr Frankie appear as if he is wading through treacle. As for the sound (what sound!) you would think the Memotech sound chip was up to more than a few blips and beeps here and there.

In summing up, we would say that if this game had been released a year or so ago, it would have been better received. Now, after seeing other games such as Miner Dick and Escape From Zarkos, it is a poor comparison.

Playability 3+ (If you don't mind treacle.)
Graphics 2+
L Interest 2-
VFM 2

Ian Heath And Sean Newman
(The Hemel Hackers)

!!! Another Review Overleaf !!!

Reviews... Reviews... Reviews... Reviews... Reviews... Reviews...

PROGRAM REVIEW

By
Paul Schofield

NAME: ED/AS
TYPE: Editor / Assembler
SUPPLIER: Syntax Software
PRICE: £7.95

RATINGS:

FACILITIES: *****
IMPLEMENTATION: *****
DOCUMENTATION: ***
VALUE FOR MONEY: *****

A question many people are likely to ask is "why should anyone want to buy a tape based Editor / Assembler for the home micro with the best built-in assembler of any produced to date?". Unfortunately, however, although the MTX assembler is excellent for imbedding machine code routines in BASIC programs and writing individual machine code programs, it lacks the type of facilities needed for the creation of libraries which are to reside high in RAM and also has no macro definition facility. ED/AS has these facilities and more.

Load up, run and select a new edit file and the Editor tells you that you are in CHANGE mode and the cursor is in column 1. Although it uses almost every control code, most of the edit keypad and half of the function keys it is quite easy to get started with the Editor. Most of the positional and correction commands are what you would expect and it will probably be many lines and many corrections before you delve into the manual. The nice thing is that as you look for more complex commands, you find that they are nearly all there. In fact for a cassette based editor the range of features is remarkable - multiple find and replace (with confirm option), cut and paste, file merge, block copy, horizontal scrolling up to 128 columns, the list goes on. In fact it is quite usable as a simple word processor.

Of course the Editor is only half the package and the Assembler is just as good. It has everything that Tandy's EDTASM had plus an extended Macro facility, conditional assembly (IF-THEN-ELSE) and iteration (WHILE and REPEAT-UNTIL). In fact the whole instruction set is defined in terms of Macros. The user can extend the Macro Library or create a new one and then generate a customised version of the Assembler. In theory this provides the facility to cross-assemble to another machine, but more practical applications are the definition of an intermediate level language or a graphics library.

With such complex facilities, good documentation is essential and unfortunately this is a disappointment. There is a single 20 page manual, which of necessity is cheaply produced. It does, however, contain all the necessary information, but some sections are rather terse and with no index or contents list it is not easy to use for quick reference.

Almost everything complimentary so far, but I never believe reviews that say nothing bad about a product, so what didn't I like about ED/AS? Well really only two minor grumples. Sensibly ED/AS uses standard Z80 pseudo-ops and notation rather than those used by Memotech, but for some reason DB is used instead of DEFB, DEFW etc.. The second gripe may only concern my copy. The supplied tape requires an abnormally high load volume, whereas the files produced require a low volume. Fortunately a good source file verification command avoids any real problems.

My main interest in this package was to create a file of procedures and data structures high in RAM for use with Pascal programs and so far it's come up trumps. I've even started using the MTX for letter writing instead of the VAX at work. It's not quite EDT and MACRO-11, but it comes pretty close, which is pretty remarkable for a home micro and at the asking price of just £7.95 it represents exceptional value. The MTX has always been a micro which appealed to programmers, so ED/AS should prove a real winner.

Paul Schofield
Switzerland

PROGRAM LIBRARY

£1 Per Cassette, 2 Programs per Cassette

This part of the club really seems to be taking off now, again I have sent out over 50 cassettes, which isn't bad since I was on holiday for two weeks. This months contributions have a definite err towards very high quality, with 3 new titles in the Basic library. Also I've started a Turbo Pascal DBASE program for those interested and also for the very unsupported CP/M Disc user three programs of real class. Phil

1. Basic & Assembler Programs

- 1.Hex-Dec-Bin Conversions. (Binary Bit In Assembler)
- 2.CGEN Sprite Generator.
- 3.3D Drawing Board. Rotate a skeleton of a cup & saucer in 3D.
- 4.Whist. The Card Game
- 5.Memory Save. This Utility will Save a block of memory to tape and retrieve it.
- 6.MTX Drawing B'rd. ;Two basic drawing boards, MTX DB has
- 7.LOGO Drawing B'rd.;more extensive commands
- 8.Simplex Tablaeux. 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 of
- 21.Noble ; Simple Text Game Graphics)
- 22.Hi-Lo ; Just like Bruce's Play Your Cards Right
- 23.Composer ; Our First Sound Generator!!
- 24.Anova ; ** New ** Applications Program
- 25.CASHFLOW ; ** New ** Applications Program
- 26.RenumIII ; ** NEW ** Utility

2. Programs/Procedures in Pascal

(Available as listings or on disc. Please provide sufficient postage to cover club costs!!)

1. DBASE for Disc Turbo Pascal
- 1(a). Comprehensive Create File Procedure
- 1(b). Simple Display File Procedure

3. Articles From Previous Magazines

- 1.PANEL2 Utility. As above but updated to include 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 Iss4,5,6)
- 7.System Variables (Not Previously Published!!)

4. CP/M Programs/Utilities

(!!! Available only on disc !!!, please send in a formatted disc stating capacity and enough postage to cover).

- 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. (Ensure that you send in at least 250K of blank disc!!)
- 2.PLOT33 A new graphics plotting package. 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!! (Ensure that you send in at least 300K of blank disc for this one).
- 3.SEDIT A program written in FDxB basic. Not fully working but comes with 3 very impressive 'piccies' ready to display.

5. Program Reviews

RenumIII ->An enhancement of renumberII, it now includes Step and Trace facilities. This allows you to step through programs a line at a time or in a slow mode. A great help when trying to find those annoying little 'bugs'.

Cashflow ->This is a super program from Alan Dobson, it'll calculate your cash flow for you and perhaps keep that 'nasty' bank manager from your door for a little longer. This one is a real must for anyone who is into good, neat well written programs. Oh! and it is very simple to use as it is well documented!!!.

Anova ->Another program from Liam Redmond of Quasimodo fame, but wait before you send for it, this is an applications program not a game, it is a well written program which might have it's uses, especially if your'e into matrices. This is fairly heavy maths, Einstein would have loved it, but it is not really for average mortals, that is unless your interested in programming structure, then perhaps a listing might be of some use to you!

Ed->Just a 'quicky' about my DBASE Pascal procedures, they are written for Turbo III although I expect they will run on lesser versions or infact any disc Pascal. The Create file is finished and I've started on the Display. These procedures use true Random access files and as such should prove very quick even when data files start to become large.

PASCAL PROCEDURES

Wulf Ireland has sent in the first Pascal Procedures to be published in the MOC magazine, they are intended to run on an MTX and Pascal Rom, they will be of little use to anyone with a disc based Pascal such as Turbo Pascal as Turbo runs under control of the CP/M operating system not the MTX operating system.

```
PROGRAM DEMO;
VAR Z: INTEGER; Y: REAL;
{-----}
PROCEDURE SETIM;
(* SET the clock by inserting 6 ASCII number values, ie: 30H OR
48 dec., FOR '0' (ZERO), and so on. *)
VAR A,B: INTEGER;
BEGIN
  FOR A:=&FD57 TO &FD5C DO
    BEGIN
      READ(B);POKE(A,B); (* Enter the ASCII values *)
    END (* READ loop *)
  END; (* SETIM *)
{-----}
PROCEDURE ZEROTIM;
(* Will set the clock to zero at run time *)
VAR A: INTEGER;
BEGIN
  FOR A:=&FD57 TO &FD5C DO
    POKE(A,&30); (* Enters all zero's to the clock *)
  END; (* ZEROTIM *)
{-----}
PROCEDURE TIM;
(* To read the time *)
BEGIN
  WRITE (PEEK(&FD57,ARRAY[1..6] OF CHAR));
END; (* TIM. Once the clock is set it will keep running, so can
be called up during any program *)
{-----}
PROCEDURE CSR(X,Y: INTEGER);
(* Simulate BASIC CSR command *)
VAR A: INTEGER;
BEGIN
  IF(X>=0)AND(Y>=0) THEN
    BEGIN
      WRITE(CHR(26)); (* Set Cursor to top left *)
      FOR A:=1 TO Y DO WRITELN;
      FOR A:=1 TO X DO WRITE(CHR(25))
    END (* Loops *)
  END; (* CSR *)
{-----}
(* Demo of the four Proc's *)
BEGIN
  ZEROTIM;
  WRITE('TIME ZERO'ED... ');
  TIM; (* Display the time..zero'ed.. *)
  WRITELN(' WAIT..');
  Cont'd Overleaf
```



```

FOR Z:=1 TO 10000 DO (* Set up a loop to waste some time *)
Y:=Z/2;
TIM; (* Now display the time taken *)
WRITELN('.....THAT'S THE TIME TAKEN TO EXECUTE THE LOOP ...
TRY IT IN BASIC SOME TIME');
WRITELN;WRITELN('NOW SET THE CLOCK TO AND TIME');
WRITELN('REMEMBER TO INSERT THE TIME IN SIX ASCII
CHARACTER VALUES, SEPARATED BY SPACES');
SETIM
WRITE('NOW READ THE TIME YOU HAVE SET, IN THE USUAL MTX
FORMAT :---');
TIM;
CSR(8,18);WRITELN('THIS IS CSR(8,17)');
CSR(2,20);
WRITELN('By Wilf Ireland, Manchester. JULY 1985')
END.

```

ROM ROUTINES... ROM ROUTINES... ROM ROUTINES... ROM ROUTINES...

MEMOTECH MTX-500/MTX-512 ROM ROUTINES			
ENTRY	ADDRESS	TITLE/ FUNCTION	REMARKS
HEX	DECIMAL		
10	16	RST 10	Graphics Control etc. Refer to Issues 3 & 9 of Vol 1
30	48	RST 30	Convert DEC to HEX Pre-load DE register with decimal value. Returns value in BC reg.
02E8	760	Print String	Prints string to screen DE reg. points to start of string LD DE,(FAB3) will print Keyboard Buffer. Terminate string with \$FF
064A	1664	RAM Page	Selects RAM page number Pre-loaded in A register
0079	121	GETKEY	Returns A Register with ASCII value of key pressed. 0 if no key pressed
0AAE	2735	Tape IN/OUT	LD HL, Starting Address LD DE, Number of Bytes LD A,0(Save) or LD a,1(Load) LD FD68H,A CALL 0AAE RET
0CAB	3243	Print A Reg.	Prints to Screen if (FD75) = 0 Prints to Printer if (FD75) = 1
0F86	3874	SOUND	"Pre-load" FE14H with CHANNEL(0to3) " FE16H " FREQUENCY " FE18H " VOLUME
1B50	4176	PRINT BC	Prints BC register to screen
1B55	4181	PRINT A	Prints Accumulator to screen

!!! MORE NEXT MONTH !!!

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