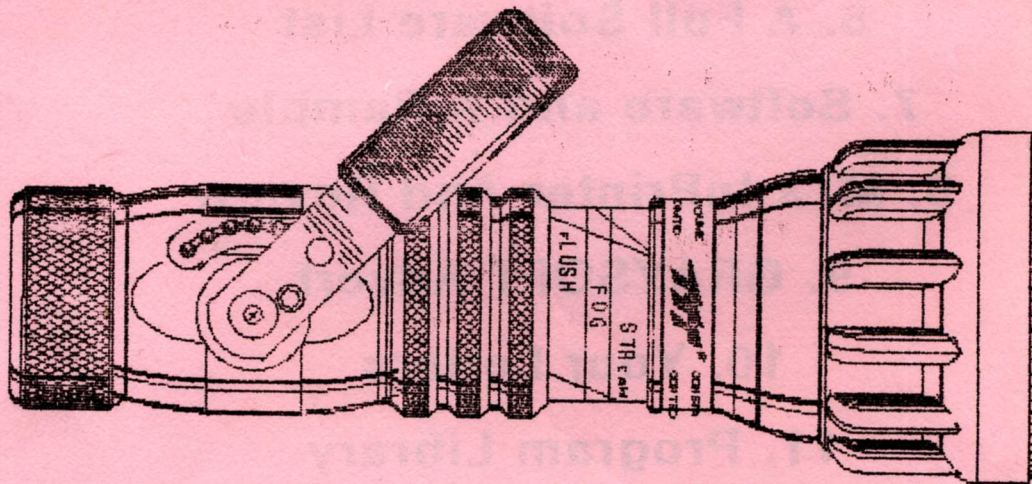


Vol 4 Issue 8

August 1988

The
MEMOTECH
Owners
Club
Magazine

MEMOTECHNIQUES



13 Copse Road

Townhill Park

Southampton

SO2 2GY

CIRCA ...344

M.O.C.

VOLUME 4 ISSUE NUMBER 8

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--- 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

EDITORIAL (August 1988)

Phil & Hazel Eyres
13 Copse Road
Townhill Park
Southampton

Firstly, and by far most importantly, SOFTWARE.

Orion have gone from initially having an answer phone to now just being unobtainable. They have vanished from the face of the earth taking with them all the software. We have managed to contact a few of the authors, who have agreed to let us take software on, which is a good start, but 99% of the titles are up in the air.

Our plan is this:-

1. To sell the software, keeping a track of what we sell, who we sell it too, and for how much.
2. To try and find as many of the authors as possible, paying them any royalties accrued, at a rate of #1 per title.
3. Obtain the titles we do not have. We have several titles, but there are plenty we do not have. See page 6 for details.
4. To take on any new software that people have and would like marketed.
5. To reduce the prices, in order to increase software sales.

We have had a few complaints about the new typeface not agreeing with the program listings very well. It is because the Publishing software insisted on making everything proportional. I am working on a fix, which I hope to have ready for next month. Until then, watch out for:-

This is a minus sign!!

< and > These tend to get lost when transferred from MTX to PC DOS. I do try and put them all back.

SPACES These are impossible to predict, when they come in block of more than four or five.

I should now be in most evenings, except for the odd game of squash, so I think that it would

be best to revert to having the Club Hotline between 7 and 8 pm any evening. Please where at all possible refrain from phoning after 9pm. I hope this is ok for everyone. The number to phone now is (0703) 585106, ask for Phil.

If anyone would like back issues they are available for the small remittance of 80p each. At present there are 37 back issues, 10 for volume 1, 10 for volume 2, 10 for volume 3 and 7 for volume 4.

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

Phil Eyres

Wanted

Does anyone have for sale an interface unit for a 5.25" 500K SDX disc drive, as mine has ceased to function, and Mr Gladwin of UK Home Computers is unable to locate replacement parts. I'm open to offers. Maybe there is someone who is able to repair these units, and if so I would be pleased to be put in touch with them.

James Hewson 4 Chartridge Branston Lincoln LN4 1UE.

INTERFACING PROJECTS

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

Interface price list A full set of components and instructions for the LED kit	#6.95
A full set of components and instructions for the Speech Synthesiser kit	#19.00
Connecting cable for the internal port (needed for projects)	#4.50

All prices are fully inclusive.

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

SOUNDS

By Nigel Cooper

This is an ACE little program from Nigel Cooper. We have not printed many programs that use the MTX sound generator. So here it is. The program has a handy little printer dump, which should help those of you (like me) that suffer brain failure now and then. The program is written to run on a 512. So if you have a 500 you will have to alter the two RAND USR statements at the bottom of the listing.

0 CODE

4007 JPANEL: LD A,#C3

4009 LD (#FA9E),A

400C LD HL,PANEL

400F LD (#FA9F),HL

4012 PANEL: CP 'P'

4014 RET NZ

4016 TEXT: NOP

4018 LD HL,7188

4019 CALL VRAMIN

401C LD HL,LINEFTP

401F LD C,6

4021 CALL PO1

4024 LD DE,960

4027 TPOUT:IN A,(1)

4029 LD B,A

402A CALL #0CE3

402D DEC DE

402E LD A,D

402F OR E

4030 JR NZ,TPOUT

4032 RET

4033 LINEFTP: DB 27,'A',12

4036 WIDTHTP: DB 27,'Q',40

4039 LINEFGM: DB 27,'A',8

403C WIDTHGM:DB 27,'K',0,1

4040 PBUFF: DS 8

4048 COUNTER:DS 2

404A POUT: LD C,4

404C PO1: LD B,(HL)

404D CALL #0CE3

4050 INC HL

4051 DEC C

4052 JR NZ,PO1

4054 RET

4056 VRAMIN: PUSH AF

4058 LD A,L

4057 OUT (2),A

4059 LD A,H

405A AND #3F

405C OUT (2),A

405E POP AF

405F RET

4060 GRAPHIC:LD HL,LINEFGM

4063 LD C,3

4065 CALL PO1

4068 LD HL,0000

406B LD (COUNTER),HL

406E CALL VRAMIN

4071 MLOOP: LD HL,WIDTHGM

4074 CALL POUT

4077 READDAT:LD HL,PBUFF

407A LD B,8

407C RD1: IN A,(1)

407E LD (HL),A

407F INC HL

4080 DJNZ RD1

4082 EPSON: LD C,8

4084 EP1: LD B,0

4086 LD D,8

4088 EP2: OR #00

408A DEC HL

408B RLC (HL)

408D JR NC,ZERO

408F SET 7,B

4091 ZERO: OR #00

4093 DEC D

4094 JR Z,SEND

4096 RR B

4098 JP EP2

409B SEND: CALL #0CE3

409E LD HL,COUNTER

40A1 DEC C

40A2 JR NZ,EP1

40A4 LD DE,1

40A7 LD HL,(COUNTER)

40AA ADC HL,DE

40AC LD (COUNTER),HL

40AF LD A,L

40B0 AND #1F

40B2 JR NZ,READDAT

40B4 LD B,10

40B6 CALL #0CE3

```

40B9      LD A,3
40BB      CP H
40BC      JR NZ,MLOOP
40BE END:  LD B,27
40C0      CALL #0CE3
40C3      LD B,64
40C5      CALL #0CE3
40C8      RET
10 REM **** SOUND EDITOR ****
20 SBUF 10:
30 VS 4: PAPER 1: CLS : PRINT CHR$(29):
COLOUR 4,3
40 LET SVOL=0: LET SFR=0: LET EVOL=0:
LET EFR=0: LET T=6: LET C=0: GOSUB 5000
50 LET K=ASC(INKEY$)
60 IF K=26 THEN GOSUB 6000
65 IF K=9 THEN GOSUB 7000
66 IF K=127 THEN GOSUB 7500
70 IF K=32 THEN SOUND C,0,0
80 IF K=11 THEN LET C=C+1: GOSUB 3000
90 IF K=10 THEN LET C=C-1: GOSUB 3000
100 IF K>1 THEN GOSUB 5000
110 IF K=128 AND SVOL<23 THEN LET
SVOL=SVOL+1: CSR 0,24-SVOL: COLOUR
1,11: PRINT CHR$(130);
120 IF K=129 AND SVOL>0 THEN LET
SVOL=SVOL-1: CSR 0,23-SVOL: PRINT " "
140 IF K=130 AND SFR<23 THEN LET
SFR=SFR+1: CSR 1,24-SFR: COLOUR 1,8:
PRINT CHR$(130);
150 IF K=131 AND SFR>0 THEN LET
SFR=SFR-1: CSR 1,23-SFR: PRINT " "
160 IF K=134 AND EFR<23 THEN LET
EFR=EFR+1: CSR T,24-EFR: COLOUR 1,8:
PRINT CHR$(130);
170 IF K=135 AND EFR>0 THEN LET
EFR=EFR-1: CSR T,23-EFR: PRINT " "
180 IF K=132 AND EVOL<23 THEN LET
EVOL=EVOL+1: CSR T+1,24-EVOL: COLOUR
1,11: PRINT CHR$(130);
190 IF K=133 AND EVOL>0 THEN LET
EVOL=EVOL-1: CSR T+1,23-EVOL: PRINT " ";
200 IF K=8 AND T>2 THEN GOSUB 1000:
LET T=T-1: GOSUB 1050
210 IF K=25 AND T<30 THEN GOSUB 1000:
LET T=T+1: GOSUB 1050
300 GOTO 50
1000 FOR I=0 TO EVOL-1: CSR T+1,23-I:

```

```

PRINT " "; NEXT
1010 FOR I=0 TO EFR-1: CSR T,23-I: PRINT "
"; NEXT
1020 RETURN
1050 FOR I=0 TO EVOL-1: CSR T+1,23-I:
COLOUR 1,8: PRINT CHR$(130): NEXT
1060 FOR I=0 TO EFR-1: CSR T,23-I: COLOUR
1,8: PRINT CHR$(130): NEXT
1070 RETURN
3000 IF C>3 THEN LET C=0
3010 IF C<0 THEN LET C=3
3020 RETURN
5000 LET SV=SVOL*41: LET
SF=(24-SFR)*340: LET EV=EVOL*41: LET
EF=(24-EFR)*340: LET TIM=T*8
5010 LET FI=INT((EF-SF)/TIM): LET
VI=INT((EV-SV)/TIM)
5020 CSR 0,0: COLOUR 1,15: COLOUR 0,4
5030 PRINT C," ";SF," ";SV," ";FI," ";VI," ";TIM," ";1
5040 COLOUR 0,1: RETURN
6000 SOUND C,SF,SV,FI,VI,TIM,1
6010 IF INKEY$ < > "" THEN GOTO 6010
6020 RETURN
7000 RAND USR(16480)
7010 RETURN
7500 RAND USR(16405)
7510 RETURN

```

Upgraded to DISC?

Ped up with waiting for games to **LOAD**?
AFW Software are proud to announce the
 launch of:

MTX Tape To Disc Conversion Booklet

This major work (37 A4 pages) allows the majority of commercially available **GAMES** software to be converted to any of the Memotech Disc Formats. Included are nine worked examples: Sepulcri, Quazzia, Kilopede, Agrovator, Qogo, Murder at the Manor, etc

The Laser printed booklet also covers the following topics: Memory, System Variables, PANEL (includes utility), the workings of the BASIC interpreter and includes a number of References for further reading.

Send a cheque or postal order for **£4.00**, payable to **AFW Software**.

20 Cambridge Road, Whitehaven, Cumbria.

MTX INPRINTER

By Paul S Jenkins

Do you want to transfer programs and data from another computer into your Memotech? You could use the serial ports, but what if you haven't got serial ports on your MTX? Or if you haven't got a serial port on your other computer?

Most computers (including the MTX) have a parallel or 'Centronics' printer port, through which the computer sends programs and data (usually text) to the printer. So even if your other computer can't send data through a serial port (e.g. if it does not have one) it can probably send the data to a printer port. All we have to do to capture this data is to connect a cable from the printer port on the other computer to the uncommitted parallel input/output port on the MTX.

Make The Connection The simplest connection could be made using a 20 way ribbon cable with a plug at each end, one to fit the socket on the printed circuit board inside the MTX, and the other to fit the printer output on the other computer. This system should work, provided we get the connection right, but it is a little inflexible. Different computers rarely use the same kind of connectors for their printer ports, so we would need a different cable for each computer.

However, if we look at the other computers printer cables, we usually find that it is fitted with a 36-way Centronics plug. (because most printers have a centronics socket). To make our cable suitable for many different computers, we need to fit a socket similar to that used in most printers, and then use the other computer's printer cable to connect to it.

Unfortunately Centronics sockets can cost over five pounds each, but at least we only need to make up one cable, so it should be cheaper in the long run.

Connecting two computers directly together should not present any problems, as long as they both use TTL signals, that is, approx. zero volts for logic low (binary zero) and approx. five volts for logic high (binary one). Sometimes, especially if long cables are used, these signals are not at the correct levels and data can be corrupted. For this reason it is better to provide some buffering to the signals, which will boost the levels to their correct values. Many computers already have such buffers in their printer ports, but some do not, so we have to provide them.

Figure 1 is a diagram of a direct connection between the MTX and another computer's printer port. Figure 2 shows the same circuit incorporating suitable buffers. These are two integrated circuits type 74LS245, costing about a pound each.

The interface is wired up to allow for virtually any Centronics printer port to be connected to it, but it's not enough just to connect the computers together through the interface, as we need some soft-

ware to tell the MTX how to accept the data from it's parallel input/output port.

Using the Software Type in the Inprinter listing and SAVE it. When run, this program will relocate itself above the BASIC area and set up a USER routine. Typing USER will cause the MTX to wait for the other computer to send a listing of a BASIC program. Go to the other computer, load a BASIC program and enter LLIST or whatever command is required for sending a program to the printer. You should see the listing appear on the MTX screen, line by line. It's best to start with a simple program of no more than 10 lines of REM statements, just for testing purposes.

When you see the last line of the computer program on the MTX screen, go to the other computer and enter LPRINT CHR\$(26); or the equivalent command (don't forget the semi colon). This will tell the MTX that there is no more data to wait for, and it will return to command mode, with the cursor in the edit screen. The program is now transferred so it's probably best to SAVE it immediately, by entering (on the MTX) SAVE "PROGRAM-NAME".

Edit The Program Because the MTX syntax-checks the lines of BASIC as they are entered, any syntax errors in the program which is being transferred will cause the MTX to stop with the "Mistake" error message, so the program must be edited on the other computer before it is transferred. This will usually mean removing all machine specific statements, adding the word LET to all assignment statements and adding the word GOTO or GOSUB to any conditional branch statements. These can usually be left out on other BASICs, but the MTX insists on them being included.

If you prefer to do the editing on the MTX then simply put a REM at the start of any lines which you think may cause problems, before transferring the program. Once the program has been transferred to the the MTX it can be edited in the normal way to get it working. This can take a long time!

How It Works The essential piece of code is the subroutine RCHAR which waits to receive a CHARACTER from the other computer (if no character is received it will wait indefinitely as interrupts are disabled, therefore the computer won't respond to the BRK key, so it is important not to run this program if nothing is connected to the I/O port.) This part of the program can be used separately if all you want to do is receive characters from another computer, perhaps for transferring data, or for using the MTX as a print buffer. The received character will be stored in location CHAR which can be anywhere in memory. Note that only 7-bit data can be received, as the eighth bit is needed for testing the other computers strobe output (this is done in the loop starting at STBTST).

To get the MTX to receive a BASIC program, the system variable USERIO is altered to point to the routine which starts at NEWIO. This is done by the code starting at NUSER. The routine NEWIO reads a character from the other computer (by calling RCHAR) and places it's value in the system variable LASTASC so that the MTX is fooled into thinking the character has been typed at the keyboard. The code around NOTSET and NOTCR is a bodge to get round a problem which occurs if the line of BASIC occupies more than one line of the edit screen on the MTX. It seems to require an extra character, otherwise the first character of the next line is missed.

The whole of the code from NUSER onwards is relocated to high memory starting at #F000, after the BASIC stack has been relocated to below this address, and after the new USER vector has been set up. A BASIC program transferred using this routine, and subsequently SAVED on cassette, will have the redirected USER pointer SAVED with it, so when the program is reloaded from cassette, USER will still be pointing at #F000, but this area of memory will have been overwritten during the LOAD from cassette. So typing USER after loading a program which was transferred using the Inprinter software will have unpredictable results (usually a crash or a reset). The best procedure is probably to use the Inprinter software to transfer several programs from the other computer, saving each one on cassette, and then reload each one and enter POKE 64137,201 (or use PANEL to put the value #C9 in address #FA89) and then reSAVE the program on another cassette. You need to do this for each programme transferred.

The Inprinter hardware and software was developed on an MTX512 using cassettes, for transferring programs from an Amstrad CPC6128. The software will also receive programs from an Enterprise 64 computer. Other computers may require modification to the software, but the Inprinter hardware should be compatible with any standard Centronics printer port.

10 CODE

```

4007 MOVSTK: LD HL,#F000 ;RELOC START
400A          LD (#FA92),HL
400D SETUSER: EX DE,HL ;DE = #F000
400E          LD HL,#FA98 ;USER VECTOR
4011          LD A,#C3 ;JP
4013          LD (HL),A
4014          INC HL
4015          LD (HL),E ;POINT USER VECTOR
4016          INC HL ;TO OUR ROUTINE
4017          LD (HL),D ;AT #F000
4018          LD HL,#07C9 ;NO SYNTAX CHECK
401B          LD (#FA87),HL ;USYNT
401E LOADUP: LD HL,NUSER ;NUSER
4021          LD A,(#FA7A) ;CHECK LSTPG
4024          OR A ;32 OR 64K OF RAM
4025          JR NZ,MTX512 ;JUMP IF 64K

```

```

4027          LD H,#80 ;32K ONLY
4029 MTX512: LD DE,#F000 ;REL'ED START
402C          LD BC,#0080 ;LENGTH OF ROUTINE
402F          LDIR ;MOVE UP
4031          RET
4032 NUSER: LD HL,#FD51 ;USERIO
4035          LD DE,#F01A ;SAVIO
4038          LD BC,#0003 ;3 BYTES OF JP
403B          LDIR ;MOVE DOWN
403D          LD A,#C3 ;JP
403F          LD HL,#FD51 ;USERIO
4042          LD (HL),A
4043          LD DE,#F01D ;NEWIO
4046          INC HL ;POINT USERIO TO
4047          LD (HL),E ;TO NEWIO
4048          INC HL
4049          LD (HL),D
404A          RET
404B CRFLAG: DB #00 ;INITIALLY NO CR
404C SAVIO: DS #03 ;TEMP STORE VECTOR
404F NEWIO: CALL #F01A ;SAVIO
4052          LD A,(#F019) ;GET CRFLAG
4055          OR A ;IS IT SET?
4056          JR Z,NOTSET ;JUMP IF NOT SET
4058          CALL #F051 ;RESET CRFLAG IF SET
405B          LD A,#0D ;FORCE A CR BY
405D          LD (#FD7D),A ;PLACING IN LASTASC
4060          RET
4061 NOTSET: CALL #F057 ;RCHAR
4064          LD A,(#F056) ;FETCH CHARACTER
4067          LD (#FD7D),A ;AND PLACE IN LASTASC
406A          CP #0D ;IS IT A CR?
406C          PUSH AF
406D          JR NZ,NOTCR ;JUMP IF NOT CR
406F          LD A,#FF
4071          LD (#F019),A ;SET CRFLAG
4074 NOTCR: POP AF
4075          CP #1A ;IS IT ^Z (EOF)?
4077          RET NZ ;DONT STOP IF NOT EOF
4078          LD HL,#F01A ;SAVIO
407B          LD DE,#FD51 ;USERIO
407E          LD BC,#0003 ;3 BYTES OF JP
4081          LDIR ;MOVE UP
4083 RESCR: XOR A ;RESET CRFLAG READY
4084          LD (#F019),A ;FOR NEXT CALL
4087          RET
4088 CHAR: DS #01 ;CHARACTER STORE

```

CONTINUED ON PAGE 8

HARDWARE AND SOFTWARE PRICE LIST August 1988

**MOC Phil Eyres 13 COPSE ROAD, TOWNHILL PARK, SOUTHAMPTON.
Tel 0703 585106**

As you will have seen from reading the editorial, we have a software supply problem. Below is a list of most of the known software titles.

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

The other titles we do not have. If you have any of them, we obviously need them in order to keep the software in existence. If you could send your originals to us, we can have a play with them for a week, to see how they copy, then send them back to you. In return I was thinking a piece of free software would be a fair payment for your effort. (This seems ok in theory, so long as everyone does not send in half a dozen titles. If I get to many I will send them back by return of post.)

Next in line. If you are the owner/writer of the software, then please contact us, we cannot promise high sales, but we do promise to pay #1 for every sale. (If anyone can get hold of Andrew Keys - I owe him #15 but I just cannot get hold of him to pay him!!).

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

Many people have been asking about hardware prices. As this page is full of software, I have taken to providing hardware prices for new and secondhand kit in the small spare corners that occur here and there.

Disc Software

500K CP/M

All Available at #3.00 per program, plus #1.00 for the cost of the disc. (As many programs as you like on one disc!)

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

500K Non-CP/M

(Readable on CP/M systems!)

Chess Reversi Chamberoids Minefield Pacman Pot Hole Pete Phaid Star Command

Title	Price	Stock
3D TACHYON FIGHTER	5.00	Y
AGROVATOR	5.00	N
ALICE	5.00	N
ASTROMILLON	5.00	N
ASTROPAC	5.00	N
ATTACK OF KER TOMS	5.00	Y
BLOBBO	5.00	Y

BOUNCING BILL	5.00	N
BRIDGE	5.00	Y
CAVES OF ORB	5.00	Y
CHAMBEROIDS	5.00	N
CHESS	5.00	Y
COMBAT	4.40	N
CRYSTAL	5.00	N
DISASM	5.00	N
DOODLEBUG	5.00	N
DOWNSTREAM DANGER	5.00	N
DR FRANKIE	5.00	N
DRIVE THE CEE-5	5.00	Y
EDASM	5.00	Y
EMERALD ISLE	5.00	Y
ESCAPE FROM ZARKOS	5.00	Y
EXTENDED BASIC	5.00	N
PI SIMULATOR	5.00	Y
FATHOMS DEEP	5.00	N
FIG FORTH	10.00	N
FIG FORTH SDX	10.00	N
FIREHOUSE FREDDIE	5.00	N
FIRST LETTERS 1	5.00	Y
FLUMMOX	5.00	N
GHOSTLY CASTLE	3.80	Y
GOLDMINE	5.00	Y
GRAPHICS	5.00	N
HELI-MATHS	5.00	Y
HIGHWAY ENCOUNTER	5.00	N
HUNCHY	5.00	N
ICEBURG	5.00	N
JUMPING JACK FLASH	5.00	N
KARATE KING	5.00	N
KILOPEDE	5.00	Y
KNUCKLES	5.00	Y
LITTLE DEVILS	5.00	N
MISSILE COM & ARCADE	5.00	Y
MATHS 1	5.00	Y
MAXIMA	5.00	Y
MEMOCHEQUE	5.00	Y
MEMOSKETCH	5.00	Y
MEMOSKETCH SDX	5.00	N
MISSION ALPHATRON	5.00	Y
MISSION OMEGA	5.00	N
NEMO	5.00	Y
OBLITERATION ZONE	5.00	N
OBLOIDS	5.00	Y
PAINTBOX	5.00	N
PAYROLL	5.00	Y
PHAID	5.00	Y
PONTOON & BLACKJACK	5.00	Y
POT HOLE PETE	5.00	Y
PURCHASE LEDGER	5.00	Y
QOGO 2	5.00	Y
QUANTUM	5.00	N
QUAZZIA	5.00	N

Continued Overleaf

REVERSI	8.80	Y
ROLLA BEARING	5.00	N
RUTHLESS B.	5.00	N
SALES LEDGER	5.00	N
SALTY SAM	5.00	N
SEPULCRI SCELERATI	5.00	N
SMG	5.00	Y
SNAPPO	5.00	Y
T.SNOOKER	5.00	Y
SON OF PETE	5.00	Y
SUPA CODER	5.00	N
SUPER BIKE	5.00	Y
SUPER MINEFIELD	5.00	Y
SURFACE SCANNER	5.00	Y
TAPEWORM	5.00	Y
TARGET ZONE	5.00	N
THE WALL	5.00	Y
TOADO	5.00	Y
TURBO	5.00	Y
USER BASIC	5.00	Y
USER BASIC SDX	5.00	N
UTILITIES SDX	5.00	N
WORD & PICTURE	5.00	Y
REVEAL	5.00	Y
SMG2	5.00	Y
PUC-MAN	5.00	Y
MOC FIG-FORTH	7.00	Y
TECH DATA	2.00	Y
TUTORIAL	7.00	Y

BOOKS

Second Hand Books

We have one each of the following

The Memotech Games Book #5.00

An Intro To Z80 Assembler

By R.A. Penfold #2.00

84 Basic Computer Games

(Not MTX - But Similar) #4.00

I sent on a first come first served basis.
All cheques to Memotech Owners Club Please.

ASSEMBLY LANGUAGE COURSE

NORMAL R.R.P. #10.00

SPECIAL CLUB PRICE

ONLY #7.00

Lotus-123 on the Memotech?

Whilst sitting in front of a friend's Archimedes one evening, running Ability Plus on the IBM emulator, I thought, "Wouldn't it be great if we mere mortals owning Memotech machines have this sort of software." And then, as if by a bolt of lightning, a thought occurred.

"Wait a minute, I have got this power!". It's true and looking back now I begin to wonder why I didn't think of it before. The way Ability Plus works, like Lotus-123 is to have a menu, or centre, from which you can select to go into various things like a wordprocessor, spreadsheet or database. It saves you from fiddling about endlessly resetting, putting in new discs and so on.

I erased all the non-necessary files of my Newword working disc, and PIPed all the SuperCalc files which it uses onto it. I copied over all the files that dBase II works with and also copied WordStar all onto the same Newword disc.

I set up STARTUP.COM in the normal manner:

```
CONFIG B:07,C:07\NW\
```

Now though, once Newword has booted up and is running, I can go into SuperCalc by choosing option R from the NW Opening Menu. As far as I can see, SuperCalc works away fine and when I want to come back out and into Newword, I press Q for Quit. The screen displays "Type any key to return to Newword" and in a few seconds I am back in the wordprocessor. I did the same thing with dBase which worked without any problems.

Defining the function keys with NWKEY.COM would provide an even easier way of flitting from one to the other, setting up, say, F1 to log onto drive C, F2 to load SuperCalc and F3 to load dBase. The way I have found easiest to do this is:

Whilst in Newword, press R from the Opening Menu and type:

```
A:NWKEY A:NW.COM
```

Move the cursor to F1 and when prompted, press: LC^M INS (M refers to hold down CTRL & M) Move to F2 and type: RA:SC^M INS Move to F3 and type: RA:DBASE^M INS Move down to F4 and type: RA:WS^M INS

Finally, hold down CONTROL and press C. In a few seconds, you'll see the familiar "Type any key etc." and back into Newword. Try it - it works !!!

Alan Hamilton

```

4089 RCHAR:  PUSH HL ;SAVE REGISTERS
408A          PUSH AF
408B          DI          ;INTERRUPT OFF
408C          LD A,#02 ;BUSY LOW,ACK HIGH
408E          OUT (7),A  ;WRITE TO I/O PORT
4090 STBTST:  IN A,(7)   ;READ PORT
4092          RLA        ;TEST MSB
4093          JR C,STBTST ;LOOP IF HIGH
4095          LD A,#03 ;BUSY HIGH, ACK HIGH
4097          OUT (7),A  ;WRITE TO PORT
4099          IN A,(7)   ;READ PORT
409B          AND #7F    ;MASK MSB
409D          LD (#F056),A ;STORE CHAR
40A0          LD A,#01 ;BUSY HIGH,ACK LOW
40A2          OUT (7),A ;SEND ACK
40A4          OUT (7),A ;FOR A SHORT PERIOD
40A6          LD A,#03 ;BUSY HIGH, ACK HIGH
40A8          OUT (7),A ;WRITE TO PORT
40AA          EI ;INTERRUPTS BACK ON
40AB          POP AF
40AC          POP HL
40AD          RET

```

TRAMP

Review By Alan Hamilton

The Tape Reader And Merge Program by John Hodgson, available through UK Home Computers is quite a breakthrough in software technology for the MTX, because for the first time it allows you to put together different programs in memory at the same time.

To quote the opening paragraph of the instructions: "...TRAMP will allow you to load routines from tape and merge them together into your own program. You may also load programs or system variables from tape into an area of RAM independent of your own program..."

Thus, with the aid of this handy program and its very well written instructions, you can copy/amend/update and generally fiddle about with programs which you have written to include the various extensions to MTX BASIC which are now available, for example, G40 - the program which allows the inclusion of hi-res graphics on a 40 column screen.

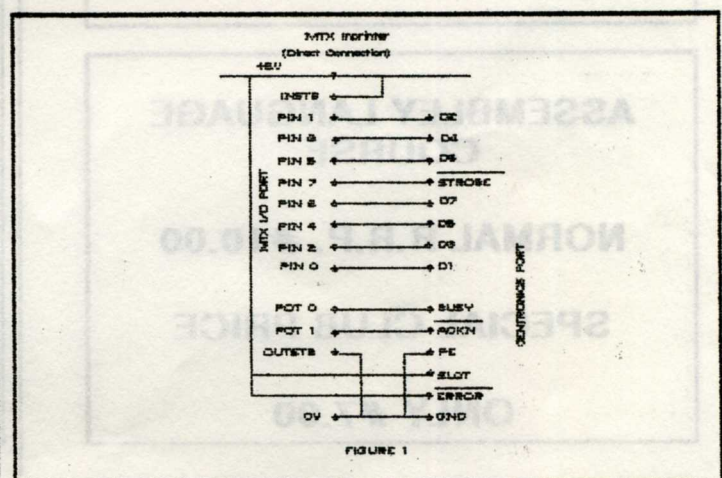
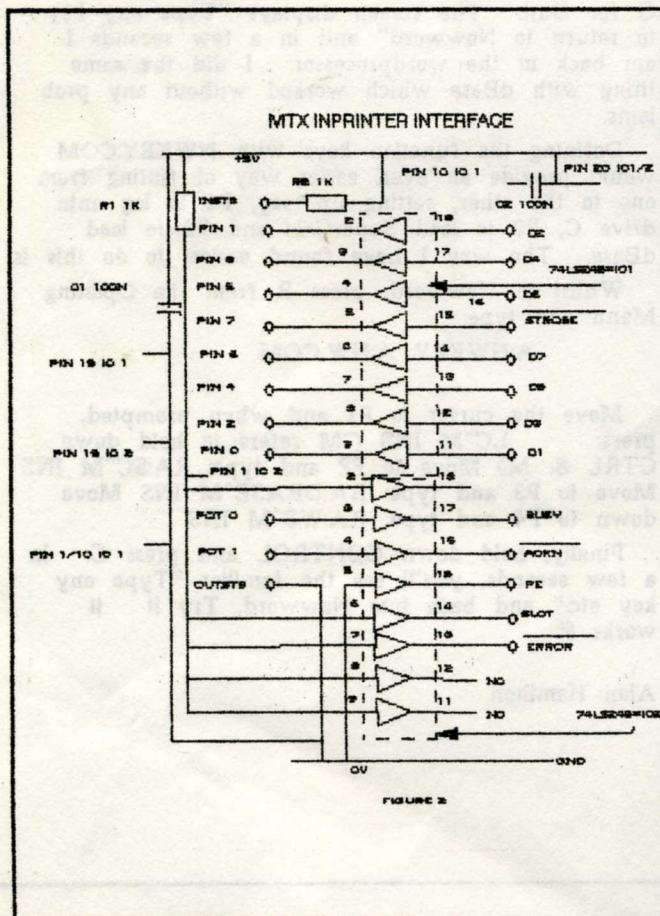
Quite soon after I played about with this program, it became quite apparent that this software is capable of copying other software. Since I will in no way condone copying of any commercial software except for personal use, it can nevertheless be used as a copier. I am not about to tell you how to do it, and, I am glad to say, the instructions do not tell you how to do it either.

TRAMP comes on tape and is sufficiently user-friendly to allow the novice to get quite far with it after a small amount of instruction. It should be noted though that it will only work on MTX512s and not on CP/M BASIC or a '500.

The instruction booklet provided is good, detailing all that is required to be known about the program. In addition to this, they also include a note of the memory locations used by TRAMP so that you can avoid any clashes with memory.

All in all, an excellent program. Nice one John!

Overall - 75% Price: \$5.95



GRAYSOFT

MTX BASIC TUTORIAL

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

The book is well and logically set out, easy to read and follow. Many examples are given. Very well presented - professionally bound and attractive. **ALL THIS FOR ONLY £5.95!**

ADVANCED GRAPHIC DESIGNER

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

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

Available on cassette or disc (not 3.5" system). Former price was **£13.99** (cassette) and £15.85 (disk). Price still stands at only **£9.99** for cassette or disc.

MTX FRUIT MACHINE

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

3D SPACE LINES

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

MTX CARD BOX

Database to quickly store, retrieve and search for information. Up to 200 separate groups of data can be held at once in memory. This program will only work on disc systems. This package includes bound instructions with the program; The total cost only **£6.99**

CHEQUES PAYABLE TO JOHN GRAYSON ONLY.

Orders usually dispatched next day.
4 Byron Court, Hill Lane, Soton.
Tel. 0703 220242

MTX Printer Connecting Cables

Only #7.00

Will fit all standard Centronics type printers

DMX 80 Printer Ribbons

Only #7.00 Incl. P&P

Your Letters

Erratum

1. Firstly, a mistake in "Aramang", which was printed in Vol 4 Iss.7 line 350, the letters "Q" should be in upper case, assuming the data statements have been typed in upper case.

Secondly, a mistake in "Slider", which was printed in Vol 4 Iss 7 line 590, should read: IF J THEN LET L=J. This updates the best score.

2. Your reply in the July issue to a member about their problem with returning to Newword after using the 'R' command to run another program is not correct.

If you use VDEB to look at a Newword COM file you will find the following. With my version of Newword at address #642 is the start of a list of Newword program file names. At address #663 is the name of the installed Newword COM file. This is the filename that Newword uses to return to after running another CP/M program. When you install a new version of Newword the COM file name that you save it as is also stored at this address.

You were correct to say that you should not rename a Newword COM file after you have installed it as it's stored name will not then match the actual COM file name. John Hodgson Bristol.

Hints And Tips Several people have phoned with problems with the version of VDEB.COM supplied on the system discs of the 3.5 inch 1Mb systems, the answer is quite simple (so I'm told). Rebuild a 54K CPM system (it tells you how in the manual) and reboot the system. You should then be able to us this very useful utility to your hearts content.

Paul Woods

Problems

1. We are looking for someone with some experience of an SDX 500K non-CP/M disc system. This is because a member has the following problem:-

He has purchased a second hand system which has on it a copy of NW.RUN. When he tries USER RUN "NW.RUN" the system reads the drive but then falls over leaving the machine in Front Panel at FFFF (hex). Does anyone have any ideas?! Can you get 40 column Newword on disc?

2. I bought my machine in October 1987. The machine as far as I can tell, is fault free. However when entering DATA statements a space is added between the keyword DATA and the first part of the data. So a line appears in the edit window as:-

100 DATA 200,400,180,560,340
is placed into the listing as:-

100 DATA 200,400,180,560,340

Then if the DATA line is edited, even if the line is not altered, another space is added so the example line becomes:-

100 DATA 200,400,180,560,340 and another extra space is added every time the line is edited. These spaces can be removed but it's a pain.

Programs I have bought from the MOC don't have the extra space, they appear as they should. What can I do? Is it the ROM or do all MTXs suffer from this condition? J.Godson Stockport

Phil: I have tried this on my machine and it reacts in the same way. Does anyone have any ideas?

3. Whilst in BASIC I like to use LO."xwz" to list programmes on the tape so I can see what I've got, but on the Memotech I can't get back to BASIC without losing the programme already loaded (by using BRK). Does anyone have any ideas? Gordon Carruthers Cardigan, Dyfed.

Phil: Vol 3 Iss 7 Pg 4-5 Contains a Tape Catalogue program which may go some way to help solving your problems.

Wanted

H.Connor, Ridge House, 120 Dunteats Rd, Broadstone, Dorset. Is on the lookout for a second hand disc controller. he can get the drives separately.

Dave Musker is on the lookout for a second-hand RS232 board and a 32K memory expansion board. If anyone is willing to part with either please contact him on the address below. 52 Mountfield Rd, London. N3 3NP.

FOR SALE

The club has the following second hand hardware for sale.

Memotech RS128 #65

128K of Memory

No RS232 Board

Speculator ROM PAC #15

Twin FDX 500K system #180

Incl CP/M, Newword & Supercalc

As New Condition

80 Column Board, including RS232 upgrade Computer

Data Cassette #15

Level control and meter.

Pause.

Three way speaker sound control

Microvitec 653 Colour Monitor #100

Vol./Bright/Contrast/Colour controls

Front On/Off Switch

3 Types of connection lead provided to suit:- 1. FDX RGB 2. MTX Monitor output 3. Sound!

PUBLIC DOMAIN SOFTWARE LIBRARY

12 Roebank Road
Bellis
Ayrshire
KA15 2DX
Tel. 05055 2491

All cheques payable to Memotech Owners Club please

Due to some confusion on the exact nature of the library, I will explain how the whole thing works for each type of user:

Tape only users:

You can purchase any 2 programs on cassette from any of the main library discs (1-5) and any of the cassette only programs. Send me #1.50 (payable to MOC) and I'll send a cassette to you with the two programs requested. Multiple orders are of course welcome.

5.25" CP/M disc drive users:

You can purchase any of the program library discs at #2.75 for 20 programs (as listed), if you send me a 5.25" disc. If you would like me to provide the disc, the price is #3.75. You can also purchase any of the discs marked CPM. Each of these discs contain all the relevant files for each subject and again, the prices are #2.75 & #3.75. In addition to this, you can buy the cassette only software but must run them using MTX.COM (provided on your system disc) - see the procedure for tape only users above.

5.25" Non-CP/M disc drive users:

If you are users who run on 40 columns all the time and type ROM 2, 3 or 7 (depending on system). You can purchase any of the library discs (1-5) and any of the cassette only software. You will not be able to run the CPM prefixed software. The same rules apply to pricing.

3.5" CP/M & Non-CP/M disc drive users:

Please see description for the equivalent 5.25" system for software availability. You should send your orders for discs to Paul Wood, adding #1 to the cost of each disc, his address is below. All other library orders (cassette only, library documents etc) should be sent to me, Alan Hamilton, at the above address.

Please feel free to mix orders (cassette only, CP/M disc etc - we'll sort it out!!). I hope this clears up any areas of doubt some of you may have had.

Due to the massive number of enquiries (one) about the Pascal Macro library and the underwhelming (non-existent) response to Nigel Cooper's offer to handle the Hisoft ROM side of the macro library, I am willing to extend the service to other languages. C has been suggested as has Assembler. Anyone interested?

New this month, are a whole pile of programs to be added to library disc 4 and the new disc 5.

Are you keeping up with all these additions??!!
Oh, by the way, anyone got any good additions to the CP/M side?

72. Headliner

The second (the first was DUNE) of what is I hope a stream of programs to come from Nigel Cooper. This program takes over where FONTS left off and takes the MTX a stage closer to Desktop Publishing with this remarkable piece of programming for any Epson printer. It produces double width and height characters but also allows you to centre the text, print darker than normal and has the provision of expansion for other type faces. Brilliant!

73. Morse Tutor

Gordon Carruther's first offering to the library with this excellent piece of programming to anyone who might need to brush up on morse code. It represents visually and by sound the letters of the alphabet as morse signals, giving you a chance to beat the computer to the answer. Gordon says he'll upgrade it to include a graphic of a flashing light - we'll look forward to that!

74. Building Societies

A remarkably simple program which does a remarkably simple thing but I'm sure everyone could make use of. This program calculates a change of interest rate in savings and mortgages giving new monthly payment amounts and lots more!

75. Metric/Imperial

This program does, as you might expect from its title, convert from/to Metric units and Imperial units. It covers absolutely all the kind of things your ever likely to need to convert from like celcius to farenhite and miles to kilometres etc.

76. Clock

At last in the library is this excellent program which was published several eons ago in the magazine. The original listing had a bug, this one doesn't. It draws the face of a clock with hands and moves the hands according to the time. It also displays the time digitally.

77. Clock 80

The 80 column conversion of number 76 which uses the graphics capabilities of the 80 column board to full use. Only CP/M 80 column users will be able to use this one.

78. 3D Maze

A brilliant game, will keep you busy for hours. Can you find your way out of the massive maze??? Excellent 3D graphics. ONE OF THE BEST IN THE LIBRARY!!!

79. Graphics Calculator

A handy program to avoid all the rigmarole of generating the numbers for GENPAT statements. Design your sprite with this program and have all the parameters worked out for you.

80. FastGraf

A fantastic piece of programming, speeding up the execution times of most of the graphics commands available in MTX BASIC. Must be seen to be believed. 81. Orbiter Can you control your spaceship to destroy the enemy craft orbiting round your planet?? Obeys all the laws of Physics (inertia, gravity etc). Bit of a shoot-em-up.

82. Card Index

This is the first of a suite of programs to come from Brian Houghton which have been written and compiled using the Hisoft Pascal ROM. You don't need the ROM to use this software though. This program is a fairly primitive notebook/address book program which comes with a facility to save to tape.

83. Appointments

The second of the suite is loosely based around the first except that this program acts as a diary, enabling you to enter time and dates for specific appointments during your year. It incorporates a handy Find facility to allow you to see what you've got planned for the day quickly and easily.

84. PhoneBill

Work out what you think your phonebill should be before Telecom do!! Very handy piece of programming which if not of any use directly will show you how a good program should be presented on screen.

85. Calendar

This program prints out to the screen or printer the complete calendar for any year after 1572 (when the Gregorian calendar was first used).

86. Bouncing Ball This program heralds the start of another suite of programs, this time from a different author and doing different things. At first glance it appears to be a graphics demo but it is actually a game with excellent graphics and gigantic animated sprites of balls.

87. Hiscroll

A graphics demonstration of the Memotech VDF chip. Impress your friends who may never have seen or heard of a Memotech with this brilliantly programmed offering. Best used on a colour monitor or TV.

88. FastWorm

Again a graphics demo. This program uses No. 80 - FastGraf to draw a worm on the screen and animate it. Very nice wrap-around graphics of the worm will keep the young'uns happy for hours!

More additions to the cassette only software:

CA17 Inprint

A sort of a revolution in computer communications. This excellent piece of software allows, for the first time, the unexpanded MTX500 or MTX512 to communicate with another computer, but without an RS232 interface. It works by sending messages through the Centronics interface via a lead into the Centronics interface on another machine. Full documentation is available as a Library Document, LL12 and circuit diagrams are available by special request.

CA18 Renum IV

Very fast renumber program which is designed to make life as easy as possible and to make your programs run faster and look better.

PASCAL PROGRAMMERS!

The MOCPSL has a large number of Pascal Macro listings available for you to modify for your own use. Please contact the library for more details.

Prices: #1.50 for 2 programs on tape (we supply the tape). 5.25" users: #2.75 for any disc (#3.75 for the disc too). 3.5" users: #3.75 for any disc (#4.75 for the disc too).

3.5" disc copies of the library from: Paul Wood, 12 Bishops Avenue, Worcester, Worcs, WR3 8XA. Phone him on 0905 24260.

Paul also has set up a bulletin board for modem users. It accepts all baud rates and so there should be no problem for anyone with a suitably equipped system. The Board's number is 0905 52536.

Lastly, a big thanks to all the contributors this month to the library, I look forward to lots more programs!

Happy Memoteching

Alan Hamilton

OPENING TIME

By
Nigel Cooper

Definitely not for technophobes and people who have an aversion to getting their fingers all inky, here is a dissection of the Panasonic 1080/1090 (DMX80!) series ribbon cassette and how to squeeze more life out of it. First, a summary of the parts:

- A. Ribbon Reservoir
- B. Tension Spring
- C. Inkipad
- D. Inking Wheel
- E. Ribbon Advance Knob

These are probably not the terms the manufacturers would use, but they will do as reference points. The ribbon cassette is very easy to open. Before doing so remember that you must keep it the right way up (the way it is used in the machine). There is usually a small slot somewhere in the side of the cassette into which an electronics screwdriver (or similar implement) may be inserted and rotated. The two halves of the cassette are push-fitted together and may then simply be gently levered apart working your way around.

You may then replenish the ink in the inkipad by dropping on stamp-pad endorsing ink. Before you rush out and buy a bottle of ink here are some hard-won facts:

The materials used in the Panasonic "original" cassette are of superior quality and are interchangeable with the parts found in so-called "copy" cassettes.

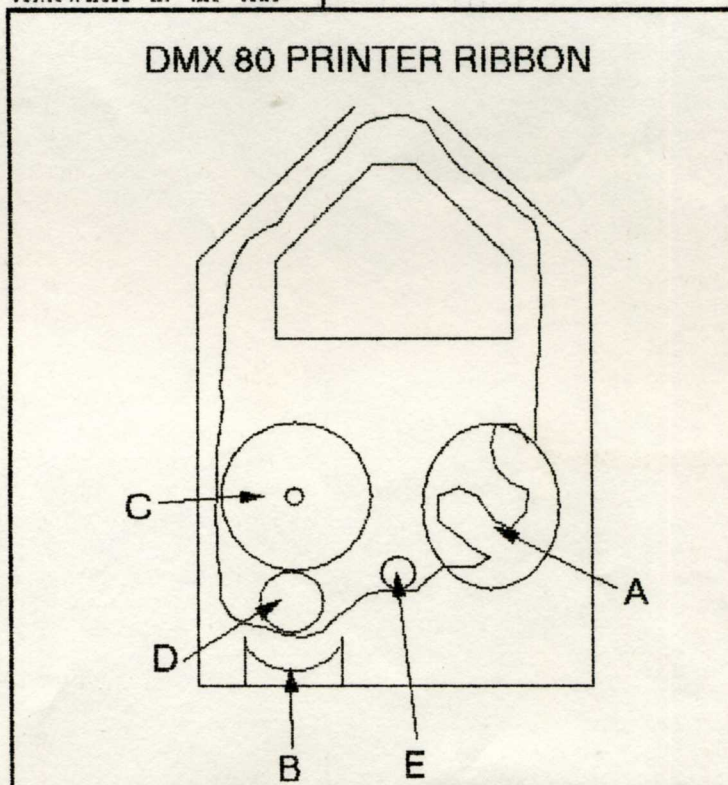
Never throw a Panasonic original away! The ribbon may be all fluffy and leave drag marks across the page but the Inkipad is made of superior absorbent quality material. In some "copies" the tension spring will be set to 'on' (the diagram shows it in the off position) from the word go... a sure sign of poor quality. It's like a little suspension leaf spring which may be pinged on and off by applying pressure with a small screwdriver. Releasing the tension on a newly inked ribbon cassette spins out the ink you've applied. Some Inkipads are not very absorbent and you'll need to leave the cassette laying around with the ink soaking in and may even have to wipe off the excess.

D.I.Y. inking is all very well but be careful not over-do it or you'll choke the printing head up with ink. However careful you are you might find

that the inking is uneven for a little while. This will settle down. I suggest that you use the cassette only for programme listings or if you're in a hurry to use it then run several sheets of waste paper through the printer (4 should do) repeating a full line of NLQ.

Any Questions? Then give me a ring (01-558 5203). The answering machine you may encounter rabbits on about a Helpline (that's 'cos I run one) don't let this worry you.

Phil Eyres: I have had to resort to re-inking on occasions, when ribbons have been in short supply. It works ok if you normally do 10 characters per inch printing. If however you do a lot of condensed printing, the actual ribbon is virtually useless in the middle by the time the ink has run out.



Hardware & Software

We are on the look out for any second-hand hardware and/or software at reasonable prices. Especially Disc systems and printers. Contact Phil Eyres on 0703 585106.