

NATGUG

NEWS

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OFFICIAL JOURNAL OF THE

National TRS-80

& Genie Users

Group.

INFORMATION ON THE GROUP

Membership of the Group is by subscription to the Newsletter, which is published monthly. Membership details are obtainable from the Group Secretary. Membership of the Group is open to anyone with an interest in the TRS-80 range of microcomputers, and compatible systems such as the Video Genie.

Details of the Group accounts, and the constitution of the Group, are obtainable from the Secretary.

Members requiring assistance with problems related to the TRS-80/Video Genie may call the Secretary. An attempt will be made to put them in touch with a member who can help with the problem.

Workshops are arranged from time to time in various parts of the country.

Sub-groups exist in many areas. A list is provided in the Newsletter from time to time.

The Group maintains two software libraries (Models I and II) which are free to members. Library lists are obtainable from the Secretary.

For confidentiality reasons, the membership list is not generally available, but members may ask the Secretary for a list of members in their area, and mailshots to all members may be arranged.

Back numbers of the Newsletter are available from the Secretary.

Please send all contributions for the Newsletter to the Editor.

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EDITORIAL

At the recent Which Computer Show in Birmingham, Tandy had their usual large stand. Their new 3000 model was launched at the show; it appears to be excellent value if you want an IBM AT clone for about 2/3 the price of IBM's offering. When it gets Xenix it might do quite well. I didn't see any Model 4 machines, and the Model 16 (or is it called the 6000 now) wasn't being pushed very hard, so it looks as if Tandy have decided to concentrate on the marketing of Japanese-made IBM lookalikes, with Amstrads for the hobbyist and home user. I heard recently that a Tandy store manager reckoned that he sold 20 Amstrads for every Model 4.

The Commodore Amiga received its official UK launch at the show. It's still a bit unfinished in terms of the software, and the PAL version won't be available for a few months, but it is a quite mind-blowing machine. Commodore demonstrated it at a recent QUANTA workshop, and several people I know are thinking of getting one. It is basically the sort of machine I suggested that Tandy ought to make, if they were to survive, several months ago. The price is likely to be around £1200, which is less than many of you will have spent on your hardware, I would think.

One or two members are using Prospero's excellent ProPascal compiler. This will shortly be available for the QL. They already have ProFortran available for the QL, and I picked a copy up at the January ZX Microfair; it looks excellent. I know the people at Prospero quite well, and (in company with several others) have been on at them for some time to produce a C compiler. They have at last seen the light, and it looks like one will be forthcoming. Like all their software, it'll be written in ProPascal.

The March Swindon workshop will be upon us quite soon. Bob Sparling has organised the weekend, and can be contacted on (0793) 740158 if anyone has any queries. David Washford has done an excellent job with the programme/booking forms, which you should receive with this issue of the newsletter. Since the AGMs of both NATGUG and QUANTA are both due, a QL workshop has also been arranged for that weekend.

Once again, I've had to hold some material over for the next issue.

Leon Heller

MEMBERS' LETTERS

As you will see from the "For Sale and Wanted" section, I'm putting my Model I up for sale. It has served me well over the years, but now I need something more powerful, in order to do the things that interest me. I'm using a Compaq portable at the

moment, with plans to buy either an IBM PC/AT or a Commodore Amiga. That remains to be decided.

RH Evans,
15 Hammond Road,
Woking,
Surrey.

PROBLEM SECTION

I am looking for a copy of an article by Ron Potkin about a game called "Warpath", which appeared in Computer and Video Games in early 1983. The article was in seven parts, and I need parts 2 and 5. The publishers have been unable to help; can anyone loan me a copy?

Andrew Freeman,
1 Bourton Close,
Stirchley Park,
TF3 1RF.
Tel: Telford 594372.

If anyone is successfully using Dotwriter with a Tandy LP8 could they please get in touch with me.

Mac Randle,
Tel: (0926) 640078

I normally use LDOS on my Model III and have transferred packages using patches when available.

During the recent Tandy clearance I bought (on impulse) copies of the old Profile (26-1562) and Business Graphics Analysis Pack (26-1597). Can anyone help with the transfer to LDOS? In particular, with the graphics package, so that I can tie it in to Visicalc under LDOS. A partial solution would be to use TRS-DOS 1.3, but this won't work unless I can patch the DOS to handle the slow stepping rate of my non-Tandy drives. Can anyone help with the patches?

The graphics package has a driver for a multi-pen plotter (26-1191) but this is obsolete. Is it possible to use the four pen CGP-115 plotter (26-1192), or will the driver have to be changed. Can this plotter be used with the Model II at all?

Jim Lane,
7 Central Avenue,
Pinner,
Middx. HA5 5BT.
Tel: 01-866 4650

WANTED

The Supercalc2 installation codes for inverse video cursor and protected cells for use on a Gemini GMB32.

D. Washford, 6 Houston Way, Frome, Somerset. (0373) 72739



No, it isn't an advertisement for Locomotive Software !. In view of the amount of interest in my chosen title, I thought that I'd go the whole hog and display to the whole world ALL of my interests in life - if you look carefully then you'll see that the engines have lady crews !!

Enough, enough. My own big news this month is that my Model 4 now sports a high-resolution board; I nearly chose the Grafyx Solution kit at \$199 but found that the Tandy kit from Os, at only £90 INC VAT was more than capable of meeting my needs. Indeed, I think that it is the best £90 investment that I've ever made !! Having got my hi-res, it was somewhat inevitable that I should dig out all the 80-Micro back numbers for the various hi-res programs and utilities, and get typing..... disaster ! My version of Rembrandt (BASIC) refused to run, and Zen didn't like the macro calls.

Thank you, John Kilpatrick, for a working copy of Rembrandt (plus other good goodies!) - I didn't fancy waiting for my finger to grow so that I could type that lot in again! One of the really good things about NATGUG is that friendly help is always so close and freely offered.

On the subject of Zen, Laurie tells me that he will introduce a SVC pseudo-op in the next Model 4 version. However, I was very disappointed to hear that Zen sales do not seem high enough to warrant Laurie writing some updates to his original (Model I) machine code notes. Now I want to know WHY people aren't buying Zen - it not only offers a much more relaxed 'syntax' for typing in long listings, but it gives such a conformity between Models I, III, and 4 - AND CP/M - that I don't believe any other Editor/Assembler package can offer. Am I missing something ?

The December magazine was a very good issue, with lots of very interesting and sensible content. D.E. Mann of Leicester asked about sideways printing - the Longview program from Prosoft (\$29.95, and Prosoft will sell it to the UK) enables a Visicalc file to be printed 'down' the paper rather than across it. Alternatively of course we now have many Dotwriter 'sideways' fonts, although I feel that this could be more difficult than using Longview.

May I remind members that Brian purchased a set of the original 80-Micro magazines, which I hold together with my own later copies. Instead of asking for copies in Natgug, members can save time by contacting me direct - all I need is return postage, 6p per photocopy sheet, and an addressed sticky label, plus of course the details of what is required! Thanks to other members, I also have a full set of the Encyclopaedia for the TRS-80, and many copies of Byte. Any redundant 1985 issues of Byte would be gratefully received at Swindon!

Fancy Tandy putting that lovely little CGP115 on offer - I picked one up from Os for £45 (£49.95 less User Group discount) and am very pleased with it. I'd be even more pleased if someone sent me some software for it!!!

David Washford, 6 Houston Way, FROME, BA11 3EU. (0373) 72739.

SPEEDING UP MX-80 and MX-100 PRINTERS

The January 1986 issue of 80 MICRO has an interesting article for those NATGUGers who own an MX-80 or MX-100 printer. The article sets out a very simple modification which will increase the printing speed by (they claim) 40%.

I own an MX-100 at home but use an FX-100 in work so I can see the difference in speed, particularly in the emphasised and condensed mode. This modification involves the replacement of two crystals. The standard MX-100/MX-80 has two crystals located on the main circuit board, one at each end.

Before starting the modification, it is a good idea to print out a full A4 page using your wordprocessor and time it. This will be useful for comparison when the mod is complete.

To get at these crystals it is necessary to remove the top cover. The MX-80 has the cover screws on the underside whilst the MX-100 has 5 of them on the top. It is necessary to remove the plug to the control buttons before the cover is completely free. The MX-80 also requires removal of the platen knob.

Take this opportunity to sweep out all the gunge and fag-ends which hide under the covers. Locate the driver board on the left side rear. Unplug the large blue plug and unscrew the two philips screws on the left side. Gently remove the board from the inter-board connectors and place aside. This will reveal the main board. Remove CN2 and CN6 from this board adjacent to the large capacitors and the ground wire at the rear centre. The retaining screws are the two philips screws connected to the heatsink for the two regulators adjacent to the transformer. The remaining screw is near the middle of the board close to the front. Set aside the screws. The removal of the board should be done carefully as it is retained by several plastic clips which don't have much 'give'.

Once the board is removed locate the two crystals at either end of the board. The article in 80 MICRO said that they were both 6Mhz but I found that the left side one was 6Mhz whilst the right side one was 8Mhz. Using a solder sucker and a clean iron, remove the crystals. Replace the left side one (beside the two large chips) with the 8Mhz one and replace the right side one with a new 10Mhz crystal.

Replacement of the main board involves gentle spreading of the plastic clips and fitting the screws. Refit all connections to the main board. Next locate the driver board over the inter-connectors, screw down and replace connections. I suggest you loosely replace the top cover, and reconnect to mains etc.

Now reprint the same page printed earlier and watch it go! Don't forget to time it. -- See the improvement !!! Try emphasised and compressed modes to ensure that all is well.

The magazine article suggests you don't exceed 10Mhz as the processor and RAM can't keep up. They suggested that two 10Mhz crystals should be used but after trial I can tell you that it

farkles your print quality. The 10Mhz crystal should cost you under a fiver.

David Roberts, 6, Plantation Road, Bangor Co Down N. Ireland.
Prestel Mailbox 247462564 Telephone 0247-462564

WORKSHOP MEETING

Enclosed with this issue is a booking form for the Swindon Weekend Workshop, to be held over the March 14/15/16 weekend. For the benefit of our new Members, I would like to draw attention to the following points - which are so readily taken for granted by the old-timers:

Workshops were originally conceived by Brian & Leon as a session of self-help between the dedicated TRS-80 users. Several "one-day" meetings were held, in various locations up and down the country, but the "biggies" were always the whole weekend sessions held initially at Milton Keynes and later also at Swindon. Accommodation became a problem with the former and so, despite allegations of inconvenience for our Midlands and Northern members, Swindon has become the mainstay in more recent years, with meetings being held in March and October.

Attendance at these workshops became almost mandatory, such is the sense of friendly TRS-80 fanaticism; there might be only thirty attendees at one of the more rural venues, or there could be over 200 at a more national event but no matter which, if you have a problem then you'll soon be introduced to someone with the answer! (In more extreme cases, it might be someone with an alternative!). It is surprising how freely programs are given away, programs that might have taken their donors months to write. It is also very useful to let a previous purchaser demonstrate commercial software so that one can decide whether or not to buy for one's own use, whilst other members, the Hackers, get their kicks by using soldering irons and old bedsteads to create all kinds of magic boxes!

The Wiltshire Hotel has adapted as far as possible to meet the needs of these 'computer maniacs' and has learnt that whilst the majority do go for some, albeit short, shuteye, there will be others intent on staying at their machines all night. The Ballroom becomes the "systems room", with anything up to 80 computers (and peripherals) up and running, and the Stratton Suite is divided into two different lecture rooms. (Lectures are very informal - at the last meeting emphasis was put on "hands-on" tutorials given, as always, by experienced members). Another suite is occupied by Os House and his crew, who will do anything between fixing a screen flicker to selling a new model 3000.

A noticeable change by the Hotel last October was the freedom given to us in our attendance at the Restaurant - previously we'd all had to go as part of a mass booking and for a fixed menu. However, we must not forget that the hotel IS a commercial undertaking, and must charge for its services. You DO NOT have to stay at the hotel in order to attend, but if you don't then you shouldn't be surprised if you are asked to pay an admission fee for the systems room and again for any lectures that you might attend. Be grateful that the coffee is then free! If you do stay at the hotel, then you are given the option of cutting your costs by sharing a room - but since the charge includes evening meal and breakfast do not expect a 50% reduction.

I hope that the above might clarify the situation for those who have yet to experience their first exciting, sleepless weekend workshop ! We all look forward to meeting old, and making new, friends on March 14th !!

David Washford, Committee Member.

MODEL I > > > HYPERCROSS > > > CP/M

Two years ago, although my Model I was still going strong, I yielded to the temptation to buy a computer package on special offer from a nearby computer store. The package consisted of a Z80 Morrow Micro-Decision with bundled software comprising CP/M, MBASIC, OBASIC, LOGICALC (spreadsheet), WORDSTAR, the PERSONAL PEARL database, and Communications Program. The two, double density, disk drive Morrow comes with a highly sophisticated Lear-Siegler ADM-31 terminal with high-lighting, inverse video and other special facilities.

Having made this purchase, I gave up any idea of upgrading my Tandy. However, it was not long before I also gave up any idea of doing any serious programming in MBASIC. It was so frustrating to have to put in the spaces and spell out in full words such as LOAD, SAVE, RUN etc. Editing was a nightmare, the only shorthand being a full-stop after EDIT to bring up the current line. The result was that I never bothered further with MBASIC on the Morrow which thereafter became dedicated to word processing and spreadsheet work. I was still a bit worried about what I would do if the Model I did pack up. All my major programs depended on its continued service. Fortunately, I began to realise the potential of Hypercross which had appeared in the Molimeux catalogue.

John Harding advised me that, whilst the program would transfer ASCII files from the Model I into the CP/M formats in his catalogue, he could not guarantee they would work. I expected to have to make the obvious changes, such as inserting spaces into compressed Basic programs and replacing several of the Tandy Basic commands, (e.g. CLS and PRINT@ and, as it turned out, PRINT USING). To cut a long story short, I bought it and have never really looked back.

For making the necessary changes, my DOSPLUS operating system proved invaluable. The SR (search & replace) command really came into its own. It is essential, however, especially where spaces are to be inserted after such reserved words as "FOR", "NEXT" and "TO", to have a trial run without providing a replacement. This will find all the occasions these letters come together, even within strings and Data lines. All inappropriate ones can then be identified BEFORE any replacement takes place. Sometimes this trial-run indicates that it would be easier NOT to replace with SR at all. Once the line numbers have been identified, it is often quicker to use the other excellent editing facilities in Dosplus and make the necessary changes, line by line, through the program.

Using SR, it was child's play to substitute "PRINT CHR\$(26): for "CLS:" and replace the Tandy filename formats with Mbasic ones. Replacing "PRINT@" was rather less easy. I did it by using FOR/NEXT loops to move down the screen to the wanted line and then TAB the text into the right place. When I saw Dave Holman's short program on this subject in the August issue, I wrote the following snippet.

```

10 ' PROGRAM TO CONVERT PRINT@ NUMBERS TO L AND C VALUES

20 PRINT CHR$(26):FOR I=1 TO 4:PRINT:NEXT I
30 T$="ENTER PRINT@ NUMBER FOR CONVERSION":T=LEN(T$):T1=(80-T)/2
40 PRINT TAB(T1)T$;:INPUT X:F=INT(X/63):G=X-(F*64)
50 FOR I=1 TO 4:PRINT:NEXT I
60 PRINT TAB(4)"TRS 80 FORMAT:                LINE NUMBER (L) =" ;F;
70 PRINT"          COLUMN NUMBER (C) =" ;G
80 FOR I=1 TO 4:PRINT:NEXT I:IF F=0 THEN F=1
90 M=INT(F*(24/16)):D=INT(G*(80/63))
100 PRINT TAB(4)"CP/M  FORMAT:                LINE NUMBER (L) =" ;M;
110 PRINT"          COLUMN NUMBER (C) =" ;D
120 A$=INKEY$: IF LEN(A$)=0 THEN 120
130 L=M:C=D : GOSUB USES DAVE HOLMAN'S FORMULA
140 PRINT CHR$(26):GOSUB 180
150 PRINT "* HERE"
160 A$=INKEY$: IF LEN(A$)=0 THEN 160
170 GOTO 20
180 PRINT CHR$(27); "=" ;CHR$(L+32);CHR$(C+32);
190 RETURN

```

I converted this program to print out the L and C values for all the PRINT@s I could find in the listings of my Tandy programs. With this printout at hand, Dave Holman's formula could be used either, on each occasion, or as a Gosub. The Heading centering formulas in many of my programs (example in Line 30) only needed a change to the screen width from 64 to 80.

Using Hypercross is very easy. I keep it, with Basic, on a DOSPLUS disk stripped of everything else. Another disk, formatted either on the Morrow or, by using Hypercross itself, is the transit disk. With the Dosplus disk in Drive 0, load Basic and the program to be transferred from its disk in Drive 1. Save it, using the 'A' option, to the Drive 0 disk. Save, in ASCII, as many programs for copying as the disk can hold. Then type CMD to return to DOSPLUS.

Insert the CP/M formatted disk into the Tandy's Drive 1 and load Hypercross from Drive 0 with the command HX1. The resulting menu asks you to state your DOS and whether you are using single or double density. Then several screenfuls of CP/M formats follow until you identify yours by typing the appropriate key letter. All your selections are then screened for confirmation.

The directories of both drives can be called providing the proper identification is given i.e. DIR :0 (Tandy) and DIR :B (CP/M). Similarly, care must be taken when using the COPY command, not to confuse these suffixes. It is also better to use the same file names for both formats to avoid confusion. A typical command might be COPY ANYFILE/TXT:0 ANYFILE.TXT:B -A. Note the use of the Tandy 'slash' in conjunction with the :0 drive and the CP/M 'fullstop' with the :B Drive.

The final '-A' indicates that an ASCII file is to be copied. Image copies are possible using the final command '-R'. When all files on Drive 0 have been copied, transfer the CP/M disk to its computer. All the files can then be PIP'd to another disk thus

releasing the transit disk for further copying. Thanks to the prior use of the DOSPLUS editing facilities, debugging of the transferred programs should be a fairly simple job. However, if difficulties arise, or if further changes are required in due course, you can always use Hypercross in reverse and get the best of both worlds. Temporary copying from CP/M to Tandy gives the benefit of quicker and better editing facilities before re-copying the revised program back to its CP/M environment.

Another disappointing difference between Tandy Basic and CP/M Mbasic is in the way the PRINT USING commands work. It is very cumbersome to do, in Mbasic, what is so easy on the Tandy. Consequently, as long as my Tandy lasts, I am using my converted MBASIC programs to print out modified Tables plus data files which Hypercross transfers without difficulty. The Tandy can then print out the larger Tables (which are in condensed type) from the transferred data files.

Incidentally, I have also discovered that Hypercross plus Tandy editing is much less time-consuming than trying to edit with Wordstar. When using the latter, 'Direct statement in file' errors abound when Basic tries to load the Wordstar-amended text file. By noting the last line loaded by Basic before the error occurred, it is possible to produce a successor text file. This can then be 'merged' with the lines already transferred to Basic. However, this is messy and might have to be done several times when editing a long program. Using Hypercross and the Dosplus editing facilities makes life much easier.

Finally, Hypercross allows you to ERASE FILE.TXT:B or KILL FILE/TXT:0 to tidy up your transit disks as you complete your copying.

Don Smith, 82, Oldridge Road, Balham, LONDON SW12 8QA

MODEL 4 RAMBLINGS

Five months ago, I decided that my trusty Model I was not long for this world, and a Model 4P would answer all my problems. To date, I have not been disappointed with it. Initially I clung to NEWDOS 80 as the old operating system I was used to. This was greatly improved by the twin 80-track drives Oz House installed for me.

The best thing for NEWDOS 80 users, however, is a niftily little prog. I bought from TAS called The Memory Disk Driver. As it says, this program creates a disk in the extra 64k bank of memory (if you haven't got the extra bank then don't read on). You have the option at installation of formatting the drive (and specifying the number of banks to be used) and you can also configure the memory drive to be a System disk. All your system files can be copied over to drive 2, leaving you free to do whatever you want with the other two drives. You can also copy the files you commonly use into the memory drive at installation, using an /ILF file. The contents of the memory disk remain unchanged if there is a reboot, which is something CP/M cannot do (more about that in a bit).

Two other NEWDOS utilities that deserve wider attention are PDR and CAT, both written by Steve Ridell. PDR will scan a NEWDOS disk and automatically determine the PDRIVE values and load them

into memory. This is a great help if, like me, you have a combination of 40 and 80 track, single and double sided and Model I and 4 (well III really) disks. The other program, CAT, does this as well, but goes further. It will read an unknown disk, which may be NEWDOS, MULTIDOS, DOSPLUS, or even TRSDOS, work out the disk format, set a skip parameter if necessary, and give you the disk directory (in alphabetical order).

I've managed to convert most of the programs I used on the Model I, including the database program AIDS which up to now had done all I needed. However, a project at work required the use of a bigger database program, and I was forced to use dBase and CP/M. I would strongly recommend dePace's book on this subject, by the way.

One of the reasons for learning CP/M was that at work we have a beastly machine called a Torch. This is a half-breed cross between CP/M and a BBC, and uses an operating system called CP/N (there's an N there, not an M). This has a disk directory structure midway between CP/M and the Acorn DFS, and there is a utility to cross between these two. So far though, I haven't found a s_i_m_p_l_e way of transferring files from CP/M to CP/N. The method which I have used is as follows.

1. CP/N to BBC using the Torch WRTACORN.COM
2. BBC to LDOS.
3. LDOS to CP/M

There must be a simpler way, but I don't know it. Incidentally, one of the reasons for doing this was to transfer text files, because the Torch runs WordStar. I have therefore been forced to come to terms with this little WP.

WordStar is like Mrs Thatcher. Although I don't like it, it is always perfectly consistent and predictable, powerful and it appeals to people who don't know better. I don't think it is nearly as versatile as Lazy Writer, my favourite WP, which allows programmable keys and the chance to undo edits with a single keystroke, and in ease of editing, speed of scrolling and speed of disc access I don't find it half as good as Scripsit Plus - even the CP/M version - although it is very good at long chunks of prose!

One of the things which I have discovered about WordStar is that the screen handling on the Model 4 could be memory mapped. When scrolling up or down a screen, standard Wordstar has to send each character to the screen using the BIOS. For this reason, when you scroll the screen up or down one line, WordStar has to send every screen character to the screen individually, causing a short period of absolute confusion while everything overlaps everything. Come to think of it, it isn't that short a period, and it could do really with speeding up.

Setting WordStar to use the Model 4 memory mapped screen allows a real increase in speed, though sometimes this is accompanied by a short stroboscopic flash like a cross between Demon Seed and Hawkwind. Anyone wanting to do it can find the bytes to patch in the WordStar manual. The Model 4 screen is memory mapped from F800 to FFFF, and is switched in by sending 86H to port 84H, and switched out by sending out 87H.

The bytes to patch are as follows:-

Name	Address	Byte	Function
MEMAPV	02B0	01	0 = not memory mapped
MEMADR	02B1	00	Address of start of screen
	02B2	F8	

HIBIV	02B3	01	Inverse video on with hi-bit
HIBCUR	02B4	01	Hibit for cursor
CRBLIV	02B5	FF	Blink cursor
SWIN	02C3	3E	Routine to switch in memory-mapped
	02C4	8E	board. Decodes as LD A,86H
	02C5	D3	OUT (84H),A
	02C6	84	RET
	02C7	C9	
SWOUT	02C9	3E	Routine to switch it out.
	02CA	0F	
	02CB	D3	
	02CC	84	
	02CD	C9	

By the way, these addresses only apply to version 3.0, though for version 3.3 the addresses can all be offset by subtracting 20H from these addresses. These modifications haven't been properly tested on a Tandy but should be OK.

I have a Model I with twin disks in a Blandford box to sell if anyone's interested, with only 1 prev. owner., gd. bdywrk.,vgc.

Regards to all,
Richard Marks 01-609 1340.

FLEXIBLE FILESPECS

By C.R.J. Currie

If you need to convert Basic programs to run on several different Tandy machines, examine this short file-reading program. It runs unchanged on TRS-80 Disk Basic, CP/M MBasic, and MS-DOS MSBasic, and can be compiled with BASCOM. (Type CLEAR 500 before running it on a Model I or III.) You can include routines from it to add the same portability to your Basic file handling.

Adjust the filespecs by asking the user at the start for the range of valid drive numbers or letters in her system. That distinguishes TRS-80 Basic from the others. Ask for the filename and extension separately or, if they are specified in the program, assign them to separate variables. Then build up the filespec as a string and open the file. An error-handling routine ensures that all available drives are searched for the file, and another rebukes the Model I/III user for entering drive letters.

Users of your program should have no more problems with BDOS errors or unlogged disks.

The range of valid drives is inclusive and must be continuous, but you can specify the same drive letter or number for the upper and lower ends of the range.

Test the program on an existing text file, or save it in ASCII and test it on itself. It should display the first line of the file and then stop.

```

4 REM *** VALDRIVE/BAS (ALIAS VALDRIVE.BAS). (C) C.R.J. CURRIE 1985
5 REM DEMO PROGRAM FOR ADJUSTING FILESPECS TRS80 DOS//CP/M//MSDOS
6 REM *** ALSO ALLOWS AUTOMATIC DRIVE SEARCH ON CP/M OR MSDOS
8 CLEAR:'CLEAR 500 IF ON MODEL I/III
10 DIM SE$,DL$(2),CO$(2):'SEPARATOR,DRIVE LETTERS,COLON
20 GOSUB 1000: REM *** GET VALID DRIVE RANGE & SET UP DELIMITERS
30 GOSUB 2000: REM *** GET FILESPEC IN TWO PARTS
49 REM *** PREPARE TO OPEN SEQUENTIAL FILE TO BUFFER &1
50 PURP$="I":BUFF=1
55 GOSUB 4000:REM SEARCH DRIVES FOR FILE
59 REM *** NOW TEST BY READING FIRST RECORD
60 IF FLAG <>1 THEN LINE INPUT &BUFF,A$:PRINT A$:STOP ELSE STOP
999 REM *** NEXT IS VALIDATING SUBROUTINE
1000 LINE INPUT"ENTER LOWEST VALID DRIVE NO./LETTER FOR YOUR
      SYSTEM: ";LV$:IF LEN(LV$)>1 THEN GOSUB 1050:GOTO 1000 ELSE
      LV=ASC(LV$)
1010 LINE INPUT"ENTER HIGHEST VALID DRIVE NO./LETTER: ";HV$:IF
      LEN(HV$)>1 THEN GOSUB 1050:GOTO 1010 ELSE HV=ASC(HV$)
1020 IF ASC(LV$)<65 THEN TYPE=2:CO$(1)=""':CO$(2)=""':SE$="/" ELSE
      TYPE =1:CO$(1)=""':CO$(2)=""':SE$="."
1030 RETURN
1050 PRINT"ONE CHARACTER ONLY, PLEASE RE-ENTER.":RETURN
1999 REM *** NEXT IS EXAMPLE SUBROUTINE TO GET FILESPEC

```

```

2000 LINE INPUT"ENTER FILENAME (NO EXTENSION): ";FI$
2010 PRINT"ENTER  EXTENSION  (NO DELIMITER  PLEASE)":LINE  INPUT"
      (PRESS RETURN/ENTER IF NO EXTENSION) :";EXT$
2020 RETURN
2999 REM *** DRIVE NO./LETTER INCREMENT ROUTINE
3000 :IF DL$(TYPE) = "" THEN TV = LV: DL$(TYPE) = CHR$(TV): ELSE
      TV = TV+1: DL$(TYPE) = CHR$(TV): IF TV>HV THEN PRINT"DEVICE
      NOT AVAILABLE, FILE NOT FOUND":DL$(TYPE)="" :FLAG=1:RETURN
3009 REM *** STORE CORRECTED FILESPEC IN FS$
3010 IF EXT$>"" THEN FS$ = DL$(1) + CO$(1) + FI$ + SE$ + EXT$ +
      CO$(2) + DL$(2):RETURN
3020 FS$=DL$(1)+CO$(1)+FI$+CO$(2)+DL$(2):RETURN
3999 REM *** DEMO FILE SEARCH ROUTINE
4000 CLOSE BUFF:ON ERROR GOTO 60000:GOSUB 3000:IF FLAG=1 THEN
      RETURN ELSE IF TYPE =1 THEN ON ERROR GOTO 0:ON ERROR GOTO
      61000:RESET:ON ERROR GOTO 0:ON ERROR GOTO 60000
4010 OPEN PURP$,BUFF,FS$:ON ERROR GOTO 0:RETURN
60000 IF ERL=4010 THEN RESUME 4000
60010 PRINT"ERROR IN LINE ";ERL:STOP
61000 IF ERL=4000 THEN PRINT"TRS-80 DRIVES ARE NUMBERED, NOT
      LETTERED":PRINT:RESUME 20 ELSE 60010

```

DBASEII - WHAT TO DO WITH IT - PART 1

It is a few months now since I finished typing my series on CPM, and I have thought about taking on another project. For some time I have been toying with the idea of using dBaseII as my database program. Until now I have used few databases mainly because, although I had plenty of uses for them, I have not found one that really combined all the features that I needed. I started with Profile on the Model 1; in fact it was the earliest version and I transferred it to the Model 4 in it's Model 3 mode. This was a very cumbersome and weak database, but it did the job. Lately I have been using PFS:File and PFS:Report on the 4. this was a vast improvement on Profile 1, but it was still not 100% and the sorting was only up to 8 levels. Without PFS:Report the PFS system is extremely weak and may well be better when enhanced with all the extras that I see for the MSDOS Version.

One of the biggest problems I found was that to transfer from Profile to PFS I had to printout the entire file and then retype it. I swore after this that I would never change from PFS to another database after the marathon typing session. I still think that PFS is quite a good database and has many merits, but recently I have been taking a long at dBaseII. The first question was could it do sorts of greater than 1 level. Aha I may have lost some of you by now. Well lets just explain about sorts.

Imagine a database with names and other personal details, in fact don't try to imagine one I will give you an example.

NAME	INITIALS	FORENAMES	WORKPLACE	EMPLOYMENT	CODE	SALARY
Abbot	DF	Donald Frank	Shopfloor	Checker	2	7500
Bristow	MW	Martin William	Shopfloor	Packer	5	7000
Bristow	MJ	Michael John	Shopfloor	Checker	2	7500
Cockram	S	Shaun	Office	Manager	1	9000
Cole	AS	Arthur	Shopfloor	Cleaner	6	6000
Cole	A	Arthur	Office	Clerk	4	7600
Cole	A	Amanda	Office	Typist	3	7500

Firstly don't pay any attention to the wages and jobs, my knowledge of these matters is slight, somewhat similar at this stage to my knowledge of dBaseII. However, let's consider a sort of people alphabetically by surname. That is simple and in fact the above list is in that order. Often though that may not be enough and sorting on initials as well may be needed. This is the second level of the sort and many databases can do this. In the above case though, this is still not enough, a third level is required, requiring a first name sort. Greater levels may be needed to sort people with identical names and first names by sorting on their workplace.

In some cases the above list may be needed to be sorted on a field, that's the headings, such as NAME and SALARY, for instance a sort in order of WORKPLACE may be what is wanted. Some databases will only sort on the KEY FIELD, normally the first one. Even more difficult is to sort on fields such as EMPLOYMENT above. A straight alphabetic sort will put cleaners above managers and packers. That may be all that is required, but if the database needs to be sorted in order of importance we have to use more devious methods. In this case simply by adding a CODE field with lower values being the higher importance. A sort using the code as the key field will result in a database rearranged in order of importance. If your database can do all of those things then probably you are happy with your lot. If it won't then read on, dBaseII is for you.

First things first, what systems can dBaseII run under? CPM and MSDOS are the 2 I know of, but more may be in existence or on the way. It comprises a number of files, and these will vary with different versions of dBaseII. Currently version 2.4 is the latest I know of but am prepared to stand corrected on this matter. At this stage I will explain the meaning of the various filename extensions.

DBF	DATABASE FILES
FRM	REPORT FORM FILES
CMD	COMMAND FILES
NDX	INDEX FILES
MEM	MEMORY FILES
TXT	TEXT FILES

The meaning of each of these will become clear as the series progresses. There may be an exception to these extensions when using MSDOS, for example the COM command files used under CPM are called CMD files in MSDOS and therefore dBaseII CMD files are called PRG under MSDOS. I must add that dBaseII command files are not executable code but similar to JCL type of files and will allow a series of commands and decisions to be made automatically.

Some specifications and requirements for dBaseII.

A Z80, 8080 or similar system is needed with at least 48K of memory, an addressable screen (all TRS 80's have this), a mass storage device (floppy or hard disk) finally a CPM or MSDOS operating system. A printer is desirable but not mandatory. dBaseII has the following specifications:-

Records per file	65535
Characters per record	1000
Fields per record	32
Characters per field	254
Largest number	1.8 x 10-63
Smallest number	1.0 x 10-63
Accuracy	10 digits

These values may be one reason for not using dBaseII, especially the fact that only 32 fields are available. Some users seem to require unlimited fields, although as yet I have no reason for more than about 12.

Before use, dBaseII must be installed for your particular machine. This is vital if the program is to run at all and even if it does run, all of it's facilities may not be implemented. I shall now run through the process of installing dBaseII for use on a Model 4/4P. In the example below the sequence may not be the same as that you take all replies to prompts appear after the ? or : prompt marks. Firstly type INSTALL, and the program will display

dBaseII INSTALLATION PROGRAM VER 2.7

ARE FULL SCREEN OPERATIONS WANTED (Y/N)? Y

SELECT TERMINAL TYPE

A -HAZELTINE 1500	B -SOROC, TELEVIDEO
C -HEATH 89	D -PERKIN ELMER 1100
E -ADM 3A	F -ADM-31
G -VDP-80	H -INTECOLOR
I -GNAT-SYSTEM 10	J -TRS-80 II (P&T)
K -APPLE	L -VECTOR GRAPHICS
M -SUPERBRAIN	N -VISUAL 100
O -OSBORNE	P -HP 2621, HP-125
Q -CROMEMCO 3102	R -TRS-80 (FMG)
S -ADDS VIEWPOINT	T -XEROX 820
U -NEC	

Y - MODIFY PREVIOUS INSTALLATION

Z - USER SUPPLIED TERMINAL COMMANDS

The various options used will now follow, however a reply of E will often do. Options Y and Z are roughly the same and if you have not installed your version of dBaseII then run INSTALL twice, selecting Terminal E (ADM 3A) on the first time and then when INSTALL is run the second time select Option Y. In fact the same questions are asked if you select Option Z, but no defaults are given. Where the default on your screen is the same as the one given here then just press <ENTER> or <RETURN> if you are using Video Genie

Option Y

MODIFY PREVIOUS INSTALLATION ROUTINE

FOR THIS METHOD, YOU WILL NEED THE HEX OR DECIMAL CODES THAT CAN BE SENT FROM YOUR COMPUTER TO THE VIDEO TERMINAL TO CONTROL IT
TYPE "Y" IF YOU WISH TO CONTINUE: Y

WILL YOU BE ENTERING COMMANDS AS HEX OR DECIMAL? H

COMMANDS ARE ENTERED AS A SEQUENCE OF NUMBERS
TYPE A CARRIAGE RETURN TO END A SEQUENCE

1 -	DELETE A CHAR SEQUENCE
2 -	DIRECT CURSOR POSITIONING SEQUENCE
3 -	CLEAR AND HOME SCREEN COMMAND
4 -	BRIGHT/STD VIDEO COMMANDS
5 -	DIM/REVERSE VIDEO COMMANDS
6 -	INITIALIZATION SEQUENCE
7 -	EXIT SEQUENCE
8 -	RESET TO STANDARD VIDEO MODE
9 -	ALTER SCREEN SIZE

SELECT ITEM TO CHANGE

ANY CHAR OTHER THAN 1 - 9 TERMINATES SESSION

Make your required selection at this point, the prompts that follow are the same as for Option Z below, but only those areas that you wish to examine/alter are displayed.

Option Z

USER SUPPLIED SPECS ROUTINE

FOR THIS METHOD, YOU WILL NEED THE HEX OR DECIMAL CODES THAT CAN BE SENT FROM YOUR COMPUTER TO THE VIDEO TERMINAL TO CONTROL IT THE CODES (OR SEQUENCES) THAT YOU WILL NEED ARE:

DELETE A CHAR SEQUENCE

DIRECT CURSOR POSITIONING SEQUENCE

CLEAR SCREEN COMMAND

HOME CURSOR COMMAND (CLEAR AND HOME CAN BE COMBINED)

OPTIONAL: BRIGHT/DIM COMMANDS OR VIDEO/REVERSE COMMANDS

TYPE "Y" IF YOU WISH TO CONTINUE : Y

Options Y and Z use the same questions from here on

WILL YOU BE ENTERING COMMANDS AS HEX OR DECIMAL? H
COMMANDS ARE ENTERED AS A SEQUENCE OF NUMBERS
TYPE A CARRIAGE RETURN TO END A SEQUENCE

NOW ENTER THE CODES FOR CHARACTER DELETION
THIS IS THE SEQUENCE "BACKSPACE,SPACE,BACKSPACE"
ON MOST TERMINALS IF THIS IS TRUE FOR YOUR
TERMINAL, THEN TYPE "Y" :Y

ENTER THE CHARACTER DELETE SEQUENCE

(3 BYTE MAX) 03,08,20

--- DIRECT CURSOR POSITIONING ---

THE CURSOR CONTROL SEQUENCE IS USUALLY A 3
TO 4 BYTE SEQUENCE. THE FIRST ONE OR TWO
BYTES ARE USUALLY FIXED AND THE REMAINING
BYTES CONTAIN THE LINE AND COLUMN NUMBERS
FIRST, ENTER THE POSITION IN THE SEQUENCE
THAT HOLDS THE COLUMN NUMBER

CURRENT VALUE = 04
<ENTER>

NEXT, ENTER THE POSITION IN THE SEQUENCE
THAT HOLDS THE LINE NUMBER

CURRENT VALUE = 03
<ENTER>

MANY TERMINALS ADD A CONSTANT TO THE LINE
AND COLUMN NUMBERS. ENTER THE CONSTANT BIAS
FOR YOUR TERMINAL

CURRENT VALUE = 20

NOW ENTER THE SKELETON FOR THE DIRECT CURSOR
COMMAND. ENTER A ZERO IN THE PLACES WHERE
COLUMN AND LINE NUMBERS GO

(11 BYTE MAX) 1B,3D,00,00

---- DIM/BRIGHT OR VIDEO/REVERSE VIDEO ----

ENTER THE COMMAND THAT WILL SWITCH TO
HIGH INTENSITY OR NORMAL VIDEO

(5 BYTE MAX) 0E

ENTER THE COMMAND THAT WILL SWITCH TO
LOW INTENSITY OR REVERSE VIDEO

(5 BYTE MAX) OF

---- CLEAR AND HOME COMMAND(S) ----

ENTER THE COMMAND(S) THAT WILL CLEAR THE
SCREEN AND PLACE THE CURSOR IN THE UPPER
LEFT CORNER OF THE TERMINAL

(11 BYTE MAX) 1A

ENTER THE COMMANDS TO BE ISSUED WHEN
ENTERING THE FULL-SCREEN EDITING MODE
(IF ANY)

(11 BYTE MAX) 00

ENTER THE COMMANDS TO BE ISSUED WHEN
LEAVING THE FULL-SCREEN EDITING MODE
SUGGESTION: USE DIRECT CURSOR POSITIONING
TO PUT CURSOR ON THE BOTTOM LINE OF THE SCREEN

(11 BYTE MAX) 1B,3D,37,20

ENTER THE COMMAND THAT WILL SWITCH TO
STANDARD INTENSITY OR NORMAL VIDEO
TO RESET THE SCREEN AFTER FULL SCREEN OPERATIONS

(5 BYTE MAX) 00

ENTER THE SCREEN WIDTH

CURRENT VALUE = 50

NEXT, ENTER THE NUMBER OF LINES ON THE SCREEN

CURRENT VALUE = 18

ENTER A CHARACTER TO BE USED FOR
INDICATING MACROS OR ENTER FOR
DEFAULT CHARACTER OF AMPERSAND (&) : <ENTER>

PRESS ENTER IF THE ERROR CORRECTION DIALOGUE IS TO BE USED OR ANY OTHER
KEY IF NO DIALOGUE IS WANTED : <ENTER>

ENTER OPERATING SYSTEM

- A - CP/M 1.4 OR CP/M 2.2
- B - CDOS SYSTEM
- C - CROMIX SYSTEM
- D - MP/M II SYSTEM

A

TYPE "Y" TO SAVE, ANY OTHER KEY TO ABORT INSTALL

Y

I should emphasize that the TRS 80 Model 4/4P emulates the ADM 3A terminal and that
selecting ADM 3A will often work, with the exception of Reverse Video.

Having installed your dBaseII the next thing to do is to get it up and running. To
do this type dBase or dBase ?????????; where ????????? is a valid filename of a CMD file,
more on CMD files later. The program will prompt by asking for the date unless you
specify a CMD filename. The date is used to indicate more recent updates on files and
pressing <ENTER> will enter a date of 00/00/00

If you have the HELP file on your disk then typing HELP is probably the best
thing to do first of all. The dBaseII prompt is a full stop which I shall omit from all

examples. Firstly you should create a database file using the CREATE command. This command will then prompt

ENTER FILENAME

Reply with any valid filename, dBaseII will add the extension .DBF automatically. Next the data structure is entered as follows

ENTER RECORD STRUCTURE

AS FOLLOWS

FIELD NAME,TYPE,WIDTH,DECIMAL

001

Reply here with the above details for example

001 NAME,C,20

002 INITIALS,C,5

003 AGE,N,3

004 SALARY,N,6,2

005 <ENTER>

This will create a database with a 20 position name field etc. The C in the TYPE column indicates Character, N is Numeric and L is Logical. If a field is not going to have calculations carried out on it then it is probably best to make it a Character type even if it only contains numbers, examples of this are dates of birth etc.

The next prompt is

ENTER DATA NOW (Y/N)

If you don't want to enter data just yet type N and the file will be created and ready for use on the disk. if you reply Y then the following will appear

RECORD 00001

NAME :

INITIALS :

AGE : :

SALARY :

If you have installed everything correctly the above should appear possibly with reversed video if you took that option during INSTALL. If it does not appear then an error has been made during INSTALL, data can be entered without the full screen mode above; but obviously full screen editing is much simpler. Enter the data that you require and press the DOWN ARROW or <ENTER> to advance a field. Note that if a field is filled with data the cursor will automatically advance to the next one, this feature can be turned off if not needed. Once the first record has been completed the second will appear and so on. To exit you should press <CTRL> W to write the current record and <CTRL> Q to quit without writing. As you press <ENTER> at the end of each record and progress to the next the previous record is written. Pressing <ENTER> on a blank record will exit to the command prompt as well.

Assuming that you have entered some data and finally exited the CREATE command, you will probably want to display the data and by typing LIST this will happen.

00001	Smith	DP	23	7000.00
00002	Hobson	M	31	8500.00
00003	Toms	RAW	45	6000.00

The record numbers can be omitted by typing LIST OFF. Other LIST options are as follows

LIST FOR NAME = "Toms"

LIST OFF FOR NAME = "Hobson"

LIST OFF FOR AGE > 23

LIST OFF FOR AGE > 23 .AND. SALARY > 7500

The combinations are endless. Similar to list is DISPLAY, this will allow a scope of record numbers to be entered and unlike LIST which scrolls continuously, DISPLAY will

scroll 15 records at a time. Try typing the following

```
DISPLAY ALL
DISPLAY ALL FOR NAME = "Toms"
DISPLAY RECORD 2
DISPLAY NEXT 1
DISPLAY
```

Also try these which should explain themselves

```
LIST STRUCTURE
LIST FILES
DISP STRU
```

The last example shows that commands may be abbreviated to four letters if you wish. Typing GO TOP will move the record pointer to the first record, typing a number will point at that record, this will be the record that appears next when DISPLAY is typed by itself. SKIP 3 and SKIP-3 should explain themselves.

Should you wish to leave dBaseII and return at a later time, then before using a database file you must tell dBaseII which one to use by typing USE NAMES for example. To add to a database type APPEND after the USE command and more records can be added just as when you created the file. INSERT will prompt for data entry on a record after the current one. INSERT BEFORE is obvious, and INSERT BEFORE BLANK will insert a blank record and not prompt for data entry. DELETE is the opposite of INSERT and can contain a scope such as DELETE NEXT 3, or DELETE RECORD 5. DELETE FILE A:DUMMY.DBF is how a file can be killed. These cannot be recovered from within dBaseII. However, deleted records can be resurrected by using RECALL in the same way as DELETE. Records can be permanently deleted by typing PACK after all deletions have been made, this will pack all the records together and totally delete any "DELETED" records.

With the above information you can play a little with dBaseII, but before I leave you I will tempt you of things to come with some commands to try for yourself.

```
EDIT 3
? 23*5
? "Hello"
ERASE
LIST STATUS
GO BOTTOM
? NAME
```

The last word for this part is after you have finished using dBaseII you MUST exit by typing QUIT, this will close all files and exit gracefully. It is now 10 PM on Sunday and tomorrow I have been asked by someone at work who is now using dBaseII there to demonstrate how it works, so armed with this article I shall "Boldly go where I haven't been before"

Good luck and I shall return next time with all the <CTRL> codes that you need for that EDIT command that you will probably have tried out by now.

Dave Holman
160 London Road West
Bath
Avon
BA1 7QU

HELP

1 Is anyone running Profile under NEWDOS80 V2 ? I would like to so that I can use 80 track drives. Please can anyone let me know of any patches or other modifications that are necessary, or any other better programs.

2 Does anyone have, or have access to, the following 80-US Journal's ?
Jan-Feb 79, Sep-Oct 79, Nov-Dec 79, Jan-Feb 81, Mar-Apr 81, Jul-Aug 81.

Mike Gibbons 021-747 2260

P R E S T E L

I've thought about it and talked about it long enough! I've decided, I'll try PRESTEL for a year. Through the generosity of Trevor Hutchinson, with the loan of his Prestel compatible modem I have logged on to the demonstration pages using the User ID 4444444444 and Password 4444. Whilst the demonstration facilities are very limited it was sufficient to get the flavour of the database.

The great day arrived when the BT envelope arrived with my USER ID and Password accompanied by the quarterly directory. I loaded up my copy of Don Bannister's PRESTEL program for Model 4 TRSDOS 6.x (purchased from Os House, Blandford Computers) and logged on to the Keats Computer. Even here in Northern Ireland the phone call is only charged at local call rates.

Would you believe it!!! I was not logged on for any more than 5 minutes when I suddenly lost control of the keyboard - Prestel would not respond to any key input yet various frames were appearing. Imagine my terror when I saw 'charged' frames appearing on the screen. No amount of swearing or sweating would stop it. I had read about HRH Prince Philip's Prestel Mailbox being hacked and here it was happening to me before my very eyes. Don's documentation warns about not logging off properly thereby providing the opportunity for someone else to pick up your line at you expense. I'll swear a full five minutes passed during which the Mailbox screen appeared and lo and behold the hacker announced that he had cracked my password and that he was not in Northern Ireland. He even suggested that I should not use abusive language - Huh!!!

Being new to the software, I had, in the moments (minutes?) of panic forgotten to press <F2> key which would have recorded the evidence on disk file for later printing. Eventually, control was returned. I immediately logged off.

A few minutes later in a condition of composure I logged on again and called the page where my Prestel bill to date was displayed.... the b***** had run up frame charges of 34p (not much you say - what about the principle of the thing then?). Next thing I did - change my password. Reflecting later I remembered that I was presented with an official looking response frame requesting that I should re-enter my password again. Muggins obliged! So that was how he did it.

WARNINGS FELLOW PRESTELers. Don't fall for that trick like I did.

Next morning I phoned Prestel and complained. Two mornings later a very pleasant young lady from Prestel phoned me (at 7.35 IN THE MORNING!!) at home and said that I had not been the victim of a hacker but we had a crossed line with another user. She said that he should have logged off. What about my charges then Miss? Oh, we will clear them from your account as you were not responsible for them. Thanks... Goodbye.

That was two weeks ago and the charges are still there. I honestly don't believe that it was a crossed line. British Telecom will never admit to a hacker. I SAY - I WUZ HACKED. After I finish this letter I shall write to them again about it.

Apart from this experience I can say that so far things have been interesting. The Tandy and Portable section looks good. Anyone who wants to converse with me via the Mailbox can do so. My number is 247462564.

David Roberts, 6, Plantation Road, Bangor Co Down N. Ireland.
Prestel Mailbox 247462564 Telephone 0247-462564

Comments on Model 4/4P mods Etc.

Reference Leon's question about extra memory for the 4/4P, there are three firms advertising memory enhancements for them in 80 Micro as well as for the 1 & 3, one of them 'Alpha Technology inc.' first advertised back in July last year, the other two 'Intellitech Corporation' & 'Seatronics of Holland' started in November.

They all seem to be advertising the same thing, I am now waiting to find out who is the originator, the Dutch firm seem to be from additional information I have received.

The Alpha Technology board has been reviewed in the January 80 Micro along with a Ram-disk program which if it can all be made to work makes the change to an IBM compatible even less necessary especially as I already have double sided 80 track drives & shall be carrying out the 4 drive mod, (also described in the January issue), to my 4P very soon, with the 'gate array' machine it's very simple but for the earlier machines it would be advisable to get OS House to do it, he has had a lot of experience with the snags.

The January issue also had the instructions on how to speed-up an Epson MX-80 printer, I have carried them out & run 2400 sheets of printing through without the slightest problem, I did of course clean & lubricate everything first.

Re Peter Tootall's comment about edge connectors, even the General Northern disk connector had pins 32 & 34 connected together so that seems a common occurrence.

When I took my Tandon drives out of my 4P they both worked with the Model 1 but only at a slower stepping rate than they had been using in the 4P & didn't they get HOT!, that explains why the 4P has a fan in it, only cool air comes out now no matter how long I am running.

Silicon grease on the head slides is a good idea with all drives, always makes them run quieter.

When using Mitsubishi drives in the 4P it is not necessary to extend the power cable, if it is disentangled from the other power wires there is enough to reach, it means cutting the cable tie & tying the others up with a piece of string if you don't have any spare ties but that is simpler than extending the cable, as for the 34 way connectors as Tandy still insist in pulling out pins to polarise the connector all you have to do is take the connector carefully off the cable, pull connectors from the middle of the other side, (the earth side), & push them in the empty slots, if of course you have some identical connectors spare pull pins from them instead, but be carefull every make is different.

The three firms advertising 'SuperMem' as they call it also advertise a 'Speed-up' mod of up to 8mhz so the speed comparisons on page 10 & 11 of the December issue of Natgug would look quite different with that mod fitted, as I said who needs an IBM compatible.

When I installed my 80 track drives I got a little PCB with all the necessary circuitry on it for switching & mounted it behind the switches on the front of the casing along with red & green LEDs to show which size I was using, two colour LEDs would have been better but I hadn't got any.

Since starting this article I have received more detailed information from 'Alpha Technology' their description of both modification kits & software is almost word for word with the Dutch specifications, so maybe they started it after all, it will be a question of who are the best people to deal with, I am hoping a friend of mine will be able to go over to Holland soon & see what sort of a firm 'Seatronics' are.

I am sorry to note that 'Anon' is still unhappy with his 4P, it is a long way from being a miserable excuse for a computer, with the additions I have referred to it is quite a remarkable one, the one 'Anon' has just needs looking at by someone who really understands them, if of course he still has Tandon drives that may be the cause, I seem to recall that the message 'not ready on drive a:' did happen to me once or twice before I changed the drives but I put it down to the disc not being entered into the drive properly, as opening the door & reinserting it corrected the fault.

The Misosys program 'Pronto' was reviewed in the November issue of 80 Micro & it is quite usefull for keeping dated notes as well as address records that need altering frequently, it has one advantage over the 'Montezuma' window program in that providing you enter the date on startup it displays the current month's calender with the date surrounded by a flashing cursor, if you enter the time at startup it also show it on the index card facility along with the date, unfortunately you cannot use 'Term' or 'Dialer' without the modem board being fitted & that is not available or legal in this country.

There are a lot of other usefull facilities but I have not got round to trying them out yet, being retired I no longer have to organise my time & as a result never seem to have any.
E.C.Kilpatrick, 3a Gainsborough St,
SUDBURY. Suffolk. CO10 6ET. Phone 0787 79504.

FREE BOTTLE OF CHAMPAGNE !

I have a bottle of rare Bulgarian champagne that I will give to anyone. All they have to do is to tell me where I can get better service from than Os House of Blandford Computers. I don't expect any of our readers not to know Os - in case they don't he and his staff and family are incredibly kind and helpfull. I am sure that it is not economic for him to attend all the meetings or to help in all the ways that he does, but I am sure that we appreciate it. I personally try to show this by ordering from Os where possible.

Mike Gibbons 021-747 2260

Aren't Computers Good !

One of my other interests is underwater diving (SCUBA diving). I was talking to a local diving shop director a couple of months ago and somehow the conversation turned to computing. To cut a long story short we agreed to look at my computer equipment and see what could be done with a computer today. He was so impressed that he decided to get a system straight away. His total outlay was about a tenth of what some salesmen were quoting and it does everything that he wants !

Mike Gibbons 021-747 2260

Wanted

Does anyone know anything about a program called Teacher's Aide (0214RD) that used to be sold by Microcomputer Applications ? I am interested in seeing a copy or knowing if it still can be obtained from anywhere.

Mike Gibbons 021-747 2260

WORDSTAR and EPSON PRINTERS:-I

This is the first of a two-part article which will cover two arrangements of Epson printer commands using the ten available locations described in my last article. This first arrangement should give most general users all they need. The second arrangement, whilst repeating some codes used in this arrangement, will include the sub/superscript commands for those who have the need for them. For both arrangements, I am providing a 'tailor-made' PRINT MENU to make it easier to find the right code.

My last article gave brief instructions on the use of CP/M's DDT program. Begin by copying to a new disk the usual three Wordstar files - WS.COM, WSMGSGS.OVR and WSSOLVY1.OVR.

The following changes to WS.COM are in Hex numerical order so that, having called the first location 'S6B5', you can continue without a break until the last one at '06E5'. When finished, type '.' then check your changes, by typing 'D6B0'. The VDU will show the lines of memory which include your changes. For hard copy, type ^P and repeat the command.

LOCATION ADDRESS	WORDSTAR COMMAND	WORDSTAR USE	SUBSTITUTED CODE	ADAPTED FOR
1. 06B5	^PA	CHARALTR	03 1B 57 31	ENLARGED ON
TEST	UPPER CASE :	test	lower case	
2. 06BA	^PN	CHARSTND	03 1B 57 30	ENLARGED OFF
3. 06BF	^PT	SUPER/DN	02 1B 34	ITALICS ON
	TEST UPPER CASE :	test	lower case	
4. 06C4	^PV	SUB /DN	02 1B 35	ITALICS OFF
5. 06C9	^PQ	USR1:	01 0F	CONDENSED ON
	TEST UPPER CASE :	test	lower case	
6. 06CE	^PW	USR2:	01 12	CONDENSED OFF
7. 06D3	^PE	USR3:	02 1B 45	EMPHASISED ON
	TEST UPPER CASE :	test	lower case	
8. 06DB	^PR	USR4:	02 1B 46	EMPHASISED OFF
9. 06DD	^PY	RIBBON	03 1B 2D 31	UNDERLINE ON
	TEST UPPER CASE :	test	lower case	
10. 06E2	^PY	RIBOFF	03 1B 2D 30	UNDERLINE OFF

Type '^C', to get out of DDT, followed by SAVE 62 WS.COM. Now, use DDT to call 'WSMGSGS.OVR'. Making the changes below will produce this:-

```

^P          < < <   P R I N T   M E N U   > > >

Begin and end for:  Only once each  !-Epson Printer codes-!
  B, D, S and Y !      time for H    ! A Enlarged on      !
B Bold D Double ! H Overprint char  ! N Enlarged off    !
S Underscore   ! Q Condensed on    ! C Printing pause   !
Y Underline    ! W Condensed off    ! PROGRAM WS2.COM    !
E Emphasise on ! T Italics on      ! has sub/superscript !
R Emphasise off ! V Italics off     ! and Elite type     !
-----

```

When you type the 'R' to load WSMGSGS.OVR, in most cases, you should get calculation values (for the subsequent SAVE command) of 6E00H-0100H i.e 110D-1D or 109 memory pages. Note the latter for use when saving the changed program.

ALTER PRESENT VALUES WHERE NEW VALUES ARE DIFFERENT

PRINT MENU: LINE 1 (Changes start:16B7 and end:16F3)
 BYTE Nos: 00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F

PRESENT 16B0 20 20 20 20 20 20 0E 20 20 A0 AD AD AD AD AD AD
 CHANGES 16B0 42 65 67 69 6E 20 61 6E 64
 ASCII B e g i n a n d

PRESENT 16C0 A0 D3 F0 E5 E3 E9 E1 EC A0 A0 C5 E6 E6 E5 E3 F4
 CHANGES 16C0 20 65 6E 64 20 66 6F 72 7C 20 20 20 4F 6E 6C 79
 ASCII e n d f o r i 0 n l y

PRESENT 16D0 F3 A0 AD AD AD AD AD AD AD A0 20 20 20 7C 20 AD
 CHANGES 16D0 20 6F 6E 63 65 20 65 61 63 68 20 20 20 7C AD C5
 ASCII o n c e e a c h ! - E

PRESENT 16E0 D0 F2 E9 EE F4 E9 EE E7 A0 A0 C3 EB E1 EE E7 E5
 CHANGES 16E0 F0 F3 EF EE A0 D0 F2 E9 EE F4 E5 F2 A0 E3 EF E4
 ASCII p s o n P r i n t e r c o d

PRESENT 16F0 F3 AD 20 7C
 CHANGES 16F0 E5 F3 AD 7C
 ASCII e s - !

PRINT MENU: LINE 2 (Changes start:1708 and end:173F)
 BYTE Nos: 00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F

PRESENT 1700 EE F5 F3 AD A0 20 0E 20 28 62 65 67 69 6E 20 61
 CHANGES 1700 20 42 2C 20 44 2C 20 53
 ASCII B , D , S

PRESENT 1710 6E 64 20 65 6E 64 29 20 7C 20 20 28 6F 6E 65 20
 CHANGES 1710 20 6E 64 29 20 59 20 20 7C 20 20 20 20 20 74 69
 ASCII a n d Y ! t i

PRESENT 1720 74 69 6D 65 20 65 61 63 68 29 20 20 20 7C 20 41
 CHANGES 1720 6D 65 20 66 6F 72 20 48 20 20 20 20 7C 20 41
 ASCII m e f o r H ! A

PRESENT 1730 20 41 6C 74 65 72 6E 61 74 65 20 70 69 74 63 68
 CHANGES 1730 20 45 6E 6C 61 72 67 65 64 20 6F 6E 20 20 20 20
 ASCII E n l a r g e d o n

PRINT MENU: LINE 3 (Changes start:1781 and end:17BE)
 BYTE Nos: 00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F

PRESENT 1780 20 53 74 61 6E 64 61 72 64 20 70 69 74 63 68 20
 CHANGES 1780 20 45 6E 6C 61 72 67 65 64 20 6F 66 66 20 20 20
 ASCII E n l a r g e d o f f

PRINT MENU: LINE 4 (Changes start:17B8 and end:17CA)

BYTE Nos: 00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F

PRESENT	17B0	7C	20	4F	20	4E	6F	6E	2D
CHANGES	17B0	7C	20	51	20	43	6F	6E	64
ASCII		I		Q		C	g	n	d

```
PRESENT 17C0 62 72 65 61 6B 20 73 70 61 63 65 20 20 7C 20 43
CHANGES 17C0 65 6E 73 65 64 20 6F 6E 20 20 20
ASCII      e n s e d      o n      !
```

PRINT MENU: LINE 5 (Changes start:17F9 and end:1832)

BYTE Nos: 00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F

```
PRESENT      17F0                                58 20 53 74 72 69 6B
CHANGES     17F0                                59 20 55 6E 64 65 72
ASCII                                               Y   U n d e r
```

PRESENT	1800	65	6F	75	74	20	20	20	20	7C	20	46	20	50	68	61	6E
CHANGES	1800	6C	69	6E	65	20	20	20	20	7C	20	57	20	43	6F	6E	64
			l	i	n	e				i		W		C	a	n	d

```
PRESENT 1810 74 6F 6D 20 73 70 61 63 65 20 20 20 20 7C 20 59
CHANGES 1810 65 6E 73 65 6D 20 6F 66 66 20 20 20 20 7C A0 A0
ASCII      e n s e d      o f f      i
```

```
PRESENT 1820 20 4F 74 68 65 72 20 72 69 62 62 6F 6E 20 63 6F
CHANGES 1820 D0 D2 CF C7 D2 C1 CD A0 A0 D7 D3 B2 AE C3 CF CD
ASCII      P R O G R A M          W S 2 . C O M
```

```

PRESENT      1830 6C 6F 72 7C 5E 4F 20 4F 6E 73 63 72 65 65 6E 20
CHANGES     1830 A0 A0 20 7C
ASCII

```

PRINT MENU: LINE 6 (Changes start:1849 and end:1882)

BYTE Nos: 00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F

PRESENT	1840	20	20	20	20	20	20	0E	20	20	56	20	53	75	62	73	63
CHANGES	1840										45	20	45	6D	70	68	61
ASCII											E		E	m	p	h	a

PRESENT	1850	72	69	70	74	20	20	20	20	7C	20	47	20	50	68	61	6E
CHANGES	1850	73	69	73	65	20	6F	6E	20	7C	20	54	20	49	74	61	6C
ASCII		s	i	s	e		a	n		!		T		I	t	a	l

[illegible]

```
PRESENT 1870 AD AD D5 F3 E5 F2 A0 A0 D0 E1 F4 E3 E8 E5 F3 AD
CHANGES 1870 E1 F3 A0 F3 F5 E2 AF F3 F5 F0 E5 F2 F3 E3 F2 E9
ASCII      a s      s u b / s u p e r s c r i
```

```
PRESENT 1880 AD A0 20 7C 53 70 61 63 65 20 42 61 72 20 72 65
CHANGES 1880 F0 F4 A0 7C
ASCII      p  t      !
```

PRINT MENU: LINE 7 (Changes start:1899 and end:18D1)																		
BYTE Nos:	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F		
PRESENT	1890	74	75	72	6E	73	20	0E	20	20	54	20	53	75	70	65	72	
CHANGES	1890										52	20	45	6D	70	68	61	
ASCII											R		E	m	p	h	a	
PRESENT	18A0	73	63	72	69	70	74	20	20	7C	20	52	45	54	20	4F	76	
CHANGES	18A0	73	69	73	65	20	6F	66	66	7C	20	56	20	49	74	61	6C	
ASCII		s	i	s	e			o	f	f	!		V		I	t	a	l
PRESENT	18B0	65	72	70	72	69	6E	74	20	6C	69	6E	65	20	7C	20	51	
CHANGES	18B0	69	63	73	20	6F	66	66	20	20	20	20	20	20	7C	A0	A0	
ASCII		i	c	s				o	f	f					!			
PRESENT	18C0	28	31	29	20	57	28	32	29	20	45	28	33	29	20	52	28	
CHANGES	18C0	A0	E1	EE	E4	A0	C5	EC	E9	F4	E5	A0	F4	F9	F0	E5	A0	
ASCII			a	n	d			E	l	i	t	e		t	y	p	e	
PRESENT	18D0	34	29	20	7C													
CHANGES	18D0	A0	A0															
ASCII																	;	

Type '.' and then D16B0, followed by successive 'D's to check your entries. The ASCII output on the right should show all the letters in the revised PRINT MENU except for those letters which will appear in highlight on the screen. These show up as a series of 'stops'. When satisfied that all is correct, type '^C' to exit DDT. Then SAVE 109 WSMGSGS.OVR.

Finally, type 'WS' and type 'D' to edit any file. When loaded, type '^P' and check that the revised PRINT MENU is as it should be.

Don Smith, 82, Oldridge Road, Balham, LONDON SW12 8QA.

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Mike Gibbons 021-747 2260

SPARE MANUALS

I have spare copies of the following manuals which I have bought and no longer require. Please contact me for further details.

Model 1 Technical Reference Handbook (26-2103)

Model 1 Dosplus 3.5 Manual

Model 1 Level 2 Basic Reference Manual (26-2102)

Model 1 TRS-DOS & DISK BASIC Reference Manual (26-2104). This is the one with the brown cover.

Most of the Tandy manuals above are now out of print.

Mike Gibbons 021-747 2260

COPYING FROM 80-TRACK TO 40-TRACK DISKS, CP/M to DOS

I regularly use Hypercross to copy data from my Model III (with 40-track drives) onto the CP/M machine in the office, which has 80-track drives. I use DEC VT180 as the interchange format; Hypercross will format and write to the disks, and the office machine will read them. So far the process has been very reliable.

Copying the other way is a different matter. The 80-track machine would write to the VT-180 disks, and read the data back, but the data was usually unreadable on the TRS-80. I've now at last found a solution which seems reliable if cumbersome. It may be relevant for any other members who need to use 80-track drives to write to disks that will later be read by a 40-track drive.

1. The first requirement is a new disk formatted in 40 tracks (in my example, in VT-180 format) by double-stepping on an 80-track drive. If you can't do this find someone who can format the disk for you on an 80-track-drive machine. This disk is to be used only for copying from the 80-track to the 40-track machine, and must not be written on by the 40-track machine. Once it is formatted, you can use it again and again, but you should only use the 80-track machine to delete unwanted files from the directory.

2. Next, use the 80-track drive to copy the files to the disk formatted under 1. above.

3. At this stage some of the files may still be unreadable on the 40-track machine. Use a good disk zapping utility on the 40-track machine to make a track-to-track copy of the whole double-stepped disk onto a true 40-track disk.

4. Copy the files over onto the TRS-80 DOS using Hypercross or its equivalent. You should now have no difficulty.

Christopher Currie

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LDOS Fix disk, Disk only, documentation on disk	I/III	5.00
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Structured Basic Translator	I/III	10.00
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Humb, Tape and documentation	I/III	3.00
GSF, Tape and documentation	I/III	3.00
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