

# ***NATGUG NEWS***

Volume 11,

Issue 6

June 1989



SWINDON SYSTEMS ROOM - 3.15 a.m.  
Some people don't know when to give up

INFORMATION ON THE GROUP

Membership of the group is by subscription to the Newsletter which is published at regular intervals - application forms are available from the secretary. Membership is open to anyone with an interest in computers but special emphasis is placed on equipment within the Amstrad, Tandy and MS-DOS range.

Details of the group's accounts and constitution are available from the Treasurer - please ensure that your requests are accompanied by a S.A.E.

Members requiring assistance with problems related to the machines specified should contact the P.R. Officer who will endeavour to put them in touch with possible advisors.

Sub-groups exist in many areas and their secretaries are invited to forward details to our Editor/Publisher for inclusion in the magazine. The back page is being reserved for this purpose.

Public domain software libraries are maintained in five separate collections : Model 1, Model 4, CP/M, Amstrad and MS-DOS. Names of the appropriate librarians are available from the secretary. There is a copying charge of 1-00 per disk or tape. (see also Vol.8, Iss.10)

Back numbers of the magazine, in 6 month volumes, are available at the price indicated on the application forms.

The group has no paid Officers or employees, and the issue of the magazine depends on contributions from Members, who are also invited to submit responses to questions raised in the previous issue. To allow legible print, we prefer contributions to be submitted on 5.25" disk, direct to the Editor - ASCII files are perfectly acceptable but please indicate the disk format used (SS,DS,SD,DD, track count, DOS etc.). Your disk will be returned if you enclose an addressed label, normally within 7 days. The Editor will accept written or typed articles where members insist - publishing will depend on readability.

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## Editorial

UPDATE: Re TRSTimes and last months announcement. Tom Ridge will be taking over the organising of importing the issues of TRSTimes into the U.K. and subsequent distribution. I ask subscribers to please do nothing for the moment. As nearly everything is organised for this year, there is no rush for an immediate take over. Either Tom or myself will be contacting every subscriber in due course. To the other member who kindly phoned me on this subject, thank you for the offer to take the job on.

UPDATE: The Email system (021-355 7150) is now able to auto answer, thanks to Laurie (Shields) being gracious enough to pay a visit to my place, a way has yet to be found to have the program boot up and install automatically. At the moment, whether it is on-line or not, depends on my being at home. I will keep members updated. How many have still not remembered that the modem is on line from 1730 to 1900 each day and have been answered by the modem, only for the caller to hear baud 'buzzed' rates being sent down the line to them? I know for certain there have been some. Sorry but the line is not for voice contact during these times. One side benefit from this, as my wife has observed, "We do get to eat dinner now without being interrupted".

UPDATE: Model 2000. I believe we have some ambiguity as to who has volunteered to become the spokesperson for the model 2000. In an effort to resolve this quickly, I have made some phone calls. Would any member wishing to join in this particular forum, in the first instant please contact Merton Fuller, who's details appear on page 20 of the May issue of NATGUG News. All can then 'fight' it out from there. I would hope that the Editor of NATGUG News will be kept informed of developments, this then leaves readable information in NATGUG News for future users of that machine. Certain manuals have become available to NATGUG for this machine, but I will leave details to be given by others.

Has no member yet tried the Ribbon Spray Ink as advertised by Caspell Computer Services of Poole? Reports please to the Editor.

I notice, reading a certain newspaper, one member works nearly as many hours as I do. Let's see 1,000,000 analyses to be carried out each year at the rate of 150 samples per hour, so someone must be working over 18 hours per day for 365 days per year.

Last month I wrote the following: "If you use DOS 3.3 and a 3.5" drive on an AT machine, check to ensure if detection is made when you change disks. At the DOS prompt, and when logged on the drive, <ENTER> DIR, look at the screen, change the disk and repeat, look to see if DOS has read the DIR of the new disk or lists again the first Directory. I have had some CRASHED disks because DOS has not 'sensed' that the disk has been changed. One way out is, at the DOS prompt <ENTER> <CTRL-C> after changing disks. Does any member know what is going on, or what the answer is please. Replies to the Editor." As yet I have received no replies.

BUT NOW! My 3.5" drive has been changed, there being a jumper "switch" beside the drive select jumpers on this new one to select either AT or XT mode. This new drive now behaves perfectly.

Tandy, in their Soft Spots, Issue 17 have a different solution, it is as follows; When the Tandy HL has a 3.5" drive installed and MS-DOS 3:3 is being used, you may experience a problem where the system does not recognise a change of the diskette in the 3.5" drive. The following should be carried out.

```
C:\>PATCH IBMBIO.COM,4EOC,74,EB <ENTER>
C:\>PATCH IBMBIO.COM,1EA1,30,41 <ENTER>
C:\>EDLIN\CONFIG.SYS <ENTER>
*I <ENTER>
    1:*DRIVPARM = /DD:x/F:2 <ENTER> (x=0 for drive A:, 1 for b: etc
    2:* <CTRL> <C>
*E <ENTER>
```

Would all members please go for their correcting pens and exchange the telephone numbers for Roger and John in the "Facts Sheet" included last month. Sorry John and Roger, my excuse is the problem with LeScript and columns not working, I had to reformat and made a mistake whilst doing so in a rush.

Also, we have been advised by the company, that the address given for Micro-Labs is incorrect, it should be as follows:-

Micro-Labs, Inc., 7309 Campbell Road, Dallas, TX 75248. Tel: 214 702 8654.

I can't help but recommend that Mr. Ted Carter, please takes a look at all the adverts for Micro-Labs, including those submitted to NATGUG News. Those members interested in High-Res graphics for their TRS-80's are urged to read Micro-Labs advert in this issue.

NATGUG receives a large number of exchange newsletters from other user groups world-wide. In the past, each month, I tried to list an index of items contained in the newsletters which arrived since the last index was published, of late I have not been able to keep this up. I feel it a shame that other NATGUG members to not have an opportunity of at least knowing what other groups are doing. Do we have someone who is prepared to go through all the exchange newsletters and extract the information they feel NATGUG members would like to see, copyright permitting. I make two rules, the remainder to be decided by the volunteer. As a committee member, I would expect to retain a right to a degree of censorship, and this only in the interests of protecting NATGUG, and myself as publisher. I would have to insist on any input being an ASCII file on disk.

I have been remiss in not acknowledging a letter received from Glyn Roberts, Editor of THUGGERY, an Australian Newsletter. This was to explain how a Micro-Labs Hi-Res board can be shoehorned into a model 4P along with an XLR8'er board. Thanks for your letter Glyn, a copy was passed to John Coyne.

I have already made one member aware that if you have Word Perfect 5, which is known to have some bugs, then if you contact the company, they will supply, free-of-charge, an updated version. They are only supplying if they receive a request. One way of recognising a bugged version is if zero bytes of a new file are saved to disk when using the SAVE DOS (ASCII) text.

Two items which I have gradually been feeling disappointed about are

- 1). Each Committee Member, at sometime or other, (and even at this time into the year) has an 'ex-member' phone and say that suddenly NATGUG News has stopped arriving. Point a), Roger is the only person who has details of membership and therefore is the only person who is able to answer queries regarding membership expiry dates or otherwise. Point b), and the main one. None of the committee gleans any pleasure from seeing the name of someone disappear from the current membership list. First off, members informed the committee that there was no way that a member knew when his membership expired. At great cost in Rogers time, he devised a way of including an expiry date on each label placed on the envelope which is sent containing a members copy of NATGUG News. This followed by the committee being informed that this was not working as the envelopes were being thrown away, and therefore included the label, before it was realised that the contents was NATGUG News. This was answered by having the envelopes stamped on the outside. Roger advises me that up to three reminders are sent out to members who are 'reluctant' to renew. What more do we have to do? Please, Please, look at the label, if you missed the one on the envelope in which this came, then do make a note somewhere to check the next one. If you do not agree with the date, please contact Roger NOW, not when it might be too late. You can avoid all those feelings of disappointment the committee have just after Christmas, when we see the first current membership listing. I have no doubt that Roger will be perfectly willing to accept subscriptions for next year at the next Swindon meeting, should you wish to delay until then.

Second Item, and I am not yet too disappointed as it is early days. The committee has telephone calls fairly regularly asking in which issue of NATGUG News a certain article appeared. This always took up not an insignificant amount of my precious private time to research. We have been fortunate and had a member, Ron Ward, volunteer to bring the 'old' index up-to-date, and whilst doing so, greatly expanded it. I have not yet found an item it does not in some form cross reference. If I am unable to find an article under one word, it can be found using another. Ron has done a brilliant job, and the committee have acknowledged this. What it now requires, is for each member to purchase a copy. See NATGUG News, Volume 11, Issue 4, page 41 for details. Sales to date have not met expectations. As every member would find this so useful, we should be into at least our third re-print. Now this index is available, I am going to be very hard and cruel, (I have invited the other members of the committee to do likewise) should a member telephone and ask me to look up the whereabouts of a particular article, I will, as normal, try to be polite, time and circumstances permitting, and invite the member to write to Roger, together with payment, requesting a copy of this SUPER INDEX.



The advantages of QuickBASIC (let's call it QB for short, in accordance with the program file name) are numerous.

- Integrated Editor, Compiler and Debugger environment
- True full screen editor. BASICA and GW-BASIC only have what I call a pseudo-screen editor. You can use cursor keys to move through the screen and change text, but you must save changes by typing [ENTER]. In QuickBASIC, any change in the screen you make, is made in the text as well. The QB environment in addition allows block copies, block moves, merge with other files and so on.
- Separate SUB subprograms and FUNCTION subprograms. Such subprograms can be part of the main module, but can also be saved in separate modules, which makes it possible to use them in other programs as well. You can even collect frequently used routines in libraries that are linked to your programs.
- DO...LOOP constructs. These resemble the WHILE...WEND loop, but the test can be put either at the beginning (DO WHILE <condition> ...LOOP) or at the end (DO...LOOP WHILE <condition>) of the loop.
- The SELECT CASE...CASE...ENDC construct. This is a branching construct of a type similar to constructs found in PASCAL or C, and much more flexible than the ON GOTO and ON GOSUB statements.
- For version 4.0 (and onward I suppose) full support of the Hercules Graphics Card. This is mentioned, but not described in the manuals that come with QB. See the README.DOC file on the distribution disk for the details. Version 4.1 might already have the information in its manuals. The Hercules Graphics Screen is SCREEN 3, a value different from any traditional IBM screen. Graphics resolution is 720 points horizontally and 348 points vertically (this might cut off the two bottom pixel lines on line 25, although it doesn't do so in nongraphics mode).
- Automatic syntax checking. When entering a line, the line is automatically checked for syntax. Syntax errors over multiple lines cannot be detected when entering a program.
- Trying out of parts of a program as soon as you have entered it.
- Block IF...THEN...(ELSEIF...)ELSE...ENDIF
- Block DEF FNname...END DEF, but this is almost obsolete with the FUNCTION procedures available.
- User-defined data types, with the TYPE...END TYPE statements. These are equivalent to structures in C and can contain multiple data of the same or different type. They can also replace the FIELD and MKX\$() and CVX() functions in accessing random access files.
- Automatic checking for the presence of a 80(2)87 Math Coprocessor. If you don't have one, its effects are emulated, otherwise the 80(2)87 is used to do floating-point calculations. For those who have a Math Coprocessor and don't intend to transport their programs, checking and emulation can be suppressed, resulting in even faster execution.
- Access to DOS interrupts.

In fact, QuickBASIC 4.0 tries to combine the advantages of the interpreted BASIC and the compiled BASIC. The working environment is very

nice. You enter the program statements in a true screen editor. The statements are compiled as soon as you enter the line, so syntax errors are flagged immediately. Once you have finished entering your program, you can try to run it. Possibly some errors occur, because the compilation during entry works line by line, and cannot check for a missing NEXT after a FOR, etc. Then you can correct these errors, and try out the program. If in the end the program works all right, you can make a stand-alone program of it, i.e. a compiled and linked version, right from the QB working environment. The resulting program can be invoked straightaway from MS-DOS.

It is possible to load multiple modules into memory. This allows you to build up a program out of separate modules, and run it from the programming environment. If you then save the program with the Save All command, a file of type .MAK is made, containing all the module names of the program. If you load the main module afterwards, all other modules are loaded as well. Important: don't use the extension .MAK for other files, or the program will not load! You can also put the required modules in a so-called Quick Library. If you then specify which Quick Library to use when invoking QB, you don't even have to load the modules. Quick Libraries even allow you to use modules compiled in a different language, such as MS C, MS Pascal, MS Fortran, or assembled MS Macro-Assembler modules. You only have to put the modules into a Quick Library, and you can use them from the QB environment. Quick Libraries from BASIC sources can be made from within the QB environment. If you do so, a parallel object library (a .LIB file) will be created for LINK. If you load this Quick Library together with QB, and then make an .EXE file from your program, then the .LIB file is automatically linked. And here is one point that in my opinion is not done well: the library is loaded as an object file, not a library file. That is all right if you need all routines in it, but not if you need only some of them. In that case it would be better to leave QB and compile using BC and link in the usual way.

To debug your program, you can single-step through it, set watch variables to see what your variables are doing, set breakpoints etc., all in the source code on the screen. That is a lot more helpful than TRON/TROFF and an occasional additional PRINT. It is possible to compile your program with added code for the CodeView debugger, for even more elaborate symbolic debugging. This debugger is not part of the package, but it is supplied with the Macro Assembler version 5.1 and the Microsoft C compiler, recent versions.

When your program is running satisfactorily, you can compile and load it into an .EXE stand-alone program. This can be done in two ways: using BRUN40.EXE or true stand-alone. The first possibility gives smaller program files, but requires the presence of the run-time module BRUN40.EXE. The second way doesn't require this module, but the program file size will be larger, and you cannot pass data between CHAINED programs using COMMON. When using BRUN40.EXE, you can. Of course, if you have a lot of compiled programs running on your own computer, the use of BRUN40.EXE will save you a lot of space. On the other hand, if you have a machine with only an occasional compiled BASIC program, or a

program that cannot find BRUN40.EXE easily, the stand-alone version would be better.

The BASIC dialect used in QuickBASIC has a number of enhancements compared to BASICA or GW-BASIC, but most of the statements will be familiar even to the TRS-80 Level II user. On the other hand, the typical interpreter statements, like AUTO, DELETE, LIST and EDIT etc. are missing, because they are useless in the QB environment. In most cases existing programs will require little or even no modification to run under QB. To take advantage of the power of QB it will be necessary to change your code in some ways. You could remove the line numbers, for instance. A demo program, REMLINE, supplied with QB, will do that, except for line numbers with references to it. Then you could change the remaining line numbers into line labels, (meaningful) names instead of numbers. It would take too long to name all possible modifications. Occasionally a GW-BASIC program will not run under QB or work slightly different, but in that case only some little alterations will cure that. One frequent problem is the missing ENDIF; QB does not recognize continuation characters.

Conclusion: at its normal price QuickBASIC 4.00 is good value, and for the price I got it, it is a real bargain. The development environment is really good. The extensions to BASIC give you some very interesting possibilities. The few things I missed were the possibility of returning a code to MS-DOS to indicate some error that occurred. C, for instance, has this facility. Also, it is not possible to have functions of a user-defined data type, unless it is, and I haven't found the way to do it yet (in the application I had in mind, I found a way round it, though). I think QB is a real improvement compared to GWBASIC/BASICA, and I have changed all my interpreted BASIC programs to QB, c.q. compiled form. David Washford commented positively on QB, and how right he is!

Latest update: last month I got a letter from Microsoft, stating that as a registered user of QuickBASIC version 4.00, I was entitled to a free update to version 4.00b, as version 4.00 still had some bugs in it. Probably that was why I occasionally got problems with CHAINing programs. You only had to send your original floppies, and you would get the update. So for the postage of the diskettes (less than a pound) I got this update. In fact, I have a strong suspicion that it in fact is QB version 4.1(?) without the new manuals. The runtime libraries and module are called:

BCOM41.LIB; BRUN41.LIB; BQLB41.LIB and BRUN41.EXE

If you want to use the new libraries, you'll have to recompile and reload your source files. But after I did so, I haven't had any system crashes when chaining, so it probably was worth the effort. By the way, QB V. 4.00b also supports the graphics screens of some Olivetti computers, with a 640 by 400 pixel screen.

Hindrik Jan Elema, Aart van der Leeuwlaan 1136, NL-2624 MC Delft,  
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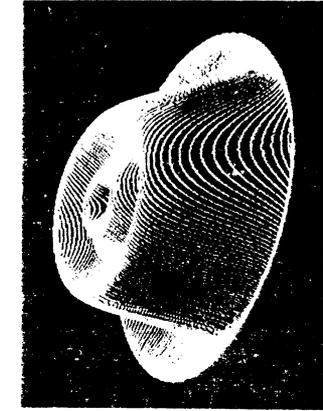


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The Grafyx Solution package is shipped complete for \$129.95 (reduced from \$299.95). The manual only is \$10. Payment may be by check, Visa/MC, or COD. Domestic shipping is free on pre-paid orders. Texas residents add 7% tax.

**MICRO-LABS, INC.** 214 - 702 - 8654  
7309 Campbell Road, Dallas, Texas. 75248



## Secretary's Notes

Thank you for your donations to the Neil Ham fund, although I must confess to being quite disappointed at the poor response rate at this stage; as I drove to work this morning the newscaster was announcing the millions that had been donated for the victims of another tragedy and I could not help but make a comparison. Neil's death WAS the result of a tragic accident - he was filling his van with fuel from a can when the van was struck by another vehicle; the van became a write-off, and Neil, after being extricated by firemen, spent two days on a life support machine before finally declared dead. Now I know that many of our Members did intend to write a few words to send with their donations, but left it "until tomorrow"; please, please, if this relates to you then please send me something, but do send it NOW.

I had the great fortune to spend last week in sunny Orlando (yes that's right, I went to see a proper Mickey Mouse outfit !) There was no time for shopping so I haven't brought back loads of software or books, but I did pick up a copy of Computer Shopper which looks exactly like the UK magazine - but has 600 pages! It was also interesting to read in the daily newspaper of the crisis caused caused because software houses could not keep up with current hardware developments, let alone the new 486 processor. Lotus and Microsoft are amongst those getting slated; the article ends with a quote from Philippe Kahn of Borland: "Good software takes time". (perhaps someone should explain that to Intel). It is stated that the original WordPerfect took eight programmers 6 months to produce, back in 1982. WordPerfect 5.0, released last May, took 35 programmers 2 years to produce - and if you've read the May issue of PCW then you'll know that the UK version at least is flawed to the extent that total replacements are being made available. Did you know that earlier issues of Sexnotes, written using WP 5:0, were totally unreadable by your Editor thanks to one of those nasty little bugs ? How dare they !

Incidentally, I use WP 5:0 with a colour monitor which immediately depicts whether bold or underline are set, features that I feel are not always immediately apparent on a monochrome display. Could I ask other WP users for their opinions on this ? And whilst on this subject of colour monitors, I have been asked to point out that that nice little front-end program, XTRA, is not very suitable for use on a monochrome machine since it is very difficult to see where the menu bar is.

Last month I asked for help with CHR\$(30) & CHR\$(31). A big thank you to all who responded; what a coincidence that PCW should have run a feature on ANSi.SYS ! Christy Gemmell came up with a routine that I hope is printed elsewhere in this issue; I am still so impressed with QuickBasic 4.0 that I purchased the book that he recommended, QuickBasic Programmer's Toolbox which appears to be full of goodies, including these screen clearing utilities. Unfortunately for me, to use the main routines from "the Toolbox" one has to type in and compile some "C" code - a language that I have studiously avoided ever since buying the original Kernigan & Ritchie book some five years ago !



copyrighted them. Various other firms, notably Far East, have cloned these processors under a variety of different names. The cloned chips have proved to be about 10-15% faster than the originals.

b. The XT Bus system is via a 62 way connector. This enables the use of various plug-in boards which range from RS232 ports to memory expansion cards. The XT usually has eight connectors. Due to the widespread use of the IBM standard these boards have become relatively cheap, £24.00 for a single RS232 Port with an option for a second. If this is compared with the boards that are available for the other computer systems it will be seen that in the long run it is economic sense to take the Compatible road.

c. The AT uses both the XT Bus System and an extra 36 pin connector. This enables the AT to use most XT boards and its own expansion boards. There are timing differences between the XT and AT Buses but I will not go too technical this time !!! The AT usually has five AT connectors and three XT connectors. XT boards can be plugged into an AT slot but not vice versa.

### SYSTEM CONSTRUCTION

Either system depends on the Motherboard for its engine and final capabilities. If the budget is a bit tight then I would suggest that an XT should be your choice but if the bank balance can be stretched then go for the AT. Motherboards can be purchased from quite a few sources but make sure that the board you purchase is fully compatible and comes with a Licensed BIOS (Operating System) and manual. Prices should range from £70.00 for a basic XT Board to £275.00 for the latest AT Turbo boards. 80386 Motherboards are now available but prices restrict these to the budding capitalist !! All XT Boards and Baby AT boards are a similar size and fit straight into the Flip-Top cases that are now available. These cases are ideal as they take the standard board, PSU and drives without any modification. Cases can be built but they do require a lot of effort and skill to get a professional finish.

Most motherboards come without any RAM installed. This has come about due to the expense of the 41256 DRAM memory chip. This is a 256K by 1 Bit. Ensure that the memory chips you acquire can handle the required speed, e.g. 10MHZ need 120 nanosecond and 8MHZ need 150 nanosecond speeds. Prices can range from £4.00 to £9.00 a chip. If you consider that the board will take up to 36 chips you can see that this is not a cheap exercise. The memory is simply plugged in and the DIP switches set to the appropriate memory size. Details of the switch settings can be obtained from the manuals that are provided with most motherboards.

The PSU is 150 watt switched mode. Again these just fit straight into the case. You now have the basis for your system and it will start to look like a real computer even if you cannot yet play Flight Simulator or prepare your accounts.



The built-in BIOS services weren't good enough for us. They were too unwieldy and, especially on the original PC, too slow. In real terms (whisper it), even the TRS-80 was faster ! Much better to bypass the BIOS and write directly to the hardware itself. That way you could get some real performance. Sirius ? Tandy ? Apricot ? Who cares about them ?

The practice was so prevalent that it became a de-facto standard, and, since it is software not specifications that sells computers, machines that were not hardware-compatible to the PC quite simply died.

Did you waste your money buying a 2000 then? Only if you paid a PC price and, in any case, don't junk it yet. If you're prepared to spend some time and effort you can get a lot of use (and pleasure) from the machine.

Firstly, there is still some software about which the 2000 can run. I used to have Tandy versions of dBASE-II, Multiplan, Multimate and Word running on my machine as well as the Microsoft Assembler and BASIC compiler (sorry, I've passed them on to other members). Your local Tandy store might possibly have some of them (cheap). *(I doubt this as I have made enquiries in higher levels about availability, I have been told non remain. There were a number of articles published in 80 Micro between Jan. 1984 & Jun 1985 particularly for the 2000, including a list of 'standard' programs which would run on the 2000. Ed. \*\*)* If you can get hold of a copy of the plain MS-DOS version of WordStar 3.3 it should run on your machine. A lot of older packages (well-behaved is the word) should work.

Secondly, as Gordon mentioned in the April newsletter (pages 58 - 59), there is a lot of public domain software for the 2000 available on American Bulletin Boards, as well as patches to enable commercial applications to run on the machine. Is anyone doing something about downloading stuff for the group ? *(O.K. someone, it is no good sitting back and hoping another will do this, YOU are going to have to make a move and get to work. Ed. \*\*)*

Thirdly, and I hesitate to suggest this since I no longer have a 2000 and can't try it myself. Would anyone like to have a go at patching some existing programs for themselves ? After all, if the Americans can do it I'm sure we can and, in fact I don't think it would be all that difficult. The only major difference between the IBM and Model 2000 hardware is the way that video memory is mapped. Most programs which 'don't work' on the 2000 will actually run quite happily. The only trouble is that they send their output to the wrong addresses in memory so you don't see anything!

IBM PCs and compatibles locate their video buffers at two possible addresses, these are (in hexadecimal notation) B000 for monochrome systems and B800 for colour systems, and this is so no matter whether the machine is fitted with with an MDA, CGA, EGA or VGA graphics adaptor. Typical PC programs, when they start, test to see if they are running in a monochrome or colour system and set a pointer to the correct address accordingly. If you could find this

pointer and substitute the proper value for the Model 2000, chances are the program would run.

If the video memory addresses on the Model 2000 were fixed the task would be simple. Unfortunately this is not the case, on the 2000 video memory is situated at the top of system RAM - the location of which varies with the amount of memory you have installed. If you are an assembly programmer, you can find the address of video memory on the Model 2000 like this :

Is\_A\_2000:

```
int    12h          ; Get memory size (in KB)
mov    cl,6         ; Convert it to
shl    ax,cl        ; paragraphs
add    ax,80h       ; Twiddle it a bit
```

This leaves the segment address of the video buffer loaded in the AX register. You could then use Debug to search the program you want to convert for Hex B000 bytes and, if the code disassembles into a video memory reference, substitute the Model 2000 address for it. There may well be other difficulties, particularly with programs which scan the keyboard directly (the Model 1000 has this problem too), but once you have the screen display fixed the rest should be relatively easy.

By the way, the above technique will only work on Model 2000s which use the monochrome display adaptor. If your machine is fitted with a graphics board, even the monochrome one, you must disable it before you can run programs which have been patched in this manner. Graphics can be disabled by holding down the <F12> key whilst you reboot your computer. If you add more memory to your computer, of course, you'll have to make the patches all over again.

I was also asked how do you get PC programs and data files onto Model 2000 disks in the first place. That's easy. Tandy put a utility named PCMAKER on the Model 2000 MS-DOS 2.11 system disk. Use this to format an IBM-compatible 360K diskette in the 2000 floppy drive, then get a friend with a normal PC to copy the files you want onto this disk and the Model 2000 will be able to read them properly.

Finally, can I appeal to all programmers who write the sort of stuff which may be of use to other members, to try and make their programs Model 2000 compatible. I shall certainly make the attempt in future. If you are an assembly-language programmer, the following fragment of code can be used to allow your program to detect when it is running on a model 2000. Two separate tests are necessary because there are two slight different versions of the Model 2000s ROM BIOS. (Thanks to John B. Harrell of PC-Resource for this information).

```
Tandy_ID    db 'Tandy'          ; String to search for
```



The program enables single-file operation of up to 65500 records. Each record can accommodate a maximum of 1400 characters in not more than 26 fields. The theoretical file capacity is about 90 Megabytes but is limited to 8 megabytes by the inherent constraints of the CPM operating system; in practice, the database file size will be limited by the capacity of the storage medium.

With a hard disc this could approach the maximum of 8 Megabytes, but with floppy discs the capacity will be much less. For a standard 40T SS DD 170k disc, any one database should be restricted to about 100k to allow sufficient space for the temporary files needed for the program to function. A single 100k file would allow for 73 records of 1400 characters to be generated and stored. However, CARDBOX PLUS, like most good databases, allows considerable flexibility to be exercised by the user in the design of a record; thus, if the number of characters per record were restricted to 200, the same 100k file size could accommodate 512 records. A larger disc capacity than the standard 170k will of course provide more storage space and will therefore allow a larger file size.

Before any data can be entered, the record format must be designed. In this respect, CARDBOX PLUS again shows its flexibility in that it not only assumes that each user will require a number of different formats, but it also imposes no major constraints upon the format designs you specify. The fields can be any length or number of lines and may be positioned anywhere on the screen; any spaces incorporated, perhaps to improve readability, will not occupy valuable disc space and there is no restriction on indexing. Any number of fields can be index designated, although there is a penalty in that indexing takes up additional disc storage space. Another user-friendly feature is that user-errors will cause the computer to beep, which is usually followed by an on-screen prompt.

When first creating a database, the FORMAT file must be written first and given a valid name; the file extension will default to .FMT. Once the format file exists, data can be entered into the database which must bear the same filename as its associated format file. The database file is created as soon as the first record has been saved to disc. Once a few records have been saved, the database can be tested to ensure that formatting and structuring suit your particular purpose. The format can be modified and additional data added to existing records at any stage.

One powerful feature of CARDBOX PLUS is the way that multiple indexing can be utilised to set up search patterns to proceed through data-eliminating sub-sets until a particular piece of information is located. These searches can be field independent.

It is important that program-orientated file conventions are observed. For example, when choosing the NEW option for file writing, etc, an error will be declared if a file already exists with the chosen name; similarly, when choosing the OLD option, an error will be declared if a file with the chosen name does not exist.

The program is almost entirely menu driven with three primary functions and up to four secondary functions, any combination of which will be regarded as an operational mode. A range of commands is provided for database manipulation whilst in any mode combination; these commands are all listed on-screen whenever they become options.

MENUS AND OPTIONS: Here is a breakdown of all the menus and options:

PRIMARY OPTION: DATABASE

Secondary Option: USE

Prompts for name of database (default extension: FIL) and enters same for normal use.

Secondary Option: ANALYSE

Prompts for output device (Disc File, Screen or Printer) and gives options for Index or Full Text cross reference information.

Secondary Option: CREATE

Creates new database with chosen filename. Declares an error if file already exists.

Secondary Option: REPAIR

Repairs a damaged database as per prompts.

PRIMARY OPTION: FORMAT

Secondary Option: EDIT

Edits previously defined file format.

Secondary Option: CREATE

Creates a new file format. Declares an error if format file already exists.

PRIMARY OPTION: OPERATING SYSTEM

Secondary Option: COPY

Standard file copy utility. Follow the prompts.

Secondary Option: ERASE

Erases chosen disc file. Note: Will not erase files with .FIL or .FMT file extensions.

**OPTION: AUTOSAVE** on/off. During the use of a database, the Save option will flush the working buffer to the disc file in use. This is mandatory before Quitting when AUTOSAVE is off. With AUTOSAVE on, this task is done automatically and transparently to the user except that he/she may be asked to wait whilst the program carries out the function.

**OPTION: FILENAME.** Option to choose filename for any of the foregoing selections. Default extensions (you must not type these) are .FIL for database files and .FMT for format definition files. Note that on calling a database for use, an .FMT file with the same filename as the database MUST exist as this is used by default.

### FORMAT FILE CREATING AND EDITING

#### OPTION E (Full Screen Edit)

Use cursor keys to position cursor to write characters, lines, etc, when designing a format. CTRL Z and CTRL W are used together to produce standard CARDBOX lines (they require a little practice). You cannot overwrite an already defined field in Screen Edit mode.

#### OPTION F (Field Define and Edit)

Answer the field designator prompt with a single character from A to Z. This character selects the field and determines the order (alphabetic) that data is entered into each Record. If you are creating a new format, you will be asked to supply a two-letter field identifier which should be a mnemonic to indicate the contents of the field (the mnemonic is not mandatory but is for your convenience whilst using the database).

The cursor will then be placed in the Format Editing Area; use the cursor keys to position the start of the desired field, then press S. Then move the cursor to the desired end position (it need not be on the same line) and press E. The defined field will then be highlighted.

If you wish to include a caption within the field, use the C option to enter it. Note that it is sometimes advisable to exclude a caption from within a field and to enter it using the Screen Edit Option E (e.g, fields for printing as address labels).

Choose the kind of indexing to be used with this field by pressing I. Manual indexing requires you to toggle the index feature to your choice using CTRL I during data input. Automatic indexing means that the field will be automatically indexed at data entry time. ALL means that all words separated by spaces in a field will be individually indexed. NONE means no indexing on this field.

There are three different field display types. STANDARD fields usually occupy only one line and do not wrap around. LINE fields enable data to be entered a line at a time (after each carriage return) - useful for addresses - and WORD fields permit automatic word wrap at the end of each line. Make your choice by pressing D.

#### OPTION D

Option D deletes a field format definition, not the whole format.

#### OPTION P (Printer Format Definition)

You can set up the format for printing your reports by using this option. Option P enables control over the page size, the top margin, the left margin, the number of entries (records) per page, the number of blank lines between entries and the manner in which the computer controls form feeds. When printing single-line records, it is advisable not to define a top margin but to stipulate a smaller number of entries per page, adjusting the paper at the start accordingly.

#### CREATING AND USING THE DATABASE

Once inside a database, control is achieved by two-letter commands. Enter data into a new database with the command ADD. You will then be presented with each field in designator alphabetic order. Use CTRL I to index a field if it has been configured for manual indexing at format time. A line feed (Enter) is required to terminate each line of a LINE formatted field; otherwise follow the prompts at the bottom of each screen. ADD is also used to add records to an existing database.

DUPLICATE will duplicate an existing record for re-editing.

EDIT enables you to edit an existing record. Both AD and ED have various control keys that are prompted at the foot of the screen.

DELETE does just that - instantly ! Use with care as deleted records cannot be recovered.

TAG tags files for future selection (refer also to SE, EX and IN).

All the above operate on the current record; i.e., the one you see on the screen.

SELECT, INCLUDE and EXCLUDE. These are record selection commands which enable you to sift through the main database prior to printing, writing to other disc files or merely for viewing. They work roughly as you would expect and when used without MASK, operate on Indexed Fields only. After entering the command, you are given the option of naming a particular Indexed Field to select on (if none

is selected, the program searches all indexed fields), followed by /, £ or =. The / expects "words" to follow (these may, if required, contain the wildcards described at the foot of the screen); the £ expects a range of numbers as indicated; the = operates either on all tagged records or on a selection which has been temporarily saved using the KEEp command.

The foregoing selection commands may all be preceded by the command MAsk; this has the effect of searching the included records for a character match without reference to the index. Obviously, this is a time-consuming function, but will be successful if careful choice of mask characters and fields is made. It is prudent to straddle the mask characters with wild cards.

Examples: MA SE AD/+SOUTHAMPTON+ selects records whose AD fields contain the string SOUTHAMPTON.

MA SE/+CONFUSED+ searches all fields of all active records to match CONFUSED.

You can combine all these selection commands to as complicated a level as you require. If you make an error in a selection, or for any reason need to go back one level of selection, use the command BACK. The command CLear clears out all selections and returns to the whole database. The command Hlstory lists the progress of all the current selections.

The TAg command is a block tag utility. You can tag all the currently selected records, untag them or clear all the tags from the database.

The KEEp command saves the current selection of records to a temporary variable name of your choice which can be used to recall the selections during other selection procedures.

The SAve command is used only when the AUTOSAVE option is toggled off when entering the database. In this event, SAve is mandatory before QUITting to flush the working buffer to the .FIL file, otherwise data will be lost

The QUIT command returns the user to the initial option screen.

### PRINTING AND FORMATTING

The PRint command has two options. By toggling TO, you can direct output either to a file for future printing or directly to a printer. If the former is chosen, you will be asked for an output filename and whether it is a NEW or an OLD file (see earlier discussion). You also have a choice of modes; these are: Single Page, Continuous Pages or Unformatted. You can choose the character used to draw lines (defined at format time). You can start printing at the beginning of the selection or from the currently displayed record. You can sequence on any of the indexed fields (sequencing is done in ASCII order).

The command **FORmat** enables you to change the format file to another prepared file (e.g, a file for address label printing). Any number of format files can be prepared for a given database provided that one of them has the same name as the database for defaulting.

### DISC FILE WRITING

The command **WRite** enables various options for writing disc files. You have the **NEW/OLD** and sequencing options already discussed, plus a **MODE** option. The **MODE** option needs to be explained. Four modes are available; these are: **INTERNAL**, **EXTERNAL** with no flags, **EXTERNAL** with flags, and **WORDSTAR**.

**INTERNAL:** This generates a file which can be read back into **CARDBOX PLUS** with the **REad** command. This is not the same as the **.FIL** file used by the database but has a more compact format with simple delimiters. Note that this is the only format that can be **REad** whilst inside the database. The delimiters are as follows:

Each field within a record is delimited with an **OOH** followed by a number **O1H** to **1AH**, except for the first field where the **OOH** is omitted. The numbers **O1H** to **1AH** correspond to the designator letters **A** to **Z** used at format time.

Lines within a **LINE** formatted field are delimited by a **7FH**.

Records are delimited by a further **OOH** so that the start of a record may appear as **OO OO O1**. Note that records in an **INTERNAL** mode file are not numbered but are loaded sequentially. This enables the user to re-order a randomly-entered database by **WRiting** it to an **INTERNAL** file using the required sequencing option, then re-**REading** it to a new database.

The end-of-file marker is three **OOH** (i.e, **OO OO OO**).

**EXTERNAL, NO FLAGS:** This is the nearest file to plain **ASCII** in that it really does consist only of printable **ASCII** characters. The delimiters are as follows:

Each field in a record starts with the character **A** to **Z** (as formatted) followed by a colon. Each field ends with a comma, followed by a line feed and carriage return (**ODH OAH**).

Lines within a **LINE** formatted field start with a space followed by a colon and end with a comma, a line feed and a carriage return.

Records end with a second line feed/carriage return pair.

The end-of-file marker is **1AH**.

**EXTERNAL, WITH FLAGS:** This format is identical to the above except that any characters which are indexed have their High Bit set to enable highlighting.

Each field in a record starts with the character A to Z (as formatted) followed by a colon. Each field ends with a comma, followed by a line feed and carriage return (ODH OAH).

Lines within a LINE formatted field start with a space followed by a colon and end with a comma, a line feed and a carriage return.

Records end with a second line feed/carriage return pair.

The end-of-file marker is 1AH.

EXTERNAL, WITH FLAGS: This format is identical to the above except that any characters which are indexed have their High Bit set to enable highlighting.

WORDSTAR: This mode allows files to be written to disc in a format which can be utilised by Wordstar or any similar word processor. Contrary to reviews and comments published elsewhere, this feature of CARDBOX PLUS does NOT require any external utility or conversion program; the feature is called into use via the M option until the on-screen display confirms that M = [WS], then select option S to confirm START = [BEGINNING], then select option O and enter your chosen output filename. Press ENTER then SHIFT+CLEAR (i.e, ESCAPE), then G and the Wordstar-compatible file will be written to disc.

The delimiters are as follows:

Each field starts with a double quote and ends with a comma and double quote. A comma is used between each field.

Lines within LINE formatted fields are treated as separate fields.

Each record ends with a line feed and carriage return (ODH OAH).

The end-of-file marker is 1AH.

CARDBOX PLUS also provides facilities for label printing and exporting data to other programs (including Mail Merging); in addition, it has the ability to salvage corrupted files and the search facility allows it to be used for a variety of sophisticated applications. The lack of password protection is not a real disadvantage unless such protection is necessary to comply with the Data Protection Act.

Don Snoad

---

The review of CARDBOX PLUS was provided by Don Snoad, who says "... much of the material used is from an unknown source and in view of that I would not wish to claim to be the originator, but I offer it in the hope that it will be of help to other members".



There are two or three firms who offer a re-inking service, one of them is called Aladdin Ink, their address is;-

ALADDINK. Eyemouth. Berwickshire. TD14 5AP. 08907 50965. Ring them before 8pm or send an SAE asking for details quoting printer make & model, another is;-

KADOR, Unit 4, Pontcynon Ind. Est., Abercynon, Mid Glamorgan. CF5 4EP 0443 740281. They charge £1.90 per ribbon, ring them too for more details, &:-

Data-Access, FREEPOST, Llanelli, Dyfed. SA15 1ZZ. They charge £1.30 per ribbon, as many as you wish, they pay postage both ways, they guarantee that they will return them within 48hrs of receipt.

Then there is of course the McInker, that is being advertised in Personal Computer World from £42 by;- MGASOFTCAT, (Phone number only) 0233 83571

The question has been raised that we might buy one for the group & do our own re-inking, but as that would be a full time job involving a lot of postal work I think it would be better left to the professionals & buy one for ones own use, once you get involved in receiving, re-inking & posting back more than one or two ribbons a day you won't have time for anything else. *(Sounds like the Editors Job John. But seriously, does any member wish to have a go at offering this service We await replies including any conditions you would wish to impose. Ed. \*\*)*

The problems of Jim Robertson's hard card for the Tandy 1000 series is due to the fact that only those designed for the machine will do, amongst other things they will have to be 'short' cards & Tandy use a different interrupt so you need dip switches or be willing to do some surgery, all is not lost however, the magazine PCM which I am for ever mentioning, carries all the adverts for such items & I think it is about the only source of information that is available, but all you have to import is the disk controller card, the drive can be bought in this country, otherwise buy from Tandy themselves, the advantage of the latter is of course that in spite of their cost, if anything goes wrong Tandy should be able to fix or replace it, whereas sending the faulty item back to the 'States is a long & expensive job, nullifying the original lower cost. *(I have been able to supply Jim with a new suitable hard card for £210.00, incl. VAT and delivery. Ed. \*\*).*

By the way does anyone know how to stop multiple A)'s on the screen when booting from an autoexec.bat file?

Up 'till now I have been using Lscript on my 4P to write these notes but as Gordon has moved over to a PC I am using PFS Professional Write on my 1000EX, it needs a full 720K disk & I have to load MS-DOS first as there is no room for the system files on the PFS disk, I shall save it in ASCII to make Gordon's task as simple as possible, (he'll soon tell me if it isn't) *(Yes, it was ASCII John, thanks. Ed. \*\*)*, for simplicity of working, so far, I think



profit this year, but it is not something I will at this stage, guarantee. I will however state quite categorically that we can easily survive 1989 with no profit. I must however make sure we do not have two consecutive years with no profit. In 1990 we must have a respectable surplus. No profit this year followed by a loss in 1990, is something I am not going to willingly allow.

On a different matter I do applaud Peter Knaggs comments on page 11 of issue 5. That whole second paragraph is (almost) a masterpiece. If I must pick one part of it, it is that we should not be backing any particular machine but COMPUTING. Thank you Peter. I also like Gordon's comment about £20,000 a year - sobering thought that is; is it not? I will do my jobs, full time, for the same amount - too - please. My wife says NO - she is absolutely horrified at the idea of having me home all the time, but I am the Boss and she is overruled.

The club has acquired a complete Model 2 system, which as far as I can see is in first class condition. A 64K system with expansion unit containing one extra drive and around 120 blank 8" disks. The software consists of TRSDOS 2.0, Scripsit, Visicalc, Profile 11, and Integrated Ledger. All are complete with original master disks and official documentation. This system is so good that I would like to see it stay together. Certainly if anybody wants to buy the the lot, I feel we should be talking about £100. If we need a Model 2 library this would be an ideal system to use. I think we are open to suggestions and offers.

We also have a complete model 1 system for which I thank Tim Martin. The club actually has a second model 1 expansion interface as well. Offers to me please.

You will see elsewhere the first of our attempt to acquire advertising from the US of A. Please I beg you all buy something and mention the advert in NATGUG. We need there support, you will be supporting us and them.

COMPUTER NEWS 80 UPDATE Further to my comments last month I have as yet had no reply from the American Publishers. Also I have had only one member place a firm order. I hope to receive the first batch of magazines very soon.

Having just experienced a little unexpected confusion over a memory upgrade for a model 4 I thought it might be an idea to document the different procedures necessary. I am of course talking about the standard upgrade to make a 128K machine, not the XL8er, alpha or similiar. All Model fours have spare space for the extra eight 64k chips on the motherboard.

Basically we have four separate machines; gate arrays and non gate arrays and 4's and 4P's. The P's are very similiar, you just fit the chips and move a jumper. The non gate array needs a jumper moved from E12/E13 to E11/E12. The gate array jumper is moved from E2/E3 to E1/E2. The fours are totally different and not so easy to alter. I suspect that all the non-gate array fours

are N/C motherboards. You need eight 64K chips with 7-bit refresh rates. Do not ask me to explain refresh rates - I cannot. You also need a PAL chip which I think is only available from Tandy and you move a jumper from E12/E13 to E11/E12. The PAL chip replaces a dip shunt in U72. The biggest problem you will have with this is obtaining the PAL.

The gate array four is easily recognised by the RS232 terminal which exits facing backwards instead of downwards. In fact all four interfaces printer, disk drives, input/output bus 50 way and RS232 exit in one straight line directly of the mother board. The earlier machine has separate boards for Disk controller and RS232, which sit behind (in front of really) the Motherboard. Only the printer and input/output bus comes straight of the motherboard. The interfaces are therefore in two rows Rs232 behind the 50 way and disk drive behind the printer.

I though the upgrade would be easy on the Gate array. I was wrong - although no PAL is needed just the ram chips themselves. The problem is that there is no simple jumper to rearrange. These machines are I think rare, when I first saw one I did not believe it, because the RS232 was obviously standard, which is contrary to Tandy literature. Anyway the service manual although it acknowledged existence of this machine did not make any serious attempt to define the wiring change. I am indebted to Oz House for his help. There are three tracer wires in the top left hand area of the motherboard. We want the longest; it exits through a hole in the motherboard between U4, U5 and U29. The other end is soldered to the lower point of resistor C39. You must unsolder this end and re-attach to pin 16 of U33. I made the mistake of counting the pins incorrectly, but luckily I checked with my Guru before I fired up. Looking at U33 as it sits in the board, pin 1 is at the top left hand and is marked with an indent in the chip. The pins are counted down the left side and then UP the other. Put another way - anti-clockwise. Pin 16 is actually the pin just below the lower terminal of C39. I would recommend that you leave up to an inch of tracer on C39 so that the machine can be returned to 64K without further soldering to the resistor itself. Similarly a little wire can be left on Pin 16 under those circumstances.

I do not think many would get into trouble with these upgrades. If you can open up the machine and do simple soldering - try it. However if you get involved in the not standard modifications, please do it to a spare machine. Do NOT fit XL8er boards to your one and only model 4. You may find teething problems or that it will not do something in Model 3 mode that you wish it to. I think it a very good plan to make sure you have a spare machine before you take your computer to pieces to make any modification. By the end of the session you may for the want of just a little knowledge or a damaged electronic part have for a few days an unservicable computer. This may be a disaster to you.

Roger Storrs.

MSDOS Mumbblings - by Dave Holman

An open Forum on MSDOS and associated subjects. - Dateline - 5 May 1989

Stop Press

Apparently there is a Shareware lawsuit between PKWARE and SEA over the word ARC. PKWARE have now changed their programs to PKPAK and PKUNPAK. MAKESFX remains unchanged in name, although there are now updates to all programs.

Sorry that this article is later than usual. I have been busy at work and whilst I am not due to go abroad until September I have not been static for some time. I have decided to change the title of my articles as I am not receiving enough comments to write a monthly forum, therefore my "Mumbblings" will be slightly more erratic.

My first item this week is in reply to a question that Gordon Collins asked me at Swindon.

He had been having problems when exiting from some programs. The Machine sometimes came up with the

COMMAND.COM not found - error message.

This is apparently caused by the inability of MSDOS to find COMMAND.COM in the current directory. I have been experimenting with my hard disk to emulate this error but have not had much luck. I believe that it can be cured by setting the PATH, although this is not always guaranteed. In addition the command

SET COMSPEC=C:\COMMAND.COM

tells MSDOS where to find COMMAND.COM, if it is kept somewhere unusual. This may be used in conjunction with a RAMDRIVE. This necessitates setting up a RAMDRIVE with room for COMMAND.COM and any other programs needed. The other programs do not have to be copied into the RAMDRIVE but doing so will greatly increase the speed of operation. Issuing the above command when the RAMDRIVE is Drive C, should prevent errors when using a single drive where the original disk is replaced with one that does not contain COMMAND.COM

I am not convinced that all possibilities have been covered and programs may still hang up on exit. More research is still needed. Watch this space.

The next tip is also from Gordon and concerns displaying 2 columns after a DIR command.

Normally DIR only produces 1 column of files and dates/sizes. This can be changed so that 2 columns of files, dates and sizes are displayed.

Firstly you need a file editor. Edit the file COMMAND.COM. Move to Sector 16, (this is for MS-DOS 3:2, it is sector 18 for MS-DOS 3:3. Ed.) search the sector for the following hex code

A8 01 B0 02 and change it to A8 01 B0 02

If a file does not have a Date or Time then the display can be a little chaotic.

Here is a example of the result.

Volume in drive C is DRIVE C  
Directory of C:\WPTEXT\FORUM

```

.      <DIR>                5-02-89 11:41 ..      <DIR>                5-02-89 11:41
FORUM1 TXT      11509    9-12-88 19:24 FORUM10 TXT      7255    5-02-89 17:41
FORUM11 TXT     14425   11-03-89 15:00 FORUM2  TXT      9209    9-12-88 19:27
FORUM3  TXT      9209    9-12-88 19:27 FORUM4  TXT      2936    9-12-88 19:27
FORUM5  TXT      3429    9-12-88 19:28 FORUM6  TXT      6609    9-12-88 19:28
FORUM7  TXT     12516    9-12-88 19:29 FORUM8  TXT      4446    9-12-88 19:30
FORUM9  TXT      8787    9-12-88 19:31 FORUM12 TXT     3850    7-05-89 16:24
14 File(s)          3913728 bytes free
    
```

The final item is about my new printer.

At Swindon I finally succumbed to temptation and bought a Hewlett Packard Deskjet Printer. It is an inkjet printer and is able to emulate a Hewlett Packard Laserjet printer. This means that programs such as Fantasy give a much better printout. The printer comes with only one font, Courier. This is available in a number of pitch sizes and 2 point sizes.

I intend to do a full review of the machine in a future article. I would like to express my thanks to Coggan Computers of 37 Sutton Street, Bath and Maggie Andrews their very nice demonstrator. They say that they will do special terms for NATGUG members.

Until next time

Dew enough-why! - Goodbye

Dave Holman

3 Harbour Court, North Parade, Portscatho, TRURO, Cornwall TR2 5HH

*Will members please note David's comments in his second paragraph. If you wish others to offer a service would you please use that service or, do you wish to take the risk of loosing it !!!!! David, that you for continuing.*

*My reason for asking David about 'PATH' was that I had unsuccessfully tried to set this up. Having a Tandy 1400 with 768K of memory, I use the 'top'*





Local Club News

- BOURNEMOUTH TOPIC Computer Club. MS-DOS & Tandy 1st & 3rd Wed  
at Kinson Community Centre 7.30pm. Ring Barry Smith (0929) 463093  
(The two Bournemouth Clubs have now amalgamated)
- CHELMSFORD 1st Wed. @ 7.30pm. Ring Richard Creak (0245) 413725. Woodcote,  
59D Little Baddow Road, Danbury, Chelmsford, CM3 4NT
- GTR. MANCHESTER Last Wed of Month 8 pm, Barton Aeroclub, Barton Airport  
Brian Disley, 061-723 5033
- LONDON Nth West London; 1st Sun, Central Common Rooms, 10.30-1.30 Northwick  
Park Hospital. Geof Smith, 01-950 6345 after 8 pm  
Nth East London-80; 1st Sun, 77 Old Church Rd, Chingford, LONDON. E4 6ST
- MILTON KEYNES Alternate Sundays, October to March. Brian Pain (0908) 564271
- SCOTLAND 2nd Thur. 7.30 pm Mansion House Hotel, Milton Road West (A1),  
Edinburgh. Dick Mackie, Chairman, SPeCS. 031-447 6651 out of hours
- SUDBURY 2nd Wed. at:- 3a Gainsborough Street. John Kilpatrick (0787) 79504
- TYNESIDE North East Users Group 2nd & 4th Wed. 7.30pm in Hebburn, Tyneside.  
Contact: Mike Easey (0661) 843781
- WEST MIDS Every Wed. Fred Challenor, 40 Whoberley, Coventry, CV5 8EP. 0203 78180  
2nd Tuesday, on even months from 7.00 pm at the Editors House
- SWINDON '89 part II & E.G.M. October 20th - 22nd (0793) 28282  
The Wiltshire Hotel, Fleming Way, Swindon. SN1 1TN

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TRSTimes Magazine, for the TRS-80 Systems and Video Genie. £13.20 for 6  
bi-monthly issues (£2.20 each). Back issues obtainable. Also TRSTimes on  
Disk £2.50, see Vol. 10, Iss. 12, p. 25 Contact: Gordon Collins, Ed.

If your club is not mentioned above then for your free advert, write with  
details to:- Gordon Collins, NATGUG News, Editor/Publisher