NATGUG NEWS

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OFFICIAL JOURNAL OF THE

National Amstrad, Tandy & General User Group

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 of the group 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 advisers.

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 I, 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. (also see Vol 8, Is. 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 issues. 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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PUBLIC WARNING. Please wear Toe-Tectors whilst reading this issue.

ADVERTS

FOR SALE:- Model IV manuals complete with TRS-DOS 6:01:01 disk: £7.00 + £2.35 for P&P. 2 off disk drives complete with cases and power supplies - These are TEAC FD50A's (40T, S/S/ D/D) and are EG400's as supplied for the Video Genie: £20.00 each, purchaser to arrange delivery. Model I, RS-232-C software, comprising, manual + 6 off cassettes in folder: £5.00 + £1.30 P&P. MACRO-MON, machine code monitor/debugger for the Model I, complete manual and disk: £5.00 + £1.30 P&P . CASIO FX-720 Personal Computer (same as the Tandy PC-4, but with added function key), system includes 4K & 2K RAM modules, and FA-3 cassette interface, all manuals and cases, still in boxes, as new: £90.00 - Purchaser to arrange delivery. Enquiries for the above to:- Gordon Collins, Editor.

FOR SALE:- EPSON FX-100 printer 160 CPS, 15" carriage. Upgraded select panel - 16 print functions, IBM/APPLE compatable, 2 spare ribbons. Very good condition:- £250.00... TONY GERRARD, 11 Forge Valley Way, Poolhouse Farm, Wombourne, Wolverhampton. WV5 8JR. Telephone: Wombourne (0902) 896311.

FOR SALE:- Unwanted Video Genie, equipment and some model I/III software. Make an offer ! all reasonable offers considered. You pay carriage. Will sell separately.

VIDEO GENIE, with 48K RAM, Sound board, and GNOMIC ROM (lower case built in).
CROFTON 9" monitor.
CULMANA twin disk drives, in box with power supply.
GNOMIC DP 1000 expansion box with density doubler, disk and centronics ports.
GNOMIC RS232 serial box.
Video Genie printer port.

Software:

SPACE INVADERS on cassete.
TEXPRO word processor on cassette.
DATA WRITER, model 3, on disk.
POWERDOT II. model I/III on disk.
MODEM 80. model I/III on disk.
AJEDIT. model I on disk.
POWERMAIL PLUS. model I/III on disk.
PAGEFILE 2.1. model I/III on disk.

Contact: The Rev. R.S.Wilson, Greenside Vicarage, Ryton, Tyne & Wear. NE40 4AA.
Phone: (091) 413 8281.

EDITORIAL

To all the people who sent in articles for the Newsletter, thank you very much, from me, and I am sure that will be echoed by all of the membership. Look at the size of the Newsletter this month. I have returned all disks that were sent to me, even ones sent with no stamps on the envelope, I hope that you now have them back.

Thank you for all the telephone calls and letters, I have now replied to all letters. I detect from the telephone calls and letters received, that there is a new enthusiasm within NATGUG, we seem to have made the Model 1'ers awake from an hibernation. This is now being written on 4th June 1987, that is before you have received Volume 8, Issue 11/12, it is at the printers at this time, as promised. (arrived today 5-6-87, yes I do get sent a copy, it is my way of knowing when it should have been received by the membership)

Update. Model I/III Library Listing. The data has now been compiled and printed out on fan fold paper, those who have requested and paid for a listing, should now have received same. Your committee came to the conclusion that it would be uneconomical to have a number of copies printed. A further point being that any list, when printed, would very soon be 'out of date' by its very nature. Another point is that of the advertised cost of the listing, £1.49. This does not cover the cost of printing that list, it is 22 pages long. Please be advised that as of now, the price of the listing is £2.00. The listing is now kept as a (at the moment) 49.5K file in LeScript format, which hopefully will be kept up to date. In the last Newsletter, (Vol. 8, Issue 11/12, page 23) members were advised that a copying charge of £1.00 was now being asked for per disk or tape. Could we please ask that this £1.00 be sent as a coin, taped to the disk or tape that you send, thank you.

Update. As promised: re Molimerx ..... For those members who had a letter from Mr. Harding of Molimerx, or for those that heard through the 'grape vine', of his closing down on the 30th June 1987, your Secretary wrote to Mr. Harding, he replied as follows:-

....I'm sure that it goes without saying that if I could help the Group, I would. I still well remember the meetings back in '78 and

'79. And how long ago was it we gave free tapes to the Club ? Lovely old days - I only stopped lecturing to members when I realised they knew more than I did !

Anyway, I am afraid that it is simply not possible to hand on either documentation or masters. Believe me I would like to make money on either and when you think that we have 5-600 programs it could be not inconsiderable. We had our solicitors get counsel's opinion before sending out the Newsletter and apparently it is just not on. With all best wishes for the groups future - Yours sincerely, A.J.Harding. (The Committee have not as yet, left it at that)

For those members who have never ventured to purchase items from across the 'pond', I can assure you, from my own experience, that it is very easy when using plastic money. Remember for ACCESS, use the word MASTERCARD; for BARCLAYCARD, use VISA, and include an expiry date.

Update. BLANDFORD '87. Please make a note in your diary for Sunday, 16th August 1987. More details to follow.

Update. Vol.1, Issue 6 Newsletter. Thank you members, your committee is now in possession of a copy. All members who requested back copies should now have received these.

Update. Swindon Oct. '87. The Wiltshire Hotel has agreed to quote an all-in price to those people wishing to stay over until the Monday, please ask when booking.

Update. The promised article about the Model I Double Density Adapter Kit has arrived. This is three pages of A4 paper from an American Magazine, Computer Digest, Dec. 1985, which includes schematics and photographs. This article, for which we have permission to distribute, shows how to convert a Tandy Double Density Kit, to operate as a PERCOM Doubler. The committee have decided that this would be to involved for us to publish in the Newsletter, so would those people who are genuinely interested, please send your request, to me please, Editor. Together with a large S.A.E., and include two 20p coins (40p) taped to some card, (this to cover the cost of photocopying) we will hope to return a good photostat copy. No S.A.E., no return. Thank you Nat. for the trouble you have taken.

There does appear to be a large number of people within NATGUG who have said to themselves, "I could not write an article good enough for the Newsletter". Three articles which have appeared within the last/this issues, were written by members who had said just that. I defy anyone to be able to pick them out, so come on, lets all have a go ..... If you feel that there is another 'force' beyond your control, that is stopping you from submitting something, and that I am, maybe, able to correct, please, I need to know ! Members are asking for write-ups/advice on software that other members use, good or bad reports on that software will be published.

Another syndrome that is happening, is that members write to me asking if articles (no theme is given) would be acceptable for publication, I am sorry I don't know. Everything is acceptable, please. Possibly after being in this post a little longer, I will form ideas about what the membership does specifically want in the Newsletter. For the moment, please send everything in.

It has been pointed out to me, that I should tell the membership (but I thought I had somewhere) that I use LeScript to produce the Newsletter, those that then use LeScript, can send their submissions in, in that format, on disk. As said before, any format is acceptable, but obviously, if sent on disk, then this saves me a lot of typing.

Scripsit on Model IV. For those members who have recently asked about using European characters, part of an answer to a letter in May '87 80 Micro, page 12, (which also carries a whole load of letters about Scripsit), suggests the use of a program which appeared in 80 Micro, Jan '85, page 60.

Some facts and figures. Research figures suggest that there are 325,000 Model 4's, 4P's and 4D's alone, worldwide. Tandy are still selling somewhere between 500 and 4,000 Model 4D's per month. Recently Tandy (USA) officials, insisted that they plan to provide service to TRS-80 owners indefinitely. Misosys expects to sell 5,000 units of LDOS 5:3 by the middle of next year. Logical Systems expects to sell 100,000 units of LS-DOS 6:3 by fall '88. .. Dennis Brent of Powersoft, "The Model III/4 is an excellent computer ... We're still going to be here, and we will support you. The technology for 5.25" disks isn't standing still. Kao Corp., and several other companies, are working on

floppies with capacities as high as 50MB. Toshiba now has a 4MB floppy drive.

Can any member confirm the meeting of a group in the grounds of the Northwick Park Hospital, LONDON ? Details to me please.

To those members who have expressed an interest of late in Model I enhancments - an advert in issue 40 of MICRO MART, page 39. Hartlepool Computer Services Ltd, tele: (0429) 869988, are offering Tandy Model I's @ £40.00, and expansion interfaces @ £45.00. In the same issue (page 44) is an advert (0444) 414484, for Winchester disc drives 6,66Mb @ £75.00. Yes I would like one, if some member could say that they would interface with my Model IV please, or what other problems, if any, would there be ?

Your Committee has received from Mr. E. A. Russell of Tandy U.K., the following, "..... as far as I am aware, there would be no problems in your reprinting articles from discontinued Micro Computer News". Details of NATGUG have been circulated within Tandy U.K.

Thank you again for reading NATGUG Newsletter and for taking an interest in us. Gordon Collins, Editor, **.

READER'S FORUM

THIS IS WHERE YOU ARE INVITED TO ASK ALL THOSE QUESTIONS THAT YOU HAVE NEEDED ANSWERS FOR, OR TO MAKE ANY COMMENTS, OR ..... ???

Dear Sir, ... I was amazed that there was bare mention in the April Newsletter of the Swindon Demo of that 1-meg Model I board. Since we are also hearing that, "the Model I's are still very strong", how could such epoch-making news be treated so casually ? I'm surely not the only one who can hardly wait to hear whether, and at what price it can open up a new epoch for them. I hope the next issue doesn't pass without more details about that 1-meg board.

As a Model I user, could you tell me why my RS232 board, running under Smart Terminal, seems to feed text from my Microwriter on to my Model I screen all right, and also to get the text onto the disk O.K.,

but fetches back nothing but (at most) a carriage return when I try to load it into Powerscript or list it from the DOS ? Or rather, never mind why -- just please tell me how to make it work right ! (Note: It's not just a matter of saving in ASCII.) ..... Anon

(The above and following letters, were sent to the committee during my publishing in the Newsletter, about "Reader's Forum", so I am going to respect my promise of anonymity for this issue only - unless requested otherwise. Therefore would any members able to help with the above, please send any replies, ref:- NI. to me please, Ed. **)

And so, in part, to answer the first paragraph of above. This has not been the only request for more information. At the demonstration at Swindon there was, handed out, an A4 paper, this gave more details as to what the board would do, with an invitation to send enquiries with an S.A.E. to :-

Mr. F. T. Harris, 15 Cholmeley Crescent, LONDON. N6 5EZ

Included on that paper was the following, "The kit will be available at a price of approximately .... £160.00. I have asked Terry to send more information for publication in the next Newsletter. At this moment he has a MODEL IV of mine, for adapting a board to suit this type of computer. How is it going Terry ? Ed. **

Follows an edited version of the letter received :-

Dear Sir, ... being a Model I user, the content for me in NATGUG is now almost NIL !!

Now with so many different models constantly being marketed, I feel that I've been left far behind, at the starting post of some antiquarian race !

Let me reiterate. I'm a Model I user. Basically I'm an avid writer, which is just one of my pastimes, therefore the computer was sought just to extend that particular hobby, but now I have superseded that aim. I have more than I will possibly need to fulfil this chore. This has now taken many years to aquire, and I may add, a considerable amount of time, patience, and above all money. Added to this, for me

there was no financial return, not in the real sense of that word, but I suppose I feel there is just reward for perseverance.

Therefore it amazes me to see so many users constantly up-grading their equipment ? Together with the accompanying software ? No, I'm not jealous (well, maybe a little), and it's not a case of sour grapes. .... I am now at a stage when I need expert tuition, but in everyday practical terms. ..... I think that I would be correct in saying that the Model I was one of the most popular and successful (and above all profitable) computers ever produced and marketed by Tandy (or Radio Shack).

QUESTION .... Where are they now ? All of them ? Models and users alike ? .....Anon. ref:- TAX

Dear Editor, ... I have been interested in computers now for three years, ever since my son gave me his Spectrum with dk'tronics keyboard and twin microdrives when he switched to a Memotech (and now an Atari ST).

Last year I bought the company's Tandy Model I, c/w TRSDOS 2.3, manual, Visicalc, a Tandy disk drive that spoilt disks at random, and Line Printer III. The company replaced it with an ICL network.

Late last year I had the chance to buy another Model I, this time with two Tandy disk drives which spoilt disks at random and a Line Printer III, from another tobacco company which has changed to Burroughs computers. Burroughs were the Tandy agents in the early 80's and supplied about a score of Model I's to industrial firms in Malawi (all with Visicalc) and some I's and III's to the University. They no longer represent Tandy, and have managed this year to convert the University to Burroughs machines. I bought a Cumana twin 40/80 track disc drive from Arc Electronics before they stopped supporting the Tandy Model I due to lack of sales, and this has made a tremendous difference to the Tandy which has had no disk problems since - even on the oldest disks.

Programs found on the inherited disks were TRSDOS 2.3B, Newdos 2.1, Newdos 3.0 (which I have never seen mentioned anywhere so I don't know how it differs from Newdos 2.1, and anyway I haven't managed to

reclaim it yet), and Newdos 80V2; no manuals but I did get the "cue cards" for the Newdos 2.1 and 80V2. SUPERZAP was used to recover some of the discs and AJEDIT was found, a word processor which I have not seen commented on in the back issues of the NATGUG Newsletter, which I have just finished reading.

Word processing is one major use for the Tandy if I can find a word-processing program that I like. I bought Scripsit from Blandford, and I find that Ajedit has advantages and disadvantages compared to Scripsit, and neither are as easy to use as Tasword on the Spectrum. (although 64 characters across the screen is easier on the eye, on the Tandy, than on the TV set with the Spectrum). I have written to Geoff Smith to ask if his modifications to Scripsit will do for my version 1.0 (if they are still available). I may buy Electric Pencil as well from Blandford, to see if that suits me better.

The main purpose in writing is to let you know that, after comments by the previous editor in the Newsletter, asking where the new owners of the cast-off old Tandys were, there is at least one person who is starting where the founders were eight years ago. Despite the fact that all the interesting items in the newsletter are in the early issues, I enjoy reading it. I do find it annoying that no answers were given to problems posed in the past by readers; presumably once somebody had the answer to their problem it was no longer a problem and so there was no need to write it up for publication.

Both the keyboards I originally had are version 1.3 according to the test program by Ken Grey in the journal, but one has the ALPS keyboard and they are Upper case only, so I imported a keyboard (number 2274 but version 1.1 - the ALPS one is number 120226) with lower case, from Blandford which when I looked inside has such a maze of wires added on that I quickly fastened it together again. I would like to convert the other two to have lower case, so I need to know if Eric Hartley is still in business and can supply his add-ons (lower case and RS232).

I use Visicalc a lot, and I need a good, low price database. I bought Versafile, but it is not what I want, I would like a similiar program to Masterfile on the Spectrum which I find excellent. I would welome recommendations.

Next project for this vintage mechanical engineer is to learn some electronics and the plan is to use one of the Model I's to control the wet and dry bulb temperatures in timber drying kilns. I've seen this being done in South Africa using Hewlett-Packard computers and sophisticated sensors, whereas I propose using the Mullard humidity sensor from Philips washing machines. Perhaps one of our members has had experience of using a Model I on this type of application ? (perhaps some of my queries will be answered)

I have borrowed a manual from Burroughs which is a photostat without a cover, and I have copied it for myself. It has an introduction by somebody called Jerry Heeps, and I would like to know if this is the out-of-print Technical Reference Manual or whether I should keep on looking for one of these, as I expect to have to do my own maintenance in the future.

I have carried out the mods to Scripsit given in the Newsletter to make it compatible with Newdos80 and I use it on 80 track which gives me plenty of space for letters. It prints out very well. I do have one small problem though, I can COPY drive 0=80 to drive 1=80 without any trouble, but DIR and FREE on drive 1 tell me that I have only 35 tracks, and will not let me SAVE on to drive 1 if the 35 tracks are full. If I put the disk back into drive 0, DIR and FREE agree that it is 80 track and I can then SAVE. There must be an easy answer, if somebody can tell me.

Further thoughts on the Model I. I know that I am only a beginner not very knowledgable on computers, but I have wondered for some time why the Model I cannot be modified by adding extra memory and the ROM switched out so that it can use CP/M. The Amstrad PCW 8256 and it's bigger brother also use a Z80 (although a later faster version) and only have a minute ROM. I now gather from the very interesting article in the last Newsletter that Terence Harris and Ian Linehan may be doing just this. I look forward to more on this project and will support it wholeheartedly.

Yours sincerely, ...Anon. ref:- MAL

THIS COMMITTEE HAS ASKED FOR ANY MEMBER TO PLEASE WRITE TO THE NEWSLETTER, WITH ANY REQUEST FOR WHATEVER INFORMATION IT IS THAT THEY

REQUIRE, WE WILL DO OUR BEST TO SUPPLY THAT INFORMATION. IT DOES HELP A GREAT DEAL, IF WE CAN CLOSE DOWN ON THE FIELD OF INFORMATION/ITEMS THAT THE MEMBERSHIP WANTS TO SEE IN THE NEWSLETTER. PLEASE COMMUNICATE WITH US. (I DON'T THINK ANY OF US BYTE). Ed. **

A member wishes to know if there are any others that would wish to start a Model I user group based in London. All replies sent to me will be forwarded. Please refer to:- "Model I User Group, London"

Dear Ed.,

John Kilpatrick advises I write to you re my problems on TRS-80 Model III CP/M and Hi-Res Graphics.

Mapper III board producers, Omikron Systems, went bust leaving me (second owner) with Single Density support but some Double Density software: Tarbell, Electric Webster, and Commx. All lack manuals.

Did anyone out there finally get DD support and/or appropriate manuals. If so Please contact me, I'd be ever so grateful. If the general reply is no, then does anyone have contacts with Tandy user groups Stateside ??

Graphics - I've got BASICG & manual but I need a board. Has anyone a TRS-80 graphics board they want to sell ??

Yours sincerely,

Tony Gerrard, 11 Forge Valley Way, Poolhouse Farm, Wombourne, Wolverhampton. WV5 8JR

Does anyone know the control codes for a Tandy Lineprinter VI to make it print in CONDENSED MODE when working with Lotus 123 V2.01 ? Any answers please to the PRO, John Kilpatrick.

Dear Gordon,

Question 1. Is there a means of accessing a BASIC reserved word list in the Model 4P (Model 4 mode) ? i.e. the equivalent of memory locations 5712 - in Model 3 mode.

Question 2. Is there a method of increasing the memory capacity above 18K when using VISICALC in Model 3 mode ?

Solution 1. In order to make use of many of the programs in "BASIC FASTER & BETTER" by Lewis Rosenfelder while in the Model 4 mode it is necessary to replace the instruction "CALL 0A7FH" with the instruction "CALL 76A4H" followed by "CALL 29F7H". These two instructions also allow the routine listed in the TRSDOS 6 manual (under USR heading) to be made relocatable.

Comment 1. Ref: "Latest Update to TRSDOS 6.2" on page 8, fifth paragraph of the January '87 Newsletter. The writer quotes that the command "DATECONV" is for converting pre 6.3 system discs (not for data discs). This is incorrect, in fact the reverse is true. To quote from the documentation (page 14) that accompanies LS-DOS 6.3, "DATECONV/CMD - Converts pre 6.3 version data (non-system) disks to use the new time/date format ..... If the conversion of a SYSTEM disk is attempted, an error message will be displayed. To convert this type of disk, you must first use BACKUP ..... "

Comment 2. Ref: "Windows on the Model IV" on page 13, same issue. There appears to be a missing section of code in the listing - lines 96-111. This code is associated with the DISPICHR label. Line 95 appears to be misprinted in that OPCODE D9 equates to SOURCE code EXX. This error maybe associated with the missing lines of code.

..... I am trying to discover how to implement some "foreign" language characters and the £ sign into SCRIPSIT. I haven't as yet completely solved this problem. ..... Would the solution, when complete, be useful to anyone else ? Or does any other member have a clue ?

Barry Thrippleton, c/o, Merz & McLellan, Amberley, Killingworth, Newcastle upon Tyne. NE12 ORS

Herwith those missing lines refered to above, Ed. **.

```
94                      ;
95 A06F D9              DISPICHR:EXX  ; Save BC, DE, and HL
96 A070 F5              PUSH AF       ; Save Print character
```

```
97 A071 DD7E04    LD A,(IX+4)     ; Get current line
98 A074 67        LD H,A          ; Set cursor line
99 A075 DD7E05    LD A,(IX+5)     ; Get current column
100 A078 6F       LD L,A          ; Set cursor column
101 A079 F1       POP AF          ; Retrieve print character
102 A07A 4F       LD C,A          ; Set print char. for @VDCTL
103 A07B 3E0F     LD A,@VDCTL
104 A07D 0602     LD B,2          ; Set "POKE" A onto screen at HL
105 A07F EF       RST 28H         ; Do it
106 A080 C226A0   JP NZ,ERROR     ; Go if Error
107 A083 08       EX AF,AF        ; OK - Save print character
108 A084 7D       LD A,L          ; Get current column
109 A085 3C       INC A           ; Move it on one
110 A086 DD7705   LD (IX+5),A     ; Reset it
111 A089 DDBE03   CP (IX+3)       ; Is it over Last column
112 A08C DAAEA0   JP C,DISP!EXIT; No - Exit back to caller
```

SCRIPSIT TO PURE ASCII

Some of the new printers can set both the left and right margins and also the top, bottom and page length. This means that they have some of the power which we normally associate with Word Processors. In fact, the ability to print justified text in proportional mode is superior to many of the current programs. Scripsit was written before the days of intellegent printers and can only work in Monospace mode. Some of the other programs will print proportional characters, but cannot justify the right margin and print proportional at the same time.

If a file is printed using the printer format controls these will probably clash with the word processors controls, and this makes it preferable to leave the formatting to the printer, except where page numbers and headers are reguired. Model 100 users have a Text mode which will produce ASCII files, but not format the text. This lends itself to these new printers, and TED, which comes with TRS-DOS 6:3, can also generate a text file but has no print facility. Again this is all that is required with the new printers, as the file can be printed later.

Scripsit is very useful in generating the text file, but it does not save in ASCII unless instructed to, and uses it own markers for Carriage Return and paragraphs. One way round this is to save the file in ASCII via the S,A mode in Scripsit, then to print the file later. The S,A saves the file with CR as 0DH, the paragraph marker becomes 0EH, which unfortunately is translated by the Epson into Expanded type.

The paragraph command in Scripist should force a line feed and insert five spaces to conform to the accepted standard for correspondence, but the same effect can be produce by ENTER and either a manual Tab or five spaces. This might be considered before the text is written, but it is time consuming to go through a file afterwards to change all the commands, especially as Global Replace cannot be used. An alternative is to use a simple routine which converts all the 8DH or 8EH which Scripsit uses, into 0DH which is the ASCII carriage return. If the file has been saved in ASCII mode, the program will work just as well, but in this case only the paragraph markers will be converted.

The Paragraph marker also causes a problem in converting Scripsit files to SuperScripsit using the ASCII/SCRIPSIT option. It is preferable to change all the 0EH to 0DH before converting, otherwise the Paragraphs lose their extra line space.

This program might have other uses as it replaces one character/code with another. It uses the INPUT$ in TRS-DOS 6 Basic which can be used to get a character from the keyboard without using string space or as in this case to get a character/s from a file. INPUT$(1,1) gets one character from the file assigned to buffer 1. The program inputs one character at a time and if necessary changes it before writing to a new file.

If the files are kept on Memdisk the process is speeded up, but if the two files are too large, the old file should be on floppy and the new one written to Memdisk. The file can be printed from Memdisk, but if a permenant copy is required, it should be saved to disk before switching off the computer. The converted file will work in Scripsit just as well as the original and therefore it is not necesary to keep both versions.

From time to time it may be necessary to print a file which exceeds the capacity of Scripsit, or TED, and this can make life difficult, especially when the printer is doing the formating. It is possible to use APPEND to join several smaller files in ASCII, to form one long file, which can be as long as the disk space will permit. I have had files in excess of 220K on my double sided disk. This can be printed with a simple Basic program or using LIST (p) from DOS.

```
1 'this program converts Scripsit TXT files to full ASCII including paras
2 'it works best if both or the output file are on Memdisk.
3 'this requires TRS-DOS 6
4 'lines 5 and 6 are only required because I cannot remember the name of programs - D.Trayler - 10/05/87
5 GOTO 100
6 SAVE "SCMOD/BAS":END
100 INPUT "FILE TO MODIFY ";FI$:INPUT "OUTPUT FILE ";FO$
150 OPEN "I",1,FI$:OPEN "O",2,FO$
200 WHILE NOT EOF(1)
210 I$=INPUT$(1,1):IF EOF(1) THEN CLOSE:END
220 IF (I$=CHR$(141) OR I$=CHR$(142) OR I$=CHR$(14) )THEN PRINT£2,CHR$(13) ELSE PRINT£2,I$;:PRINT I$;
240 WEND
```

This program is written for the model 4 and I have tried to write an LBASIC version for use on the model I/III. As I use neither at the moment I cannot check that it works.

```
1 'this program alters the paragraph marker in Scripsit files to a Line feed
2 'the file must be save in ASCII using S,A
3 'if the Scripsit files are not in ASCII then CHR$(14) should be changed to CHR$(142) or add a second line at 215
10 ON ERROR GOTO 50
15 GOTO 100
50 IF ERR=62 THEN RESUME 240:ELSE ON ERROR GOTO 0
100 INPUT "FILE TO MODIFY ";FI$:INPUT "OUTPUT FILE ";FO$
150 OPEN "R",1,FI$,1:OPEN "R",2,FO$,1
170 FIELD 1,1 AS I$:FIELD 2,1 AS O$
200 FOR N = 1 TO LOF(1): GET 1
```

```
210 IF I$=CHR$(14) THEN LSET O$=CHR$(13):ELSE LSET O$=I$
220 PRINT O$;:PUT 2
230 NEXT
240 CLOSE:PRINT "DONE":END
```

(In the above listings please read the 'pound' sign as an hash sign. Ed **)

This will generate a file with a LRL=1 which will print, but not load back into Scripsit. The file should be copied to another disk or, to the same disk under a different name and forcing the LRL to 256.

```
COPY filename/TXT to filename/ASC (LRL=256)
```

When doing this type of job, it should be remembered that Printing to the screen is a relatively slow process, and not strictly necessary. By deleting the PRINT O$ in 220 the propgram will speed up, but the screen will stay blank. As you could be working on the wrong file, it is best to accept the small delay and watch the screen for typos and spelling errors.

It is possible to modify the programs, so that they count the characters and the spaces. The spaces are an approximation of the number of words, but this only works when there are no tables, and preferably no indent,s at the start of the paragraph.

MEMDISK

The TRS-DOS 6.3 Basic seems a worthwhile improvement, and now has those useful extras that we have come to expect in LDOS. The arrow keys to advance to the next line in a listing, and the single keystoke commands for Editing etc. The ability to copy lines is very useful, and although I use Scripsit, the text processor TED is also useful.

All in all a more useful upgrade than the advertised feature of extending the date. The LDOS version also boasts an Input@ command like DOSPLUS IV.

When model 4 Basic was introduced, it seemed to have more disadvantages than advantages, as I got more familiar with it the situation changed. The latest version seems to offer the best of both worlds. I like the way that I can get back to DOS from Basic, by typing SHIFT/1, <ENTER>; without having to type SYSTEM. (Members could also look at a utility called 6:2 PLUS by Micro-Systems Software, the authors of DOSPLUS IV. This contains BASIC enhancements designed to run with TRSDOS 6:2. I also find that having backed-up the BASIC files to LS-DOS 6:3, they still run. Ed **)

The only problem is one that is not of LSI's making, and in fact they have been trying to avoid it. The Ramdisk driver that I use for my 512K expansion will not work with 6:3. According to 80 Micro, I am not alone and a new driver is suposed to be available. In the meantime, I have to switch back to 6.2 to use the extra memory, this can be rather a bore. Once you have got used to a Ramdisk which will take all the system files, application programs and data files, a standard 128k machine seems so s l o w .....

This led me to trying to cram as much as I can in the normal Memdisk, this is limited to 60K +, which will just take the normal system files. If you want to use some of the memory for the programs, you need to compromise somewhere. It also takes time to set up the Memdisk, especially where you cannot use a straight backup command. Copying all the files for Superscripsit with all the selectivity that must be used, can take best part of half an hour.

A simple way would be to load the whole lot as one single file. There was a program for the ESF Stringy Floppy, that could take a snapshot of the memory and load it back complete with the cursor in the orginal position. It was like a time-warp in a game because you could resume exactly where you left off, even though some days had elapsed. Don't ask me how its done, because I just used it and prayed that it would work each time.

Then along came disks and away went Exatron, it appeared that the Amstrad got all those sort of programs. Still that does not help the model 4 user who has 64K, but only limited use for it. This is where SLMEM came in. It was written by Clifford Knight (author of Scripaid), if you really get what you pay for, this must be the king of the

freebees. SLMEM, which stands for Save and Load Memory, is a program that saves the contents of the memdisk as a disk file and can reload it at a later date.

You still have to format the Memdisk in the normal way, but you only copy one large file instead of all those individual files. Thus it is possible to do the whole job in about four minutes. One advantage is that it saves you trying to remember which files you had last time, and there is no limit to the number of files that you can keep. You could have a limited DOS file and the required Superscripsit files. Another could have Multiplan set up, yet another with your database or word processor and the relevant text file.

I tend to use it in a JCL which sets up the Memdisk and runs SLMEM. The JCL then makes the Memdisk into the System disk, the former drive 0 can then be used for a data disk as drive 2. The bad news is that you cannot buy a copy, because Clifford felt that the distribution cost would exceed the possible returns. Clifford deserted to the MS-DOS ranks because he felt the need to earn enough money to buy little luxuries, like food and clothes. The good news is that he sent me a copy before he left.

(PRO-ESP from MISOSYS, has utility programs which work in much the same way. I have one file which contains all the system files, BACKUP/CMD, FORMAT/CMD and DISKCOPY/CMD, with 3K free, which is loaded using a JCL file, this also software write protects and makes the upper 64K of memory into the 'system disk', all in 31 seconds. Ed **)

Most people feel that free gifts are rather expensive in the long run, and so it might be better to price it at £99. If anyone wants an official 'private' copy, I will try and oblige. To make it clear it is only of use to a person with a 128K, model 4, with disk drives. It is no use for model I/III or 100 users, or 64k model 4, and certainly not to tape users. This is not a promo for Disks or Model 4's, but a fact of life about the way the program works.

The preceeding two articles were submited by:-
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XLR8 - CPU & Memory Upgrade For The Model 4

For a number of months I have been considering whether I should upgrade my Model 4P with one of the many memory boards now available. They have been on the market for some time now, prices have tumbled, and they should be thoroughly debugged; furthermore, there have been a considerable number of articles written discussing the merits of what is available. During my search for the best option, Roy Soltoff, through Misosys Quarterly drew my attention to another contender in the Model 4 memory upgrade market, but this time with a considerable difference. H.I.Tech in Houston are marketing a CPU and memory upgrade for the Model 4 called an XLR8.

The board appears to have great potential, mainly because of the CPU upgrade the board provides. The upgrade involves replacing the Z80 with the HITACHI HD64180 as well as providing an additional 256K of memory. The XLR8 is new on the market, therefore there has been little feedback from users, so I thought it was about time I helped out in that area. The board was advertised as a plug in, no soldering required. If the XLR8 was to be a disaster I could always revert back to normal without major surgery.

Please note my experience is based on a gate array Model 4P, operating LS-DOS 6.3, however, the XLR8 will fit any model 4 and run with CPM 2.2 (you must specify your operating system when ordering, both cost extra).

The board was ordered at the beginning of DEC 86, and following a further letter and a phone call, (it appears my order got lost) the board finally arrived in MAR 87 in an oversized not to well packaged parcel. The package contained the XLR8 board, an umbilical cable, a manual and a disc containing the necessary software to obtain the best from the new board.

XLR8 Board

First to describe the main features of the XLR8. The circuit board is designed around HITACHI's new high speed, low power HD64180 8 bit microprocessor. The HD64180 has maintained compatibility with the

Z80 instruction set. There are only a dozen new instructions which allow full utilisation of the enhanced features of the HD64180. Although the HD64180 can access 512K of memory, the XLR8 only contains 256K. There are no facilities for on board expansion. The main XLR8 features are:

1. HD64180 microprocessor running at 6.144 MHz
2. 256K of high speed DRAM
3. On chip memory management unit
4. Two channel DMA controller
5. Internal wait state generator
6. Two channel 16-bit programmable reload timer
7. Programmable dynamic RAM refresh addressing and timing
8. Interrupt controller with 12 levels of control
9. Twelve new instructions

Optional

10. Two channels of RS232 communication
11. Expansion port

The XLR8 board appears a well constructed and compact card; fully populated except for the large socket for the umbilical cable and three smaller sockets for additional RS232 chips. Further expansion of the board to utilise some of the HD64180 additional facilities is possible through the provision of 3 on board IDC connectors (an expansion cable is available from H.I.Tech). The large IDC provides access to the XLR8 bus and of the two smaller ones, one provide access to the two RS232 ports, and the other can provide the board with +12V and -12V required for RS232 drivers, which, as indicated above are not fitted. The board is designed to fit in the Model 4P modem slot.

HD64180

The HD64180 is a new device, therefore I think it would be useful to highlight some of its main features.

Hardware Features

1. Operating frequency up to 8 MHz
2. On-chip memory management unit,(MMU) supports 512k bytes of memory and 64k bytes I/O address space
3. Two channel direct memory access (DMA) with memory - memory, memory - I/O and memory to memory mapped I/O transfer
4. Wait input and wait state generator for slow memory and I/O device interface
5. Programmable dynamic RAM refresh address and timing
6. Two channel full duplex asynchronous serial communication interface (ASCI) with programmable baud rate generator and modem control handshake signals
7. Clocked serial I/O port (CSI/O) with high speed operation (200k bits/sec at 4 MHz)
8. Two channel 16-bit programmable reload timer
9. Versatile interrupt control manages 4 external and 8 internal interrupt sources
10. 'Dual bus' interface compatible with all standard memory and peripherals LSI
11. On chip clock generator

Software Features

12. Fully compatible with CPM and CPM Plus
13. Twelve new instructions including multiply
14. On-chip I/O addressing relocation register
15. Sleep instruction, IOSTOP mode and system stop

VLSI CMOS Process Technology

16. Low power operation - 75 mW at 6 MHz
    45 mW SLEEP mode
    25 mW IOSTOP mode
    19 mW SYSTEM stop
17. VCC = 5V (+/- 10%) fully TTL compatible

Manual

The manual provided with the XLR8 contains 31 pages and discusses the general description of the XLR8, the installation procedures for each of the three Model 4's, the software at sufficient level to get you started, and then at a more detailed level. I/O pinout and the installation of the additional chips required for RS232 is well documented, however, the manual states the RS232 sockets require fitting; my board had them already fitted. I considered the final section, the programmers reference, insufficient as a reference, however, it does give you an idea of the additional facilities provided by the HD64180. I found it necessary to obtain the HITACHI HD64180 reference manual, but that was only because I have a lot of other devices 'hanging on' my model 4 and needed to change my drivers and check timing wait state functions.

XLR8 Software

The disc provided with the XLR8 contains all the software necessary to fully utilise the speed and memory facilities provided by the XLR8, however, because the additional 256k of memory is accessed by bank switching a number of these programs must reside in low memory, therefore, some of the operating systems utilities (hard disc driver, comms, etc) must be moved to high memory. That is not a problem, but you will probably have to re-configure your system. Space in low memory for other programs which could utilise the additional memory such as PRONTO, DDUTY and RAMDISK is limited. The following is a brief description of the software supplied.

FIXALL

Resides in low memory
Only needed when running at full speed
Used to slow the CPU during keyboard access. (Keyboard PAL is to slow to cope with maximum speed)

SET180

Used when required to change the CPU refresh period, wait state and I/O wait state

FIXBANK

Resides in low memory
Provides new bank driver to access additional memory

RAMDISK

Uses low memory
Emulates a disc drive in the additional RAM

RAMDISK is more flexible than MEMDISK, other than enable, disable, format and not format you are presented with the option of selecting which bank you wish RAMDISK to start, and how many contiguous banks it should use. This allows the installation of, for instance, RAMDISK, PRONTO, DDUTY or any other programs which normally utilise internal ram, providing there is low memory space available. Performance of the XLR8 is impressive, but with the system in RAMDISK, providing you don't mind waiting for the system to be setup in RAMDISK, has to be seen to be believed.

CFGRD64

A simple JCL to set up part of the additional memory as the system

DIAS

A simple HD64180 dissassembler

BANKSTAT

Presents the status of the internal ram i.e. what is available.

Installation

As the manual suggests this is very easy if you have a standard Model 4, and not difficult, just awkward, if you have a hires board and/or facilities to fit external drives. Removal of the Model 4 case is exactly as described in the manual. To be able to lower the bottom part of the PCB pan I had to remove the carrying handle internal metal

strengthening brace, the rear CRT screening cover and the disc drive cable (in my case a small PCB). I could now lower the PCB pan to gain access to the main PCB. The XLR8 board replaces the Z80, therefore the Z80 needs to be removed and the XLR8 umbilical cable plugged into the vacant Z80 socket. If you have a hires board fitted the Z80 is under the hires board. I found the umbilical cable was obstructed by one of the hires board supporting pillars and therefore stopping the hires from sitting correctly when refitted. With a Stanley knife I removed a small part of the pillar to give the cable a clear run.

The manual suggests that the existing ram chip speed should be checked. To be able to run the HD64180 at maximum speed the ram chips must be 150ns or better, however, it would have been nice to warn that TANDY fit 200ns ram chips as standard. I will now have to strip the machine down again and fit faster chips if I want to run at maximum speed.

With the Model 4P the XLR8 slides into the vacant modem slot, and now the most difficult part, when closing the main PCB pan the umbilical cable running to the XLR8 needs to be plugged into the 40 pin socket on the XLR8. Unfortunately the socket and cable are not in line. The pan needs to offered up a number of times and the cable formed to line up with the socket. A final task before plugging the cable into the socket is to attempt to squeeze it as flat as possible. Plugging the cable into the socket is a bit of a juggling act, with the PCB pan 3/4 close space is limited and great care should be taken to avoid bending any of the header plug pins.

Reassemble in the reverse order of stripping and the system should boot with your normal boot disc. Don't worry about the length of time it takes to look at the boot disc, the HD64180 boots in the slowest mode (approximately 75% of the normal Z80 speed). At this stage the Model 4 should behave no different from before the modification, except it is slower.

Initialisation

To make full use of the XLR8, some of the software delivered with the XLR8 will need to be utilised, first, bump up the speed. The HD64180 contains an internal register which controls the CPU wait

state, I/O wait state and the refresh period, and without going into to much detail, the value in this register defaults (at boot) to the slowest value. SET180 provides a user friendly interface to the resetting of this register to obtain maximum speed for your particular configuration. (There are 4 settings for each of the three delaying functions). Increase in performance can be noticed immediately by the faster screen functions.

Hard Disc

Setup of my winchester caused some concern. Once the XLR8 was installed, obviously I wanted maximum performance, and this was to fast for the hard disc. It took a little time to realise the cause of the problem. During initialisation I had reduce the I/O wait state to far. A little experimenting and the hard disc was up and running. My disc will happily work up to the fastest but one position for I/O wait states.

Clock

I have always found date stamping a useful facility, however, keying in time and date on system boot is tedious. When I bought my Model 4P there did not appear to be a clock readily available, so I built my own based on the MM58174, and patched TRSDOS to pick up the time and date on boot. The MM58174 is a very slow chip and during a clock read/write the Model 4P (fitted with the Z80) had to switched to the slow CPU speed (2 MHz), returning to high speed after the read/write. The HD64180 does not appear to respond to this original mode of switching, (probably because it has its own clock) therefore the external clock must use the external wait line to slow the clock read/write (this will require some additional hardware). My reason for including this section is because most commercial clocks for the Model 4 use similar technology, and, therefore may not work unless they are modified. (Mine now works without any problems).

I/O Ports

To provide the versatility that the HD64180 is capable of does require a controlling mechanism to which the user can interface. The HD64180 provides a series of on board ports which can be accessed to

provide this interface, however, nothing is easy, these ports are mapped into the model 4 I/O map, taking up ports 0-3F Hex. Although these port addresses can be relocated to any contiguous port address within the model 4 port map, it would be pointless, all the supplied software is based on the internal ports being at 0-3F Hex. Port addressing may cause some problems if you have any external hardware using those ports, and, I suggest, if practical, move the hardware to between 40H-7FH. (The system uses all ports above 7FH). If this is not practical, the hardware and the HD64180 can still work together, however, the following must be observed. The HD64180 uses a 16 bit address when placing an I/O address on the bus, although only the lower 8 bits are available on the external Model 4 expansion bus. If the upper 8 bits are set to 0 the internal CPU registers are addressed, otherwise these ports are disabled, therefore, if addressing an external port the driving software must ensure the upper 8 bits are none zero, if not, both internal and external ports are accessed (and chaos may result). The means of ensuring the upper 8 bits are set is not difficult but it would be to long to explain here. Full details can be found in the HITACHI reference manual.

Performance

I should have checked the performance of my Z80 before removing it, but I did'nt, so I can't give a comparison. If anyone would like figures please send me the benchmark test and the time it takes your machine to run, (I would interested in the comparison) and I will be happy to run the test. Please bear in mind I am running at 30% less than maximum. (I have only got 200ns rams fitted)

Conclusion

For the short time that I have used the XLR8 I have been impressed by its performance. Extra memory is always a benefit, and once you have got your working procedures organised to utilise the extra memory, it is a real asset. Low memory restrictions imposed by all the driving software does detract from the ability to utilise the additional memory to full advantage. Would'nt it be nice to install PRONTO, DDUTY and use the rest as ramdisc, however, only two of the three listed above will fit in my installation. Should I wish to run at maximum speed I would need to install FIXALL, reducing my low memory

space even further. To someone who is considering expanding the Model 4 memory, taking the additional cost into account, the XLR8 is certainly a Model 4 upgrade I can recommend.

The XLR8 is available from:- H.I. Tech, Inc., PO Box 25404, Houston, Texas 77265, USA. ..... John Coyne (04203) 7165

FASTER AND BETTER THE Hi-Tech WAY

I have now had on test the H.I Tech Model 4/4P Accelerator Board since February 1987 and wondered whether a note or two about it might be useful for others. This is an internal speed-up board with extra memory which according to the 80 Micro adverts will take the old 8 bit Model 4 into the future.

PRICE -------- @ 299 dollars (£145 approximately at current levels of exchange it is not cheap. Does it do the job ? Well, writing as an entirely non-tech man (John Kilpatrick also got one and may give the techies the detail they require), I suppose the answer is --- it depends upon what you want it to do. For my money it is worth it and is recommended to those who may have a need. The recent adverts in 80 Micro says that the board "will extend the life of your Model 4". I looked up some old 80 Micro's to see what the original full colour page adverts said when the board was first advertised - but as usual I couldn't find it when I wanted. My recollection is, however, that the advert made a great play of being able to both speed up the processor and give accessible internal memory and so make the Model 4 a real contender against the new 16 bit machines.

ORDERING -------- The board arrived at my home after I charged it up to Visa by means of a telephone call direct to the advertiser in the States. They were very helpful on the telephone and sounded as though they were a reputable company. It took a long time in coming though!! I had to telephone the States 3 times to "chase it up" and got promises of action each time (with lots of apologies). Eventually, I got a bit uptight and they promised to send another board forthwith on the assumption that the first was lost. As you can guess it was about two or three weeks after that promise that I got two parcels through the

post. within the space of a few days (and hence why John Kilpatrick is happy !!!). Somewhat surprisingly Customs and Excise charged VAT and Customs Duty differently on each package (although they appeared identical on the outside and were identical on the inside !!) raising a charge of £22 on one of them which obviously put the price of the board up quite a bit.

INSTALLATION -------- Not knowing anything about printed circuit boards I took the board along to the last Swindon meeting and John kindly offered to install the board into my Model 4P. In John's expert hands the fitting of the board seemed quite easy ! For a total non-expert like me, however, I was grateful for his help. If you know how to take the outer casing off the computer you should be able to fit the board yourself. Since the Board has been installed I have had no trouble with it at all and it is happily invisible to the user of the machine.

THE MANUAL -------- The instruction manual which came with the machine is 31 pages and includes chapters on the function and design of the board, the method of hardware installation, details about the software which comes on disc with the board, notes on optional instalation of 2 extra RS232 ports (what purpose would they serve ??) and a programmers reference section (which I don't understand), although it looks well written.

THE SOFTWARE -------- In both my parcels came discs with TRSDOS and CP/M compatible software for use with the board. I believe that H.I. Tech now offers only one choice of software with the board and makes a separate charge of 10 dollars if you want more than one set of compatible DOS files. The manual itself says it is valued at 10 dollars - but I can't believe you have to buy the manual as well !! Once the board is installed the software is very easy to use. I have not used the board with CP/M (but I believe John has) and therefore can only comment about the use of the board with TRSDOS. The software files are very easy to install onto your normal boot discs and by judicious use of an AUTO DO file and a SYSGENing of the disc (as per detailed instructions in the manual) the board becomes operational without user involvement. The way in which I have got the board set up gives me an automatic boot to a system disc in logical drive 5 together with a number of useful utilities (like DOSTAMER, BACKUP FORMAT and

LSQFB) together with about 150k RAM disc. All my favourite s/ware programs (e.g. SCRIP PRO, MULTIPLAN, VISICALC) (with judicious adjustments) reside on the system disc. As my Model 4P had 128k internal memory before installation of the board I still have that memory available which allows the large programs using 128k to run with the above RAM disc configuration.

UP & RUNNING -------- I have the choice of "overwriting" my top 64k of memory and adding that memory to the RAMdisc if I wish. This gives a maximum optional 319k of system RAM disc of which 250k is available for "on line" program files. I also have the choice of leaving the systems files in Drive 0 which would then give me a free 319k available to read and write files to. The benefit of this does not seem to override the extra speed of having the systems files resident on the RAM disc. As those who have used MEMDISK will know, there is a noticeable increase in speed of accessing system files if they are held in RAM. The difficulty that I have found is that "user program" files still have to be accessed from a physical drive and therefore, unless access to the program overlays was small, the increase in speed was not all that noticeable because of the many physical disc accesses as the program ran. With a user program file and the system files on RAM disc the increase in speed is very noticeable - particularly when copying files or data or "backing up". (I suspect a combination of RAM discing and chip speed)

SPEED -------- SCRIP PRO which is the Tandy word processor I use is atrocious for going to disc, (either for system overlays or program overlays or to save program files) is a whole new word processor with this board. I suspect that a basic program which uses disc access for record retrieving and dumping would also be remarkably improved. They do say that RAM disking beats a HARD disc for speed - except when you forget to copy the data to a physical drive before turning the machine off !! The board is not, though, just about RAM disking, although it does perform well in that department. There are, I hear, other boards that have 1 MEGA byte memories. The sales pitch on this board is that there is a replacement microprocessor installed on the board. The board comes with a Hitachi HD64180 chip which takes the place of the Z80 chip which normally sits in the Model 4. The Z80 is simply unplugged from the mother board inside the computer and the new board is plugged into the place where that chip came out of. (What can I do

with a Z80 chip on its own ?), This chip, so the manual says, doubles the speed of the CPU processing and moves the speed of the Model 4 to 8 Megahertz. In a sample basic test that I ran this increase in processing power is not as remarkable as it suggests. On my test the speed of processing a simple basic set of calculations in a FOR NEXT loop was increased by about a third only. Anyone any idea why speed only goes up a third, when the chip runs twice as fast ? Paging through SCRIP PRO documents, however, was noticeably faster. As far as processing speed goes all I can say is that it certainly speeds things up in word processing and copying files, but whether the speed is worth the price will depend on the applicaion. I would not pay £150 merely for the increased speed, but with the combination of a large RAM disc and the easy instalation the board, it is a very attractive proposition. As I said the board comes with a choice of software, in my case both TRSDOS and CP/M. I beleive LDOS is now also on offer, but NEWDOS 80 is not mentioned.

NEWDOS 80 -------- When the board was installed at Swindon Laurie Shields gave it a look and when I discovered that all my NEWDOS 80 programs would not work he kindly sorted me out. On booting NEWDOS 80 the machine gives a "lost data " error message. I am led to believe this is because the chip is working too fast for the Model 3 ROM image to boot in. Laurie sat down and wrote a boot loader routine for me to run from TRSDOS and lo and behold ! I can now get NEWDOS 80 to boot up. ..... Thanks Laurie. There is, still however, one possible problem with NEWDOS 80. It appears to bomb out of some of my (previously reliable) NEWDOS 80 basic programs. I wonder if this is the same problem and the basic isn't getting loaded in. Any suggestions please ? When the second parcel arrived I rang Hi-Tech in the States and told then that Laurie had written a piece of code to get NEWDOS 80 to boot. They told me that someone in Cananda was writing the software for NEWDOS 80 to run with the board but it had not yet been finished. By the time you read this it may be on offer with the board. I did mention your name Laurie, but they didn't seem to want any help !

SUMMARY -------- On balance I think that I have spent my money well. The board works and does give the 4P that extra versatility. My justification of the expense, is that I run TRSDOS wordprocessing within my office and do not want to spend a fortune in getting into

MSDOS yet. The addition of the board to my internal memory and the internal drives, (80 track) gives me a pretty mean machine which is difficult to find elsewhere. The 4P has 319k internal memory, 1.5 MEGA byte on physical drives, runs at 8 mhz and is a portable at a (as new) price of £800 or thereabouts. It runs some tried and tested software and with the shell programs like DOSTAMER is user friendly. I think Hi-Tech are justified in saying that the board prolongs the useful life of the Model 4. There are a couple of caveats though. Clearly, all software can be stored on the ramdisc with suitable adjustments as to which programs should be "on line, but DOUBLE DUTY will not run with the RAM disc installed. If tried the error message, "too many IO drivers in low memory" is given. - Any ideas how to get round this ? Although the manual clearly states that the on board memory could be configured to be "user" memory it gives no hint as to how this is accomplished, nor any detail of where the drivers are loaded. It would be nice if I could have SCRIP PRO and MULTIPLAN running and at the same time have PRONTO available at the touch of a button. This would mean trying to find out how to install PRONTO into one of the memory banks otherwise used by the RAM disc and then be able to load it by switching out the application program as normal. Any ideas anyone ? This is my first write-up for the magazine and I hope these notes may be of help to someone out there. Is anyone interested in some of the word processing techniques that I have picked up since getting involved with computers ? Or is this old hat ? Does anyone know where one can get hold of a good set of tried and tested business models for MULTIPLAN. I have one book that I picked up but none of the models are of much use to me.

Finally a comment about the company H.I.Tech. Although there were delays in getting the boards, I have never yet met another firm who would send a second board out without being sure the first one was genuinely lost - and all on the basis of a telephone call. I was impressed by their friendliness and trust and they get my vote as a reliable source.

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CED - A MSDOS Public Domain Command Editor

When MSDOS was in its infancy, a mere 3 or 4 years ago, there was very little good public domain software, in fact compared to the programs we had available on the TANDY range, there was very little good software - programs such as dBASE had been crudely ported to the 16-bit environment, instead of being re-written, and often ran slower on the MSDOS machine. Now however, we are reaping the benefit of the greater processing power in our spreadsheets, wordprocessors and languages etc. Codeview, the debugging environment for Microsoft C is really amazing and I'm afraid that you will never have WYSIWYG desktop publishing such as Aldus Pagemaker on your M4, its a bit like trying to win the LeMans with a Mini-Cooper S - just not enough horse power. Additionally the 'hackers' have had time to delve into the mysteries of the operating system and in the last year there has appeared some very interesting and useful utilities both commercially and in the public domain. One of these is CED - an acronym for Command EDitor.

CED was written by C.J. Dunford and put in the public domain with the specific injunction that you may copy the program for yourself or others but you may not charge for such copies or in any other way sell the program - i.e. its real PD. The initial function served by the program is that of a command line editor - i.e. similar to that found on the Beeb and that written for the TRS80's by Peter Knaggs. However its actual functionality goes way beyond that and I'll just borrow the purpose section of the docs to illustrate.

-- Complete command line editing facility.
-- Recall of previously issued commands for re-entry.
-- Command synonyms, which may include "chaining" of a series of commands.
-- Parameterization of synonym commands.
-- Recall of parameters for previously issued commands.
-- User-settable buffer sizes for all functions.
-- For programmers, a facility to add new "resident" commands to the DOS shell.

Installation can be as simple as typing (its less work to put it in autoexec.bat) the filename CED, whereupon it integrates itself into the DOS and becomes memory resident.

The command line editor is all that you might expect, the DOS F3 copy to end-of-line etc. is removed but replaced with logical cursor key-pad alternatives and extensions. The program keeps a record of each command that you have used in the form of a circular stack, that is accessed via the (UP) and (DOWN) arrow keys. If you retrieve a command and just reuse it, it is not added to the stack. If you retrieve and edit before use then the newly edited command is added to the stack. The size of the stack can be altered by the user. There are in fact two separate stacks, one for DOS and one for compatible programs such as DEBUG.

The next major function is parameter recall (PCALL). Many programs let you type extra information after the filename of a program, this information (parameters) being passed to the program at the beginning of execution. For instance you might be want to enter your editor and specify a path and filename for the editor to load:

EDIT C:\assem\mac\workfile.asm

The parameter takes quite a bit of typing and if you are doing some assembler development work you might need to type that 20 times in an hour. The command CED PCALL EDIT stores the parameters associated with EDIT so all you only have to type the parameters once and thereafter just type EDIT.

Another very useful aid comes under the title synonyms. This allows you to define brief 'synonyms' for often used commands. At its simplest this is d for DIR, c for copy etc. But can also embrace quite long command strings as well, so for instance you can change directory and invoke a program with passed parameters all with a single (or more if you want) letter command. The synonym can also contain substitution parameters (%1 etc) like those found in BATCH. CED provides ways for you to set up PCALL and SYN sequences in a configuration file that can be read from the autoexec.

The final function allows you to add new resident commands to the DOS. This is provided via a bogus DOS function 0FFH. This does of course pre-suppose that you can write your own machine code (or C±-code) to carry out the new commands. Examples are given in the DOCS on how to set up a new command.

. In summary this is an exceptionally useful utility which goes a long way towards making life at the Command Interface almost pleasant !

Geof Smith ..... 01-950-6345.

BASICALLY BETTER

I bought my Video Genie in 1982, and last year "upgraded" to The Model 4P when they were being sold off by TANDY. During this time I have written a number of programs for my work, as a clergyman. I have used BASIC, but always realised its limitations. The "garbage collection" routines which from time to time stop the programs in mid track have always been a pain in the neck.

From time to time I have looked at Machine Code, and "C" but never got into them. Last year when I bought the 4P I wanted to translate some of my old programs for use in the model 4 mode and began the task. There was no problem with the actual translation of the code but I got quite a shock when I tried to run them. I don't quite know what happens to the 4P's 64K memory, but when BASIC is loaded plus some 20K of program code, the amount of memory for data storage is very limited. Worse still the garbage collection routines on the 4P seemed to be occurring every few minutes, probably a result of the small available memory.

I began to think of the possibilty of using "C", but good compilers are not cheap. This was when a collegue introduced me to ZBASIC. I phoned ZEDCOR in the states who put me in touch with an English supplier, and since then my programming has taken off. I'm well into the translation and updating of a CASHBOOK program, which I'll probably make available in the Model 4 library when it's finished.

ZBASIC is called an "interpiler" by the publishers, a cross between a BASIC interpreter and compiler. You can write programs in BASIC using either the built in Editor or, much better, any word processor which allows you to save in ASCII. From ZBASIC you can RUN

the program as in any BASIC, but ZBASIC first compiles the program in memory before running it. As it compiles it checks for syntax errors which you must correct before it will execute the compiled code. Since you are running complied code the program runs a lot faster than normal BASIC.

But this is only the start of the advantages. Once your program is running properly you can save the compiled code to disk, and from then call it up from DOS ready as a /CMD program. In any ZBASIC program you have to declare all variables carefully, preferably at the start of the program, and memory is reserved for them. There are no garbage collections and no long pauses in the operation of the program.

You can choose whether or not to use line numbers in your programs, but ZBASIC happily responds to labels. This is a truly liberating experience if you have never programed without line numbers. You can call all your routines and program sections by reasonable names and GOTO or GOSUB them. You can build up your own libary of routines on disk and insert them at will into your programs.

ZBASIC verisons are currently provided for a number of computers including IBM PC and compatibles, Apple IIe and IIc, Macintosh and Macintosh Plus, TRS-80 and compatibles, Atari 520 ST, CP/M 2.2 or 3.0. For each machine there is a core of BASIC commands which are the same for every machine. The idea is to make for as much compatibility as possible. To this end, for example, there is one set of file commands for ALL machines. And when addressing the screen you can use ZBASICS device independent coordinate system in which the screen is divided into 1024 points across and 768 points whatever the computer. This use of common commands for different machines means you should need only a minimum of alterations in the source sode for a program to me made to run on a variety of computers.

There is a good set of BASIC commands with strengths and weaknesses. For instance it is possible to define LONG FUNCTIONS and to use LONG IF's which allow much easier programming than in MICROSOFT BASIC. However the PRINT USING function is not as comprehensive as in the TANDY 4P's BASIC. ZBASIC has excellent handling of numbers and you can define the accuracy of both single and double precision numbers

with double precision up to 54 digits. There are some BASIC GRAPHIC commands like BOX, CIRCLE, FILL etc, which will work in Low or High resolution modes. The graphic commands are not as extensive as in TANDY BASICG but at least they are there.

You can CHAIN programs carrying over common variables, and in the TRS versions you can load program OVERLAYS. In computers like The Apple MAC there are many enhancements, but of course using these will destroy program transportability.

The manual supplied is an example of clarity. It is not a BASIC tutor, and you will need to have some knowledge about the rudiments of BASIC programming, but is well laid out as a reference manual 1.5 inches thick.

ZBASIC can be bought in England through:-

TULIPS ENTERPRISES LIMITED, Studio 7, Intec Two, Wade Road, Basingstoke, Hampshire. RG24 6NE. Phone (0256) 463754,

at a cost of about £79.00. This may seem expensive but is much cheaper than the normal "C" compiler, or as cheap as a good Editor Assembler. If you want better performance from you computers but don't want to get involved in learning another language like Assembler or "C" then this could be for you. I have a demo version on my disk, which we are told is for "passing on to your friends". Obviously it will not save to disk, but will show you some capabilities of the program. I will happily send a copy if you send a disk, with suitable packing and return postage. Perhaps in NATGUG we can build up library of ZBASIC source code.

Stoker Wilson, Greenside Vicarage, Ryton, Tyne & Wear. NE40 4AA.

FORMAT and the DCT

At a long ago Swindon meeting, I was asked if I could explain two 'patches' which changed the floppy disc FORMAT utility of TRSDOS 6.2.

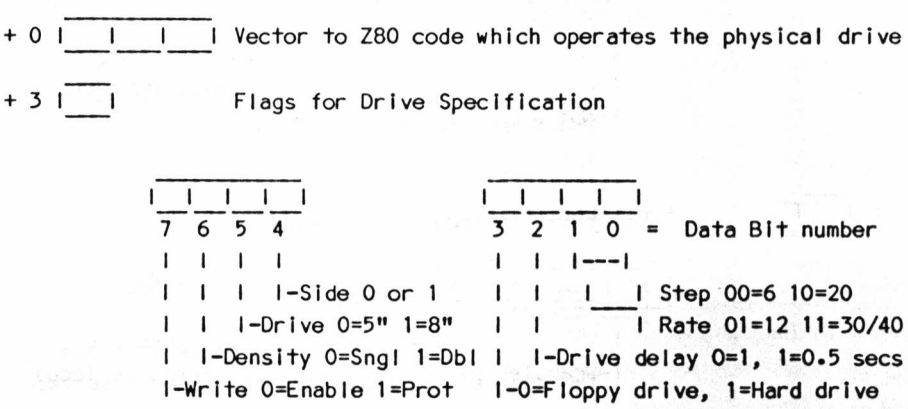
More recently I have been asked if I can advise the equivalent changes for TRSDOS 6.3. As this may be of general interest to members my reply is in public form.

To explain the detail, I must first describe the Drive Code Table (DCT) which is a block of memory reserved and used by the operating system for the logical control of disc drives. The DCT is a table with eight entries, one for each of the possible logical drives 0 to 7. Each entry is ten bytes long, and Logical Systems Inc. (LSI, the creators of TRSDOS 6 and LDOS) have described the use of each byte when the logical drive is a floppy disc. The LSI explanation is in both the TRSDOS 6 technical reference manual and LDOS manuals, to which I refer you for their description. I find a diagram easier to understand.

You can view the DCT as in-use on your TRSDOS or LDOS system with the DEBUG utility. The table is at:

0470H - 04BFH Model 4 TRSDOS 6
4700H - 474FH Models I and III LDOS

Drive Code Table entry - When used for a Floppy Disc drive.



```
+ 4 |___|        Flags for Additional Drive Specifications

          ___________                 ___________
         |_|_|_|_|_|_|               |_|_|_|_|_|_|
          7 6 5 4                     3 2 1 0  =  Data Bit number
          | | | |                     |---------|
          | | | |-0=Std FDC            3 2 1 0     Set ONE only
          | | |-Drv sides 0=1 1=2     |---------|
          | |-Density capability            |-Drive select mask
          |     0=Sng only 1=Dbl possible
          |-Reserved (keep 0), (6:2 only @CKDRV)

+ 5 |___|        Current head position within drive
                 FFH = Drive has not yet been accessed

+ 6 |___|        Number of cylinders less one 27H = 40 tracks -1
                                              4FH = 80 tracks -1

+ 7 |___|        Allocation information
                        |
                  ______|_____
                 |_|_|_|_|_|_|_|_| Disc physical
                 |-------|-------|
                     |           |-Sectors per track less one
                     |                 Uses 09H S/den 11H D/den
                     |-Not used for floppy discs

+ 8 |___|        Additional allocation information
                        |
                  ______|_____
                 |_|_|_|_|_|_|_|_|     Disc logical
                 |-------|-------|
                     |           |-Sectors per granule less one
                     |-Granules per track less one (Single surface)

+ 9 |___|        Cylinder number containing disc directory
```

The use of DCT bytes +0,+1 and +2 is consistent whatever physical device is being used as the logical drive controlled by the table

entry. I must emphasise that the description of the remaining bytes given above applies only when the DCT entry is used for control of a floppy disc drive. You should be aware that they are defined differently for control of a hard disc drive or for "memdisk".

Question 1 LSI published a fix to TRSDOS 6.2.x, FORMAT/CMD which corrected a problem which could occur when you wanted to format both sides of a new (unformatted) disc. If the last successful disc access on the drive to be used was to side one of the disc then FORMAT would lockout track zero of the new disc. TRSDOS would then refuse to initialise the new disc because it must put the BOOT/SYS on track zero, which of course it cannot do because track zero is locked out.

Why ? If you will look at the DCT diagram above, you will see that there is a data bit within byte +3 (the drive specifications byte) which specifies the active side as 0 or 1. This bit will have been set to one for the last successful access to side one of the previous disc in the drive to be used. As the TRSDOS utility FORMAT/CMD contains no instruction to reset this data bit to zero before the format begins, the first track formatted on the new disc will be side one of cylinder zero. When FORMAT/CMD verifies the format it has carried out, it will be unable to access side zero of cylinder zero, which was not formatted, and cylinder zero will be locked out as faulty.

You may appreciate that if a disc is to be re-formatted, the FORMAT utility will have reset the data bit for access to side zero of the disc as it reads the disc name for confirmation that you mean to re-use that one. Also, the data bit will have been reset if the last successful disc access was to side zero of the drive. Thus the problem only shows in the circumstances which LSI described.

The problem will be overcome if the format program always starts specifically at side zero of cylinder zero. This will be achieved if data bit four of the drive specifications byte within the DCT is invariably reset to zero before the format begins. The fix published by LSI for FORMAT/CMD of TRSDOS 6.2 meets the requirement by adding the Z80 instruction:

RESet 4,(IY+3) .... at a convenient point, before the format is carried out, when the IY index register is pointing to

the DCT. As this instruction is not already in the 6.2 FORMAT/CMD, it has to be added, hence the full published fix involves intercepting the activity of the Z80, performing the new instruction and directing the Z80 to resume.

The fix given - which should be considered mandatory - is:

TRSDOS 6.2.x FORMAT/CMD.UTILITY

```
X'32A4'=CD 16 3A
X'3A16'=FD CB 03 A6 C3 59 35
```

TRSDOS 6.3.x FORMAT/CMD already contains the required instruction.

Question 2 If the command line 'FORMAT :x (Q=N)' is given, the disc is always formatted single sided. Changing four bytes within FORMAT/CMD program lets me format double sided by default.

Why ? Again, reference to the DCT diagram shows that there is a data bit within byte +4 (additional drive specifications) which specifies the number of sides as 1 or 2. If the data bit is reset to zero, a single sided disc will be formatted, which is what FORMAT/CMD does with the Z80 instruction:

RESet 5,(IY+4) ..... which is always done during the preparation to format. The data bit is subsequently set to one only if you specify the format parameter SIDES=2.

If this Z80 instruction were to be removed, the data bit would be unchanged. A new disc would be formatted, by default, to have the same number of sides as the last disc successfully accessed in the drive to be used. A re-formatted disc would keep the number of sides previously formatted, since TRSDOS will establish the bit as it reads the disc name for your confirmation.

BUT - If your previous successful access was to a double sided disc, and you specify the parameter SIDES=1, FORMAT/CMD will not know that the removed instruction has not been carried out. It will assume that it has already reset the data bit for a single sided format, so will NOT reset it again, and you will get a double sided disc even though you wanted single sided. This would not happen when

re-formatting a disc, which would keep the same number of sides unless you have specified SIDES=2. Also, if you have not successfully accessed a disc in the drive since the computer was last reset, the number of sides will depend upon the default state of the data bit when the DCT is initialised by TRSDOS. No warranty given !

The fix given - which should be considered optional - is:

TRSDOS 6.2.x FORMAT/CMD.UTILITY

At File sector 0AH Byte 79H - Load address 32A7H

Change FD CB 04 AE
To 00 00 00 00

TRSDOS 6.3.x FORMAT/CMD.UTILITY

At File sector 0AH Byte 87H - Load address 32ABH

Change FD CB 04 AE
to 00 00 00 00

I feel that for those that would like the default format to be double sided, a better method would be to invert the logic of FORMAT/CMD. Currently it always resets the data bit for single sided format, then sets it only if the SIDES=2 parameter is specified. Why not always set the data bit unless SIDES=1 is given ?

To achieve this we must not only reverse the SET and RESet commands, but must also reverse the action of the SIDES = parameter. The following fix for TRSDOS 6.3 ONLY is offered for anyone who is willing to test it and report back. Again it should be considered optional.

TRSDOS 6.3 FORMAT/CMD.UTILITY

At file sector 0AH Byte 87H - Load address 32ABH

Change FD CB 04 AE Default to one side Reset
To FD CB 04 EE Default to two sides Set

At File sector 0AH Byte F8H - Load address 3318H

Change FE 31 28 11 FE 32 Detect parameter '1' or '2'
To FE 32 28 11 FE 31 Detect parameter '2' or '1'

At File sector 0BH Byte 05H - Load address 3325H

Change FE 02 Is two side required ?
To FE 01 Is one side required ?

At File sector 0BH Byte 09H - Load address 3329H

Change FD CB 04 EE Change to two sides Set
To FD CB 04 AE Change to one side Reset

Hopefully someone who can understand LSI manuals will give this a thorough test, and next month's issue will contain this fix in TRSDOS patch format.

(Quite separately from the above research, I wrote to Roy Soltoff with regard to changing the first appearance of "FD CB 04 AE" of FORMAT/CMD to "00 00 00 00". Roy replied, "Here's a better way. If you change FORMAT'S handling of sides so it initializes to sides=2 and changes it to sides=1 if the parameter entry was (SIDES=1), then FORMAT will always do 2-sided unless told otherwise. Here's the patch for both LDOS 5.3 and LS-DOS 6.3". Ed **)

```
. FORMAT53/FIX
D09,D6=EE:F09,D6=AE
D0A,49=01:F0A,49=02
D0A,4F=AE:F0A,4F=EE
. EOP

. FORMAT63/FIX
D0A,8A=EE;F0A,8A=AE
D0B,06=01;F0B,06=02
D0B,0C=AE;F0B,0C=EE
. EOP
```

NOSTALGIA

The latest issue of the News has arrived (Vol 8, 11/12). Firstly I would like to congratulate the editors (present and past) on the legibility of the print. I can read everything now without having to resort to the magnifying glass. Not that I intend to criticise the past issues as, after all, we have to do our best with the available resources. And this is what brings me to the subject of this letter.

Model 1 has been mentioned quite a lot in the last issue. What is all that about Model 1 ? I have almost forgotten it's existence even though it has not been that long ago. This however has made me put the fingers to the keyboard. I thought that on my retirement I would become a frequent contributor but couple of factors conspired against it. One is that my garden, though not particularly large, has not been touched for about fourteen or so years so the hay-making took rather a lot of time (especially as the top of the garden is higher than the chimney pots) and, secondly, that here in Isle of Harris I am completely cut off from the computing community and my only sources of information are different groups' magazines and the Personal Computer World.

During my army service I have spent some five years running so called input control. IBM punch machines and verifiers. One of them was 011 but I don't anymore recall whether this was a punch or verification machine. 80 column cards hand fed. I had a senior machine operator and eight operators. The cards were sent to the computer centre where they were first checked for batch control totals, then they underwent an edit check run and finally the update run. Clearing the rejects from all three runs was one of my responsibilities. The update run rejects were either no traces or compatibility errors. The compatibility errors were the ones which could produce some problems. We held the interpreted copies of records in our office but, as these were designed for us and the 'customers', they did not contain all the information. In those days of very tight coding things like negative numbers etc were used to denote that something may have happened but is no longer valid. I used a straight (uninterpreted) print with a thick coding book to investigate why something, which on the first sight appeared perfectly logical, was

considered by IBM 730 to be incompatible with the information held. Sometimes I had to take a trip to the computer centre to consult the specialists there and that was the nearest I managed to get to the computers, big brutes that they were, silently spinning their tapes back and forward - in their air conditioned, dust-proof rooms. I wonder why the staff servicing these monsters always spoke in whispers in the computer rooms ?

Towards the end of my service (in 1968) I have passed programming aptitude test and was to be posted for a year's programming course but I was also required to waive the right to terminate my service for five years. But enough was enough and, after twenty two years of it, I decided to try whether I could provide myself with a roof over my head and three meals a day by my own effort and without tax payers' assistance.

In 1980 (?) I have seen ZX80 advertised. Anyone remembers those ? I bought one - 1K memory and integer maths only. Still, it fired my interest but proved to be quite inadequate to do anything useful. And this brings me to the almost forgotten Model 1. What a fuss it was trying to buy one. The Tandy store would accept only certified bank draft and the keyboard did cost some £400. I still recall vaguely the frustrations with the tape (I bought a Minisette recorder and this improved the matters a bit) and then it was a big decision to take - Aculab or disk drives. Disks drives meant buying an expansion interface (another £300+) and the drives - miserable as they were as far as the volume was concerned. I finished with three of them (drive 0 over £400, and the other two over £300 each). I must say that I did not experience that much trouble with the connectors between the keyboard and the expansion interface and never had to resort to gold coated ones. Occasional wipe with a cotton bud moistened with the disk cleaning fluid kept them working. A bigger problem was the refrigerator and this used to freeze the computer occasionally until I bought couple of filters. The disk drives gave trouble at times too. On one occasion one of them refused to read in spite of cleaning etc so I lugged it to a Tandy store in London - where the thing worked perfectly. My face was red but I have received the best bit of advice from the kind salesman - 'Occasional shaking sometimes does them good'. After that any reluctant drive was lifted at one end about 1/2 inch and dropped and this always did the trick.

Drive cleaning was another thing. Firms advertising cleaning products were categorical 'protect your data, clean the drives weekly'. In those days I probably did clean them too often. Now I cannot remember when I have cleaned the drives in my Model 4 last time.

However much is said about the paperless office, computer without a printer is still half a tool only and so it will remain until such a time when everybody has a computer and modem, or we will be able to exchange miniaturised disks. So it was with a great thrill that I installed Line Printer VII. It was a horrible thing - awfully rough-formed characters and no descenders. . My model 1 ROM had a lower case character set (being a later model) but there was something to do with loading the lower case driver but I no longer can remember what it involved. This however disappeared once I got the floppy drives. Line Printer VII was followed shortly by Line Printer VIII which was really quite nice machine but only accepted 8" paper. In turn the Line Printer VIII gave way to Epson FX100 and this one is still working perfectly after some three or four years.

My first project was a data base program to sort out the house contents insurance. It was a long program in Basic, untidy, undocumented spaghetti junction but it did everything I wanted. It had a search facility by even a substring of an item description, locations, inflation adjustments by type of the item and all sorts of prints. The second program was another Basic effort to do the accounts. Another rough thing and so long that I had to split it into two parts - the daily transactions and end of month or year routines. The whole thing, if loaded, left no memory to run data. In those days I had no idea how to create overlays and I don't even remember whether we could do it under TRSDOS. I still remember that, when using NEWDOS, one could retain all the variables to be used by the called program.

My Model 1 and all the bits, which went with it, went in exchange for twin drive Model 4 in July 1983. An early model it must have been as the serial number is 000212. Well, there I was a proud owner of a 'real' computer at last. One can understand this feeling when comparing Model 1 with Superbrains, Kaypros and other makes - most of them long since deceased. But the snags of Model 4 soon started appearing. There was still no access to the vast volume of CP/M

software and Tandy was very slow producing their own. Anyone remembers SuperScripsit ? It used to freeze sometimes and you lost your data disk on re- booting. You could not get out of the text creation without saving the file and, if the file got corrupted in the memory that was that. The disks held a miserable under 200K of data and it was quite a while until TRSDOS permitted formatting 80 track double sided disks. CP/M+ was very late in coming out and this has proved to be the greatest disappointment of the lot. Mine is sitting somewhere in Pickfords store in Oban. Tandy hard drives were very expensive and all this taken together prevented Model 4 becoming the real workhorse which it could have been. Montezuma CP/M arrived too late to give the machine a real boost of sales in UK. By that time the 16bit computers were really established and a sophisticated, memory-hungry software was flooding the market. I bought a 16bit co-processor but this was rather a disappointment. It could run MSDOS programs but was not IBM compatible. Now it lives somewhere in the attic but it may get resurrected once I have more space in my computer room. It does after all produce an additional RAM disk of 256K if nothing else. But to those of us who already had Model 4 Montezuma CP/M became a real liberation. Finally we could run dBASE II, SuperCalc, Sage Accounts and what have you. And, some time later, we could even get a 20MB hard disk at a reasonable price. I have bought three of those, one for myself and two for the office (where I was just about finishing my working life) and they have proved to be very reliable.

As, after retirement, I was still involved with the program maintenance and enhancements for my old office I have also bought (to have a standby computer) Model 4P with two 40/80 switchable drives. A sweet machine this has proved to be - whatever I may have said in the past about an early model bought also for the office. I am afraid this has gone now as I bought an Amstrad PC with colour and 20MB hard drive. I was trying without any success to sell the Model 4. There is however still quite a demand for 4Ps. So here I am still with my Model 4, double sided dual 80 track drives and hard disk and an Amstrad. Model 4 is not used that much - a bit of work for my old office and still Sage accounts. Amstrad is now becoming a workhorse with most of the stuff being transferred.

So much for the nostalgia. I shall always think of Model 1 with sentiment - providing that something will recall it to my mind. After

all I have learnt my computing on it and it did provide all the excitement which a new experience always creates. It was a good machine and it could do a great deal. Any failings are now forgiven and these again were due to an incomprehensible Tandy policy of providing non-standard disk format, own operating system, 64 column screen and only 48K of RAM.

And what I can say about Amstrad ? Well, the keyboard is ropey (it does not feel right), the screen character set is horrible, you cannot get a high resolution card for it, it has some expansion slots but there is nothing to put into them and GEM is a lot of rubbish. The only couple of times I tried to use GEM it froze the machine. But for all of that it is a very fast computer and it runs IBM software with no trouble at all. I have dBASEIII for it, the unimproved version, and it is a pleasure to work with it. The only snag I have found so far is that in spite of MODE LPT1:,,P command my printer sometimes cannot keep up and freezes. dBASEIII however has the decency to report the error and asks whether to Ignore, Abandon or Retry. Pressing R puts everything right. Incidentally MODE LPT1: command does things to printer like setting number of lines per inch, characters in the line and the flag 'P' tells the computer - 'hold the horses, my printer is flagging'. Would now be the right moment to think about FX1000 ? I wonder what the boss would say to that idea and what the heck I could do with a still working FX100 ?

Well, in spite of jumping on the 'me IBM too' band wagon I will still remain a group member and I also will continue the membership of the CP/M group. After all we do look after the MSDOS users, don't we ? Breaking off completely with Tandy would feel like a betrayal of Model 1 memory (I wonder who's cursing it now ?).

ANON.

Notes From The PRO

Reference the Secretary's comments about Model 1 users. There are a large number of them still in existence & being used, in my own group we all have & use Model 1's, NATGUG is interested in ALL Tandy users, their views, problems & interests. For everyones information the Blandford Bulletin board runs on a Model 1 ! NEWDOS will run with

the Tandy Doubler & any MEMBER can ask us how to do it, but if you don't want to join, well, in all fairnes how can we help ?

Members using Model 100's may like to know that there is a program that runs on both Model 1's & 3's that enables programs to be loaded to & from disks just as if they were part of the 100, it was published in 80 Micro during the time when they had a special section called C Notes, it is on page 171 of the January 1984 issue. If anyone has problems, I have typed it in & got it running for both a Model 1 & 3, but I no longer have a 100, to try it out on, I sold that to help buy my Model 4P.

More notes on the THE XLR8er.

There is an article in the June issue of 80 Micro from another user of this board, so until I have had the opportunity to read it I will not add much to my last comments, except to say that under CP/M it appears to have more advantages than TRSDOS, because you don't have to load a lot of system files into memory first. You only have 256K of ram disk, but Monty's Window will run while programs are loaded in ramdisk.

Another firm are advertising an HD64180 board in the June issue of 80 micro, they also suggest that most DOS's can be run, so I am going to write to them & find out if they have cracked the Model 4Ps, Model III mode yet, because our little program will not run basic programs properly, doesn't seem to be able to read data files, CMD files seem OK, but as yet I have not had the time try it out. It might be to do with the way 'wait states' are set up first, look out for the next heart stopping instalment.

I was very pleased to read the secretary's comments about NEWDOS, I still think you can do more with it than any other DOS, LDOS users will disagree most violently I don't doubt, but then I started using NEWDOS in 1979 & by the time LDOS was available I was well established, & couldn't see any advantages in trying to learn another operating system to run the same programs. The things I can do with Montezuma's CP/M on the 4P are about equal, as well as setting 80 odd different disc formats, as a result I can format a disc that can be read by an Amstrad 8256 using a 5 1/4" second drive & pass programs to & fro as long as they are compatable with CP/M+.

I had a lot of trouble with edge connectors on my Model 1 in the early days, & eventually solved them with gold plated edge connectors which can still be obtained from America, the firm that sell them are:-

E.A.P. Co., PO Box 14, KELLER, TEXAS 76248, U.S.A.
Their phone number is 817-498-4242, in case you may want phone an order using a credit card.

It is notable that although the 4P has still the same sort of edge connectors for the printer I have never had any trouble with them, probably if I ever use the 50 way bus connector I shall do.

John Kilpatrick, 3a Gainsborough Street, Sudbury, Suffolk.
CO10 6ET. (0787) 79504

TREASURER's NOTES

We now have all back issues of the Newsletter available. I think I have supplied all those who were waiting for the unavailable issues. If I am wrong please tell me. I would like to thank David Washford for all the photocopying that has made this possible. Indeed I would like to thank David for his total dedication to the job of Secretary. He was not keen to take on the job and I feel very responsible for talking him into it. Thank you David. (I echo that, Ed. **)

CP/M library list are now available - see elsewhere in this issue.

Model I/III library list (24 pages) have now been sent out to all those requiring them. If I am wrong please tell me. Model I/III library lists will in future cost £2.00. This is to cover the high cost of photocopying.

I hope at some time in the future we will have some Model 4 and MSDOS list, but I would imagine that, as yet, there is not much in these libraries.

The mailing list for this issue was printed from the membership database and not from Gordon's Powermail. John Bodsworth will mail

direct, those who have paid their subscription to Dec '87. I shall mail with a further reminder, those whose subscription runs out on 30th June '87. The database is quite up to this, whereas Powermail needs flagging from the database to perform the same task. Those then who are a little late with their subscription will receive the Newsletter a few days late.

I think, also we shall have to consider charging foreign members an increased membership fee, this to cover the higher cost of postage. I do not include our two African subscribers as we have UK forwarding addresses for them both.

I look forward to meeting as many of you as possible at Blandford on Sunday 16th August. I shall endeavour to have supplies of Model I/III Library lists, maybe back issues of the magazine and disk mailers available for purchase. This will depend on adequate space in my car. It has to carry me, the Hon. Editor and probably one other, plus all our gear.

Roger Storrs, Hon. Treasurer.

SEX NOTES

I must start this month with a humble apology for a terrible error last month when I said that Dave Holman was running the 3.5" format Amstrad library - sorry, Dave, sorry, readers. I don't know where the 3.5" format bit came from, and it is totally incorrect - Dave is reporting on the Amstrad 1512 and will look after PD software for that machine - but in the more normal 5.25" format. Regrettably we do not have a 3.5" librarian at this moment in time. Please accept my most sincere, and humble, apologies.

Thanks are due to Richard Marks for the work that he did back in 1984 to index the first five years of our Newsletter; aided by a day in which I was dying from a common cold - and therefore unfit to do anything else - I have typed in entries for the later issues and we now have a fairly comprehensive NATGUG NEWS INDEX, up to and including the last issue, Volume 8, no 11/12. Thanks to tuition from Ariela, who was so very tactful in pointing out my rather stupid programming clanger,

the Group can now make this available in hardcopy form, and publish an annual update each July. I deliberately say hardcopy since the database file is around 90k ! The printout is 27 pages long, hence the cost of £2.00 per copy - orders to our Treasurer, please.

I'm very pleased to announce that the much requested reprint of Dave Holman's CP/M tutorial is also now available at £2.00 (for 34 FULL SIZE pages) this is very good value - again, all orders direct to the Treasurer please.

SWINDON looms nearer and nearer, and I for one am getting quite excited at the prospect of meeting so many friends again - but please, make my life a little easier and let me know NOW what you would like to have talks on or demonstrations of. As Gordon has said, the Hotel is prepared to offer a concessionary rate for those wishing to stay an extra night (Sunday), apart from that I understand that the rates will be the same as in March; if you can't wait for the next issue to get more details then ring the Wiltshire Hotel on (0793) 28282. Looking at our membership list, it does seem that around 200 to 300 of you have not yet attended one of these weekend endurance tests - if this applies to YOU, then might I enquire as to whether you realise just what you are missing ? This is where you find out which word-processor is best for you, how to get Visicalc to do really clever tricks, why the Amstrad 1512 might be better than your present machine. And you find out these things, and so very much more, not just from the "lectures", but more from talking to real live users who are pleased to help and advise. The preliminary schedule includes getting Newdos to read & write Trsdos 6,, more dBase II, communications, more 'C', MS-DOS applications software, hi-res graphics etc.,etc.

(Can we also find out how to get TRSDOS 6 to read & write that other, now obsolete DOS ? I hope David will not mind me including, that if you are attending Swindon - you are arn't you ? - then if you have a specific query, please let David know sometime beforhand, someone can then aproached to come along prepared with the answer. Don't be disappointed on the day. Ed. **)

Before Swindon we have BLANDFORD. Yes, thanks to Blandford Computers, all members are invited to spend the day there on Sunday August 16th. Yes, we do know that August is prime holiday time - but

did you know that Bournemouth & Poole are only 15/20 minutes away and thus give you an ideal opportunity to give both yourself and your family a good day out ! The meeting will start at 10.30am and finish around 5.00pm, so there's plenty of time to drop the boss and/or the kids off for the day and pick them up afterwards. The main theme of this meeting will be modems and how to get the most from one, but all the other usual activities will be taking place as well.

In preparing the Index, I noticed that over the years I had frequently asked for information about various pieces of software - I never, not ever, had a response ! So I still don't know whether Banner Machine or Crayon compare with Dotwriter, whether Plannercalc is better or worse than Visicalc, or what Datagraph does for Visicalc. Now come on, someone out there knows at least one of the answers and could write a review for the Newsletter. And what about Profile Four Plus - allegedly directly useable with either Superscripsit or Visicalc; again, SOMEONE must be using it and could write an appraisal.

When you send your renewal in at year end, (this month if your subcription was only paid up until June '87) let's hear about YOUR choice of three favourite pieces of software. Game or utility, business or pleasure, just give us three titles together with the model computer that you use. The information will not only help us plan future meetings, but is expected to shed more light on what keeps the oldies going or why the newies are so much preferred.

Most of our appeals for help have been answered in one way or another, and we're very grateful to all those who came forward. Surprisingly enough, to me at any rate, the one area still awaiting respondents must be the cheapest to fulfill - I asked if Members who regularly took a Computer Magazine (yes, there ARE others apart from NATGUG Newsletter) would undertake to report regularly on issue content as well as maintaining an index for other Members' benefit. This paragraph is therefore a repeat of my earlier appeal - do YOU take PCW, or Byte, or ..... ?

I haven't included a Model I article this time as I understand that we're in the novel situation of a space shortage ! However please be reassured that there will be more; Tandy have given us permission to reprint articles from the discontinued Microcomputer News series.

(Space shortage !!! Not true, I have not run out of paper yet ! I did advise David, at sometime, that the LeScript file I was building to make up the Newsletter, had then dropped the figure of 84992 free bytes to 3846, which may have printed 40 pages. This Newsletter has been output by merging 5 files with a total count of 135K. Ed. **

More on the Megabyte RAM Board

In December '86 Ian Linehan had installed the Winchester interface hardware (on the RAMBOARD that was subsequently shown at the Spring SWINDON meeting) so that from about then, he was able to dispense with his previous Winchester interface and run his 20 MB NEC Winchester from the RAM board HD interface hardware. The WD1002 controller is not part of the RAM board. The controller interfaces to LDOS via (patched) RS software. Since approximately February '87 Ian has been running the full megabyte RAM board on his LNW whilst "polishing" the interfacing and Clock software for it. This is possible because his Core LDOS 5.1.4 patches enable the LNW (or any similar architecture) 64 K system to ignore the RAM board on command. On May 14th 1987 Ian and I installed the second RAM board on the first of my Model 1's. We had hoped to make a temporary installation on a Video Genie 1 on the same day, but a flaky disk drive and an elusive problem that was eventually identified as a bad cable-to-connector junction used up most of the day and kept the VG in it's box.

At the end of May Gordon Collins went well beyond the horizons of a dedicated editor and generously loaned us a Model 4 to develop patches enabling the board to operate under TRSDOS 6. To this end we await the arrival of PRO-create from Misosys and the Model 4 technical manual from Os House and I have started to build a third RAM/Winchester system to try on Gordon's MC. It happens that June and July are very hectic month's for me and this year seems worse than usual so progress on the third board is not noticeable yet. (How did Terry know that I had asked him the question in my editorial ???

Roy Barber kindly sent me a copy of a review of the Alpha-Technology Supermem board in 80 Micro in which Hardin Brothers writes, "I expected something more than a 3 by 5 inch printed circuit board with 10 chips soldered on it, a couple of wires hanging off the

side, 16 memory chips and five pages of loose-leaf instructions ..... I usually use Supermem and RAMDrive to create a 448 K RAM disk. I back up my system disk to it and set the RAM disk as the new system disk. This process (run as as a job control language file) takes about two minutes". The price for 1024 K is 399 dollars with a further 49.95 for the Alpha Technology RAMDrive software. This totals about 280 pounds at the moment.

Our Winchester-interface/RAM system is intended to enable the addition of an expansion board to ANY Z80 based microprocessor system running at CPU clock speeds up to 4 Mhz. The design uses a method intended to allow any of the RAM expansion to act as system ram in which opcode could run. The system consists of 2 high quality double sided, through hole plated boards with silk screen identification for all components. The boards are, a Z80 interface board (2 1/2" x 2 3/4") and the main board, (7" x 8"); software interfacing it to LDOS 5.1.4 as described below; together with 20 (at present) pages of information on circuit diagrams, component lists, construction and setting-up instructions, software and hardware notes. The notes describe how the FPLA/ROM controller is programmed to enable others to design alternative FPLA programs for other machines. The connection of the board is electronically independent of any individual machine interface and only requires that the host Z80 be removed, the small interface board plugged into the Z80 sockets and the Z80 inserted into the interface board which is connected to the main expansion board by two ribbon cables. The expansion board then only needs 5 volts at approximately 1 amp.

A fully populated board allows;
1 Megabyte of RAM,
WD100X Winchester-interface,
Z80 CTC - for mode 2 interrupt support,
battery powered Real time Clock,
Alternative boot ROM socket - 2732 or 2764

Apart from the essential control logic the design allows for variable sizes of RAM up to 1 megabyte and the omission of the other features such as the CTC, BOOT ROM, RTC etc. Link selection permits power-on determination of the following power-on functions:

New boot ROM enable/disable
New boot ROM size select
Host machine standard/mode 2 interrupts
Reset on *NMI enable/disable
*M1 gated *RESET signal
Standard or WD1002 *WAIT signal
IEI input for CTC daisy chain
Control port addressing range (any 16 byte page)
New/old RAM select

Additionally, the control functions of the RAM and optional alternative BOOT ROM are software selectable as follows:

32/64K bank switching mode
New/old BOOT ROM enable/disable
Disable whole board
Enable RAM at 1, 2, or 3 predefined address blocks

Hence the RAM board can carry a crystal, 60 semiconductors including 2 PLAs, more capacitors, some 20 resistors, together with commensurate numbers of pin sockets pin headers and jumper links unless the components are soldered directly to the board.

The packaged software consists of:

RAMDISK - emulates 80 track double sided double density
OUTLOAD - loads high resident drivers into a RAM page
patches to LDOS 5.1.4 to enable the RTC
" " " " " mode 2 interrupts
" " The RS Hard Disk Package (WD)

My RAMDISK system has now been running routinely for a month on a TANDY Model 1 which has a Level 2 Keyboard with lower case mod, Tandy Expansion (neither has gold-plated edge connectors), Gnomic DD board, 1 TEAC 40/80 switchable drive, 1 TOSHIBA 2S 80T floppy, a NEC 20 MB Hard drive, WD1002 HD controller all powered from a single ASTEC switch-mode PSU. Apart from the PSU mods, there are no changes to the TANDY basic architecture. The RAM board lies loose under the Expansion pcb and psu cabling to KB and expansion. The interface board protrudes slightly through a hole cut in the underside of the KB. I routinely use linked

sequences selected from a suite of 20 sizable fortran programs (up to 32 K) which have run for up to 3 hours so far and given the requirement will run for longer. The programs are linked through a JCL file which extracts the appropriate programs from partitioned data-sets providing them with standard keyboard entry as needed in a Zshell environment. When data checking is complete the program sequence reads data from 4 files and then creates and operates on up to 21 files (two of the scratch files may exceed 300K). At the close of processing 7 files of OP, one of which can be up to 40K are written out to the TOSHIBA for printing on a Sakata SP-5500 controlled by a JCL file running on a MAX 80. Thus the new expansion ram system gets a thorough work-out. The ramdisk is a joy when building and re-modelling PDS's and with it I was able to reorganise a PDS of /CMD and control files, that had grown to 709K, into 3 smaller PDSs. This involved copying, appending and purging 70 of 150 members and is an undertaking I had avoided previously even with the facility of Hard Disk, it took about 5 hours on the RAMDISK and operating under control of a long JCL file. Ian's RAMDISK software sets up a "DD DS 80 track" RAMDISK and loads 270K of operating system and utilities in 40 seconds on my 1.77 Mhz Model 1. Other software sets and initialises the real time clock and a very nice software feature of Ian's, OUTLOAD (OL), loads system modules into a page unused by the ramdisk. With the ramdisk (set as drive 3), two floppies, 4 Winchester partitions and with a diskdisk on one partition then all of the 8 OS slots available for backing storage are in use. Snags are that the Real-time clock, which works for Ian, screens rubbish for me. I haven't found time to change the clock chip which I expect to restore me to RTC British Summer time (the Max 80 gives GMT) - meanwhile the unpatched LDOS 5.1.4 TIME and CLOCK software stays in use. The FDC seems to have become more sensitive to poor floppy disk media, pre-CREATEing files a little larger than their expected size overcomes this. At present Basic, Fortran and Visicalc crash the OS when OL is in operation although the Operating System, various Misosys utilities and Scripsit run satisfactorily (at present OL requires *KI RESET, tho' that has nothing to do with some opcode crashing the system, which is probably a problem with port addresses). Similar difficulties arise when the RAMDISK is defined as the system drive but not otherwise. Similar problems arise, I believe, with the 128K Model 4; where I've just seen a discussion of @EXMEM in the Winter 1987 !! version of the Misosys Quarterly that indicates that @BANK resides in high memory and contends with languages such as BASIC which use a high

memory stack. (what will the Winter 1987 issue be called ?). I have been writing this and backing text to the ramdisk as I go along. It is quicker and even quieter as only SYSTEM access is needed to the HD (but no longer when OL operates at spec). Now THAT you may say is foolhardy. Well, not so foolhardy because Ian has provided a very neat feature so that if the system does crash - and it hasn't done so for the last three weeks - but retains it's power supply - given an auto-ed config file then all you do on re-booting is to invoke RECOVER :d and there is all your data and configuration back in about 1/40th of the time required to set-up the RAMDISK in the first place. At 11.23 I'll just REBOOT and RECOVER :3.

And at 11:23:40 here we are all back, and that included 20 seconds of reconfiguring the system as well as KB entries for and re-loading of Scripsit and this Text file from RAMDISK. The RECOVER should be and apparently is instantaneous.

We have had five enquiries about this Winchester-RAMDISK package. If we get sufficient firm orders to enable us to have 15 boards produced we will go ahead and have them manufactured. The price is 160.00 pounds.

16th June 1987. Terence Harris and Ian P Linehan,
15 Cholmeley Crescent, London. N6 5EZ

A request for words of wisdom.

I have installed 80 track double sided disk drives in my 4P. I have put the old 40 track drives into a spare box, with power supply, and followed the instructions in 80 Micro to connect the external drives to the 4P. However so far I have not been able to access drive 3. I understand that TANDY use the normal drive three line for side select. Has anyone made this modification and got all four drives working who could advise me.

Contact: The Rev. R.S.Wilson, Greenside Vicarage, Ryton,
Tyne & Wear. NE40 4AA. Phone: (091) 413 8281.

LOCAL CLUB NEWS

BOURNEMOUTH

Meets First and Third WEDNESDAY at Kinson Community Centre at 7.30pm. Ring Carl Rabe on (0202) 730617

CHELMSFORD

Meets first WEDNESDAY of each month at 7.30pm. Contact Richard Creak, Woodcote, 59D Little Baddow Road, Danbury, Chelmsford, CM3 4NT (0245) 413725

MILTON KEYNES

Meets alternate Sundays, October to March. Contact Brian Pain on (0908) 564271

NORTH EAST LONDON

N.E.L.U.G; 77 Old Church Road, Chingford, LONDON. E4 6ST. Meets first Monday every month.

SUDBURY

Meets second Wednesday at:- 3a Gainsborough Street. Contact John Kilpatrick on 0787 79504.

SWANAGE WEEKEND

The next meeting is scheduled for October 16th-18th - make a note; NOW!

BLANDFORD ..... 16th August 1987. (More information to follow)

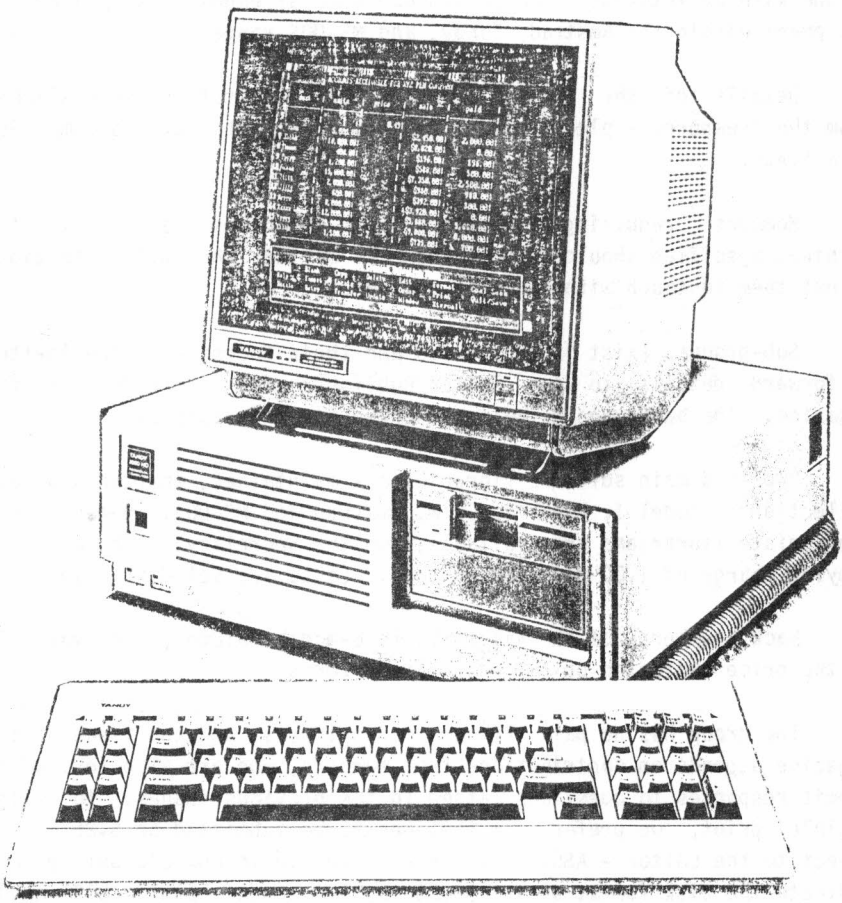
For both above contact David Washford on (0373) 72739.

If your club is not mentioned above then its your fault, not ours ! For your FREE advert, write with details to:- Gordon Collins, Editor.

NATGUG NEWS

Volume 9, Issue 2.

August 1987



OFFICIAL JOURNAL OF THE

National Amstrad, Tandy & General User Group

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 of the group 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 advisers.

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 I, 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. (also see Vol 8, Is. 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 issues. 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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HAPPY BIRTHDAY, TRS-80



This is the month we celebrate the 10th anniversary of the TRS-80

EDITORIAL

To all the people who sent in articles for the last Newsletter, thank you very much. I hope you have managed to read and digest it all, and are now eager to read this one.

Before going any further, I should apologize to all for the 'problems' with my daisy wheel. I have not been able to print some characters and I suspect that some Authors, like John Butcher, Brian Edwards, Leo Knaggs and Geof Smith have squinted slightly when re-reading their articles. I hope that in the future I will not need to use the heavy pen. I have not had any actual complaints, but never the less I feel guilty. All this was due to absence of the correct characters on the print wheel I had used for the first two Newsletters of my Editorship. I note that Geof asked somewhere back in maybe Vol. 7, Issue 8, if someone knew of a supply for ASCII print wheels. These type of wheels are not easy to come by. Now the good news, after what must have cost a fortune in people's time and effort - one professional man in the south of England must have spent a whole morning phoning around stockists, just to draw a blank - I now have a print wheel with more of the suitable characters, these are {}\<>[] , one character it does not have is a pound sign, (as standard ASCII), if no character is in front of what appears to be a monetary amount, please read it as pounds. I think the characters also have a better form to them. Two of the most helpful companies were:-

Camwil Communications Limited, The Old Mill, Mill Lane, Godalming, Surrey. GU7 1EY. (04868) 4611:- Who also included with their catalogue a complete print out of all the characters of every print wheel. This company also customises print wheels and typeheads.

And the man who spent a great deal of time for no returns was:- Albert Lilly, trading as Lilly Peripheral Services of 47 Horton Street, Frome, Somerset, who also sells and services Epson printers, and services teletype printers. He did sound most helpful. See also Sex Notes.

Whilst on the apologies, only three more, please forgive me Leo for not putting any credits at the end of your article titled,"FORMAT/CMD and the DCT". (Page 38, Vol 9, Issue 1). I ran the item off from the disk file and did not stop to notice that there where no credits at the end, thank you Leo (Knaggs). Please contact Leo C/O, Blandford Computers. Under LOCAL CLUB NEWS, please read Sunday, not Monday, as the meeting day of the North East London Group. (Monday is the day that venue supplies good meals, so I am informed). That demon of a random month generator seems to have moved up into this part of the world, last months issue should have been July not June. Just staying with Local Clubs for a moment, would it be possible for someone from each group to give me just a little bit of news about yourselves, for printing into the Newsletter ?

I have been taken to task for not clearly separating individual items. I hope I am learning, and will look to give a better layout in future issues, space permitting. The reason for doing it this way with the last issue was as follows:- We can post a Newsletter of up to 44 pages for 12p. then up to 64 pages for 20p. One double sided A4 sheet making four pages. Now as Members are on a fixed subscription of 12.00 per year, if we output larger and larger Newsletters we can fail financially by our own success, (larger Newsletters put up costs). As a great number of Members had not renewed their subscriptions by the time we sent out the last issue, we the committee, felt that we had to send out a reminder to those members included with the last Newsletter. If one more page had been added to the Newsletter, the cost of printing that page, together with the additional postage, would have substantially increased that months Newsletters costs. I thought it more prudent to -->squeeze<-- the Newsletter, than to incur that extra cost. It would help your committee greatly, for more reasons than the above, if Members would pay subscriptions before their renewal date. We would not understand why you should never want to renew your membership, but should you ever decide on that, then please just drop us a note before your renewal date.

I have now received two submissions for the Newsletter, which I have not included, as in my opinion (and others) they would have infringed a copyright. Can I beg members, if they have doubts, to check on this in the future, by maybe asking one of the committee. I don't like to see all the work that has been involved not able to be used and members disappointed. You can be certain, that any article taken from another magazine will infringe copyright. You saw in the last issue that NATGUG has been granted permission to reprint from "Micro Computer News".

On Sunday 14th June I visited a Radio Ham Rally and was fortunate to have purchased a "power supply" unit. This was being demonstrated on a stall running a 60 watt lamp, as an inverter - 12VDC to 230VAC - this is what I purchased it for at a price of 20.00. On getting home and opening the unit up, it had obviously been designed as an uninterruptable standby unit - mains in, mains out and facilities to charge an internal 12VDC sealed lead acid battery - the battery was missing. I fitted an external socket onto the unit to put 12VDC in, now I can sit in my vehicle, plug into the battery and run my Model 4P. This is now being input on the roadside whilst I have a moment, just north of Bolton, Lancs. I must now get a small sealed lead acid battery and put it into the unit for Swindon, then when whoever it is, pulls the plug, my 70K LeScript file won't disappear. Just for the record, I was very dubious when first switching the 4P on, as a little notice on the back of the 4P says "Amperage 0.46". Does not some law deem this to be about 108 watts ? The unit is only rated at 100 watts. I have fitted the 4P with two TEAC HD55 switchable 80/40 drives. When I eventually switched on, and using a not very accurate way of measuring, guess that the 4P is now taking between 50 & 55 watts. Is any member able to "guarantee" that if I disconnect the internal fan of the 4P, it will suffer no harm ? Or could a thermal device be fitted to switch the fan on, should the inside get too warm ? If so, at what temperature should the device switch on ? (This in order to save on battery power).

There is no further news re: Molimerx. (A Ball Pen with "Thank you ! Molimerx Ltd" on it arrived today - 17/07/87. Thank you, John).

Some members have said that they are finding it increasingly difficult to obtain copies of 80 Micro. The committee have written to

80 Micro, Northern Bytes and Misosys, asking if they offer any facility for us to bulk purchase their Magazines, we have also asked other questions, but more later. Now, would members please put any form of marking utensil to anything that can be marked (no large rocks please) and let me know if YOU would like to take up any one of these options if we receive favourable replies. The committee may have to make a quick decision of some kind, it would help to know how the membership feels, remember you are uncommitted at this time. Whilst doing that, and to save your postage, would you also let me know if YOU would be willing to attend a Sunday workshop, if held in the West Midlands sometime next May '88. We do need uncommitted support at this moment, to decide if we should book the venue. I will publish results of the above.

If any Member has any suggestions, such as alternate venues, or on any other theme, and would like your committee to follow it up, please get in touch with one of us.

Update. BLANDFORD '87. Please make a note in your diary for Sunday, 16th August 1987. See also SEX NOTES, last issue and advert this issue.

Update. Swindon Oct. '87. The Wiltshire Hotel has agreed to quote an all-in price to those people wishing to stay over until the Monday, please ask when booking. 'Mac' has now left to take charge at another hotel. See also advert this issue.

Update. Repeated from the last Newsletter for the Benefit of all the new Members - & Welcome to you. The promised article about the Model I Double Density Adapter Kit has arrived. This is three pages of A4 paper from an American Magazine, Computer Digest, Dec. 1985, which includes schematics and photographs. This article, for which we have permission to distribute, shows how to convert a Tandy Double Density Kit, to operate as a PERCOM Doubler. The committee have decided that this would be too involved for us to publish in the Newsletter, so would those people who are genuinely interested, please send your request, to me please, Editor. Together with a large S.A.E., and include two 20p coins (40p) taped to some card, (this to cover the cost of photocopying) we will hope to return a good photostat copy. No S.A.E., no return. Thank you Nat. for the trouble you have taken.

Further to this is a detailed article on building a double density adapter for the Model I or Video Genie and 5.25/8" disks in the recent issue of Northern Bytes, Vol 7, Number 5.

I hope to include in future issues some zaps to LDOS 5:1:4a, LDOS 5:3, TRSDOS 6:x and LS-DOS 6:3:0, which have been requested by some of the members. As I have no idea of what I am letting myself in for, (number of requests and workload wise). I will say that this next offer goes with no guarantees and no promise of turn-round times, but I would hope no longer than two weeks. If any member has seen zaps mentioned in the Newsletter or elsewhere, this includes those given by Leo last issue, and is unsure of how to implement them to his own disk files, if you send me a SYSTEM DISK with those files on which you want zapped, saying what format; LDOS, TRSDOS 6:x or LS-DOS, (Sorry the NEWDOS 80 people, I do not have sufficient experience of the DOS, do we have another volunteer ?), the disk is, density and number of sides, together with a written/typed listing of the zap to be done, sufficient return postage and addressed label (members only please), I will try to carry out that zap or zaps. Backup copies only please, for the obvious reasons. One thing to consider when receiving a disk which has been written to by another disk drive, is that should you not be able to read that disk, try it in another drive before doing anything else. The members of the committee have found this works with disks they have exchanged. Can someone now explain about which alignment is "wrong" ? Please mail your disks in a suitable container. I have now received three disks, which because of the way they were mailed, had had the sleeve 'squashed' onto the disk, the disk would then not turn. Send to the Treasurer for Disk Mailers. Your Hon. Sex. has volunteered to apply ZAPS to NEWDOS80 disks, thank you David. Please post direct to him. I have to warn members, and please be understanding, not to "cry wolf" to often on this one, this comes from both of us. We expect your learning curve to progress.

I ask on behalf of all the membership, that if any member, having asked for help of any kind, then subsequently should be fortunate to receive an answer due to his membership of NATGUG, would that member then please give the whole of NATGUG the benefit that help received ? You may help someone who is just having the same problem. Or you might see the answer to a problem that has just manifested itself to you. Thank you in anticipation of your co-operation.

This is an unsolicited request on behalf of our PRO. I know he would like to go to Blandford, but because of the distance, shanksies are out of the question and Mr. Beeching took away his other form of transport to that town. Could anyone pick John up (I hope you agree with this John), from any main line station on route and return him to same. Any kind person contact John direct please.

What about some answers to all those questions, too numerous to ask again, asked by various members of your committee since the March AGM, either in the last two Newsletters or other papers sent out. I believe that collectively, the Committee have had the great total of one answer.

On Friday, 17th July, I had a meeting with two Directors of Tandy UK @ Bloxwich, this was a very positive meeting. The following are brief points to come from that meeting.

1). We have been advised, subject to proof approval, that NATGUG can have leaflets/membership forms available in Tandy Stores for distribution.

2). NATGUG will receive: Press Releases, Updates, Patches and notices of Special Offers.

3). There could be certain Tandy Stores made available for Local Group meetings. Please contact the Secretary.

4). I am a new member - nearly four years - but from reading back issues of NATGUG Newsletter, I don't believe Tandy & NATGUG have come as close as we are now. I would be happy to be corrected.

From my vantage point of Editor and putting together all the 'feelings' gained from telephone calls and letters received, also from seeing all the "renewals of membership" from lapsed members, I feel confident in saying that NATGUG is on an 'UP'.

Thank you again for reading NATGUG Newsletter and for taking an interest in us. Gordon Collins, Editor, **.

SEXNOTES

What a super job Gordon did last month (with YOUR help, of course) - 60 pages ! At this early stage (July 8th) I can only hope that that will become the norm ! Well done, keep it up.

I think that Anon's letter, particularly his opening comments, was a very good illustration of the difficulties experienced by the Committee in striving so hard to be all things to all men. On one hand we have Members feeling that they and their Model 1 machines are no longer cared for, whilst on the other hand those Members who have moved on to later machines wonder why we spend so much time on the Model 1 ! Well, we intend to look after the Model I's for as long as we are asked to, but we do have some very good news for the MS-DOS user - DAVE's COLUMN is on the way ! Dave Holman, of Dotwriter and CP/M fame, has promised to produce a monthly series dedicated to the new systems (and did you know that in the US Tandy is the largest of all the "clone" producers ?). Hopefully Dave's Column will restore the balance in the Newsletter between the different systems.

Talking of restoring a balance, and harking back to the good ol' days, do you remember when every issue of NATGUG News contained a 'slanging' match between Laurie and Leon concerning the merits of different Assemblers ? I never was really certain who won that battle ..... !

We are deeply indebted to Leo Knaggs and Bill Jupp this month. Bill, who until quite recently traded as Microcomputer Applications at Blandford, has had a clear-out of old stock and our Leo promptly stepped in with a full cheque book to save an assortment of goodies for YOUR benefit. Firstly we have an assortment of cassettes which Bill gave to the Group, and these are available FREE, first-come first-served, to those who send me 30p postage for each tape they want. The titles are: Editor Assembler Plus, Bridge Partner, Super Nova, Sargon II, Defense Command, Stellar Escort, Galaxy Invasion, Robot Attack, and Meteor Mission 2.

Secondly, we have purchased a quantity of assorted "Mystery" books - mystery in the sense that that was their title when published (at around #20 each). I am still waiting for Leo to unpack them and

give me the titles and quantities, although I understand that we also have a few copies of Electric Pencil 2. Like the cassettes, these are all BRAND NEW, unlike the cassettes they are going to cost you FOUR POUNDS EACH plus postage. If you are interested then ring me on 0373 72739 but be prepared for the ansaphone. Thank you, Bill and Leo. (We WILL reimburse you, Leo - one day !)

Anyone out there using a Teletype printer ? If so, you might be pleased to hear about Albert Lilly, trading as Lilly Peripheral Services here at Frome; he covers the whole South West of England servicing these machines. He also repairs all Epson printers and can be contacted on 0373 52654, and we want to tell everyone just how helpful he was in trying to get special printwheels for Gordon's daisywheel. Help & service like that are so appreciated that we just had to give him a mention, and we hope that Members will be able to find out for themselves just how helpful he is. Lilly Peripheral Services can be found at: 47 Horton Street, FROME, Somerset. BA11 3DP. Albert is also a Radio Ham, his call sign is:- G8 VGI.

Going back to last month's Newsletter. Our MAL correspondent asks about Newdos 80 v3.0 - well, I have a note from Apparat which clearly states that there ain't no such thing ! The last issue was 2.0 for floppy, and 2.5 for hard disk, and my guess is that someone has personalised his copy by zapping in that 3.0. MAL also asks about a database for Model 1 and whilst it isn't simple in the normal sense of that description, I would recommend Datawriter which I picked up second-hand and used for quite a while. I liked both the versatility and bomb-proofing of this program (which I used, for example, to produce the 80-Micro index). The problem that I found with Databases was that it wasn't until after I had spent an awful lot of time typing in entries that I found out just what I wanted the program to do - and in that respect Datawriter never failed me.

You might know of a magazine called MicroMart which includes amongst other things the ACC Club News. Over the last 4 issues they've been kind enough to mention NATGUG three times - unfortunately all incorrect ! They promise that the next issue, due out just before you should be reading this, will be correct !

I had an interesting 'phone call last week which suggested that maybe we will see an official Tandy presence at Swindon in October. In view of the high number of referrals that the Group is getting from Tandy customers nowadays it does seem that we've achieved recognition at last.

80-Micro for June arrived too late for comment last month. Articles therein for MS-DOS users include: First steps to 8088 Assembly Language, Custom Character Generator, and how to change the inaccessible back-slash to the normal slash as a dos delimiter character. For the Models III/4 we have a Model III Memdisk, DOS functions from within Superscript, Improved 6.2 backups, three more fonts for the DMP printer, and Rules of Bank-Switching.

Does anyone have for sale an Alternate Source "public domain" disk which has all the mods for NEWDOS ?

SEE YOU AT BLANDFORD - SUNDAY AUGUST 16th

David Washford, 6 Houston Way, Frome, BA11 3EU 0373 72739

P.S.

David phoned with the news of the recent promotion for Dave Holman, you are all invited to join in with the congratulations. Well done, Dave .... Dave hopes to be at Blandford, but will then be off on a long 'holiday'. Be safe Dave, we look forward to your monthly articles.

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MSDOS Monthly - by Dave Holman

An open Forum on MSDOS and associated subjects.

This forum is brought to you as a result of a conversation that I had with Dave Washford recently (a non MSDOS user). I had thought of writing a series on MSDOS similar to the one I did for CP/M, which is now reprinted for the group and available for the princely sum of 2.00. However I realised that this was something which I could churn

out over the period of a few months and then it would all be over. Yes I know you are probably thinking that once produced it would generate lots of enquiries to test my knowledge, but since the CP/M series initial publication not one enquiry has come my way. Surely the series was not that comprehensive.

Therefore in order to keep the pot boiling a Forum similar to "Daves MSDOS Column" in 80 Micro is what I hope to achieve. At the last Swindon meet a number of questions were asked of me and since then I have asked myself some questions, so this first issue will contain those questions and, I hope the required answers.

After much discussion it was suggested that I receive the questions to the Forum and publish the answers, if I know them, in the same issue. This will prevent those long waits for the all revealing solution to that ticklish little problem. The nature of my work prevents me from being easy to contact directly, either by phone or mail, so I am using my mother's home address as a forwarding address so that no matter where in the world I may be I will receive your queries and hopefully be able to process and answer them quickly. So all queries should be sent to the following address:-

Dave Holman, 160 London Road West, Bath, Avon. BA1 7QU.

I am sorry that personal visits to that address will bear no fruit nor will telephoning because although my whereabouts are known; for very good reasons my mother will not be able to pass it on. If this sounds over melodramatic, I am sorry but those of you who know me will certainly know why and this method is preferable to being referred to as Anon.

So without further ado lets get down to the first question.

Will I be able to transfer my data from my Model I/II/III/IV to an MSDOS machine ? That has to be the $64,000 question, however here goes.

I still have my Model IV and used various utilities on it to transfer all of my DATA, and MOST of my BASIC programs to MSDOS. How was this achieved ? Well the answer to that lies in the upward

compatible nature of the Tandy series. For example lets take an example of a basic program that I wrote in the days of my Model 1 Level 1. I first transferred it to Level 2 BASIC using a supplied utility. Once I had purchased a Model IV I used another utility to transfer it to both Model III and Model IV format. The names of these utilities escape me at the moment and are not that relevant to the question posed. Next I transferred them to CP/M using one of a number of utilities for this purpose. From here on the courses open to transfer to MSDOS are manyfold. Existing utilities such as TRSCROSS will transfer DATA direct from Model IV format to MSDOS format. Alternatively if the DATA is in CP/M format then it can be transferred to MSDOS by using CONFIG to set up one of your Model IV CP/M drives as either an MSDOS one, or as a CP/M 86 drive. The former did not work for me as my Amstrad did not seem to recognise the MSDOS format made by CONFIG. Some warnings:- MSDOS is 40 track double sided double density as standard, although it is not impossible to find other drives in use under MSDOS. If you have a single sided drive only then the DATA must be transferred to a single sided disk format under CP/M 86, which is the 16 bit version of CP/M. My Amstrad machine when running under DOSPLUS, a compatible version of MSDOS which also reads CP/M 86 disks, was able to read CP/M 86 single sided disks formatted on my Model IV and containing the DATA transferred by using CP/M SWEEP. This meant a fairly slow method of moving the DATA but did mean that I did not have to buy any of the proprietary transfer programs.

I should add that only DATA and BASIC programs saved using the "A" option can be transferred using this method. As to the transfer of programs, this is virtually impossible unless the source code in the form of a language such as PASCAL or C is available, and even then it not 100% certain that it will run. For those of you who have been using CP/M on the Model IV or for that matter the Model II, there is in many cases no need to transfer programs as most of the existing software is available on MSDOS, subject to your willingness to buying a second copy. For example WORDSTAR, DBASE II, SUPERCALC, LESCRIPT and MULTIPLAN are all available under MSDOS. Many of them with advanced features and improved capacity.

There must be much simpler ways of ensuring that your much beloved first BASIC program stays with you for life, but it would very likely be impossible on any series of machines except the Tandy. I am

proud to say that I have been able to keep my first program right the way through.

There is probably a lot more to the transferring of programs and it could well for the subject of a separate article, hopefully by someone else.

Next I was asked about directory trees in MSDOS ?

Firstly I had better explain what a directory tree is. It is so I am told similar to the user areas of CPM. This I would tend not to agree with as user areas were more like separate directories which effectively masked off other programs held on disk. The MSDOS tree is more like a series of linked directories and is found to be most useful on hard disks.

Imagine a 20 Meg hard disk with many hundreds even thousands of programs on it. A simple DIR command will result in screenfuls of filenames whizzing past your eyes. To overcome this at the highest level of use, called the ROOT directory, there should be a series of lesser or sub-directories displayed which can be called up from the root. Lets look at an example. Imagine a Hard Disk that contains WORDSTAR, DBASE and SUPERCALC.

On booting up and asking for a DIR the root directory would display:-

```
Volume in drive C is MSDOS 00001
Directory of C:\

1512         <DIR>       11-04-87  15:35
DBASE        <DIR>       25-03-87   7:31
SUPERCAL     <DIR>       25-03-87  15:04
AUTOEXEC BAT      201    26-06-87  19:16
COMMAND  COM    23612     9-02-87  17:16
CONFIG   SYS       91    28-06-87  16:00

      6 File(s) 14046848 bytes free
```

The last three files are actual files on the root directory and their file sizes are indicated in the second column. The first three files have the annotation <DIR> in the second column and this is an indication that a lower directory level is available. Typing CD SUPERCAL at the MSDOS prompt will transfer the user to the Supercalc directory and any DIR request would now display the following:-

```
Volume in drive C is MSDOS 00001
Directory of C:\SUPERCAL

.            <DIR>      25-03-87 15:04
..           <DIR>      25-03-87 15:04
TUTORIAL     <DIR>      27-08-86 23:00
BARPRICE CAL     5760   28-02-87 19:22
BUDGET   CAL     2304   22-05-86 20:45
ECHO     COM       16   22-05-86 19:32
ELECTRIC CAL     5632    7-05-87 22:23
FONT     DAT    46336   29-08-86  7:56
INSTALLS COM     7296   22-05-86 12:12
MAINTAIN COM    14080   22-05-86  1:09
MORTGAGE CAL     3840   29-06-87 21:11
PETROL   CAL     2816   15-02-87  8:50
SALES    CAL     2432   27-02-87 13:52
SC3      COM    40448   27-02-87 18:44
SC3      OVL    33920   29-08-86 23:57

                                .... etc
```

The first two entries are dummy directory entries that refer to the current directory and the next higher level directory respectively. The next entry is a lower level subdirectory containing a tutorial on Supercalc. It can be accessed by typing CD TUTORIAL. To go back up one level type CD .. and you will back up to the SUPERCAL directory. To return to the root type CD \ and you are taken directly back to the top level. Directories are similar to having separate drives in that normally a program cannot be accessed from another directory without detailed knowledge of it's location. For example to access Supercalc from the Root you would need to type \SUPERCAL\SC3 this would attempt to run the program but would probably not find the relevant overlays. To overcome this there are 2

commands PATH and APPEND, these tell the computer that if a file and it's overlays or data cannot be found on the current directory search the others specified. It takes the Format:-

PATH \SUPERCAL to find COM or EXE files

or

APPEND \SUPERCAL to find data files

These commands can be built into your AUTOEXEC.BAT file so that they are automatically performed on booting.

There is a lot more to directories so if you want to know please ask.

Finally a few quickies.

Can I run Dotwriter on an MSDOS Machine ? No, but son of Dotwriter, FONTASY, is available from the same firm ProSoft. It is based on Dotwriter but as yet I have not been able to use old fonts although ProSoft obviously converted theirs as many fonts are similar. A review would be welcome. I have to admit I am a user and if no-one else is forthcoming I will probably end up reviewing it.

How can I route a directory to a disk file ? Simply by typing DIR > DUMMY.DAT where DUMMY.DAT is the disk file to contain the directory information. Typing DIR >> DUMMY.DAT will append the directory to an existing file, here is scope for producing a directory file of all your disks.

Why does my Adventure program display lots of garbage symbols ? This is because the file ANSI.SYS is either not present or has not been called in on booting. This file supplies certain standard screen displays although it does slow the computer's speed slightly. It should be present on any disk where this garbage, for example:-

27[03[3$[Enter Your Command

occurs, in addition the line DEVICE=ANSI.SYS should be

contained in the file CONFIG.SYS, not in the file AUTOEXEC.BAT. It can be placed there using any word processor or text editor that can write ASCII files.

That's all for this edition, please ask away and I will try to answer your query, I am no expert but with all your questions coming at me I will soon be forced into becoming one, and so I hope will you.

Good Luck and Happy Computing. Dave Holman

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Model 1 Notes

Despite all the earlier fuss from members, the only requests that I've received over the past two months for help with Model 1's have been for information on the megabyte memory board, so I'm taking the liberty of changing to detailing some of my personal experiences with the Model 1, mainly in BASIC programming. I would never consider myself to be particularly competent as a programmer but because my efforts HAD to work I've scrounged help and tips from various sources, and some ideas might be of help to others. I must apologise if any of these ideas are disk Basic only - it is now 5 years since I used Level II and at my age, (he can still lift a heavy one pint glass ... Ed.) I can no longer remember all the differences !

I think everyone would agree that the biggest single pain in BASIC is the garbage collection 'freeze' that happens when using strings. The bigger, and more important, that your program is then the worse that these delays become. I found that a tremendous achievement could be made by initialising empty strings, of the correct length, and then LSETting the data strings into these. Examples should speak more clearly than words - this one also demonstrates the Newdos Igel:

```
10 CLEAR5000:DEFINT A-X:DEFSTR Y-Z
20 OPEN "D",1,"MAILLIST/DAT","FF",90
30 INPUT"ENTER RECORD NUMBER REQUIRED (999 TO END) ";A
31 IF A=999 THEN 100 ELSE 40
```

```
40 GET 1,A,5000
50 PRINT YA
60 INPUT"IS THIS CORRECT (Y/N) ";Y:IF Y="N" or "n" THEN 30
61 IF Y<>"Y" or "y" THEN 60
70 LPRINTYA:LPRINTYB:LPRINTYC:LPRINTYD:LPRINTYE
71 FOR AA=1TO4:LPRINT" ":NEXT
80 GOTO 30
100 CLOSE:END
5000 B%,(24)YA$,(20)YB$,(20)YC$,(14)YD$,(10)YE$;
```

A small program like this would not be likely to cause much trouble but in real life the program would be much larger and there would be more manipulation of the strings in the program and if run for a while there would be the inevitable delays whilst BASIC rearranged string pointers etc. Following advice given to me, I changed that program to:

```
10 CLEAR5000:DEFINT A-X:DEFSTR Y-Z
11 REM ****************************************
12 REM THESE STRINGS MUST BE SET TO MAX LENGTH
15 ZD=" ":ZE=" ":ZB=ZE+ZE
16 ZC=ZB:ZA=ZD+ZE
17 REM ****************************************
20 OPEN "D",1,"MAILLIST/DAT","FF",90
30 INPUT"ENTER RECORD NUMBER REQUIRED (999 TO END) ";A
31 IF A=999 THEN 100 ELSE 40
40 GET 1,A,5000
45 LSETZA=LEFT$(YA,24):LSETZB=MID$(YA,25,20)
46 LSETZC=MID$(YA,45,20):LSETZD=MID$(YA,65,14)
47 LSETZE=RIGHT$(YA,10)
50 PRINT ZA
60 INPUT"IS THIS CORRECT (Y/N) ";Y:IF Y="N" or "n" THEN 30
61 IF Y<>"Y" or "n" THEN 60
70 LPRINTZA:LPRINTZB:LPRINTZC:LPRINTZD:LPRINTZE
71 FOR AA=1TO4:LPRINT" ":NEXT
80 GOTO 30
100 CLOSE:END
5000 B%,(88)YA$;
```

On another matter, I have long used PRINTUSING strings to print out pounds and pence "correctly". . If you are printing a single line then that is fine, but it is very embarrassing to print out an invoice of maybe only two or three lines together with a total that, whilst formatted most beautifully, is glaringly inaccurate by an infuriating one penny ! Rounding routines are somewhat complicated to perfect and so I am indebted to Lewis Rosenfelder (Basic Faster & Better) for this DEFFN: (DEFine a FuNction, a predifined operation)

```
10 DEFSNG Q-T
20 DEFFNQ(Q1)=FIX((FIX(Q1*1000!)+SGN(Q1)*5)/10!)/100!
```

program lines call & manipulate variables and produces, say, T1 as a total figure

```
500 TA=FNQ(T1)
```

TA will now be "fixed" to two decimal places and further embarrassment eliminated !

David Washford.

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From :- J. H. Jeffery.

CONGRATULATIONS ON THE FANTASTIC PRINT QUALITY OF THE NATGUG NEWSLETTER, AND I SEE MODEL I AND MODEL III ARE NOT FORGOTTEN.

However to things I like about these models, good keyboards with numeric keypad and good simple programs like Scripsit and Visicalc, however (traitor) I find myself using my Q.L. more and more in spite of its poor keyboard and dodgy microdrives, why :-

1). Lack of memory expansion, with the Q.L. I simply had to plug in an extra 512K, making 620K in all, when dealing with spreadsheets this makes all the difference as only about 15K is available after loading Visicalc. I seem to hear we can tag on extra memory but are we talking about Model I or Model III ?

2). Due to lack of memory we cannot use Supercalc, and after using Supercalc or even Q.L. Abacus, Visicalc just does not have the versitility we expect, such as different column widths and sort facilities.

3). Even the old standby Scriptsit is not so easy to use as Quill and lacks easily defined printer codes - I know members have written these but they do not appear at the top of the screen to remind forgetful people like me of the options available. If there is a version that has these options let me know.

4). I do know which data base would be preferable for the III and have in the past written for my own particular purposes, but I do find it best to use a fairly common one (you've guessed it - Archive) and with the PC's getting cheaper I feel it would be better to start on DB/III, so is there a similar one in the Library or on the market for the Model III ?

I see John Kilpatrick has increased the versitility of his Model 4, with the XLR8er, is there a way of doing something similar with the III ? Incidently for the record we have Model I, Model III (both 48K), Q.L. 640K with disc drive, Amstrad 6128 with single disc.

The Croft, 11 Rowan Drive, Kilburn, Derbys. DE5 OPG (0332) 881239

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AUGUST 16

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Starting at 10.00am, proceedings will continue throughout the day until 5.00pm. A limited repair service will be provided if possible - if you wish to use this then please ring beforehand to confirm.

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A full programme of talks and events is being developed and queries and comments on this should be directed to David Washford on 0373 72739.

Day visitors will be very welcome at a small nominal fee.

TRS 80 to MSDOS

by

John Miller

Well, every one said that some time it would happen, though as a TRS 80 user of long standing I was very cynical. But with the cost of clones coming down, and my need to get a CAD system including digitiser and plotter for producing publication-quality diagrams for my research, I have finally taken the plunge.

MSDOS is not quite the bogey everyone makes it out to be, and with the aid of a good "front end" like XTREE (similar to DOSTAMER) to take away the pain of the syntax and make multiple file operations easy, the transition has been fairly simple. I have an AT clone, 80286 running at 10 meg with 1 meg RAM, a 20 meg hard drive and a 1.2 meg floppy, costing £1295 + VAT from Elonex - and a very fine machine it is. The 14" HiRes monitor is excellent, and I use a Hercules Plus mono graphics card which gives 720 x 348 pixels. The Hercules card is an industry standard, and virtually all programs support it. It came as a considerable suprise, therefore, to find that GW-BASIC from Microsoft does not - and that provided some problems. However, for the benefit of other members, and because Hercules-compatible cards are commonly sold with IBM clones, there are two solutions. First, Epson have licenced GW-BASIC and produced their own version which supports the Hercules card in the Epson PC+: this is available from Northwest Computer Supplies, 82 School Lane, Didsbury, MANCHESTER M20 ORY for £95. It is well-documented and the graphics commands work on Hercules and EGA (colour) cards, without any cumbersome machine language routines in HiMem which you might also see advertised.

A second, and very interesting, alternative is TRUE BASIC from Grey Matter. It costs about £125, and is a complete interpiler system from the men who wrote the first BASIC, and represents their ideal. There are some extraordinary powerful statements, such as the ability to read and write whole arrays to and from disk with a single command, device independent graphics and many other enhancements. True Basic is a completey structured language, and needs no line numbers (but you can have them if you wish). In my view it is better than ZBASIC, but you do need to buy the runtime module if you want to compile stand-alone EXE programs.

One reason that many people fight shy of upgrading from TRS to MSDOS is their investment in software. Well, there is now an answer to that problem too: the folks at Hypersoft have produced PC Four, which not only emulates a Z80 but also convinces a program that it is running under TRSDOS with 4 disk drives. Assemblers, debuggers and even BASIC programs can be run. Scripsit, Visicalc etc all run, and Allwrite will be supported soon on the next upgrade, as they have to write in a few more DOS calls. It has only just arrived, so I haven't had time to evaluate very much yet. One observation is that the emulation slows things down somewhat, but then I have been blazing away at 10 Meg and had quite forgotten what 4 meg looks like! Hypersoft also provide Hypercross, an excellent program for transferring between TRSDOS, CP/M and MSDOS in a huge variety of formats, including good BASIC translation if you need it.

Now I'm left with quite a bit of hardware and software, as listed below. If you are interested in an item, please give me a call and ask about availablility or function. As everyone must realise, support for the TRS80 market is getting very small: virtually non-existent over here since the demise of Molimerx. In any case, I have always dealt directly from the States, but even there the flood has nearly ceased. Therefore, this is a good opportunity to pick up some material to run on the Model 3 or Model 4 which will keep them going for some time.

HARDWARE - I have a brand-new, unused Micro-Labs HiRes graphics board complete with GBASIC support software. This is a much better board than the now unobtainable Tandy one; for example it can display text and graphics screens simultaneously. It cost me £125, but I offer it for £85 + postage. NB the board is for a NON-GATE ARRAY Model 4 (most of the ones in the UK). It is very easy to fit - just plugs into a socket, no soldering needed, with excellent instructions and a wide range of demo programs.

SOFTWARE - The following items are original diskettes, not copies, and are fully documented.

BIZGRAPH - comprehensive suite of graph plotting routines including bar, pie, line and scatter graphs with keyboard or DIF file input. Model 4, in GBASIC for Micro Labs Graphics Board. £20.

DRAW - excellent HiRes drawing program for Micro Labs Board. £20.

GPRINT - dump HiRes graphics screens to any printer - fill in a screen form giving printer characteristics: example Epson and DMP routines included. £15

TOURNAMENT CHESS - for Micro Labs HiRes board. Plays an excellent game and has a superb display. £15.

DOTWRITER 3.0, Model 4, DMP/OKI printers - the unique Prosoft program for proportional, kerned printing in a variety of fonts. £25.

LETTERSET DESIGN SYSTEM - Model 4, DMP/OKI printers - design and manipulate DOTWRITER fonts. £25, including book listing PROSOFT fonts.

FONT DISKS for DOTWRITER 3.0 - 8 wire (e.g. Epson) on one side, 7 wire (DMP) on the other. Disk 1 - Simple Letter Quality, Disk 2 - Formal Letter Quality, Disk 10 - Headline, nostalgia, Disk 15 - Headline 19th Cent, Modern. £10 each.

LABLMAKR - superb label printer and data base, including cassette type. Model 3 only. £5.

DOSPLUS 3.5 - reliable and very fast Model 3 DOS with excellent manual. £15 inc. postage.

DOSPLUS 4.0 - mostly TRSDOS compatible, complete with MZAL editor/assembler - worth it for this alone, but BASIC is better than LSDOS 6.3 BASIC; other excellent utilities: very fine manual. £25 inc. postage for the big manual.

PRONTO (now PRO-WAM) - 128K Model 4 or 4P - pop-up resident diary, database, calendar etc. £20.

Mister ED - applications for PRONTO (above) including text editor, screen editor, memory editor and others. £15.

PRO-SAID - text editor for Model 4, 4P, ideal for writing

programs, uses 128K if present; customisable. £15

PRO-ESP - Model 4/4P utilities including RD40 (read 40 track disk in 80 track drive), ALTDISK and ALTLD (very much quicker way of setting up a RAMDISK and its contents than TRSDOS gives), Mod 3 to 4 BASIC conversion, function key definer, minidos, various filters etc. £15.

SUMUP - 128K Model 4 or 4P: pop-up calculator, takes very little RAM, works on DOSPLUS unlike Pronto. £10.

DOSTAMER - Model 4 or 4P: you can't be without this superb program for managing your files and DOS operations. Customise your own commands, comment all your files and more. £20.

MTERM - TRSDOS 6 or DOSPLUS - a very fine and quick COMMS program, much more friendly and efficient than LCOMM etc. Includes binary transfer. £15.

ZORK 1 - Model 4. The game that started adventures. £5.

VISICALC - Model 3. The spreadsheet that sold the micro! £15.

ZBASIC 3.0 - Model 4. Fast compiler with enhanced commands: source code protable to almost any computer; hires graphic commands compatible with Micro Labs Board. £25.

MULTIDOS - Model 4. Interesting, this one: runs in Model 3 mode but with Model 4 speed and screen; has very enhanced BASIC but doesn't work with many Mod 3 M/C lang. programs. But it can read and write to just about every DOS, including NEWDOS in most formats, and thus is worth having just for this. Lots of utilities including RAMTEST. £12.

MULTIPLAN - Model 4. From Microsoft. Runs best when overlays placed in RAMDISK on 128K machine, using ALTLD/CMD from PRO-ESP (above). £25.

BASIC FASTER AND BETTER - Book and 2 disks; many super short cuts and programming techniques; no need to type in the listings. £12.

BASIC DISK I/O - book which complements above and adds indexing and other fast disk access techniques. £10.

DOS RANDOM ACCESS VOLS 1 and 2 - J. MULLER; the complete survey and proactical program-building guide: a must if you use Random files. Listings in MS BASIC for TRSDOS, CP/M and MSDOS machines. £15 the pair.

MODEL 4 TECHNICAL REFERENCE MANUAL - you need this, since Tandy isn't interested any more! £10.

NORTERN BYTES - about 20 issues (to date) of this invaluable newsletter, full of programs and tips - essential for NEWDOS users but with plenty of Model 3 and TRSDOS 4 lore and programs. £6.

MISOSYS QUARTERLY - a new (1986-7) publication from the writers of TRSDOS 6 and LSDOS 6.3 with all the patches, hints, programs etc. This is essential for TRSDOS 6 users as Tandy will not support the DOS any longer. 4 thick issues (one to come) for £10.

LITTLE BROTHER - for MSDOS only. Despite its awful name, this database program is excellent: I have used it on the TRS as my bibliography for years, and it was extremely easy to port all the files straight to MSDOS. Now I need a database that will handle graphics as well. £25 including LBMAINT file maintenance utilities - cost more than twice as much!

Please feel free to call me about any of these items on 031-667-5938, or write to Dr. J. Miller, 28/5 Causewayside, Edinburgh Eh9 1QB. Happy Computing, whatever the machine!

MODEL IV DISASSEMBLER

I do not know whether you saw J. C. Sprott's Model IV disassembler in 80 Micro some time ago. I typed it in and have used it several times, but it has a few disadvantages. If you use it without a printer it scrolls and you do not have time to look at it, but the main trouble to my mind is that because it is in Basic you cannot disassemble programs in the lower part of the memory without moving them. If you do this the jumps and branches look odd.

I recently needed to disassemble a program which lives at $25A8 to $3160, and in the end I wrote a modified version which displays the temporary address in column one, but the true address in column two, and the branches are correct. It also stops every 22 lines when the printer is not used, and does a page feed after 60 lines when printing.

If anyone is interested I would be happy to send a listing if they will write to the address below.

On a different matter, my Epson printer, now some six or seven years old, suddenly lost the tails to all the lower-case letters. With much daring I removed the printhead, and inspection showed that there was a deposit of ink on the lower wires. I washed this off with methylated spirits, all tails are now waving again happily.

M. C. Matthews 5a, West Walks Dorchester Dorset DT1 1RE
(0305) 64464

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PRESTEL

In rather a thoughtless way I have left my Prestel number in the heading of my letter sent to the Editor with my last contribution. The result was that the Editor wanted me to do a write up about Prestel. Rather an unwise request as a perusal of my previous contributions clearly shows that I can write pages of general waffle but no

technicalities. The trouble is that after some seven years of playing with micros I still don't know my computer elbow from . . . . ! When it comes to communications and Prestel there are many things which always baffled me and one of these is the difference between bauds and bps (???). Bits per second are obvious as it is the transmission speed but baud ?? Something to do with the variations of wave, I think. Anyway regardless of my lack of knowledge I will try to say something about Prestel. How many Group members belong to it ? Because sometime ago after my move to the Hebrides and before breaking my leg (which kept me away from the computer for quite a while) I included my Prestel box number in my article and invited contacts. The result - nil !

BT calls Prestel a videotex service implying that they provide pictures and text, which are transmitted over the telephone lines and displayed either on a TV set or computer terminal. In fact Prestel holds hundreds of thousands of data base pages, mainly provided by independent specialists (Information Providers or IPs for short) which is another way of describing people who are after your money either by a direct charge for access to their information or by advertising. In addition to that there are messaging and telex services. The Prestel services can be broadly divided into messaging, City, banking, travel, farming, education and general information, news, views and reviews collectively described as Focus. Prestel computers are linked in pairs all over the country so one accesses either of two computers at all times.

There is also an extension to Prestel called Micronet. This is a service purely for the computer user but, I am afraid, not for Tandy users. Computers catered for are BBC, Spectrum, C64, Amstrad (CP/M+ version), PET, Apple and IBM and clones. A new group for Amstrad PC1512 is also now forming. Services provided by Micronet can be broadly classified as communications, shopping, software (public domain and commercial), technical help and the editorial section aimed at keeping computer users up to date.

We all know that, should we contemplate joining Prestel, we will require additional hardware and software and we can more or less estimate these costs. But how much does the actual use of Prestel cost ? There are different charges involved in this communication business. Firstly there is your BT bill for use of telephone.

Connection charges to Prestel are allegedly made at the local rate in most of the UK but this needs checking depending on the locality in which you live. After that start the Prestel charges. These are 26.00 pa for Prestel and 40.00 pa for Micronet payable quarterly, i.e. 16.50 per quarter for both, Prestel and Micronet. If one wants to use Prestel on Mondays to Fridays between 0800 hrs and 1800hrs and on Saturday between 0800 hrs and 1300 hrs there is a charge of 6p per minute (all other times free) so, obviously, anyone using Prestel just for the hell of it should avoid these times. Then we come to page charges and these can vary from 2p up. What they really can be I have no idea as I never use charged pages, unless I get into them by mistake. The appropriate indexes display the cost of pages so one is warned in advance. On top of that annual fees may be required for use of some services such as, for example, British Library BLAISE. To use that one has to be a registered member of BLAISE at the cost of some 300.00 + pa for an individual. Bank of Scotland has me rather puzzled. They provide banking on Prestel. One can view the account at any time, make payments instead of writing cheques etc. For that service they charge a hefty fee. Why one may ask ? If the computer does things for them and they don't have to bother with clearing cheques surely users of this service should pay less then a normal user. I spoke about it to the local Bank of Scotland manager and he told me that those using Prestel for banking get better interest which is all very well if one has plenty of money but most of us (especially computer users) live on a shoe string.

Having decided to join Prestel anyone taking the first step into communications will have to get some extra hardware. Firstly RS232 capable of a split baud rate is required. Prestel operates on 75/1200 rate (I think this is called V23 standard) which means that it sends at about 120 characters a second but receives at about 7 characters - if you are lucky. There is quite a bit of work going on Prestel these days and not so long ago I was waiting for about 3 to 6 seconds to have a character echoed on the screen and my 1512 was beeping at me constantly telling me that the buffer was full. There is also limited access to Prestel in V21 (300/300) standard in London. This one provides text only and no pretty pictures. You won't get pretty pictures on TRS either whatever service you use. Tandy RS232 is capable of a split baud rate, characteristics completely ignored by TRSDOS 6 Comms program, so there is no problem there and owners of

Model 4P already have one anyway. Next there is a modem or acoustic coupler. After a short experience with an acoustic coupler I have bought WS3000 and, as prices of modems are coming down, a decent modem is the best option. Modem requires the new type of telephone point to plug into. In fact, any married member with teenage daughters should seriously consider having a separate telephone line installed for communications. Have you ever tried to punch the keyboard with a chorus round you of Dad/HIM monopolising the telephone again ? So you think you will avoid that by installing an additional BT socket in your den and using modem with the doors locked. Ha, have you ever seen the VDU whilst during transmission the boss or daughters keep lifting receiver to check whether Dad/HE is still at it ? So, if you are married etc it is either separate BT line or do it after they all have gone to sleep.

So now you have a computer with RS232 and a modem and you have obtained grudging permission from the boss to start yet another craze and all you need now is something to make it all work. You guessed it - some software. There is plenty of it on the market, mainly for 16bit computers and some for 8bit. The trouble is that any usual type of communication software won't do. Your software has to be capable of setting RS232 to 75/1200 speed and dealing with all the funny characters sent by Prestel. Until one of our Group experts in Northern Ireland wrote a Prestel terminal program for Model 4 there was really nothing for us Tandy users. This program can be obtained from Blandford Computers at a very reasonable price - 27.30 including postage and VAT in Feb 86 - and it is an excellent program - as good as anything that can be provided for a computer with very limited graphics ability and no colour. What you actually get is three programs and some samples of pages saved for viewing. There is a Prestel terminal program, to view saved pages and a Basic program which permits customisation of the terminal program including auto-logon. The terminal program provides for a selective saving of pages. The manual is very comprehensive.

For owners of IBMs or clones there is really a plethora of programs including Sage Chit-Chat which can be bought as one package with a modem. I would recommend Multicom program which has great variety of facilities and reproduces fairly faithful Prestel pages in colour.

Anyone with the necessary hardware and software can try out Prestel and Micronet before joining. All one needs to do is to get from Freefone Prestel the number of the computer and log on by using 4444444444 (ten 4s) as identity number and 4444 (four 4s) as password. One is given then a conducted tour through certain pages and an option to leave a joining message. Or, alternatively, personnel on Freefone Prestel will advise how to join. The address of Prestel is:

Prestel, Telephone House, Temple Avenue, London. EC4Y OHL

and one can write directly there too. In due course forms arrive, one completes them, sends them off and finally there is the notification of membership together with customer's handbook and a Prestel directory.

The notification of membership contains several items of information. Firstly there is the telephone number of the computer to be accessed. It is wise to double check this. My notification gave me the correct names of two computers but wrong telephone number. Then there is your identity number (10 figures). This number has to be entered on log on but otherwise it should be kept confidential and not disclosed even in correspondence with Prestel. After all you don't want other users to run up charges on your account - do you ? You are also allocated your initial password, normally four figures and you are advised to change this as soon as possible. Passwords can be changed at any time and should, in any case, be changed from time to time. Page 920 is used to change the passwords. You remember that the Prestel computers work in pairs - don't you ? It is possible to have different passwords for these two computers but it is not possible to change the password on both computers at the same time. Passwords can only be changed on the computer which is accessed at the time. Passwords of 0000 are discouraged and Prestel notified not so long ago that anyone using this password will be forced to change it. Finally there is also the account number consisting of nine numbers. This number appears on the quarterly accounts, must be quoted in all correspondence with Prestel and is also used as mailbox number.

So there you are all ready and eager to go and explore the exciting world of videotex. The procedure for starting varies with the type of equipment. If you went for an easy option such as a Hayes compatible, intelligent modem with Multicom program all is easy. You

just press a key and you are shortly in without any bother of entering identity numbers and passwords because Multicom has done it all for you.

If you have an intelligent modem (Hayes compatible) with a number store and you use the Blandford Computers program, you type ATD and a number in the telephone store or the actual phone number and you see the logo etc (you have customised the program for auto log-on, haven't you ?) but then you have to enter your password manually.

But your modem may require manual dialling or you may have an acoustic coupler. You must dial manually. Prestel, on connection, will send an enquiry signal. This starts with a carrier tone (very high pitched) and then the pitch changes. As soon as the carrier sound is heard the modem must be switched on-line or the hand set placed in the acoustic coupler. If the Prestel program is not configured for auto log-on Prestel will re-send the initial page asking for the identity number, followed in either case with the enquiry for the password. As typing of ten figures without an error is not an easy task for anyone attempting communications for the first time auto log-on is definitely recommended.

The log-on successfully completed the customer is welcomed, told which computer is accessed and the last time this computer was used. If there are any messages for the customer he/she is advised to press 0 for new messages.

Once in, where and how to go ? Prestel Customers Handbook and Guide to Micronet give some useful numbers and the directory gives them all. Very comprehensive directory it is and I never could find anything in it that I was looking for. One can also access from the first page A -Z guide and one can move through the series of menus to reach the desired page, or one can ask for it straight away. Prestel uses * to start a command and # to end it instead of return/enter and these two keys are used frequently. Tandy Prestel program assigned * to F3 and # to <enter>. The line feed, which is not needed for Prestel but may be required for the modem is shifted <enter>. To call a page by number one would enter *(page number)# (to change the password *920#). It is advisable to make a note of any interesting pages one may stumble on. After years of quips

about lack of keyword access Prestel has introduced keyword access as well. It does not work very well as database is not searched for the keyword and access is limited to page titles only. Most of my attempts to search by keyword finished with a message 'no such keyword - see page . . . ' whatever it was. Sometimes a page is distorted. In such case *00 will re-display a page without any charge in the case of chargeable page. ** is useful to correct any mistakes in command or to remove any annoying message from Prestel and to obtain access to the command line.

What does one use Prestel for ? Well, one does not use it to find out the vacancies on motorail for one thing. I tried last year before moving to the Hebrides but the Motorail pages at the time had not been updated for three months. A clerk at Euston has told me that the 'damned' machine has broken down again. What puzzles me though is why it has not been repaired for three months ? Another thing you cannot get on Prestel is the Australian Pools results. Living in a place where there are no pools' collectors - one has to rely on a standing forecast - and where in any case pools are regarded as just one degree less evil than murder and where Sunday papers arrive on Tuesday late in the afternoon how can one know whether one ought to claim ? If anyone has discovered Australian Pools results on Prestel would they please, please let me know the page number (pretty fast please). Otherwise there is a lot of information and some of it quite good. If one lives near big centres one can shop by Prestel, there are pages of travel, details of different countries (holiday adverts really), Ladbroke do telebetting, insurance, assurance, etc, firms advertise, share quotations can be viewed (at a price of course) and so on. Prestel Index, now sent to all customers every two months together with a magazine called Connexions (not a spelling mistake), contains some twenty pages of four columns of subject and page numbers with generally one line in each column for subject and page number.

Many of us though use Prestel for contacting other users or accessing public messaging facilities. One can leave personal messages (MBXs) to other users by typing from Prestel page 77 their account numbers and then, when the intended recipient is identified by name, any text followed by #, which ends the input. One is then asked whether to send the message or not. Arrows keys move the cursor through the text sideways and up and down and there is no delete. One

has to overtype any errors. No wonder there are many typos in the messages both private and public. If it takes a second or more to move the cursor one space, as it can do, it is not worth correcting errors if the message is meaningful. I use page 77 to communicate with my friend in NI and find it very useful.

Of the public message boards there are many both on Prestel and Micronet. Anyone can read public messages and post them. Those on Micronet are better than on Prestel but a lot of stuff is very juvenile or intended to pull a bird. Imagine the conversation on one of the boards - "Zeb's here", "Hallo Zeb, Dave", "Hallo Dave, Zeb" and so on. On another board "Four TAs require four hunky males . . . . ", "What's TA ?", and so on. Many messages are vulgar but some are also funny like the one I saw some time ago "Train looking for a tunnel". Micronet is doing definitely better. There are technical queries and answers, dynamic displays, celebrity chatlines etc. One can also send and receive telexes through Prestel and the charge at present is 50p to send and none to receive. Very useful facility that.

Some of the IPs provide more informations about goods and services they are hawking on their own computers. Access to such computers can be had through the Prestel Gateway service.

Well, a lot more can be said about Prestel and in fact those interested can turn to the Personal Computer World of a couple or so months ago and to an excellent article by Peter Tootill. He was much more factual about Prestel. Now the question is - is it worth it ? Well, I don't know the answer. My friend talked me into this, as he later talked me into joining Micronet and again into buying a PC1512. His enthusiasm seems to break through my old army attitude of never joining anything and never volunteering for anything. I am still a member and am likely to remain one. To start with I was accessing Prestel quite frequently but the novelty has now worn off and sometimes weeks pass without me logging on. Of the benefits of Prestel, apart from contact with my friend, there were hardly any though I must be fair and admit that I managed to get MacBraynes brochure of sailings to Harris via Prestel but things I could not find are legion.

So you have been warned. You know what to expect and as you waste money on computers anyway, you will probably join Prestel as

well. There is a lot of work going on Prestel now and we are promised that the whole system will be modernised, improved, etc. So maybe you should join after all. And, if you are a member my MBX is 474873644 and I would be pleased to hear from any Group members.

ANON. Somewhere up North.

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I had a telephone call from ANON to say that he had received his returned disk, posted Wed. p.m., received Fri. a.m.. I can not get service like that across Birmingham. Thank you for the above and thanks for the call .... I hope members who are on Prestel will now try to contact ANON.

I welcome the information given above, it has started my insight into Prestel and may lead into my being able to receive EMail, hope I can make the Blandford lectures on Modems. Is there a member who is local to me, who also has enough time to give me help and guidance to set this up ? Before doing that, and before spending all the money involved, it would be nice to know how many members would use the facility. Any answers please ? Peter, do you have a copy of your article for me please ? Are we allowed to reprint any portion ?

ANON had also asked if I could read MS-DOS disks - his article arrived on a CP/M (wordstar) disk. I have a Model IV, using that I copied the files across to LS-DOS 6:3, then took the liberty of reformating the disk in MS-DOS format and copied the files back from LS-DOS 6:3 to the MS-DOS disk, plus a letter of thanks. ANON was phoning to say that he had read the disk O.K.

.... Now how much is that Prestel terminal program, plus 0s. tax ?

I still have two disks that have not been returned, one from a member in Wiltshire, and one from a member in Berks. (This is one I am having problems with and may have to contact the member). All other disks have been returned, thank you, Ed. **.

ADVERTS

Video Genie 1 - modified to 2 and also 48K RAM
Drive interface to the Genie is homemade but works very well
1 - EG100 monitor
2 - EG400 disk drives
1 - Canon 4106 disk drive

Software:-
TRSDOS 2.3a and 2.3b
small-LDOS
Trakcess - disc track editor ect.
Diskaid - disc sector editor.
Database Management - simple database.
Interdictor Pilot - quite a good game.
Sargon 2 - chess.

Books:-
The Custom TRS80 and other mysteries.
Microsoft Basic Decoded and other mysteries.
TRSDOS 2.3 Decoded and other mysteries.
Machine Language Disc I/O and other mysteries.
Introduction to TRS80 Level 2 Basic and computer programming.
Intermediate Programming for the TRS80 (Model 1).
TRS-DOS and Disc Basic Reference Manual.

Please contact:- John Moseley, 10 Whirlowdale Crescent, Millhouses,
Sheffield. S7 2NA. Who is open to offers.

Would the person who phoned and spoke to my wife with reference to my advert in the last issue of the Newsletter for 2 off EG400 disk drives, please phone again. The member who had phoned previously and said he would be purchasing these items, has now phoned to say that he does not now want them. They are still for sale. Gordon Collins, Ed.

READER'S FORUM

THIS IS WHERE YOU ARE INVITED TO ASK ALL THOSE QUESTIONS THAT YOU HAVE NEEDED ANSWERS FOR, OR TO MAKE ANY COMMENTS, OR ..... ???

FROM: 50, Gardner Close, Eastern Avenue, LONDON. E11 2HN

Dear Gordon,

..... (This is not the complete letter. Ed. **)

..... re: The local group that may meet at Northwick Park Hospital, LONDON, you could try asking Richard Marks.

Word processors ..... there are so many to choose from, each in turn was studied and experimented with for quite a long time, added to that, one has to remember all the codes and commands spontaneously, so as to make all work at will. The conclusion being, now I automatically fall back on what I'm using now, COPYART, because it's so simple to use. ..... Yours, A. Nathan. (Nat)

Nat also asked to be put in touch with anyone that uses Electric Pencil. Would anyone using that Word Processor, please contact Nat. (Nat, read Sex Notes quick, also note Tandy's venue offer). An item that Nat supplied was a 1984 listing of TRS-80 user groups, thanks Nat. I will see if I have time to list them in this issue, if not the next, and ask if anyone knows if these still meet. Ed. **.

FROM: 40 Edinburgh Drive, Ickenham, Uxbridge, Middlesex. UB10 8QY
Tele: (0895) 639802

Dear Gordon,

As a newcomer to the world of computing, I've only had a Model I 'Clone' type computer since October, I am learning fast and am writing to you in the hope that you will either be able to put me in touch with

expert advice or, publish extracts of this letter in the Newsletter in the hope that one of your readers can offer advice.

(A request followed for a photocopy of the Model I Double Density Adapter Kit, see Vol 9, Issue 1. The request and 40p has now been sent to the member with the original for him to process, as also Mark Austin's request for the same. Ed. **)

Re London Model I User Group. As you enquired in the June Newsletter. I would be interested in joining a group if it were based to the west of London. You mentioned such a group at Northwick Park Hospital, this is quite close to me and if such a group does exist then I would appreciate my name and address being forwarded on to them.

Re LDOS 5:1:4. Can anyone please advise me of a possible patch to enable LDOS 5:1:4 to accept dates after they are due to expire later this year ?

(Roy Soltoff in The Misosys Quarterly Vol 1, Issue iv, page 3, writes:- There will NOT be a 5:3 release of LDOS for the Model I. However, before the end of the year we will be making public a set of patches to accommodate Model I LDOS users. These patches will de-activate the Directory file dating and extend the DATE$ dating to accept dates through 1999. Ed. **)

Re Advice on Databases. The main reason for my letter is that I am looking for a DATABASE system that is capable of having at least 3 files with the ability to cross reference from one file to another. As a member of a Cine Club which has a library of members films for exhibition at various shows to other clubs etc., it is my responsibility to organize these shows and keep records as to which club that we visit has seen what films. I need a 'Filmfile' with Title, Maker, Duration, Gauge, Availability etc., - 10 fields - A 'Clubfile' with details of Club Name, 2 x Contact names and address, Venue etc., - approximately 25 fields - and then a 'Showfile' which keeps track of what films were shown to what club on what date.

From this information I then need to be able to ask the computer the following:-

1 List all films, currently available, that have not been seen by this club since --/--/-- (date). (NB. Not all films are currently available.)

2 List all the dates of shows to this club.

3 List in alphabetical order, with dates, all films seen by this club.

4 list, screen by screen, in reverse date order, (ie, latest show 1st) each show to this club with films in projection order.

I have listed only a brief outline of the type of Database system that I am looking for and any advice that can be offered will be greatly accepted.

Thanking you for all your help and also for such an interesting Newsletter.

Yours sincerely, John James

(John also supplied a layout covering the above description. Would any member able to help John please contact him direct. Ed. **)

FROM: c/o, Merz & McLellan, Amberley, Killingworth,
Newcastle upon Tyne. NE12 ORS

Dear Gordon,

Barry wrote to me again, letter dated 14/07/87. As Barry lives in Zimbabwe he would not have seen Newsletter Vol. 9, Is. 1, at that time.

Part of his letter goes: ..... While reading through the copies of NATGUG Newsletter I find almost all the articles refer to the use of non-Tandy software and as such are of little use to me personally. In Zimbabwe computer hardware and software is just not available. (I know

of Commodore 64's with no monitor and single disk changing hands for 600.00, and a BBC 'B' with disk but no monitor for 1200.00.)

Barry also mentions what his current projects are.

Kindest regards,..... Barry Thrippleton.

Barry,

Since writing in the last Newsletter I have booted VisiCalc up on my Model 4, in Model III mode using LDOS 5:3. That version of VisiCalc is V1.20Z. On boot up, it shows memory capacity as being 23K. I now no longer use this version as the Model 4 VisiCalc will use all 128k of memory - when available - in Model 4 mode and boots up with memory capacity of 90K.

Re LLIST'ing Basis programs. Possibly look at saving in ASCII and then using a word processor.

Re non-Tandy software. Start off by writing to Misosys for their catalogue, address as Vol. 8, Is. 10, Page 6.

FED is a file zapping program from Misosys, which can also be used as a disk zapper as well, this is the best of this type of program that I have used and comes free with LDOS 5:3.

Misosys's Mark III and Mark IV collection is very good value for money.

You seem to have 'supply' problems, would you like to write to me, detailing what they are and how we might overcome them ? You mention 80 Micro, so you must have a supply for those ?

Regards, Ed.

Re: The member who askes about Superscripsit file rescue mentioned in Vol. 8, Iss. 11/12, P. 9, I can only point you to the 80 Micro issue detailed. To reprint would infringe copyright. Ed. **.

FROM: 12 Seymour Road, Chippenham, Wiltshire. SN15 3NH

Dear Gordon,

May I thank you, and apologize to anybody who has been waiting for my Windows Software for the Model 4. It has all eventually been published, you can find it in Volume: 8 Issue: 7, with an extra bit in Volume: 9, Issue 1. Please note that the original software was written on the Model 1 and can be found in Volume: 6 Issue: 6 (Dec '84).

Just for the record, this year as part of a project team I have written another windows system, but this time for MS-DOS. The windows were to be used in the Multi-Tasking environment and so are a great deal more complicated than the version I did for the Tandy. (Even though I did work out some of the code on the Tandy).

Now does anybody know, or can they provide, a 68K simulator program for CP/M to go along with the Public Domain 68K assembler program. I have to do some 68K programming and do not happen to have a 68K system laying around to debug the coding on ? (By the way 68K is the abbreviation for the Motorola 68000 CPU chip)

..... P. Knaggs.

Peter, Thank you for all the other articles. Peter has agreed that I can print these over the next couple of issues. Ed. **.

STOP PRESS

Thank you Roger and Gillian (Storrs) for a very pleasant time at your Disco and Barbecue, I was dissapointed not to have met more NATGUG members there.

I beleive that we now have an MS-DOS library listing. More details next issue. (Just had the phone call and this issue will be off to the printers in two hours time. 20/07/87. Thank you, Ariella.

A BIG <<< THANK YOU >>> TO THE MEMBER WHO HAS OFFERED TO SPONSOR SOME NATGUG ADVERTISING.

LOCAL CLUB NEWS

BOURNEMOUTH

Meets First and Third WEDNESDAY at Kinson Community Centre at: 7.30pm. Ring Carl Rabe on (0202) 730617

CHELMSFORD

Meets first WEDNESDAY of each month at 7.30pm. Contact: Richard Creak, Woodcote, 59D Little Baddow Road, Danbury, Chelmsford, CM3 4NT (0245) 413725

MILTON KEYNES

Meets alternate Sundays, October to March. Contact Brian Pain on (0908) 564271

NORTH EAST LONDON

N.E.L.80; 77 Old Church Road, Chingford, LONDON. E4 6ST. Meets first Sunday every month.

SUDBURY

Meets second Wednesday at:- 3a Gainsborough Street. Contact: John Kilpatrick on 0787 79504.

BLANDFORD

16th August 1987. (See Page. 22)

SWINDON WEEKEND

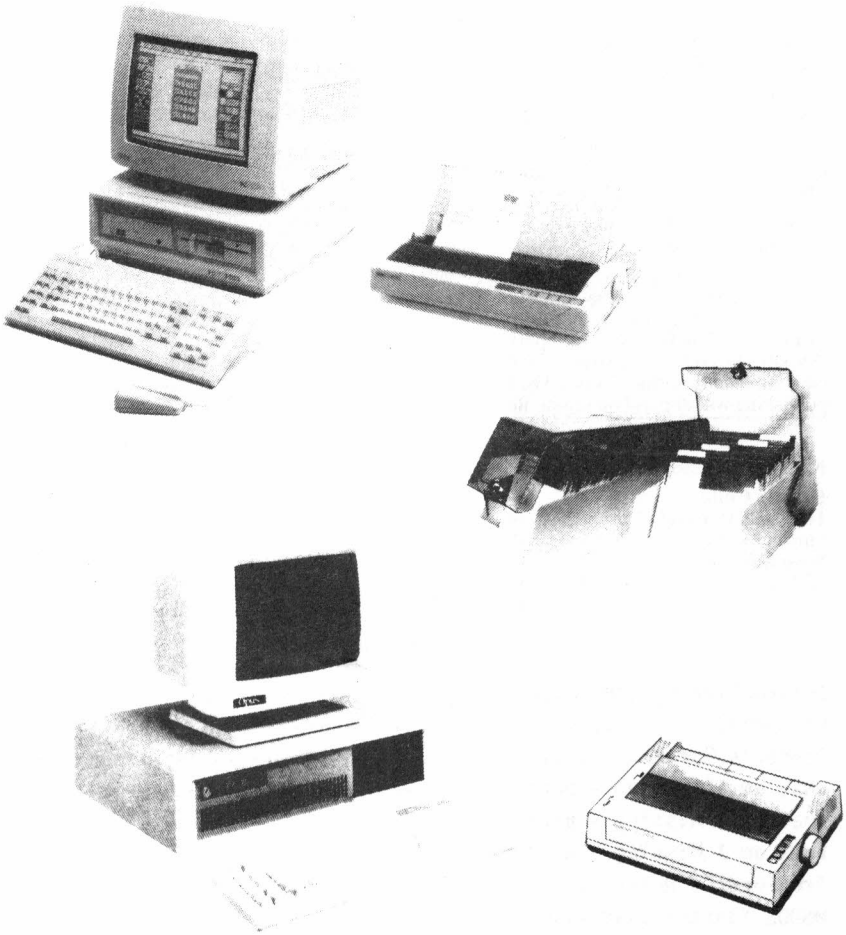
The next meeting is scheduled for October 16th-18th. (See Page. 23)

If your club is not mentioned above then its your fault, not ours ! For your FREE advert, write with details to:- Gordon Collins, Editor.

NATGUG NEWS

Volume 9, Issue 3

September 1987



OFFICIAL JOURNAL OF THE

National Amstrad, Tandy & General User Group

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 grous'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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SWINDON OCTOBER 16-18

Provisional Schedule

FRIDAY

Noon onwards meet for a pub lunch, and then set up in the Systems Room
7.00pm onwards Dinner in the Shelley Restaurant
10.00pm Talk on fundamental MS-DOS by Tony Evetts (This is a repeat of Tony's very successful Blandford talk)

SATURDAY

07.30 Breakfast
09.30 OPEN FORUM : Communications
11.00 Machine language session with Laurie - how to disassemble a modem program, alter it, and reassemble it.
12noon Lunch
14.00 OPEN FORUM : Models 1,3,4,4P
14.00 MS-DOS niceties. A talk by Paul Ostwind
15.00 OPEN FORUM : MS-DOS in all aspects
16.15 Electric Pencil (the MS-DOS version). A review by Brian Pain.
17.00 OPEN FORUM : Word Processing
18.00 dBase Questions & Answers by Ariela Taylor
19.00 Dinner
21.00 Review of the day, with Bob Sparling & David Washford. Tell us YOUR views!
22.00 Transputers - an introduction to this new technology by Leon Heller.

SUNDAY

10.00 Programming in 'C' Part 2, by Arthur Wraight.
11.30 Screen 6 - an update from its author, Brian Edwards
1200 onwards Lunch
1400 Programming in 'C'. More from Arthur Wraight.
1630 VACATE THE SYSTEMS ROOM PLEASE !

This schedule is compiled 8 weeks prior to the event and has to be subject to alteration for all kinds of reason; if you particularly want confirmation on any subject then check with David Washford on Thursday October 15th, between 8.00am and 5.30pm, on 0225 444000.

EDITORIAL

Thank you to all the people who have sent in articles since I sent the last copy of the Newsletter to the printer.

Could I give a plug for John Bodsworth who is doing such a fine job of printing the Newsletter. John's business is printing and although he is rightly invoicing NATGUG for his work, it is obvious he is charging us less than the going rate. John's company is Chiltern Print, Tele:- (05255) 3990. He lives in Toddington.

I have received no information after my request for just a little bit of news about your Local Club. Come to think of it I have received nothing about any of my questions - is anyone out there ? I did write in the last issue; "would you also let me know if YOU would be willing to attend a Sunday workshop, if held in the West Midlands sometime next May '88. We do need uncommitted support at this moment, to decide if we should book the venue". Judging from the lack of replies (none at all) you do not want this workshop. Your committee have to make a booking within the next month, no replies of support, no workshop ! (13/8/87. Have now received two replies, please see Reader's Forum.)

We have had no reply from 80 Micro or Northern Bytes.

We have had a reply from Roy Soltoff of Misosys, he advises that if NATGUG were to bulk purchase The Misosys Quarterly there would be no saving to members. For users of LDOS, LS-DOS, MS-DOS or any Misosys product, I do urge you to subscribe to this excellent magazine, obtaining it direct from the States. Information for you to be able to do so, has been given in recent back issues. Also request a copy of the Misosys Catalogue and have a look at the value of the Mark III and Mark IV Collections. Roy has given NATGUG permission to excerpt from the following sections of The Misosys Quarterly:- The Blurb, LDOS Information, LS-DOS Information and The Patch Corner. I have replied to Roy with our Thanks.

If any Member has any suggestions, such as alternate venues, or on any other theme, and would like your committee to follow it up, please get in touch with one of us.

BLANDFORD '87. Because of the timing of the Newsletter going to press, a report of this event may not appear until the next issue.

Swindon Oct. '87. See advert last issue.

Our PRO will be at the PCW show on the ACC stand, this to further the cause of NATGUG. Thank you John for giving up your time. If you attend please go and say hello to him.

Sorry no zaps this issue. Due to circumstances beyond my control I have just found out that the Newsletter copy has got to get to the printers early. Added to that, I have a great deal of business work to get through this month. For those articles received and not in this issue, I apologize to the people who submitted them.

I have received another two disks that have had the sleeve 'squashed' onto the disk, the disks just about turned. Please send to the Treasurer for Disk Mailers.

Can I ask on behalf of all the membership, that if any member, having asked for help of any kind, and then subsequently has been fortunate to receive an answer because of his membership to NATGUG, would that member then please give the whole of NATGUG the benefit of both question and the answer ? You may be helping someone who is just having the same problem. Or you might see the answer to a problem that has just manifested itself to you. Thank you in anticipation of your co-operation.

I believe there are possibilities of seeing adverts in the Newsletter, this will help with NATGUG's income. I understand that the going rate is 20 pound per page or 10 pound per half page. Should anyone wish to advertise, please for the time being contact the Treasurer.

Without going into any detail. Should you have tried to contact our Secretary at sometime within the recent past and have not found him available, please be patient. David is around, but very busy. For a few more weeks, please contact any one of the other committee members. Thank you.

UPDATE. I have today (11-8-87) received a letter from Ian Linehan to say that his move of house is nearly complete, he then hopes to soon have the Megabyte Memory Board finally ready for sale as a kit.

Once again, thank you for reading NATGUG Newsletter and for taking an interest in us. Gordon Collins, Editor, **.

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READER'S FORUM

THIS IS WHERE YOU ARE INVITED TO ASK ALL THOSE QUESTIONS THAT YOU HAVE NEEDED ANSWERS FOR, OR TO MAKE ANY COMMENTS, OR .... ???

FROM: J. F. Whitelock, Malawi.

Dear Gordon,

1. Re your note on NATGUG bulk-purchasing 80 Micro,etc. I would be prepared to support the venture, subject to:- At present I have a direct subscription to 80 Micro which eventually gets to me in Malawi. The subscription expires in a couple of months time. I have not received renewal notices, unlike last year when I was bombarded from February onwards, so I do need to know if you are able to deal before I renew.

2. I have never seen Northern Bytes, but could be interested if its helps with Model I's.

3. West Midlands meeting in May - distance too great

4. Zaps for LDOS. I have just bought LDOS 5:1:4a from Blandford to add to NEWDOS 2:1, ... etc. Regards John.

John, Please see the Editorial for answers to the above. Your reason for not coming to the West Midlands next May I will accept, but please nobody else. Thank you for answering, Ed. **

FROM: Dr. Ronald Welch, Whetstone, LONDON.

Dear Gordon,

My congratulations on the new format of NATGUG Newsletter and the enthusiasm displayed by you and your colleagues. I am particularly interested in the proposal to bulk purchase Misosys and Northern Bytes magazines and if you are successful I would like to subscribe to them through your scheme.

I have no difficulty with 80 Micro which I obtain by placing an order with the local branch of W. H. Smith and I collect it from there in the middle of each month. This is a nationwide chain of stationers but it is rarely on the shelves. The one exception, in my experience is the branch shop on Waterloo Station.

Your sincerely, Ronald Welch.

I thank you for the letter Ronald, also my colleagues and my thanks for your kind comments. I find it very enjoyable working with a team you elected, we all seem to get along well. Hope you have read the updates to the above in the Editorial, any more news will be published. The W. H. Smiths in the centre of Birmingham also have 80 Micro on the shelf.

FROM: Barry Thrippleton, c/o, Merz & McLellan, Amberley, Killingworth, Newcastle upon Tyne. NE12 ORS

Dear Gordon,

Thank you for publishing excerpts from my letter of 3 May. Thank you also for for reproducing the missing lines of code for "Windows on the Model IV". I will give this a try at the next opportunity.

For the sake of completeness I have listed below the hardware/software that I have available and use:-

Hardware: Model 4P with orig. SSDD drives, 128k memory and Hi-res.
Software: TRSDOS 6:2, LS-DOS 6:3, BASIC (01:01:00 enhanced by LSI)
BASICG (01:01:00), EDTASM (version 1 on disc)
and SCRIPSIT (01. 00. 00) for native mode
plus VISICALC for Model III mode.

I am very happy with the 4P having upgraded from a 48k Model 1. The upgrade was basically for reasons of portability while travelling overseas but many of the other advantages became apparent once I started using it. The only area that gives me real problems, to the extent that I no longer persevere, is BASICG (see Part 3 attached).

However all the comments in NATGUG about NEWDOS, LDOS, LeSCRIPT, PRONTO, DDUTY and even DONKEYDOS etc, etc and an almost total lack of comment about TRSDOS, BASIC, SCRIPSIT and EDTASM etc. makes me wonder "what am I missing". Are these TANDY programs no longer used and if not why not ?

On the surface it would appear that I am "too far behind to catch up" or am I using the wrong software or both. I must point out that while here in Zimbabwe my only contact with computer enthusiasts, or even users, is via NATGUG and that additional hardware/software and/or books are just not available to me. It is, I believe, this lack of facilities which has led me to being "so far behind".

Recent articles in NATGUG have referred to "extra memory/higher speed" on the Model 4's and these have prompted me to write two separate but partially overlapping sections entitled "WHAT AM I MISSING ? Parts 1 & 2" and they are enclosed as separate sheets. Part 3 is written in the same vein but refers to BASICG and is also enclosed. Maybe these can be published (as can any of my correspondence) as thought provoking articles although I would appreciate some response to the questions asked.

As a matter of interest this letter, and the accompanying articles, took me 12 hours to prepare and write, 4 secs to save and load and 13 mins to print (on an LPVII). The printing speed is, for

me, the greatest time consumer and it is in this area that I would first like to improve. Unfortunately this cannot be done economically until I leave Zimbabwe. The main reasons being the 80% import duty, the transport costs and the mountain of necessary "official" paperwork required let alone the "approval to import" processing time involved.

In addition to the printing speed and quality the chore of having to count program lines and insert "stops" to allow me to advance the paper to the next page is extremely tedious. This is not a problem with SCRIPSIT which handles page length and top of form satisfactorily. Even though the manuals give a number of methods for handling top of form (ie. TOF from DOS, FFHARD from FORMS and LPRINT CHR$(12) from BASIC) none of these work with the 4P coupled to an LPVII. Could someone please advise if this is or is not possible.

I do use my computer in the office to maintain a detailed record of our engineering drawings. I originally wrote a BASIC program to handle the input etc. however I found that SCRIPSIT was much easier, quicker and less prone to error or fault and therefore I use it for this application. Currently we have 115 files totalling 500k of data on record. The biggest data file is 36k which the maximum I can load using SCRIPSIT. Is there any way that my "extra" 64k can be used to increase these file sizes ? Could I expect an add on board to give me any improvements in this application ?

With reference to the attached articles please note I am not trying to be critical of the reports in NATGUG and I apologise now for any hard feelings that the articles may generate in the authors. Perhaps if I don't hurt their feelings too much they may like to correspond direct with me and if they do I would be most grateful.

Kindest regards, Barry THRIPPLETON

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"WHAT AM I MISSING"

PART 1. Those extra 64k

To date I have often wondered what I could use the additional 64k for. Prompted by articles in 80 Micro I wrote 2 JCL programs to transfer some selected system files and either BASIC or SCRIPSIT to MEMDISK and thus free the two drives for my own programs and data. The BASICG program is too long to fit into MEMDISK even with minimum system files. I have not tried with EDTASM but I believe my following comments will be unchanged.

After some use the only apparent advantage is to be able to "BACKUP" files between the two physical drives without changing disks. It does not allow any additional memory that I can use (ie max. program size remains at approx. 32k) or improve the loading/saving times except for the time to actually load BASIC or SCRIPSIT from MEMDISK. As I only generally use one of these programs during a computing session, and therefore only need to load it once, the time taken to set up MEMDISK (2. 5 mins by JCL) is all overhead and really wasted.

This overall loss of performance concerned me and I thought perhaps I should leave the system files (all of them) and BASIC/SCRIPSIT on drive zero and transfer my working program to MEMDISK. Alas, I find this method even more time consuming and has more disadvantages than advantages. For example:- a computer lock-up, necessitating a reset, during program developement (especially m/c language) or if you happen to forget to transfer your program to disk before switching off means START AGAIN. This problem aside, loading/saving times to/from MEMDISK are very similar to those to/from drive 1. Thus no real time saving.

In summary whilst I have an extra 64k potentially available I never use it as I have not found an application for it. The BACKUP advantage I referred to earlier is overcome by saving the program twice to different disks.

"WHAT AM I MISSING"

Part 2 Those add on boards.

2.1 Ref Vol 8 Issue 11/12 page 12

I am really confused :- The writer says that the XLR8 board is not compatible with the Model III mode. This means I can expect no improvement if I want to use VISICALC. This is one program where speed and memory improvement would be a real boost. This is so slow and being limited to 18k file size becomes so time consuming that it is quicker to get out the four function calculator, a pencil and some paper.

The writer also says that it is no real advantage unless using your computer for several hours each day. Is this because setting the system up to work takes so long. If this is a problem with one set up per session it must really eat into available programming time if you have a couple of "crashes".

2.2 Ref Vol 9 Issue 1 page 21

The technical aspects of the article is outside my range of understanding however I was particularly interested in trying to understand how these units are used in practical applications and what improvements were evident.

This article infers that to achieve full performance a new set of RAM chips is required !! (How many?, how much ?, how difficult to fit ?, where from ? and what specification ?).

I am a little confused about the need to manufacture external clocks and write special programs to allow the clock on the new board to work correctly. What function does the external clock provide that is not available from the internal clock ? Is it to overcome the "tedious" task of keying in the date/time at BOOT or to improve the accuracy of time stamping in the directory ?

In application the article says that the system boots at a slow speed and then all sorts of other setting up tasks need to be done

before you can start "programming". He refer to use of PRONTO, DDUTY etc. Does it work with LS-DOS 6:3, BASIC, SCRIPSIT and EDTASM or is this other "special" software essential ? What additional programming tasks are required to install this software and what benefits are achieved when installed ?

2:3 Ref Vol 9 Issue 1 page 29

The author refers to the programrs reference section of the manual ("which he did not understand"). Does this mean that without expert assistance the upgrade is of really no use ?

In regard to software the writer infers that to run TRSDOS you have to use CP/M. Is this true ?

With regard to memory size he states that with the board installed you can have up to 250k of "on-line" program files. Does this mean that you can run a program 250k long as a single program or that the files are available from the banks by switching ? If the latter, then this surely means lots of additional programming steps which according to the TRSDOS technical manual should only be done by a person with a "high degree of skill in assembly language programming i.e. a professional". The author also states that because program files still have to be accessed from physical drives any speed improvement is only noticeable when accessing "data" files from MEMDISK. As these files have to be initially loaded into MEMDISK is the double handling, ie. disc to MEMDISK to program, accounted for in any time improvements ?

The writer quotes improvements during "backing up". Is this in relation to backing up from MEMDISK to disc or between two disks ? Backing up from MEMDISK to disc has one disadvantage in that, without making special programming corrections, the MOD flag on the disc directory is not set and the results of the DIR command will be misleading.

As an aside the writer mentions that SCRIP-PRO is "atrocious for going to disc". Is this in relation to the time taken to transfer files or that many errors occur during these transfers ? I never have problems transferring files from SCRIPSIT to disc or vice versa. Where

is the difference ? Also I do not understand his reference to using SCRIP-PRO for system/program overlays or saving program files. How is the word processor used in these applications and for what purpose ?

The add on boards increase the extra 64k to 256k or even up to 1Mb. How can this be used other than as a giant pseudo disk drive ? Surely in the Model 4P a working program (including data) can only ever be approx. 32k long without "DELETE" or "CHAIN MERGE" as the program runs.

With the extra memory comes the extra speed (or vice versa). While using SCRIPSIT I certainly cannot keep up with the computer as is and BASIC programs I write seem to give me instantaneous results thus what is the advantage of the extra speed ?

WHAT AM I MISSING ?

Part 3. BASICG

When I purchased the Hi-res board & BASICG I had a project for which I thought this would be extremely useful. The project, as a matter of interest, was to pictorially represent all the slogans which have been used to cancel (obliterate) the stamps of Rhodesia/Zimbabwe. (Barry has supplied me with a photocopy. Ed. **)

Up to the time I purchased the Hi-res board I had been doing this using the grap4ics printing capability of the printer. I have enclosed photocopies of some of the results achieved.

I tried to emulate these using BASICG. Alas, total failure. I spent a complete weekend (24hrs approx) and at the end was unable to even print 3 unequal but actual sized, empty rectangles across the width of an A4 page. The programming necessary is extremely cumbersome, complicated and massive in size compared with the custom generated character method. The necessity of forever swapping between screens to program and review results was totally frustrating. Also as BASICG always prints sideways on a 10" printer, with a ratio that is almost impossible to calculate, the printing of alphabetic characters

could only be done with pixel set/reset. Hence this method was abandonded and I returned to my BASIC programming method. My current BASIC program is approx 170k long (which nicely fills 1 disk) comprises 5 main program files, 3 supplementary files, 35 data files and runs from start to finish using the "DELETE" and "CHAIN MERGE" facility to reproduce 96 slogans on 4 - A4 pages.

The only apparent uses for BASICG therefore are to produce charts or diagrams on the screen. To correlate the "picture" on the screen with a printout I find totally impossible. For instance I am unable to printout a simple logic flow diagram (without words) or even a pair of labelled axis for a graph.

All above "WHAT AM I MISSING" articles by Barry Thrippleton.

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TREASURER'S NOTES

We have had another action packed month. A large number of old members have been contacted to give them the chance to rejoin or to offer membership to the new owners of their old machines.

The MSDOS library under Ariela's care would seem to be progressing nicely and we should shortly have some lists for circulation. We had one offer of help with this library from John Barton, which I hope will give Ariela great support.

The financial position is sound for the next eighteen months anyway. We are not wealthy but we are just about financing expenses out of income. Membership had up to the last AGM fallen steadily, but I think we have now arrested that.

We have a number of irons in the fire which should all help. Gordon has had contact with Tandy to try to get promotional literature in their shops. We have now the task of making that literature available. The mail shots should bring some more response. John

Kilpatrick is going to fly the flag for us at the PCW Show - 23rd to 27th Sept. We now do respond to all inquiries, immediately. ACC who have a regular page in MICRO MART has given us good copy over the last few editions. They made so many mistakes they have had to correct every comment they have made about us. All publicity is good publicity.

My next task is to deliver a right rollicking to all those who have not made contribution to the magazine. This club being National rather than local has only one regular method of intercourse - the magazine. It is essential that we put out a good fat informative publication. Only you out there can supply the material for this purpose. The four of us Gordon, David, John and I are putting vast amounts of our time into organisation. I personally have no experience of running a small business, which is what we are doing. I am enjoying the experience but it is taking up all my spare time. The point is, you cannot expect us to write the magazine as well as run the club. Gordon, particularly, has more than enough to do just editing our little tome.

It was nice to see a good sprinkling of MSDOS material in the last issue. This must be the only way to secure the distant future for us. I have no intention of going MSDOS myself, but I think it fairly obvious that eventually we will all have to travel that road. It would therefore be silly to lose those who are changing over now. So please all you MSDOS owners pen to paper NOW. One other comment, we have discovered that it is a good idea to have a hard copy as well as the disk. If Gordon does have difficulty with a disk and gets some garbage a hard copy enables him to check the accuracy without delay. Anyone wanting to submit three inch Amstrad disks please send them to John, who can convert them to Five inch. He has both sizes of drive on his Amstrad, and can supply Gordon with a readable disk for his model 4.

In my piece on page 51 of vol 9 issue 1 I said we had a CP/M library list. We do not. God knows why nobody picked me up on that. What we do have is Dave Holmans excellent tutorials, reprinted and costing 2.00 pounds each. I am almost able to supply an MSDOS library list but at present it is only eight pages compared with Leighton's twenty four pages. I do feel it will grow frantically over the next few months. 2.00 pounds for this might be considered a little

extravagant on the purchasers part, for the moment. I would not like anyone to be dissapointed. We also have an Index for the NAYGUG Newsletter, which David has sweated blood on and brought up to date - cost 2.00 pounds.

At the present membership level we really cannot afford to put out a monthly magazine of more than 36 pages. We are hoping to attract some advertising from various sources, which hopefully will allow us more latitude. The situation is not too critical for the moment because we do have some reserves and we do get some income from the stock of back magazines and the various sheets sheets we sell. Incidentally anyone wishing to help club finances can do so easily by buying back issues, buying advertising or just sending me a cheque, ever hopeful am I. As far as postage is concerned, the most economical cost effective magazine size is about 100 pages. This costs 24p postage, but we definitely cannot afford this on the present membership size and subscription level. As some of you may know the excellent NORTHERN BYTES is put out at irregular intervals when a full edition is available and the readership is charged per issue. A good idea perhaps to bear in mind, but only really practical for credit card holders. Another possibility might be to publish bi-monthly and aim to produce a 100 page magazine. We are pushing it to afford that too. I understand that our "sister" magazine put out by QUANTA is just not published when funds are low. I am doubtful that the members are told the real reason for these ommissions.

I want us to put out a good regular monthly magazine. One of Gordon's strong points is that when he says the magazine goes to bed on the 20th of the month, then come what may that is what happens. I could not manage that degree of determination. We need more members - a hundred would be great and/or we need at least three advertisers willing to spend 100.00 pounds a year each. If anyone knows of any firm wanting to support us and sell their wares to us please let me know. Please everyone, try to introduce more members.

We shall shortly be taking over Peter Hall's CP/M library. It has not been decided yet who will be the Custodian, but we will endeavour to produce a Library list as soon as possible.

MSDOS STARTER DISK

MSDOS starter Utilities disk. Most are in .ARC form & need to be un-arced with ARCE123 or run PKX33A12 to get FASTARCs and their DOCS. If no docs try

1. execute the program without a command tail this often displays a help file. If it does'nt - try F1 or entering ? or h
2. execute with a ? or /? or /h tail

All should work on IBMs & compatibles with DOS 3.1 / 3.2 and probably 2.11. I use almost all of them frequently, if not daily, but neither the Group nor the authors offer any guarantees. Most are fully public domain but if a program is 'shareware' (i.e. the author asks for money if you use the program regularly) do register. It usually gets you the latest version and a clear conscience.

ARCE123 COM quick unarc. Syntax ARCE123 arcfilename
CED ARC command line editor. Re-use last 25 commands
COVER ARC print directory to put in disk cover
DBEDIT ARC use / edit previous commands in dBase II or III (not needed for III +)
DD14 ARC see 2 directories at once & copy/delete/move etc files
DELBUT COM delete everything BUT filename(s)
FILEMGR ARC Dos commands shell - can be memory resident
FREE COM Free space on disk
GLOBAL COM apply command to all directories. eg Syntax GLOBAL del *.bak
KEY-FAKE ARC stack keystrokes for program to use unattended
KNEW ARC back up changed files only
LF COM disable extra line feed send by DOS
LIST60H ARC super file lister with find
MENU ARC Menu for Basic - lists all .BAS files for you to chose from
NERN3 ARC memory resident printer controls. Several printers & info on modifying for any others
NOPRINT COM sent printer output to screen
NSWPPC ARC Dave Rand's NSWP for the PC at last. Zoom into .ARCs too
PCWINDOW ARC memoory resident notepad, stopwatch & alarm
PKX33A12 COM Fastarc & fastun-arc. Run this program to unpack them & the docs

RAMDISK ARC Variable size ramdisk from the command line
SCROLLK COM makes the scrollk key do what you'd expect. Clashes with some programs tho'
SD COM Super Directory. SD /w to send to printer. Warning, with DOS 3 it hangs if there is only one file to list.
SDIR50 ARC 2 colun sorted directory listing with DOS commands
SDL ARC sorted directory + all subdirectories
SEARCH ARC Path replacement which recognises OVL files
SETPRINT ARC send control codes and text to printer
TSRCOM ARC MARK & RELEASE memory resident programs. RAMFREE to see how much is free, EATRAM to simulate limited memory systems
UNERASE ARC restore deleted files. Also back up and restore DIR & FAT - like Norton/Mace/PCTOOLS
UNSQ COM Unsqueeze . needed for some DOCs on here. Will also unsqueeze CPM squeezed files
VPRINT ARC direct printer output to file

.ARC files and de-ARCing software

If you look at the MS DOS software library lists you will see that almost all the files have the extension .ARC. Recent converts from CPM or TandyDOS may be unfamiliar with .ARC files but they are definitely one of the pluses of the MS DOS world.

.ARC files are ARChive files. Usually they are made up of of an executable program and its associated .DOC or README file. The archive format is a convenient way to compress files and combine them into one for efficient disk storage and transfer. The nearest CPM equivalents are .LBR files and I don't remember anything at all comparable in NEWDOS or DOSPLUS. ARC files are even more efficient than LBR or squeezed ones. Several compression techniques are used and each file is compressed by whatever compression technique is most effictive for the type of file.

The obvious advantages of the .ARC system are economy and convenience. They take up a lot less disk space and,if they are being transferred via modem, a lot less telephone time and it is clearly more convenient to keep all files for a particular application together.

At the moment software in .ARC format has to be de-ARCed before it can be used. There are several public domain/ shareware utilities that do this and if you send for a disk from the MS DOS library you will find it includes one of them too. The most widely used are -:

ARC.COM or .EXE
FASTARC.COM OR EXE
PKARC AND PKXARC.COM
PKXARC33.COM or PKX35A35.EXE
ARCE.COM
ARCE123.COM

The last two will only unARC. The syntax is simply ARCE (or ARC123) filename (where filename is the .ARC file - no need for the ARC extension)

The others also let you make your own ARChives and maintain existing ones - yours or imported. Documentation is included, either as a separate file or generated when ARC.COM or PKXARCnn.COM/EXE are run. An on-line help summary will appear if you just invoke the program without a filename.

They all do essentially the same job - create, maintain and extract from ARChive files, and this includes letting you see what is in an .ARC file without unpacking it, and checking its integrity. ARC provides all its functions in a single .EXE file. (the .COM file unpacks itself when run, into the .EXE and .DOC files). It is the oldest and slowest. There is a rumour of a new version but I've not seen it here yet. FASTARC and the PK arcs are from another source, newer and much faster and the PKXARCs let you annotate the file lists in the .ARC. The latest PKARC also includes a program that lets you create your own .EXE files that unpack into executable programs and their documentation.

A recent and long-awaited arrival on the public domain scene has been an MS DOS version of Dave Rand's NSWP. It does not handle .LBR or squeezed files but does handle .ARC ones. The Z command Zooms an archive to its component parts and lets you view, print or copy them without un ARCing. It has certainly made dealing with library disks much easier. I'm expecting some more utilities for dealing with .ARC

files too, including a program that will let you run programs directly from the archive. If they come and they work they will be added to our MS DOS library too.

Ariela Taylor, 42 Davenham Ave., Northwood. HA6 3HQ

(Ariela has requested that anyone with a question/s about dBASE, to please send them to her well prior to the Swindon meeting please.)

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DDUTY AND SYS13/SYS.

DDUTY/CMD is a very useful program which allows three partitions in a 128K Model 4. I have used it regularly with Visicalc and 1.68 Lescript. You get two programs areas, plus a DOS command area. Utilities cannot used in this later area.

I have just realised that it can also be used with Dotwriter and Lescript. This must be 1.68 or 1.7 Lescript. Electric Webster still functions correctly too.

The next refinement is to load each of these three CMD files into SYS13/SYS and zap byte 7AH of SYS0/SYS FROM 00H TO FFH. This must be done on separate disks of course. SYS13/SYS will then automatically load into each program area.

I have two disks I use for Visicalc, one has Visicalc in SYS13/SYS the other has Lescript in SYS13/SYS. I can start off with Visicalc in both program partitions and then by switching disks can change one of those partitions to Lescript to print out the spread sheet. This enables me to do one months expenses in one partition while referring to the previous month in the second partition. I can then load Lescript to format the spread sheet to fit on my Employers

expense claim form. Lescript provides a very easy way of altering the Line feeds to fit the form.

One problem I have found is that if Lecript is loaded first, then the other partition will no longer load automatically. Sometimes this is useful, as when I wish to load lescript with the KSM file. SYS13/SYS can be loaded by typing SYS13 or by typing a "*". Typing "* &" loads lescript plus the KSM file. Dotwriter is much easier to use from a partition of DDUTY.

I have just made myself two new disks along the line of my Visicalc disk, with Dotwriter in one SYS13 and Lescript in the other. I learnt most of this from our Hon. Editor so thanks Gordon.

OPTICA.

(Only with TRS-DOS 6:2 upwards. Ed. **)

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NATTER from Phillip Marsden

After at least three years of membership, and several decisions to quit the group which I decided not to carry through, I have now put pen to paper (or finger to keyboard, whichever you prefer).

I keep reading the newsletter and occasionally come across some gems, some of which help me in computer spheres not connected with the Tandy/Genie. These help to keep me interested in the group, although I have not powered up the Genie for about two years now.

What has happened during that two years, one might ask ? I suppose that I have been in a situation similar to that experienced by other members, in that I had a computer that seemed to be outdated by the current offerings, which I wished to sell in order to get one of the new Super-Whizzo computers. No-one wants to buy at a price which would allow me to recoup some of the money spent on it, as they can buy

a Super-Whizzo themselves for the price of a second-hand Genie. (Mine cost 330 pounds in 1981 for the basic keyboard containing just 16k ram, with a lot more for the expansion ram, disk drive controller and printer interface, and disk drives. No doubt many other people are in the same boat). So what was I to do ?

My answer was to leave the Genie lying round in the loft whilst I flirted with other machines, these being in chronological order: a Texas 99/4a; a CP/M machine called an Iotec Iona; a Cortex, based on the TI 9995 processor. If I can be allowed to take up some of your magazine space, I will describe my experiences with these computers and compare them with the Genie.

The 99/4a was an experience to be learnt from, with several important lessons to be remembered. These are: do not believe any of the advertising until you have tried the machine for yourself, preferably by extended sessions at a dealers, or some friend who has already bought the machine. If the dealer won't let you try the machine, don't buy it, it is your money, not his.

The main points about the 99/4a that were misleading were the 16k memory and the 16-bit cpu that comes as standard. The memory (a lot in those days) was in fact screen memory which was accessed as a memory-mapped port and which was used as a store for programs. In order to run the programs, the instructions had to be fetched byte-by-byte (not words) into the scratchpad memory of 256 bytes ! It can be imagined how this slowed up the the computer. The 16-bit processor was 16 bits only for the 256-byte scratchpad area, as there was an external 16-to-8 bit data bus multiplexor built onto the outside of the processor. A sort of Intel 8088 in TTL logic !

Other points to be noted were the claims for easy hardware expandability and the software availability. Always watch for the catch ! In this case the expandability was easy if you wished to pay the price, which was high even bearing in mind the obvious quality of the parts, and if you got in first. The parts were no doubt available in the States at the time of advertising the machine, but I for one had to phone all round the U. K. in order to get the parts that I wanted. Compare this with the Tandy situation at the time, and you will no doubt recall that there were any number of third-party suppliers

selling add-ons, as well as Tandy and Genie selling the official expansion systems.

The software was mainly games, but there were other programming languages available. These were an extended version of the built-in Basic (very powerful), and UCSD Pascal. The Basic was priced at about 80 pounds, and the Pascal weighed in at around 450 pounds. Later on there was Logo, with TI Forth being thrown in for nothing when TI pulled out of the home computer market. There was even a small-C written, but this was left to an amateur (very talented). The software was undoubtedly very good quality, and I never crashed the system or locked it up on TI software. The application modules were mainly menu-driven which I thought was a nice idea for people beginning on the system, as this allowed fewer mistakes. The amount of software in comparison with the Tandy was small, although the adverts for the Texas claimed several hundreds of packages, but again mainly available in the States. I believe that the catalogue that I used most (Molimerx) probably had more programs than the whole of the Texas fraternity had access to, and this was not taking into account other excellent sources of software for the Tandy.

The machine had some very nice points, despite the general design being a botch (due it is said, to internal politics, in order to prevent the original design from being faster than the Texas mini-computers of the day) and the quality was high - much higher than the Genie. I never had any trouble with the machine locking up due to bad connections. The machine was built in a modular fashion, with the peripheral software interface being set out by TI, so that the main computer software did not need to be designed to take account of any future peripherals - they simply did their own thing, as long as they followed the specification laid down for talking to the rest of the system. The hardware was also modular, being paged in and out of memory as required. All peripheral memory was mapped between 4000-5FFFH, sideways rom years before the BBC! Modern machines could perhaps benefit from modular hardware design just as most software is now being designed in a modular fashion.

The best thing about the 99/4a was the full 16-bit processor, the 9900. This is a very powerful processor that was shackled by the computer into which it was placed. It would be hard to find a nicer

processor to work with, as 90% of the instructions work on any of the sixteen 16-bit registers. Imagine a Z80 with fifteen index registers, not two; sixteen 16-bit accumulators; auto-incrementing registers as counters; multiply and divide. All on a processor first sold in 1976. I find when working on the Z80 that I am having to do much more work to produce the same results as with the 9900. It is not very productive when the same few registers have to be used for all the common processes, and I find it a bind to save a register in order to use it for the next instruction, especially when it has just returned a result to be used in the next process. From the above, it can be seen that I like working with the 9900, and although other processors such as the 68000 have built on the experience of the 9900, and have in places advanced on the facilities, the 9900 is still a very nice chip on which to work.

The next computer that I bought was the Iotec Iona, a failed business machine. This was bought secondhand for a very low price, the Teac 55F disk drives costing more than the computer. The computer was built as a business machine running under CP/M, and had the full 64k ram addressable by the Z80, a monitor in ROM, disk controllers to handle 5" & 8" drives, a screen which is 80 x 24, in full colour, being able to display 8 true colours and 8 pseudo-colours at the same time. It uses the ubiquitous 6845 crt controller as in the BBC, IBM etc. The reason why it gives more colours in 80-column mode than the BBC (black and white only) is simply that the 6845 has been used in a different way, and still uses only 4k for the screen memory. A very versatile chip the 6845. With all these powerful features, how did it fail, I hear you ask? The reasons, in my mind, are fairly simple. First, like a lot more computer manufacturers round the early 80's, it was thought that they only had to turn out a computer which ran under CP/M and they could charge the earth, to make a killing out of the gullible businessman trying to find a way to make his business more efficient. Secondly, Big Blue was starting out with the PC, and the businessman went for a machine with big-name backing, rather than one of the many unknown firms. A pity this, as some of the small firms were selling good pieces of equipment. More than the Iotec company went out of business around the same time. While Tandy was not forced out of business by Big Blue and its PC, it must have suffered a big set-back in sales of its machines.

What can I say about a CP/M computer? Apart from the afore-mentioned hardware, it acts like most other CP/M computers. (Boring?). It is very reliable, doesn't throw a thrombie every five minutes, unlike the Genie.

While the Iotec has not got graphics in the sense that the Atari and the IBM have, it still manages to produce a good display due to the 80-column format. I like the 80-column display best, but the 64-column Tandy is quite reasonable, and neither strain my eyes. Both are infinitely preferable to the 32-column 99/4a in standard mode, although there is a 40-column mode in text display because both these screens make the computer look like a toy, even though the working parts are anything but toy-like.

Because the Iotec runs under CP/M, I have access to many pieces of software, as the adverts say. What the adverts miss out is that most of those packages are in the public domain, and whilst I am not going to deride the many people who have donated programs, many of them are not of a professional standard. The professional programs have been, and in some cases still are, very expensive. Most of the people that I know cannot afford these very expensive programs, and so there are many more pirate versions of these programs than there are legal copies. I am not making a case in favour of piracy, but what do the authors of some of the programs expect ? Surely by now the big companies have made back their costs on the package, and have made profits many times over ? Take for example Wordstar. After about six years of selling this package at 300 pounds plus, the owners cannot say that every package they sell costs 250 pounds to produce with something like 20%+ profits ? If companies like this reduced their prices, they would find that they would sell a lot more copies.

I have several languages on the Iotec, three versions of the C programming language; a public domain version, a commercial version of that small-C, and a full Kernighan & Ritchie standard called Mix-C, that Leon Heller recommended to me, and I find it very good. It does not go as fast as Turbo-Pascal in either the compilation or run-time, but it is a very full version and is well worth the 60 pounds for the full package.

I also have Forth and Basic, but the prize of the lot is the UCSD

p-system. I have for years wanted a good version of this, as I first came across the p-System on the Texas. I know that the p-System was produced for the Model 1, but by the time I found out about it, I was too late, as the makers had withdrawn it, saying that there was not enough memory on the Model 1 to write decent-sized programs. They should have tried writing it for the Texas with its convoluted memory map ! At least the Tandy has a straight memory map from the screen memory upwards.

I find the Pascal language much easier to use than the other languages that I have tried (although Cobol is said to be easier, but I haven't got into that very much), and I find that the UCSD implementation is very powerful because of the added features such as string-handling and units. It is possible to interface to assembly language in the same way as with Basic and C, so any bit-twiddling can be achieved in that way, should the need arise. The p-System Pascal is not as fast as Turbo-Pascal, at least not on the machines that I have used it on, but it is more powerful in that it is able to run programs that are larger than can fit in memory at any one time. For example, it would be possible to write and run a program of 300k in a machine that only has 64k memory ! This is due to the segmentation of the system, which moves program segments in and out of the memory as required. This of course is slow on a floppy disk system, but on a machine with fast hard drives, or ram-disk, then the system can really fly. This system of swapping segments is normal on mini-computers, which is where the p-System originated. I look forward to getting a version to run on a ram-disk.

I bought the package from the new owners, Pecan, who now have an office in Bristol, but I bought the package direct from the States. Unfortunately, the firm knows more about Pascal than they know about CP/M, and my system arrived on 8" disks which were formatted for the DEC RT-11 operating system, even though I was told that they would run on the CP/M system. To cut a very long story short, without any help from the supplier, but a great deal of help from the p-System user's group, I now have a working copy. Should any member of the group wish to install the p-System on their CP/M Tandy's, I would be willing to offer advice on the installation.

The third computer that I bought was the Powertran Cortex, based

on another TI processor, the 9995. This was bought as a kit, which was quite enjoyable to build, and results in a powerful computer. The 9995 is a derivative of the 9900, but has an 8-bit external data bus, but despite this, Texas claim that it has a higher throughput than the original 9900. It has been said by "informed" sources that it will keep pace with the 68000 when comparisons are made on operations that are specific to neither processor. It would seem that nothing responds faster to interupts than the 9900 series. It can respond to interupt after interupt with equal ease, until system memory runs out, whereas the Z80 runs out of duplicate registers after the first interupt, and it then has to resort to stacking its registers in the normal way like any other processor.

The flaw in the design of the Cortex is again the 40-column screen, as it uses the same VDP chip as the 4a. The machine is otherwise superb, with an extremely fast Basic, much faster than BBC basic, which is no slouch ! A built-in monitor and assembler allow the use of machine-code, which can be easily called from Basic. Using the monitor from the system prompt does not affect any Basic program loaded, which sits there until you return from monitor. The disk interface is through a DMA chip (not often seen on small computers), allowing fast access to the disk. Like the Tandy under LDOS, the machine is configurable to use a variety of drive sizes, but unlike the Tandy, (I do not think that I can agree with this bit ? Ed. **) it can boot off any size or type.

The point on which the Cortex does not match up to the Tandy is the amount of software available. The Cortex never really took off in the market place, and so not a lot of software got written for it, whereas there is a large amount of software for the Tandy.

There is a thriving user group, with several brilliant members, who have implemented RAM and ROM disks in the 1 Megabyte memory space available. Graphic video mixing cards have been made with the best graphics I have seen on a computer outside a cad-cam package. I use an 80-column terminal on this computer, which makes it look like a much more professional-looking package, but there are no such things as graphics. Not a computer for business, because of the lack of software, but nice to hack about on.

Now onto purely Tandy things. I have been writing this article with Scripsit/lc, the only word-processor I have for the Tandy. No doubt this has all happened before, but I found that I could not save to disk reliably. Sometimes the computer would hang, sometimes it would reboot. This happened when I was using my standard set-up of 40-track, single-side and single-density in drive 0, with 80-track, two-side and double-density in drive 1. Lower-case drivers were enabled, as were the keyboard filters. I run in LDOS. I tried various combinations of disk types, to no avail, until I went back to the original LDOS distribution disk. This is 35-track, single-side, single-density, and when I tried this, I found that it worked OK. Why should this be ? I notice that although the Scripsit and the text file are on drive 1, the program first accesses drive 0 before drive 1, even though it knows that the text file is on drive 1. If anyone knows the answer to this curiosity, I would like to hear it.

I would like to mention one fix that I have applied to my Genie since resurrecting it, and that is the keyboard. I found several years ago that the original connector was very fragile, especially when being moved around during memory modifications, and I soldered a ribbon cable to the cpu board, placing the other end (suitably soldered) into the original socket. When I re-started using the Genie this arrangement was found to be unsatisfactory, causing keystrokes to be missed due to intermittent contact, usually at the wrong moment. I decided to make a proper connection by obtaining some connectors normally used on industrial electronic equipment. The same type of connectors are used on the BBC disk drive connectors. By soldering these connectors onto both boards, crimping on the appropriate connectors to a piece of ribbon cable, I am now able to sit several feet away from the monitor, instead of on top of it. The ribbon cable is about 4' 6" long, and I have not yet had any transmission problems with it.

I intend to continue this philosophy to the rest of the connections, between the expansion edge and the disk drive controller. I will solder a ribbon cable to the edge connector and fetch it to an Elektor backplane containing several DIN 41612 64-way plugs. I can then plug into these ribbon cables holding the 41612 socket (they can be bought for crimping onto ribbon cables) , and these will be taken to the expansion boards. I have measured up the Genie case, and I calculate that now that I have removed the tape drive, I can fit the

pcb from my Gnomic disk drive controller into the space left vacant. I will then have to lengthen the ribbon cables to the disk drives, but this should present no problems for transmission (have you ever seen the length of the ribbon cables inside a mini-computer ?).

I believe that I could also fit the expansion card currently being developed by Terence Harris and Ian Linehan above the disk drive controller card, thus keeping more of the machine together. I hope that the 1 Meg expansion card proves a viable proposition, because it does sound quite exciting, especially as the software has been developed for LDOS. The only problem then will be to beef up the power supply to cope with the extra current needed. This will probably need a toroidal transformer, but I may be able to pick up a switch-mode psu cheap these days, and this might fit into the original psu enclosure. If not, perhaps I can find another enclosure to put things in. If I do, I will report back on my findings.

I have another query for those more experienced than myself in Model 1/LDOS affairs. I have booted from an 80-track, single-sided disk, but cannot do the same from a double-sided disk. I have followed the instructions given by Ken Arntsen in his letter of June 1985, but no joy as yet. I have found that I cannot do it with any double-sided drives. Any suggestions ?

I have noticed, using a CP/M disk utility, that the double-sided, double-density disk contains information only on the first side of the disk on track 0. Strange !

I had better finish the letter, or it will never even get into the post to have a chance of being published. Hope some of it will get past the editor.

6, Kennerleigh Grove, Leeds 15. LS15 8NQ

So it all got passed the Editor. Phillip it is a long time since I worked on Model I LDOS, but try going to BOOT/SYS after reading the Technical Manual and ZAP one of the bytes in the DCT so that the system knows that you have double sided drives, could be DCT+4 and bit 5 has to be 1. Ed. **

THE LAWS OF COMPUTING

Hardware

1. The Maintenance engineer will never have seen a model quit like yours.
2. Any spares required will have just been discontinued and are no longer in stock.
3. Any V.D.U. from the cheapest to the most expensive, will protect a ten pence fuse by blowing first.

Software

1. If anything, can go wrong with a system, It will generally do so when the system becomes most indispensable.
2. Any given program, when running will be obsolete.
3. If a program is useful, it will have to be changed.
4. Any given program, will expand to fill all available memory.
5. If a program is useless, it will have to be documented.
6. Make it possible for programmers to write programs in intelligible English, and you will find that Programmers can not write intelligible English.
7. Constants aren't, Variables don't !
8. As far as we know, our computer has never had an "UNDETECTED ERROR"
9. If Builders were to build buildings the way that programmers write programs then the first woodpecker to come along would destroy civilization.

Any more comments or quotes along these lines will be gratefully accepted.

P. Knaggs, 12, Seymour Road, Chippenham, Wiltshire. SN15 3NH.
(All replies direct to Peter please. Ed. **)

XLR8 - In Model 3 Mode

Further work with the XLR8 has confirmed the problem that John Kilpatrick highlighted in the May/June issue of Natgug, that you cannot boot the model 4 in model 3 mode once the XLR8 board is installed. To those who never use the model 3 mode this is not a problem, everything in model 4 mode appears to work fine. I have one or two programs which I occasionally use in model 3 mode, further to that, I would like to know why in does not work.

Laurie Shields provided me with a clue why the machine may not boot in model 3 mode. The code in the boot ROM for loading the model 3 image utilises the 2 MHz clock for its disc access timing, and, as I mentioned last time, the XLR8 board has its own clock and ignores the model 4s ability to switch between 2 and 4 MHz. Even at the slowest speed the XLR8 is still much to fast for the timing necessary for the ROM to read the modela/iii off the disc. The ROM is a slow device, but that seems to be quiet happy at the slow XLR8 speed.

To provide a ROM solution would require a significant amount of work in dissassembling and rewriting the boot software to remove this disc i/o dependence. Blowing the resultant new software into an EPROM is easier, but the overall effort to carry out this task requires more time than I have available.

An easier solution, and much quicker to implement would be to load the modela/iii while running in model 4 mode. A little investigation is required to see how the boot ROM carries out this task to ensure a clean transition to model 3 mode.

Without going into to much detail, on boot, the memory management ensures the boot ROM is switched into the bottom 4k of memory, therefore the cpu will start processing instructions from location 0000H in the boot ROM. The boot ROM will then carry out the initial housekeeping routines, i.e. setup the memory into the correct configuration, setup the vdu, set the clock to 4 MHz etc, and then the keyboard is checked for any (predefined) input, in our case key F3 or 3. Then the P,L and N keys are checked to see if a disc swap is necessary after the load, or whether modela/iii should be loaded

regardless whether it is resident or not, or whether modela/iii should not be loaded following a reset. For our purpose it will need to be loaded. ROM will then move a number of parameters, including linkage for DOS i/o, display, keyboard and a work area into RAM at 4000H-4100H. The clock speed is then reduced to 2 MHz (probably to cope with TRSDOS 1.3, all other operating systems seem to be able to work at the higher speed). The actual loader routine is then moved to 4000H-4100H and control is transfered to the loader, which in turn loads modela/iii and transfers control to modela/iii which boots the model 3 DOS.

Concluding from the previous paragraph, to get modela/iii into position from model 4 mode, we would need to do the following:

1. Get a copy of modela/iii which normally loads at 0000H-3800H into memory to load well above the normal model 4 DOS. I used 7000H-0A800H. This may provide some users with a problem. To load modela/iii into high memory a utility which can load a program with an offset will be needed. I used TASMON. You will get an end of file encountered error (22H), it is of no consequence, you will still have a good load in memory. Save modela/iii under another name from this location.

2. Write a small assembler routine which will move modela/iii from 7000H to 0000H.

3. Find out how to set the model 4 to model 3 mode and tac it to the end of the assembler routine and then pass control to 3015H which will initialise the modela/iii and boot model 3 from drive 0. This little routine is added to the end or beginning of the modela/iii at its high memory location. I loaded the routine at 0B100H, and save the whole lot 7000H-0B112H with a transfer address to 0B100H, (start of the move routine). An hex dump of the routine which will move modela/iii down to low memory and switch to model 3 mode is provided at the end.

The only other problem that remains is that the model 3 DOS must be resident in drive 0 when invoking the new modela/iii. With LS-DOS this is not a problem simply change the system drive to drive 1 and put the model 3 DOS in what is normally drive 0 and invoke the new modela/iii.

One small point, if you have bumped up the speed by whatever means, invoking the new modela/iii will leave the XLR8 running at the previous speed. If you are running at maximum speed you will run into a problem because FIXALL is not there any more, therefore before changing modes reduce the speed to at least one memory wait state from maximum and unhook FIXALL. LDOS, DOSPLUS, NEWDOS80 and MULTIDOS appear to be happy at this speed, however, TRSDOS 1.3 is not, even at the slowest speed I have doubt about its operational integrity.

Please note there is still a problem trying to get model 3 basic to run, it appears to load ok, but as soon as you try to use it you get a syntax error and you have to re-boot to get out. This happens with both LDOS and NEWDOS. It is an area for further investigation.

Below is the assembler listing of move and switch to model 3 mode

```
;
;TRANSFER MODELA/III TO LOW MEMORY
;
            ORG     0B100H          ;start of move routine
GETBOOT     DI                      ;stop interupts
            LD      HL,7000H        ;start of modela/iii
            LD      DE,0000H        ;where to put it
            LD      BC,4100H        ;number of bytes to move
            LDIR                    ;move
            EI                      ;enable interupts
            XOR     A               ;clear    A    reg
      OUT   (84H),A         ;switch to model3 mode
            JP      3015H
            END     GETBOOT
```

This is a hex dump of the above.

```
F3 21 00 70 11 00 00 01 00 41 FD B0 FB AF D3 84 C3 15 30
```

John Coyne, (04203) 7165. (for address, see below)

DUMPER - A memory dump & load utility for the XLR8

During my recent discussions with Stuart Ranson, while we were comparing notes on the XLR8, he drew my attention to one of the shortcomings of the XLR8, or for that matter any of the other memory expansion boards available for the model 4. A major selling point of the additional memory is that the operating system can be loaded into this additional memory, freeing the system disc, and providing further improvement to performance. The disadvantage is that all the system files, and any other utilities need to be loaded everytime the system is started up, and that can take some time, several minutes in most cases. As a hard disc user I keep my system on the hard disc and therefore never had a need to carry out a mass copy during startup. I have not been portable since installing the XLR8 therefore this particular problem never occurred to me. However, I will be going portable shortly, (day out at Blandford) and I would like show off some of the XLR8 good points. Getting the system up and running quickly is important, people get bored very quickly waiting for long disc dumps to be completed, so I set myself the task of developing Dumper. The specification to which I developed dumper were:

> For a dump to disc, Dumper must be able to find, without additional parameters on the command line, a previously created ramdisc and store it into one file, regardless of size (up to 10 banks). Included in the file should be the disc drive parameters so that after a load the drive can be re-created.
>
> For a load from disc, Dumper must be able to load the previously save ramdisc, exactly as it was when saved, and following the load install the driver and re-created the drive without user intervention.

I have developed Dumper to run with the XLR8 under LSDOS 6.3, it will not run with the Z80 CPU. For those who are interested in performance, with the XLR8 running at one wait state off the maximum, (I still have not installed 150ns ram chips yet):

> To create an 8 bank ramdisc and to load all sys files a backup from a normal floppy (approximately 64k bytes) takes 1min 20sec.

To create and load a 252k ramdisc, with Dumper, including contents, takes 35sec.

The load of the file to disc is slow, about 5min to create that 252k file, which is still considerably faster that trying to use backup for the same size file, however, once created its always available. Any number of different configurations can be save and subsequently called up by filename.

Dumper only expects one ramdisc to be resident at a time, therefore, if a ramdisc is resident when trying to load, Dumper will abort. Dumper will happily run whilst PRONTO or DDUTY or any other utility using low memory is present, providing there is enough low memory space to place the driver, and there is no bank conflict.

I am prepared to make Dumper available to NATGUG users through the library when I get the instructions tidied up. For immediate requirements give me a call.

John Coyne, 24 York Close, Whitehill, Bordon, Hants. GU35 9PX
Tele:- (04203) 7165

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LOCAL CLUB NEWS

BOURNEMOUTH

Meets First and Third WEDNESDAY at Kinson Community Centre at: 7.30pm. Ring Carl Rabe on (0202) 730617

CHELMSFORD

Meets first WEDNESDAY of each month at 7.30pm. Contact: Richard Creak, Woodcote, 59D Little Baddow Road, Danbury, Chelmsford, CM3 4NT (0245) 413725

MILTON KEYNES

Meets alternate Sundays, October to March. Contact Brian Pain on (0908) 564271

NORTH EAST LONDON

N.E.L.80; 77 Old Church Road, Chingford, LONDON. E4 6ST. Meets first Sunday every month.

SUDBURY

Meets second Wednesday at:- 3a Gainsborough Street. Contact: John Kilpatrick on 0787 79504.

BLANDFORD

What a pity if you missed it.

SWINDON WEEKEND

The next meeting is scheduled for October 16th-18th. See Page. 23 of Volume 9, Issue 2.

If your club is not mentioned above then its your fault, not ours ! For your FREE advert, write with details to:- Gordon Collins, Editor.

NATGUG NEWS

Volume 9, Issue 4 October 1987



OFFICIAL JOURNAL OF THE

National Amstrad, Tandy & General User Group

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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OBITUARY

Very sadly I have to report that John Bedford, of Sussex, died suddenly on July 26th. John was a very long serving and much respected member of NATGUG, and I for one am very grateful that Peter Hall was able to attend the Service.
..... DW.!

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(It's Toe-Tectors time again this month)

Secretary's Report (formal this month !)

Six months on .....

"The time has come, the Walrus said, to talk of many things..." Well, not too many, in fact only one - albeit a major one - the future prospects for NATGUG. You will be reading this approximately six months after the AGM and the change of Officers and I have finally conceded to my colleagues who insist that you all be told just how we, as a User Group, stand.

In March we all felt that the Group was on a downward slide, but none of us realised just how steep that slide was. At that time we had - probably quite justifiably - several 'complimentary' memberships and

we found that once these were dis-counted, we had a total paid up membership of 120. Ever felt like pressing the Reset button ? You don't need access to financial reports to instantly recognise that that level of subscribers cannot be viable ! We had three IMMEDIATE choices - double the subscription charge, at least double the membership, or quit.

None of us felt inclined to follow either the first or the third option and so we set about increasing membership - although we initially did the opposite in that we scrapped all the complimentary issues ! (In view of services rendered, we were pleased to confer just two Honarary Life Memberships, to Leon Heller and to Brian Pain).

Several free mentions in PCW and Micro-Mart brought in sufficient inquiries to establish that not only were our potential members out there, but also that they needed the help and guidance that we are renowned for. If only we and they could get together .....

The sterling efforts of Roger in contacting all known past members brought several back to us; John has spent hours in building up his database and giving out help and assistance, and Gordon has gone to the lengths of providing a mains supply in his mobile workshop so that he can attend to correspondence during his lunch breaks. Gordon has also established a very good relationship with Tandy which should prove to be of mutual advantage. More on the extraordinary efforts of these three later.

Under the previous Editorship of Geoff Smith, our magazine improved beyond all recognition; his successor, Gordon Collins, has far more than maintained Geoff's high standards. We are also fortunate that our printer, John Bodsworth, is a very keen member of NATGUG and we must thank him for the new covers and for our new information and membership application forms.

Anyway, as a result of the efforts and actions outlined above, our membership now (12th September) stands at 184. Still periously low BUT OVER 50% up on the April figure ! Were time on our side then we would have no worries - but time is rarely on anyone's side. Molimerx has gone, Northern Bytes has gone, the Genie has gone, August 80 Micro did not appear, and our traditional Z80 background is fast disappearing; we owe thanks to those members who forced us, two years ago, to embrace (reluctantly then) the new MS-DOS machines. Now, although we will never forget nor desert our origins, our future lies with these exciting (?) new machines. Daily I am receiving calls for help or advice, and I must confess that there is a new Model 3000 sat on my desk at work which I hardly ever switch on because I can't

remember which way the slash should go ! And I know that I am not alone, because Tony Evetts had the most attentive audience that I've ever witnessed when he gave his talk on Introduction to MS-DOS at the Blandford meeting (he is repeating it at Swindon, on the Friday night). Sorry, I digress. I was stating that in terms of expertise, then NATGUG has a great future, and the enthusiasm of its Officers will carry it far.

That last phrase worries me. I pointed out earlier the selfless efforts made by Gordon, John, and Roger; we are very, very heavily dependent on volunteers. Nothing wrong with that in itself (it sure keeps costs down, and we certainly couldn't afford paid officials anyway) but now is the time to recognise that volunteers do eventually become stale and jaded. For goodness sake, don't anyone misunderstand me - we certainly don't have that problem, now. But we could have later on and for that very reason I intend to table a motion at our next AGM that we limit volunteer service to a maximum two-year period. I might be wrong, but I think that you'll all agree with that. The reason I mention it now is that from experience I expect it to be quite difficult to find fresh volunteers to replace the present incumbents ! Don't worry, there's another year to go yet (unless any resign) so another motion might be that those members who recruit the least should be forced to serve !

So to recap. Financially, NATGUG can survive through both 1987 and 1988, although the Committee will have to monthly appraise cash flow against the size of the Newsletter that we can output and limit its size accordingly. (But PLEASE keep those contributions coming in). More importantly, as a User Group there is a great future ahead if we prepare for it now, both in looking after the TRS-80 models and their clones, AND in helping out with understanding and exploring the MS-DOS world. We already have a substantial PD software library for MS-DOS, together with over 100 disks devoted to CP/M and around fifty for the Model 1 and Model 4 libraries. Like someone else, WE have the ability, the technology, and the willpower, we just need a little more of YOUR involvement, encouragement, and even criticism. (constructive only please). I sincerely hope that we will see you at the forthcoming Swindon weekend (we do tend to emphasise 'weekend', but you will be made just as welcome if you only pop in for an hour or so).

The only possible despondency that I could possibly have is the fear that our Members continue to ignore me and my fellow Officers - we keep asking for feedback, for ideas for the workshops, subjects for debate, etc. Please understand that WE can only give YOU what you give US !!!

Oh Dear !! .... Just to prove that you are not the only one that 'things' happen to, a most ghastly disk error caused three separate lines to be dropped from Roger's Treasurer's Notes last month. As a result it looks as though we were being very rude about Quanta - sorry Quanta, we didn't mean it !!

That's enough for now, I'm off to play Interlude ! (well, at least I can choose the options there !!!)

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

Late breaking news .... and ... I'm back

We are indebted to both Bob Dunn and Peter Hall for supplying the early copies of Northern Bytes that we requested. Bob tells us that, due to a mixup in the States, he has spare copies of 80-Micro for May, June, and July this year; his telephone number is 0847 66477. Regrettably Bob doesn't have a copy of the August issue which, as most of you will know, did not appear in the UK. Don't blame Smiths, apparently their importer's agent did not receive supplies - the only way that you'll get one now is by writing to the States. NATGUG is still negotiating for supplies, but - once again - your response to the suggestion has been cool to say the least ! As we would have to take at least fifty copies then unless there is an overwhelming change of attitude at Swindon, we shall have to drop the idea. September 80 Micro has been spotted on a shelves at W.H. Smiths. D.W.

Stuart Ranson is actively pursuing the possibility of bulk supplies of the Model 4 XLR8er speedup + memory board and needs to know just how many members would be interested. The problem is that the price will vary according to total demand - and the demand will vary according to price ! Can you let Stuart have three decisions : Would you be interested at ninety pounds, at one hundred and ten pounds, and at one hundred and fifty pounds. Stuart needs to know by the end of the Swindon meeting so if you are not attending, please give him a ring on 0264 51388. D.W. (** Can I have 90 one PLEASE, Stuart ? Ed. **)

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(**. Any program listing appearing in the Newsletter I should have in an ASCII format file. Should any member wish to save typing time, if you send me a formatted disk (please state clearly what format it is) togther with a label and return postage, I will try to tranfere the file over onto your disk. Ed. **)

EDITORIAL

First, a big welcome to all the new members who have joined NATGUG recently, also welcome back to all those who have rejoined NATGUG. I understand that this has been the best month since April for an increase in membership. But please all try harder, we do need more members. Thank you to all those who have encouraged people to join/rejoin.

PLEASE READ DAVID'S ABOVE ARTICLE AT LEAST TWICE. It is your group, at the AGM you will be asked to make decisions.

David's article is not a report to give rise to any pessimism whatsoever, just enthusiasm. The committee now feel that we have a very viable group, we just have to control our income against expenditure, which can be done by regulating the size of the monthly issues of the Newsletter. Given the above size of membership we can output, on average, a monthly Newsletter of 36 pages - number of articles received permitting. Having more members would mean we would not have to exercise this limit so rigidly, lots more members, no limit at all, or can we put up the Membership subscription ? Thousands of members and we could think of a smaller subscription. Your committee has also decided that they will cut down on the amount of space that they take up in the Newsletter, should YOUR article require that space. So come on ===>>>> squeeze <<<<=== us out.

David mentions that we - NATGUG - have to move to MS-DOS, I agree. Please also note that he says that we will NOT be moving away from the original Models. With regard to MS-DOS, it may be that I will get out of my depth with this DOS. Should the membership note any confusion creeping in on my part, please speak out early, we can then ask if anyone is willing, then or now, to take over this part of the editing. I do not want a service to members to not function correctly because of my non-experience with that particular item.

I can not comment here on where the "slash" should go.

Your committee has also recognized and discussed that we are all Model IV users, for that reason we try our best not to show a bias. We

hope we don't.

I can understand David's reason for tabling a motion of limiting volunteer service to two years, but I would not vote for it - maybe I could be persuaded to change my mind if I saw a flood of volunteers.

I have served on many committees, this is the only one where I have found it possible to discuss points without any rancour whatsoever with any member of the committee. We can happily agree to disagree, the majority takes the decision. This has allowed each one of us to get on quickly with our own job, and the membership has then received more output. Since March we have had to make some harsh decisions, we are all still the best of friends. I would be very happy to continue serving you, with them.

David has pleaded for feedback. As Editor I find that it is starting to come in, both phone calls (even at 7.30 a.m. from Zimbabwe - sorry that I had already gone out Barry) and letters. I hope it will both continue and grow. We can only judge what the Membership requires from feedback. If YOU find that NATGUG is not the right "colour" for YOU and YOU have not contacted us, how could YOU expect us to be able to paint it YOUR colour ?

If any member has any doubts about anything to do with NATGUG, please contact one of us, we are only to happy to spend the time to explain further. We are here to make you happy in computing.

SWINDON, Oct. 16th - 18th 1987. Any member requiring a subject or query dealt with at Swindon, please give David advance written notice, we then have time to ask someone to do the correct research and then appear with the answer. This also applies to contacting Ariela prior to Swindon with reference to her CP/M lecture. Please also note that we are trying a new idea at the next Swindon meeting, that is to have forums on various subjects. Bring all your questions along for each forum. This should also include all those members not able to attend, if this is you, I will undertake to bring your query up at the appropriate forum. Don't forget that I need YOU to send me your query in writing first !!!!! (You did note the provisional schedule on Page 3 of Volume 9, Issue 3, didn't you ?)

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I have often wished for a crystal ball, never more so than since taking on this office.

Roger is hoping soon, to be able to put on one corner of the label which gets stuck on the envelope bringing your Newsletter, a date, such as "06/87". This will advise YOU when YOUR membership subscription expires, if you do not agree with this date, Roger will be very happy to receive your written reason why. DO NOT THROW AWAY THE ENVELOPE WITHOUT FIRST CHECKING THIS DATE, NATGUG would not like to loose you because we had not given you the opportunity to renew your membership in time. We would hope that this move will stop the cry of "I did not know when I had paid up till". Roger tells me that he is willing and able to accept any amount of money at anytime on behalf of NATGUG.

UPDATE - TANDY We are still in contact with Tandy-UK. At the moment we are concerned mostly, with being able to bring in new members.

80 MICRO:- We are 99.9% certain that the August issue of this magazine has not been shipped from the States. We are not able to find out why.

UPDATE - WEST MIDLANDS WORKSHOP The Committee have received two replies - thank you to those two - both apologizing for not being able to attend if one was held next May '88. Your Committee will therefore be taking no further action on this item.

If any Member has any suggestions, such as alternate venues, or on any other theme, and would like your committee to follow it up, please get in touch with one of us.

Members have tried to phone me and have heard instead from my answer machine. I am rarely at home. I am a self-employed service engineer who travels around England. It is not very convenient to return calls should you leave a message on the answer machine, (have you tried to find a public call box that works ?) you will most likely receive a written reply. Members may find that they will have just as quick response if they send a written message.

Due to the size the Newsletter is now getting, I am obviously spending more and more time editing. Members who have used a word

processor or whatever to output an article and also have disk drives, have then sent me a hardcopy. Could I please ask those members to save on my time (I will then have more time to do other things for NATGUG), and send in articles on disk ? Your disk will be returned promptly. As other members have found, I am able to "read" most "standard" formats of disk. Although I use a Model IV, that includes 40T, D/D, D/S, MS-DOS, and have sent items out to members on that format. I will edit hardcopies, but time may dictate a delay on these getting into the Newsletter.

There have been minor suggestions about the Newsletter. I maybe using a D.M.P. to output part of this issue. If members have any views on the readability of this section, would they please let me know !

Hoping to see as many of you as possible at Swindon. If you are attending, we, the Committee, would ask if you will please wear a name badge (they are supplied, let's hope Christian names are included this time), this will enable us to put a face to a name, and to get to know each other quicker, thank you. Gordon Collins, Editor.

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Sexnotes (informal)

I have been taken to task, quite rightly, over my example of the DEFFN rounding routine published in Volume 9 issue 2. The value will only be "fixed" when printed out with PRINTUSING - sorry for any hassle, and grateful thanks to my proofreaders !

(** I also possibly had a hand in this, there is a typo, sorry. Please also see Herbert Butler's letter. Ed. **)

We are very saddened to hear, unofficially as yet but no doubt true, of the demise of both Northern Bytes and The Alternate Source. Both have been invaluable to TRS-80 users around the world and will be greatly missed. It is therefore particularly good that I can announce that I now have copies of Northern Bytes from Vol. 5 Issue 1 through to

Vol. 7 issue 5, and one day you will read that an index has been made available through Roger. That's probably my Boxing Day sorted out ..!

No doubt due to recent publicity, we are getting many phone calls from people with Tandy orientated problems; I get embarrassed because many calls just lately relate to either CoCo or Pocket Computers - who will take on these calls ? Give John a ring, please.

Have you noticed the subtle change in terminology lately ? TRS-80 has now become the generic term to embrace all Model 1,2,3,4,12, and 16 machines, whilst the name Tandy is used to denote the 1000,2000,3000,4000 range. Just where the CoCo and PC fit in, I'm not sure.

It is surprising just how many new owners of the older TRS-80 machines nearly all seem to have copies of Dotwriter; I'm quite pleased because it really is a good piece of kit, and it spawned Fontasy, which is even better. However, may I remind these Dotwriter fans of " Longview ", which was also produced by Prosoft. Quite inexpensive, Longview allows you to print out a Visicalc file SIDEWAYS ! Obviously if you only have eight or so columns then it really doesn't matter, but an 80 column printer can't cope with a 12-month Sales forecast for example. If you use VC, then check out Longview - it costs less than 30 dollars. Don't take a ripoff, there aren't many software houses left now and we desperately need the few that are left !

David Washford

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CP/M SOFTWARE LIBRARY

The principal source of CP/M PD software is, of course, the CPM USERS GROUP who publish a quite thick index to all the volumes available - there are in fact five or six different 'collections' such as SIG/M, UK, NL, FREESOFT, CUG, etc and the number of files must run into thousands. A 'volume' is a related collection of files and was originally (think of the origins) issued on 8" disk. In recent times

the CPMSDOSUG (they changed their name too !) have made their library available to members in a wide number of different 5.25" formats, although I personally never recognised any of those listed as being applicable to a TRS-80 ! Anyway, this is going to be a long enough story as it is without any history lessons, so lets get on with it. A very enterprising NATGUG member has built up a collection of some 239 volumes, on 5.25" disk, which now form the NATGUG CP/M library. However, before you rush off to get copies, you must understand the following points.

1. The disks that you send must be formatted by you FIRST, and must clearly show what format they are in. The most common CP/M used by TRS-80 owners is Montezuma 2.2 but there are an awful lot of other systems. We also need to know if your disk is 40 or 80 track, single or double sided. The reason that you format your blanks is to avoid any step-rate problems which might otherwise occur.

2. Now for the tricky part - if you have double-sided or 80 track drives you may skip this paragraph ! Still here ? Then you must have 40 track single sided drives, and the bad news is that we only supply 'volumes' and one volume ain't very likely to fit on one of your disks. Sorry, but you must format and forward TWO disks for each volume required - but the good news is that the librarian has agreed to charge the standard one pound as a volume copy fee rather than a disk copy fee.

3. If you didn't need to read paragraph 2 but did out of sheer cussedness, then this paragraph is to tell you that No, you won't get a reduction on YOUR copying fee !

The CP/M librarian for NATGUG is Peter Hall, 11 Gerrard Street, Brighton, BN1 4NN. (Neither Peter nor NATGUG issue an index for this library, partly due to its sheer size but mainly because anyone interested would be expected to be a member of CPMSDOSUG and would therefore have the full details anyway.)

For your reference, the volumes held by Peter are:-

SIG/M 60, 62-97, 110-113, 115-117, 119-121, 123-125, 127-150, 152-264
UK 1-32
NL 508-525
FREESOFT 1-4
CUG 1-8

If anyone has suitable copies of the missing volumes then they are cordially invited to send copies to Peter. The disks will be promptly returned.

David Washford.

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Sexnotes 2 (informal)

One of the greatest tips that I ever picked up for use with Newdos80 v2.0 was the ability to boot up and go into BASIC with 15 files open - as you know, as standard you had three buffers allocated although you could always demand more from the keyboard. However it isn't always convenient to go back to DOS. Below is a working example of how I use this ability; we have gone into BASIC with an auto menu program from which we have entered sales figures for some 400 customers. This information has been entered into a main customer file called KINGS/DAT, and from this I can call up all kinds of report showing customer activity or non-activity (or both), for all customers, or just those canvassed by sales reps. However, although the datafile contained a geographical location code (the LO$ in line 60005) it was exceedingly tedious to go through the file 12 times in order to obtain "area" reports. I therefore wrote BUILDLOC/BAS which automatically creates 12 data files (erasing previous files) and then copies the data to the appropriate file. Upon completion, another "for-next" program prints out the reports in town sequence.

```
10 'BUILDLOC/BAS
20 'TO ALLOCATE MAIN FILE TO AREA FILES
30 CLEAR10000:DEFINTA-Z:DIMLA$(12),LN$(12),LZ$(12),LF$(12),SA%(15),
     LZ%(12)
```

```
40 FORX=1TO11:READLA$(X),LN$(X),LZ$(X)
50 IFLEN(LN$(X))>8THENLN$(X)=LEFT$(LN$(X),8)
60 LF$(X)=LN$(X)+"/DAT:0"
70 NEXTX
75 LF$(12)="OTHERS/DAT:0":LZ$(12)="50"
78 CLS:FORX=1TO12:PRINTX;LA$(X),LN$(X),LZ$(X),LF$(X):NEXT
80 FORX=1TO12
81 LI$="CREATE "+LF$(X)+",LRL=176,REC="+LZ$(X)
82 PRINTLI$:CMD"LI$"
83 NEXT
90 BA=1:BD=1:CM=1:FM=1:HN=1:KM=1:MN=1:RK=1:TR=1:WY=1:MD=1:OT=1
100 OPEN "D",1,"KINGS/DAT","FF",176
102 OPEN "D",2,"BATH/DAT","FF",176
104 OPEN "D",3,"BRADFORD/DAT","FF",176
106 OPEN "D",4,"CORSHAM/DAT","FF",176
108 OPEN "D",5,"FROME/DAT","FF",176
110 OPEN "D",6,"HINTON/DAT","FF",176
112 OPEN "D",7,"KEYNSHAM/DAT","FF",176
114 OPEN "D",8,"MIDSOMER/DAT","FF",176
116 OPEN "D",9,"RADSTOCK/DAT","FF",176
118 OPEN "D",10,"TROWBRID/DAT","FF",176
120 OPEN "D",11,"WESTBURY/DAT","FF",176
122 OPEN "D",12,"MAINDEAL/DAT","FF",176
124 OPEN "D",13,"OTHERS/DAT","FF",176
200 FORX=1TO500
210 GET 1,X,60000
220 PRINT@630,X;
222 IFLEFT$(N$,8)="RESERVED"THEN500
225 X2=0:X3=0:X4=0
230 FORX2=1TO11
240 IFLA$(X2)=LO$THEN 250ELSE280
241 PRINTLN$@(X2),LO$
250 X3=X2:X2=11:GOTO300
280 NEXTX2
290 GOTO420
300 ONX3GOTO310,320,330,340,350,360,370,380,390,400,410,420
310 PUT 2,BA,60000:BA=BA+1:GOTO500
320 PUT 3,BD,60000:BD=BD+1:GOTO500
330 PUT 4,CM,60000:CM=CM+1:GOTO500
340 PUT 5,FM,60000:FM=FM+1:GOTO500
```

```
350 PUT 6,HN,60000:HN=HN+1:GOTO500
360 PUT 7,KM,60000:KM=KM+1:GOTO500
370 PUT 8,MN,60000:MN=MN+1:GOTO500
380 PUT 9,RK,60000:RK=RK+1:GOTO500
390 PUT 10,TR,60000:TR=TR+1:GOTO500
400 PUT 11,WY,60000:WY=WY+1:GOTO500
410 PUT 12,MD,60000:MD=MD+1:GOTO500
420 PUT 13,OT,60000:OT=OT+1:GOTO 500
500 NEXT X
510 OPEN"D",14,"BUILDLOC/DAT","FF",25
520 LZ%(1)=BA-1
521 LZ%(2)=BD-1
522 LZ%(3)=CM-1
523 LZ%(4)=FM-1
524 LZ%(5)=HN-1
525 LZ%(6)=KM-1
526 LZ%(7)=MN-1
527 LZ%(8)=RK-1
528 LZ%(9)=TR-1
529 LZ%(10)=WY-1
530 LZ%(11)=MD-1
531 LZ%(12)=OT-1
535 PUT 14,1,61000
910 CLOSE
950 RUN"SALEMENU/BAS"
59005 END
60000 A%,(16)P$,(24)N$,(20)A1$,(15)A2$,(14)PT$,(8)C$,(8)AM$,(2)PS$,PH!,
60005 SA%(0),SA%(1),SA%(2),SA%(3),SA%(4),SA%(5),SA%(6),SA%(7),SA%(8),
      SA%(9),SA%(10),SA%(11),SA%(12),SA%(13),(8)DC$,(8)DS$,00%,01%,
      02%,(2)LO$,RP%,NU%,(7)Z3$;
60099 'NEXT IGEL ALLOWS FOR AREA ENTRY COUNT FIGURES TO BE STORED
61000 LZ%(1),LZ%(2),LZ%(3),LZ%(4),LZ%(5),LZ%(6),LZ%(7),LZ%(8),LZ%(9),
      LZ%(10),LZ%(11),LZ%(12);
65000 SAVE"BUILDLOC/BAS"
```

The Zap to enable 15 file buffers is to change:
3E 03 32 to 3E nn 32 (nn being the number of buffers required, in hex)
The change is made to BASIC/CMD, on a Model 1 to sector 14, byte 46, and on a Model 3 to sector 14, byte 1F.

Hope this helps someone else as much as it helped me. The Zap came from Northern Bytes Volume 7, Number 4 - thank you Jack Decker and Bob Seaborn. (this issue contained 49 Newdos zaps).

David Washford

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PROfound Statements.

Many members have asked about bulk purchasing 80 Micro for distribution within the group, I don't think there is any need because I have been getting it direct from the States since it was first published in January 1980 & on the odd occasions when it has got lost, usually due to a torn wrapper, (which have now been replaced with a sealed plastic one), they have always replaced it.

The correct address to write to is:-

CW Communications/Peterborough, 80 MICRO, PO Box 981,
Farmingdale, NY 11737 U.S.A.

The best way to pay is by credit card, if you try to send a money order the banks charge you too much, the cost is $44.97 per year & takes up to six weeks to arrive for the first one, but is usually every month after that.

What am I missing ?, vol 9 issue 3. Some comments

CP/M & TRSDOS are quite seperate operating systems & neither has anything to do with the other, I don't know how Barry thought otherwise, also the XLER8er works perfectly without any programming knowledge whatever, but of course if you want to write machine language programs using the HD64180 extra functions, then that's another story.

The new set of ram chips that are required are ones that have a faster 'speed' than the ones Tandy (in their infinite wisdom) fit, you need 16, they are quite cheap, less than 20 pounds the lot if you know

where to buy & it's just a case of taking out the existing ones & putting in the new ones the same way round.

A good firm to order from is:-

EVASHAM MICROS 63 Bridge street, EVESHAM.
Worcs. WR11 4SF

They advertised on page 89 of the September issue of Amstrad Professional Computing, selling a set of 18 4164-15 Dram chips for the Amstrad PC1512, so you have two spare. Order them as a set for a PC1512 so as not to confuse them, I have used them so I know they work.

The extra ram will never enable a basic program to work in more than 32K because that is the way Basic is written.

However if you want to be able to write notes in Scripsit or better still Lescript whilst using Visicalc or Multiplan as your reference, then with Double Duty installed you can switch between partitions to look at the information in your spreadsheet & write about it in your wordprocessor or any other similar situation where you want to be able to look at two programs at the same time. A lot more can be done, but that is up to what anyone can think up.

The advantage of an external clock is that it keeps going when you switch off & is not affected by disk access, extremely useful for people who need to time & date stamp files.

The XLER8er works with all existing model 4 software that I have tried. The setting-up proceedure is very simple, most of it being 'sysgened' when you first set-up the disk, very simply explained in the manual, so that it is invoked automaticaly whenever the computer is switched on or reset.

Under TRSDOS it is possible to have 319K of ramdisk but under CP/M only 256K. The sort of things you can do are as I have done:- under TRSDOS I load PFS File & my Data file into ramdisk if I am spending more than a few minutes with PFS, then I don't have any further disk access, (which saves wear & tear), until I copy my data

file back at the end of the session & the speed at which one can go through a large set of data is very much faster than having to read it off the disk.

Under CP/M I load dBase & all my command files into ramdisk & get all the same speed advantages, it is especially useful when you are developing command files, because every time you want to try the latest change the file has to be written back to disk, as one is working in drive 'M' there are no alterations to the disk files until you are finished when you copy the files back to drive 'A' (don't you).

The extra speed & memory are quite independant of each other, it so happens that the HD64180 can directly address 512K of ram if it is fitted, (this is not possible at the moment) and the speed is adjustable according the way the system is set up.

Barry also asks in his other article about TRSDOS, BASIC, SCRIPSIT & EDTASM, well they are still being used by lots of people but the other programs he refers to are better, after all a working model T Ford will get you around but a Porsche is much more fun if you can afford it.

Model 4 Visicalc by the way will use up all your 128K of ram giving 90K of work space & with the XLER8er works considerably faster but does not use any more ram.

Reference John Coynes article about the model 4 in model 3 mode.

I have not tried an XLERer board in a model 4 only in a 4P, the 4 has the model 3 ROM installed & I don't know what would happen when trying to load a model III Dos. The snag with the 4P is that no matter how you set it up, the statement 'lost data error' comes up on the screen if you try to load the modela/III file.

The modification that Laurie Shields wrote onto the begining of the modela/III program enables Newdos 80 to be loaded but as soon as a basic program is run that accesses disk it crashes.

PRO John Kilpatrick

TREASURERS NOTES

On the the top right hand corner of the label on the envelope of this magazine you might have noticed a date. If you did award yourself 10 Brownie points. This is the expiry date of your NATGUG Membership Subscription. So please check the date, make sure you agree with it, and please write to me if it is wrong. All mail that goes out from me should in future carry this date. Chasing members for their subscriptions, which a large number of you think we should do, is very time consuming and expensive. We cannot afford it. We also cannot afford not to do it. It is a "CATCH 22" situation. Please remember that this is your club, it belongs to you and the more money it wastes in trying to survive the less there is to spend on you. To survive we must at all costs keep the membership up. The membership is rising quite nicely, we now stand at just over 180. We lost about 15 at the end of June who did not renew, but this has easily been off set by the gain made from new members and lapsed members rejoining. We shall shortly have the opportunity to gain new members at the PC show and our new involement with Tandy-UK. My target of 200 additional members by the end of the year should be made. Then the whole merry go round starts again. You will all renew in December, won't you ?

The list below is the total membership as of 7th September. If you know of anybody who should be on this list please help me to correct the situation. Oz House has a copy of this list and it is those, and only those on the list, who will receive the discount he offers to club members

ABRAHAMS R.	BANNISTER D.	BODSWORTH J.	CHAMBERS K.
ADLER D.	BARNETT S.	BOOTHROYD J.	CHRISTIE J.
ANDREWS D.	BARRATT P.	BRANDES E.	CLARKE D.
ARCHER I.	BARROW F.	BULLARD R.	COLE MARTIN
ARNOLD C.	BARTON J.	BURFORD C.	COLLCUTT M.
ARNTSEN K.	BAUST N.	BURNS J.	COLLINS G.
ARTHUR J.	BAZIN G.	BUTCHER J.	COWHIG W.
ASHFORD C.	BELL P. .	BUTLER C.	COYLE J.
ATKINS M.	BENNETT J.	BUTLER H.	COYNE JOHN
AUSTIN M.	BILLING J.	BUTTERS F.	CRAKER NOEL
BACON J.	BLACKBURNE A.	CARTER D.	CREAK R.
BAKER M.	BLAKER-HEDGES	CHALLENOR F.	CREIGHTON A.

CROSS M.
DAVIES L.
DAVIES R.
DAWKINS G.
DIDCOT R.
DIGAN P.
DREW P.
DUCKFIELD D.
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DUNN ROBERT
DUNSBY B.
EAVES RAY
EDWARDS B.
ELEMA H.
ELLIS P.
ENDERSBY ?.
ERRINGTON P.
EVETTS TONY
FATTORINI T.
FILDES W.
FINNIE B.
FLIGHT A.
FOORD S.
FORDE-JOHNSTON
FOSTER GEORGE
FULLER MERTON
GALE JOHN
GARLAND MIKE
GERRARD A.
GIBBONS MIKE
GLADSTONE E.
GLOVER G.
GORDON-SAKER M
GOULDEN L.
GRACE R.
GRINDEY JOHN
GRIST R.
HALL PETER
HARRIS TERRY
HEINLEIN C.
HELLER LEON
HIGHTON A.
HILL TOM
HOLMAN DAVE
HOUSE O.
HOWARD WRIGHT
HOWELL K.
JAMES JOHN
JEFFREY J.
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JUKES ERIC C.
KILPATRICK E.
KING L.
KIRBY W.
KITSON DONALD
KJELLANDER M.
KNAGGS LEO
KNAGGS PETER
LATKO GEORGE
LIDDLE BARRY
LINEHAM IAN
LOGAN A.
LUCAS A.
MACHLACHLAN J.
MACKIE RICHARD
MALVERN A.
MANN D.
MARSDEN PHILIP
MARTIN D.
MASON ROBERT
MATTHEWS M.
MCLEAN A.
METCALF A.
MILLER BRIAN
MILLER GEOFF
MILLER JOHN
MOSELEY JOHN
McKEOWN JOHN
NATHAN A.
NORMAN ALAN
NOWERS C.
O'CONNOR B.
OLDMAN C.
OSBORN JOHN
OSWIND PAUL
PAIN BRIAN
PICHEL-JUAN J.
POPE R.
PRICE C.
PURTON A.
QUARTERMAIN P.
RABE CARL
RANDLE MAC
RANKINE G.
RANSON C. S.
ROBERTS DAVID
ROBERTS E & G.
ROBERTS JACK
ROGERS KEN
ROLISON R.
ROWDEN B.
RUMARY BRIAN
RUTHERFORD P.
SAMPSON R. D.
SAUNDERS A.
SHEPHERD H.
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SHIELDS LAURIE
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SMITH BARRY
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SUTHERLAND D.
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SWAN BRYAN
TAYLOR A. E.
TAYLOR ARIELA
TAYLOR KEITH
TEASDALE K.
THRIPPLETON B,
TOOTILL PETER
TURNER MARTIN
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WARD NORMAN
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WATSON J.
WELCH R.
WHITELOCK J.
WILLIAMS JOHN
WILSON STOKER
WINCOTT GEORGE
YATES GRAHAM
YOUNG GORDON
YOUNG GORDON

As you will see elsewhere Peter Hall is to be the custodian of the CP/M library. Thank you Peter.

Selecting a Programming Language made easy.

By Daniel Sallman and David Rosenblueth.

(This article is brought to us courtesy of the Department of Computer Science, University of Waterloo, Canada. Please note that the cars have been Anglicized.)

With such a large number of programming languages on the market it is often very difficult to choose which one is the best for your needs, however, most people have an idea what kind of automobile would suit them best. Here are a few analogies for your perusal.

Assembler	A Formula 1 racing car. Very fast, but difficult to drive and expensive to maintain.
Fortran II	A Model T Ford. Once it was king of the road.
Fortran IV	A Model A Ford.
Fortran 77	A Six cylinder Ford Consul with standard transmission and no seat belts.
Cobol	A delivery van. It's bulky and ugly, but it works.
Basic	A Second hand Morris Minor with rebuilt engine and patched upholstery. Your Dad bought it for you to learn to drive. You'll ditch the car as soon as you can afford a new one.
PL/1	A Cadillac convertible with automatic transmission, a two-tone paint job, white-wall tyres, chrome exhaust pipes, and fuzzy dice hanging in the windscreen.
C	A red E-Type Jaguar, the all macho car.
Algol 60	An Austin Mini. Boy, that's a small car !
Algol 68	An Aston Martin. An impressive car, but not everyone can drive it.
Pascal	A Volkswagen Beetle. It's small and sturdy. Was once popular with intellectuals.
Modula II	A Volkswagen Golf with towing bar.
LISP	A Sinclair C5. It's simple but S..L..O..W.
PROLOG	Prototype concept car.
FORTH	A Land-Rover . Bolt together Mecano kit.
LOGO	A Kiddies replica of a Rolls Royce. Comes with a real engine and working horn.

Note: Here I include languages that do not necessarily operate on our machines just for compleatness.

Note: Modula II is a new language that was designed by the same bod that designed Pascal and is exceedingly similar in many ways. Modula II does, however, allow for Program Modules and Real-Time operation (I think).

Please do not hesitate to get in touch with me if you can come up with a better definition or one for any other language !

Peter Knaggs

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Symbolic Debugging under CP/M 3 (Plus)

This artical has come about because of some work I was doing on the Amstrad PCW machines and a small problem I experanced with the writing/debugging of a program for that machine. The following coding has taken me something in the region of 3 to 4 days to work out and get working. I also think that others might like to know of the problems and at least some of the answers.

I wished to debug a Character Editor program on the Amstrad but had no sensible Debugger for the system. So I copied over the Z8E program from CP/M 2.2 (Version 1.0). Unfortunately this did not operate properly as it uses RST 38h which CP/M now uses for it's own devious reasons.

To over come this problem I patched Z8E to use RST 28 instead. Unfortunately I can see myself wishing to use RST 28 in a program or two that I would also use the debugger on. To overcome this little problem I have made a rather larger Patch to Z8E so that it now askes me which ReStarT that I wish to use and then modifies itself accordingly.

Type Z8E Z8E.COM to load in the Z8E program and then apply the patch as follows:-

Place the following code at 0924h

```
0920                11 03 01 CD   3B 26 11 A5  09 CD 3B 26
0930  11 CE 09 CD   3B 26 CD 6C   23 FE 0D 28  0A D6 31 38
0940  EF FE 07 30   E8 18 02 3E   04 21 78 09  06 05 5E 23
0950  56 23 D5 10   F9 6F 87 87   85 5F 16 00  21 82 09 19
0960  EB 06 05 E1   1A 77 13 10   FA 11 D2 09  CD 2B 26 AF
0970  32 03 01 2F   32 D0 2C C9
```

Place the following data at 0978h

```
0970  .                           DF 09 DE 09  3B 13 1A 02
0980  53 01 08 09   CF 30 38 10   11 D7 31 30  18 19 DF 31
0990  38 20 21 E7   32 30 28 29   EF 32 38 30  31 F7 33 30
09A0  38 39 FF 33   38 0D 0A 45   6E 74 65 72  20 52 65 73
09B0  74 61 72 74   20 66 6F 72   20 42 72 65  61 6B 20 50
09C0  6F 69 6E 74   20 28 31 2D   37 29 20 3A  20 00 00 00
09D0  00 00 0D 0A   55 73 69 6E   67 20 52 53  54 20 00 00
09E0  68 20 66 6F   72 20 61 20   42 72 65 61  6B 20 50 6F
09F0  69 6E 74 0D   0A 4C 61 62   6C 65 73 20  61 72 65 20
0A00  43 61 73 65   20 64 65 70   65 6E 64 65  6E 74 0D 0A
0A10  00
```

The next problem was that in my source codes I like to use lower case labels (Sometimes of quite a length) and unfortunatly when you configure Z8E to operate in Lower Case in converts all of the labels into lower case. Now as Zen will allow "Loop" and "loop" as two seperate labels (This is a fetcher that I do use) then this automatic convertion to lower case is quite out of the question. Hear is a patch to remove the automatic convert to lower case. Note after applying this patch you must type the label exactly as shown (IE the labels are now Case Dependent). Z8E does not do this convertion if in upper case mode, however there is a bug in Upper Case mode that hangs the system. The Alterations for this are :-

```
03C1  From    28  to    18          232A  From  A7 CB  to 18 22

234C                                          C5 D5 E5 0E   From
2350  0B CD 05 00   A7 0E 06 1E   FF C4 05 00  E1 D1 C1 E6
2360  7F C9 00 00   00 00 00 00   00 00
```

```
234C                                              18 06 A7 C8    To
2350  F6 80 18 D8  C5 D5 E5 0E   0B CD 05 00  A7 0E 06 1E
2360  FF C4 05 00  E1 D1 C1 E6   7F C9
```

Finaly the program ZENTOSYM.PAS by Laurie Shield was supposed to take a ZEN Symbol table listing (S command) and convert it into a format that Z8E can read in. Now to my mind it did not do this too well, as it could only handle labels up to 8 characters in length. This as you might see, is of no use to me when I am using labels of up to, and in many cases, over 14 characters in length. Hence I have had to re-write the program to use another of the formats that Z8E can use that will allow Upper/Lower case labels of up to 14 characters in length. Also note that my version of the program does not limit the amount of labels that it can process by reading them into an array but actually creates the array on the fly so to speak, by using a Linked List. This then enables me to use the same "Output" file as I am using for the "Input" file. IE. overwrite the original zen file with the Z8E input file.

So here is a listing of the Pascal program to do the job. I have changed the name from ZENTOSYM to CONVZ8E to save confusion between the two programs.

```
(*************************************************************************)
(*                                                                       *)
(* Program : ZenToSym                                                    *)
(* Date    : --/--/--                                                    *)
(* Author  : Laurie Shields                                              *)
(* Function: Convert a ZEN Symbol table into a .SYM file for Z8E to      *)
(*           process                                                     *)
(*                                                                       *)
(*  5 Jun 1987   Total Rewrite to output Z80ASM.LST type files.          *)
(*  6 Jun 1987   As thay can handle labels of up to 14 characters.       *)
(*               Have also made user friendly. => Checks if over 14      *)
(*               chars already defined, allows user to change label      *)
(*                                                                       *)
(*************************************************************************)
```

```
Program Convert_Z8E (Input,Output);
{$U+,X-}

Const
      Space = ' ';
      Tab   = 9;
      Bell  = 7;

Type
      Str          = String[128];
      Item_Type    = Packed Record
                        label   : Str;
                        Address : Str;
                     End;
      Pair_Pointer = ^Pair_Type;
      Pair_Type    = Packed Record
                        Item : Item_Type;
                        Next : Pair_Pointer;
                     End;

Var
      Pair_List        : Pair_Pointer;
      File_In          : Text;
      File_Out         : Text;

Function Link_There (Find_String : Str) : Boolean;
Var
      Ref     : Pair_Pointer;
      Located : Boolean;

Begin
      Ref := Pair_List;
      Located := False;

      While Not(Located) and (Ref <> Nil) Do
            With Ref^ Do
                  If Item.  label = Find_String Then
                  Located := True
                  Else
                  Ref := Next;
```

```
      Link_There := Located;
End;

Procedure Upper(Var Line : Str);
Var
      X : Str;
      Count : Integer;

Begin
      X := Line;
      For Count := 1 To Length(X) Do
            X[Count] := UpCase(X[Count]);
      Line := X;
End;


Procedure Title;

Begin
      CrtInit;
      ClrScr;
      GotoXY(34,3); Write('Convert Z8E');
      GotoXY(34,4); Write('===========');
      GotoXY(19,6);
      WriteLn('Converts a ZEN Symbol table listing (. LST)');
      Write(Chr(Tab),' ');
      WriteLn('to a Z80ASM Symbol table listing (. LST) for use by
      Z8E');
End;


Procedure Get_Files;

Var
      Error : Boolean;
      Source_Name : Str;
      Destination_Name : Str;

Begin
      GotoXY(10,9); Write('Enter Source file name');
```

```
      Repeat
      Error := False;
      GotoXY(40,9); ClrEol; Write('=> ');
      ReadLn(Source_Name); Upper(Source_Name);
      If Pos('.  ',Source_Name) = 0
              Then
              Source_Name := Concat(Source_Name,'.  LST');
      GotoXY(43,9); Write(Source_Name);
      {$I-} Assign(File_In, Source_Name); {$I+}
      If IoResult > 0
              Then
                      Error := True
              Else
                      Begin
                              {$I-} Reset(File_In); {$I+}
                              If IoResult > 0 Then Error := True;
                      End;
              If Error
                      Then
                              Write(Chr(Bell));
Until Not(Error);

GotoXY(10,10); Write('Enter Destination file name');
      Repeat
              Error := False;
              GotoXY(40,10); ClrEol; Write('=> ');
              ReadLn(Destination_Name); Upper(Destination_Name);
              If Pos('.  ',Destination_Name) = 0
                      Then
      Destination_Name := Concat(Destination_Name,'.  LST');
              GotoXY(43,10); WriteLn(Destination_Name);
              {$I-} Assign(File_Out, Destination_Name); {$I+}
              If IoResult > 0
                      Then
                              Error := True
                      Else
                              Begin
              {$I-} Rewrite(File_Out); {$I+}
              If IoResult > 0 Then Error := True;
                      End;
```

```
      If Error
              Then
                      Write(Chr(Bell));
      Until Not(Error);
      WriteLn;
End;


Procedure Say ( Message : Str );
Begin
      WriteLn(File_Out,Message);
      WriteLn(Message);
End;


Procedure Write_Pairs;

Var
      Ref : Pair_Pointer;
      label : Str;
      Address : Str;
      Line : Str;
      Count : Integer;

Begin
      Count := 0;
      Line := '';
      WriteLn;
      Say('Symbol Table:');
      Say('');

      Ref := Pair_List;
      While Ref <> Nil Do
              Begin
                      label := Concat(Ref^. Item. label, ' ');
                      Address := Concat(Ref^. Item. Address,' ');
                      Line := Concat(Line,
                              Copy(Address,1, 6),
                              Copy(label, 1,16));
                      Count := Count + 1;
```

```
                    If Count = 3 Then
                            Begin
                                    Say(Line);
                                    Line := '';
                                    Count := 0;
                            End;
                    Ref := Ref^.  Next;
            End;

      If Count > 1 Then Say(Line);

      WriteLn;
      WriteLn('End of Symbol table');

      Close(File_Out);
End;


Procedure Read_Pairs;

Var Line : Str;
      Item : Item_Type;
      NewRef : Pair_Pointer;
      Position : Integer;
      Location : Integer;

Function Copy_Text : Str;

Var
      Sub_String : Str;

Begin
      While Line[Position] <> Space Do
            Position := Position + 1;
      Sub_String := Copy(Line,Location,Position-Location);

      While Line[Position] = Space Do
            Position := Position + 1;

      Location := Position;
```

```
      Copy_Text := Sub_String;
End;

Begin
Pair_List := Nil;
While Not(Eof(File_In)) Do
Begin
      ReadLn(File_In,Line);

      Location := 1;
While (Line[Location] = Chr(10)) or (Line[Location] = Chr(13)) Do
            Location := Location + 1;
      Line := Copy(Line,Location,Length(Line)-Location);

      If Length(Line) > 11 Then
      Begin
            Line := Concat(Line,' .  ');
            Position := 1;
            Location := 1;

            Repeat
                  Item.  label := Copy_Text;
                  Item.  Address := Copy_Text;

            Repeat
                  If Length(Item.  label) > 14 Then
            Begin
      Write('label "');
      Write(Copy(Item.  label,1,14));
      LowVideo;
      Write(Copy(Item.  label,15,Length(Item.  label)-14));
      NormVideo;
      WriteLN('" is to long.  ');
      Item.  label := Copy(Item.  label,1,14);
            End;

      (* Check not allready there *)

      If Link_There(Item.  label) Then
      Begin
```

```
            Write ('" ',Item.  label:14,' " already exists, ');
            Write ('Change to => ');
            ReadLn (Item.  label);
      End;

Until (Length(Item.  label) < 15) and
      Not(Link_There(Item.  label));

      (* Link Item into Link List *)

            New(NewRef);
            NewRef^.  Item := Item;
            NewRef^.  Next := Pair_List;
            Pair_List := NewRef;

      Until Line[Location] = '.  ';
End;
End;
Close(File_In);
End;


(* MAIN program loop *)
Begin
      Pair_List := Nil;

      Title;
      Get_Files;
      Read_Pairs;
      Write_Pairs;

      WriteLn('Converstion compleated');
      WriteLn;
      CrtExit;

End.
```

P.Knaggs. 12, Seymour Road, Chippenham, Wiltshire. SN15 3NH.

Things you did not want to know about the Tandy 1000 Pt 1.

Despite its pure white exterior so innocent looking, lies a conglomeration of hardware "funnies". Mind you I only found this out after buying one of the beasts, but to my surprising delight things were nowhere near as bad as I had first thought. The helpful salesman's, "It is fully IBM software compatible", left me as an engineer thinking, "What about its hardware compatibility ? Alright I heard the one at the back say, I should have found out before handing over my money, but you must appreciate I was in the state where reason is disregarded and my pulse rate was as high as the asking price with anticipation of owning my MS-DOS machine.

Opening the cover revealed the quoted 3 expansion slots, however I was already occupied by the additional board making the 1000 up to 256K. If I needed to expand any further I had to fill in the missing RAM chips (16 in total) order a 516K memory board (another slot gone) and another set of RAM chips to fully propagate the machine to 640K. Cost = "How much ?, you must be kidding, etc., etc.". I was not standing for that there must be a replacement for them, unfortunately MOSTEK U.K. did not know the American numbers would you believe (by the way I had no access to a technical reference manual) so it really was simply a matter of finding a replacement with an acceptable access time. This was duly done, you all must know by now that they are 4164-15 (4164's with a 150nsec access time). So I went ahead, obtained same and now the prompt said 384K Memory, a great improvement for under 20 pounds.

My enthusiasm knew no bounds, "What about a faster processor", I asked myself. A one hour drive later and a V20-5MHz made my IBM rating zoom from 1.0 to 1.7 and the speed was noticeable. Things are looking up, I said to myself, and in a state of mild euphoria asked Tandy the question that left me in a state of deepest depression, what was that question you may well ask ? HOW much is a hard disk upgrade ? The reply was at least 9.0 on the Frank Tyson scale.

The British Bulldog in me gradually broke forth like the HULK only more determindly. I was going to have a hard disk and at a reasonable price. To say I had few difficulties would have been the

understatement of the year. I tried the W.D. Programmable controller it seemed to recognize my ST225 MB disk but nothing else, no start to the low format I longed for. Boring bit, Boring bit, Boring bit. When you first switch on do you see the BIOS message, well mine said 01.00.00 response from you know who, "has a bug/not meant for hard disk/blah blah", so I part with 26 pound for a 01.01.00 and to my joy after entering debug and -G=C800:5 she started formatting beautifully and is still now up and running.

Any 1000 can be made a hard version for a sensible amount, it is a shame Tandy addmitted this and made the cables standard and supplied us with info on all know bugs. Enough of that -ve outburst, I am looking forward to my upgrade in three weeks time to a 1000SX, I will keep you posted on the outcome. May all your back-ups be in time. Shalom,

John B.

(John, could the next article be on disk please? saves on typing, Ed.)

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THE TRANSPUTER

I don't think I have contributed anything to NATGUG News since I relinquished the editor's chair, so I thought I'd bore everyone with an account of my latest toy, the Inmos transputer. Most of the following verbiage is taken from a little newsletter that I send to people who have enquired about the transputer systems I've developed.

The transputer is basically a microcomputer with on-chip memory and links for connecting transputers to each other. Inmos currently produce four types of transputer:-

T414 - 32-bit, 2K bytes on-chip RAM
T212 - 16-bit, 2K bytes on-chip RAM
T800 - 32-bit, 4K bytes on-chip RAM, with on-chip maths co- processor
M212 - 16-bit hard/floppy disk controller, 2K bytes on-chip RAM

32-bit transputers can address a maximum of 4G bytes of RAM (at current prices this will cost about 640,000 pounds using 1 Mbit devices!), and the 16-bit devices can address a maximum of 64K bytes of RAM.

Although transputers are extremely powerful devices when used on their own - the T800 is currently the most powerful 32-bit processor available, and makes the Intel 80386, Motorola 68030 and even the Fairchild Clipper look a bit sick - the transputer is best used as a parallel or concurrent processing element. That is, high performance concurrent systems can be constructed by using several transputers, connected together, via their links. The links are very high speed (10 or 20 Mbit/s) serial channels, with DMA, enabling rapid data transfer between transputers without slowing the processors appreciably.

Designing transputer-based systems is amazingly straightforward. The T414 and T800, for instance, have a built-in DRAM refresh capability. Because all transputers can be configured to boot from one of the links, EPROMs and ROMs are not needed in many cases. Memory locations may be PEEKed and POKEd via links, following a reset, which means that conventional monitors and debuggers may be dispensed with, and testing prototype hardware is greatly simplified. All transputers use a 5 MHz input clock which is multiplied by internal circuitry to give the 15 MHz, 20 MHz or 30 MHz processor clock. This means that one does not have the problem of distributing a high-speed clock signal around the system.

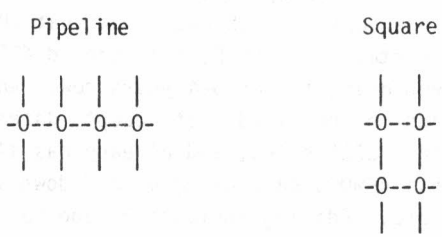
Conventional programming languages are not really suitable for applications involving parallel or concurrent execution of programs, so the occam programming language is generally used with transputer-based systems. A fundamental concept in occam (named after William of Occam, a philosopher whose dictum was, basically, keep things simple) is the 'process'. A software/hardware system is designed as interconnected processes, communicating via point-to-point channels. Processes may themselves consist of processes, in a hierarchy. Several processes may be run on a single transputer, using a conventional multi-tasking technique (it's part of the hardware), or, for maximum performance, processes can be run on separate transputers, in parallel, communicating via the links. Occam was designed first, by the way, and the transputer was designed to execute occam as efficiently as

possible. Other programming languages are available, however, such as C, FORTRAN and Pascal. Assemblers are also available from several suppliers.

With Inmos charging over 4000 pounds for a transputer development system, I decided I would produce something cheaper for my own use, and for sale to individuals and companies that wanted a low-cost transputer system. I have accordingly designed a couple of 'transputer modules'. The TM1 has a T414 transputer and 256K of RAM on a four-layer board about 75 mm by 95 mm. Some of you may have seen it at the last Swindon meeting. The new TM2 module is the same size but has 1 Mbyte of RAM, using the latest 1 Mbit (256K by 4) RAMs. The basic TM1 costs #450, and the TM2 starts at #650. With my PC interface which sells for #150 and the TM2 (you need at least 1 Mbyte for the various compilers) I can supply a complete development system ready to plug into a PC for #800, less software.

Because of their small size and flexible mounting arrangements, my modules are ideal for use in very compact, powerful, parallel processing systems. Southampton University have just purchased 16 TM1s for an Alvey-funded project to investigate a novel Fortran compiler, which will be distributed over the network of transputer modules.

A couple of simple configurations using my transputer modules are:-



When using networks of transputers, certain problems are best suited to particular types of network. Networks can get quite complex - some people use multi-dimensional hypercubes.

If you want to find out more about the transputer the Transputer Reference Manual is recommended. It's available from Inmos and their

distributors (Ref. 72 TRN 006 03). Inmos also publish an excellent series of application notes - I have found them invaluable.

If any members would like more details of this project, please get in touch. NATGUG members can have a discount of 10% off any of my hardware and software, provided it is for their own personal use.

Leon Heller, Concurrent Techniques, 30 Baldslow Road, Hastings, East Sussex. TN34 2EY. Tel:-(0424) 714790

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DOSPLUS 4 & OTHER ITEMS

When I retired at the beginning of May I resolved to use some of all that spare time to contribute to the Newsletter more frequently. What spare time - I seem to be busier than ever ! Now, though, shamed by the magnificent contributions in Vol 9 Issue 1, I will really make an effort.

I seem to have been one of the few people praising DOSPLUS 4 and think it is time I banged the drum a little more ! I have been doing some sums to add up the cost of all the updates and add-ons for TRSDOS, and comparing them with the total cost of DOSPLUS. Now that TRSDOS 6.3 has come along I am quite certain that DOSPLUS at around #100 offers much better value. I have been using it for 3-4 years now, and there have been no updates or add-ons required. It accepts dates to a.d. 2000, is fully compatible with TRDSOS files, and already has all those useful shorthand tricks that NEWDOS had, using up and down arrows to move through Basic programs, etc. Editing includes DI and DU, but adds DR, which moves a line to a new place and number, and renumbers all references to it. It comes with a set of Basic enhancements that make TRSDOS look silly, including cross-reference listing, a search and replace string function, and a very full array sort with key and tag arrays, both either string or numerical. INPUT@ has always been there, and the ability to use labelled lines instead of line numbers. Errors in basic statements are printed on the screen, not just line numbers,

and there is an ingenious use of OPTION to convert Model I/III programs to Model 4 by inserting the extra spaces. There is a MAP utility which lists every file on the disk showing all the sector numbers it uses, and a RESTORE utility which will recover killed files not yet overwritten. Particularly useful is the facility to write any number of configuration files to suit different applications, and store them on disk under different names. A diskfile editor and a disk zapping program are included, together with a full screen text editor, a linking assembler and a labelling disassembler. As well as a memdisk and a spooler, it also has a filedisk driver, enabling you to create a "disk" within a file. This is what LDOS calls a Partitioned Data Set and charges extra for. It is faster and more flexible than TRSDOS. The extraordinary thing is that the DOSPLUS people were able to put all this in the DOS four years ago, while LDOS periodically adds on one or two features at a price and calls it a break-through !

Having said that, there are one or two things NEWDOS would do, like single stepping through basic, and renumbering lines to move whole blocks around, that I miss. On the other hand, I have found NEWDOS80 with 80 track double sided disks is very prone to clobber them with "Sector Not Found " errors, usually in the directory. It may be my disk drives or the computer, but the other DOSes don't do it!

Programs to read and load complete memdisks have been much discussed recently. I am sending a couple I wrote, one each for TRSDOS and DOSPLUS, to the Model 4 librarian. The TRSDOS version loads a complete memdisk and installs its driver in 14 seconds flat ! Also a disk indexing program which is very fast and easy to use. I have a couple of programs for using Banks 1 & 2 direct from Basic which I will send in later - they need a bit of tidying up first.

I have been using Banks 1 and 2 recently to hold an alphabetical or numerical index to a database file on disk. This index, because it is in alphabetical order, makes it possible to use a Binary Search to find a particular item very quickly - I have a list of 450 chemicals with names up to 36 characters long, and the data on the one I want is found almost instantly. The great advantage of using the Banked memory is that a new item can be added in its correct place by using LDIR to shift everything above it up in one block move, whereas if it were on disk an endless succession of GETs and PUTs would be required. I was

appalled at the time dBase II took to do the same job when I tried it out for comparison.

There have been requests for hints and tips on the Model I, and the gold connector has been mentioned again. I got over this problem in a totally different way. Accepting that the exposed parts of the edge connectors were oxidising, I tried the traditional smear of grease which was a slight improvement, but it then occurred to me that the trouble must be when the connector was MOVED so that the oxidised part came under the contact on the connecting link. With the very short and stiff link, and the bashing most of us give our keyboards, this seemed a likely cause. So I took the computer board out of the keyboard case altogether and laid it naked on top of the expansion interface, and then connected it to the keyboard with a 4 foot length of 20-way ribbon. Its been that way collecting dust for four years now and still works every time. The flexible printer lead is probably the reason why the tinned connectors on the Model 4/4P dont' give trouble.

A tip I gleaned from an advert in Micro-80 is too simple to be true, but I find it very useful. Cut a strip from a postcard or visiting card about an eighth of an inch wide and one and a half inches long. Slide this into the folded-over corner at the back of a floppy disk case so that it fills the write protect notch and you have a removeable/replaceable write protect device that is easier to use than the conventional sticky tabs, and doesn't make the disk messy. If you get the length right the white end sticks out of the front of the drive door and serves as an indicator. The sad news is that only disks with spot-welded envelopes will accept it; this excludes Os's excellent low price black disks, although his coloured ones are OK.

Further tip applying to Model I, III, and 4/4P users. Trying to print out formatted tables of text and data can be a terrible hassle, involving several lines of complicated string functions, tab(xxx), print@(x,y), and so on. If some of the columns may or may not be blank, and some may have text carrying across several columns, programming it becomes a nightmare. If on top of that you want to have the option of printing to the screen or on the printer, you then have to write the whole lot out again using lprint instead of print. I know there will be a chorus of "You should route the display to the printer", but it is not always that easy and routeing instructions have

a nasty habit of going wrong for me ! Anyway for model 4P users at least (or some of them !), printing a pound sign on the screen means using CHR$(0)CHR$(6), which means nothing at all to the printer !

The solution I found is to open a dummy file and use the file I/O buffer space to build the line up. A file buffer has 256 bytes in it, and as the average printed line has 80 bytes, you could get 3 line buffers into one file buffer. I'll only talk about 1, though - any more are the same principle as the first.

Suppose you want to print a 10-column table with the following spacing:
Col 1: 6 bytes; Col 2: 8 bytes;Col 3: 36 bytes;Col 4: 10 bytes;
Col 5: 5 bytes Col 6: 6 bytes; Col 7: 6 bytes;Col 8: 6 bytes;
Col 9: 6 bytes;Col 10: 11 bytes

All you do is open a dummy file:

```
10 OPEN"R",1,"DUMMY1/RND"
```

Field it to correspond with the column lengths:

```
20 FIELD 1, 6 AS B1$(1),8 AS B1$(2),36 AS B1$(3),10 AS B1$(4),5 AS
 B1$(5), 6 AS B1$(6),6 AS B1$(7),6 AS B1$(8),6 AS B1$(9),11 AS B1$(10)
```

Finally, remembering that you can field a buffer in as many ways as you like at the same time, you field the whole line:

```
30 FIELD 1, 80 as B1$(0)
```

and then close the file:

```
40 CLOSE 1
```

You must not now use 1 as a file number, but even though the file has been closed, the fielding will remain in force.

From now on, filling and displaying your table is simplicity itself. Simply use a succession of statements like:

```
100 LSET B1$(1)= A$ (to fill column 1)
110 LSET B1$(2)= B$ (to fill column 2)
.
. and so on
.
```

or 150 RSET B1$(5)= Q$ (if you want the column right-justified)

```
.
```

etc.

Because you are using LSET and RSET, any unused parts of the columns are filled with blanks automatically, saving you the trouble of using tabs, and also there is no garbage collection because all the work is being done inside a buffer.

To print or lprint the line, I use a print flag PF, and a line like this:

```
1000 PRINT B1$(0):IF PF THEN LPRINT B1$(0)
```

This prints the whole line in a single instruction. If I have the pound sign problem mentioned above I use additional statements:

```
1000 PRINT B1$(0):IF NOT PF THEN 1030
1010 X=INSTR(B1$(0),CHR$(0)+CHR$(6))
1010 IF X THEN MID$(B1$(0),X,2)=" x"
1020 LPRINT B1$(0)
1030 .....
```

(assuming that "x" comes out as a pound sign on your printer).

There may be occasions when you want text to carry straight across two or more columns. The fielding method might be made for this. All you do is add another line:

```
22 FIELD 1,14 AS DU$,51 AS B1$(11),35 AS DU$
```

This will enable you to write straight across columns 4,5,and 6 with one entry by LSETing or RSETing B1$(11), without interfering with B1$(4),(5) and (6). Don't forget to dimension the array at the start of the program if you are going above element (10).

There is one disadvantage of this method, and that is that you cannot use the PRINT USING"####.##";A! instruction to format and round up or down figures displayed. I had to write a complicated function to cope with all cases from .006 to 999, and display them as 0.01 and 999.00. In fact to keep it under-standable it took two nested functions:

```
FND1$(A!)=STRING$(-(A!<1)*2,"0")+MID$(STR$(INT(100*A!+.5)),2)   and
FND2$(A!)=LEFT$(FND1$(A!),LEN(STR$(INT(A!)))-1)+"."+RIGHT$(FND1$(A!),2)
```

FND1$ is never used on its own, it is merely a building block to use in FND2$ (whose name came from the fact that it displays a single precision number to <2> places of <D>ecimals).

Has anyone any use for a Percom data separator ? (Used in the Model I in single density only to reduce disk read errors). It is superceded when you fit a double density adaptor.

Small requests re the Newsletter format:

1) Several contributions appeared without any indication as to who they were from. It makes the newsletter very impersonal when this happens.

2) We have a lot of Anons! May I suggest they adopt individual pen-names if they wish to remain anonymous ? At least they then have an identity !

3) I find it confusing when the editor's comments (good tho' they be) are inserted in the middle of a contributor's text. In the old days Leon used a different size print and a shorter line, which helped to keep them on a different plane, as it were! I know I'm nit-picking!

Finally (at last, do I hear?), congratulations to all on the rejuvenation both of the newsletter and, it appears, the group as a whole. The change is marvellous and let's hope it will continue.

Henry H.Shepherd, 3,White House Close, Shippon, Abingdon, OXON. OX13 6LP. (0235-21921)

** Re: 1 & 2. At first, that is from Apr. '87, LETTERS appeared with only a "reference" as to who they were from, this was to be fair to the person who contributed, as no prior notice stating that all letters received would be printed. This notice, now having been given, means that all letters/aticles have a name to them, unless a request to use ANON is also received. Anyone not wishing a letter to be printed should say so please. Since a member uses ANON, then he does not wish

to have an identity. No member of the committee wishes the flow of articles to stop from anyone, so I will continue to accept appending ANON to an article, I must know who the contributor is. Only one article has appeared since the above date with no acknowlegment to the contributor, an apology was printed in the next issue. The reason was, that normally, a contributor will append his name and address at the end of a disk file, this time it did not happen and I did not check.

Re: 2. Leon used to "Cut-and-Paste", so normally his print was different in style to the article. I use a word prossesor and daisy wheel printer (although this could change), I do not have the time to stop and change print wheels. I am very happy to take on board suggestions that will decrease my time editing the Newsletter, but you will have to please accept that most probably you will have a very hard time convincing me that I should accept something that is going to increase that time. Ed. **

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MSDOS Monthly - by Dave Holman

An open Forum on MSDOS and associated subjects.

I am glad to see that there has been some small response to the last forum, however I am sure all the MSDOS users out there cannot be totally happy with their operating system. This month there is a mixed bag of queries, so without further ado I shall begin.

In the last forum you said that BASIC programs could be transferred to MSDOS, why won't they run under the Amstrad PC1512's BASIC2 ?

The simple answer to that is that they will. However, Locomotive BASIC2 uses a different dialect of BASIC to MBASIC or TRSDOS BASIC. This is especially noticeable when it comes to file handling. Also BASIC2 runs under GEM, that operating environment that we have all come to love or hate as the case may be. This means that some of the

commands are not available direct from the keyboard but have to be accessed from the menu bar found in GEM. The major difference with BASIC2 is that there is no need for line numbers when writing programs, but programs with line numbers will run and can be renumbered in the normal way.

BASIC2 handles it's graphics in a vastly different way to other BASICs and this means that any program containing graphics will have to be extensively re-written if it is to run under BASIC2. This is not unusual as very few BASICs have compatible graphic commands. This also applies to PEEKing and POKEing which could not be compatible when using different machines. If you are having major problems running your programs under BASIC2 and if like me you don't like the fact that it runs under GEM, then there are alternatives for example BASICA, which is Microsoft's standard BASIC and is much more of a "standard" BASIC being very similar to to MBASIC under CPM. Also there is GWBASIC which is short for Gee Whiz BASIC and is said to be a better BASIC for PC Clones, it is very similar to BASICA. There are bound to be more specific queries on BASIC2 and I should be able to answer them if only for the fact that I bought the manual, not included in the price of the Amstrad PC 1512.

I have bought an Amstrad PC 1512 and am impressed with it's performance but some games programs run too fast for me to even attempt to play them. What can I do ?

This one is simple, well fairly simple. The Amstrad runs at 8 mHz instead of 4.77 mHz, which normal PC's run at. This means it runs about twice as fast, well that's the theory. Therefore any games which are not written specifically for the Amstrad will not have been written for 8 mHz and will run nearly twice as fast. How can you slow them down ? There are, so I am told utilities to make the computer waste about half of it's time when running programs, thus the result is a game which is playable. But beware these utilities will remain in operation until the machine is rebooted and therefore your Supercalc spreadsheet or your database program will run at half speed as well. I don't know any specific names of these programs and after some research have drawn a blank. Perhaps Ariella's library listing may come up with an answer.

Next not a question but some news. I have just bought a copy of Mix C for my PC 1512, it is a fast compiler and very well documented. For some time I have toyed around with the idea of writing C programs but understood it to be time consuming when you have to write the source with a text editor then compile this source then link the object code to finally produce an executeable command program. All of this only to find that it has a bug. This put me off for some time, however Mix C's advertising blurb made mention of a trace program which would single step and more through your C9 program displaying various items of information as it went along. This was more like it so I phoned the UK distributor who gave me some very good information about it and without any hard sell tactics convinced me that this was what I wanted. I ordered a copy of the "Complete Works". This is a compiler, a linker, Ctrace, an editor, lots of examples and an assembler utility. All for 83.44 pounds inc. VAT. The UK Distributor is:- Analytical Engines Ltd., PO Box 35, Eastleigh, Hampshire. SO5 5WU. Tel: 0703 262099 (Answering Machine until 6 pm.)

I fired up the program, as usual skipping whole chapters of the manual. All was not doom and gloom and I found that a useful tutorial was contained in the very professional and glossy manual. Having written my first program I was eager to try out the CTRACE utility. I was pleasantly surprised to find that a control key was provide within the text editor to compile link and trace the current C Source file. This took about a minute to achieve. The trace program then allowed me to step through the program whilst watching variables change or move through at a slow (tracing) speed or execute the program at full speed. Not a difficult task when the program outputs "Hello World". I have not had time to fully evaluate this program yet but may be able to do a full review later. What does intrigue me is that there must be other C users out there, either using CPM or some of the TRSDOS Compilers (LC etc). Is it possible to hear from you a little more frequently as I may need help myself in using the language.

My brother asked me a question last week which had me stumped for a moment. He uses a PC 1512 and wanted to switch his Amstrad DMP 3000 printer into uni-directional (a big word for one way) printing so that the vertical lines on the forms he was printing would line up correctly. My first thought was what was the the point of printing in two directions if the printer does not line up vertically. However

maybe this is an inherent problem with all printers. How to solve it was another thing, we tried sending codes to the printer from BASIC. This worked fine but would involve booting GEM running BASIC and then running the word processor. A long winded process. From my days when I used the Model I and IV, I remembered various utilities that would set up and initialise printers, also that I had sent printer codes to my Epson by writing a dummy file containing just that code and then directing the file to the printer. Here surely was the solution. Just as work was about to progress on the matter I remembered that my latest copy of PC-Plus (an Amstrad Magazine) had a disk attached to the front and it contained a routine to initialise printers. This was found, PRCODES being its name. It did the job perfectly and my brother retired to his work a happy man. It just goes to show there is no need to reinvent the wheel. It still left me with the thought could I create a file containing just the printer code and could I direct it to the printer. Using a file editor I created a file containing the hex code OF which sets my printer into condensed print. I then typed at the MSDOS prompt. COPY PR.DAT LST: PR.DAT being the file I created, LST: being the MSDOS name for the LiST device or printer. This worked a treat and configured my printer for condensed print as required. This now has me thinking and although it has been done many times before I want to write a printer setup program. So my next task with C is to do just that.

Finally a small batch file that I find very useful, I call it CAT.BAT. It saves you having to type the complicated DIR command to get a directory in column mode instead of the full listing with dates and times etc. The command in MSDOS to do this is DIR /W. CAT.BAT is simply an extension of this. Create the following file with any word processor or line editor. DIR %1/W/P The DIR part is the DOS Command and the /W sets the display into the column or Wide mode and the /P Pages the screen and prompts each time the screen is full of file names, usually only possible with a hard disk. That just leaves the %1 bit of the file. This is the Batch File Command to extract the first parameter from the command line and substitute it in the batch file where the %1 is located. This means that typing CAT *.COM will be interpreted by CAT.BAT as DIR *.COM/W/P thus listing all .COM files, any parameters can be used on the command line for example CAT B:*.C?M to give DIR B:*.C?M/W/P listing all *.COM and *.CIM etc. I have set my command CAT to the SHIFT F10 key so that it

is a very simple matter to call up a directory. More on how to do that in a later instalment That is all for this month, so keep those questions coming. Good Luck and Happy "MSDOSing"

Dave Holman, 160 London Road West, Bath, Avon. BA1 7QU

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WINDOWS and a CALENDAR

It is often difficult for me to visualize applications for programmes or routines that appear in magazines.

In the Jan & Jun 87 issues of NATGUG there has been printed a programme entitled "Windows for the Model 4" by Peter Knaggs. I entered this programme to see the effects and to learn some techniques of assembly language programming.

As I use the TANDY EDTASM editor/assembler I had to modify the printed programme slightly to suit my software. Following these mods I ran the programme and discovered errors in the programme as printed namely:-

1. The CLS SVC is incorrectly numbered (should be 105) however the associated note is correct.

2. Following the JP C,FINISH line within the CHAR routine e 121) there requires to be added LD (IX+4),A This is the current line to the last line. If not added the 11 routine will not work as the current line is saved (line 118) as the one below the last line.

3. The JP NZ,ERROR line within the CHAR routine (line 106) should read JP NZ,ERR

While working on this programme I had an idea that I could use one of the windows to display a calendar. I have added some code to the basic programme to achieve this and the revised programme is reprinted in the listing as "CAL"

During the developement of this code I made a few modifications to the basic programme as follows:-

1. SCR1 is now in the centre as a "scrolling" window. SCR2 at the bottom right is the window for calendar display.

2. The original programme left the <F1>, <F2> and <F3> characters displayed as the first character of the window. The two additional lines (1840, 1850) allow this character to be "overwritten" by the first of the keyboard input text keys.

3. There was no access to the "string" display routine within the original programme. As a demonstration I use this routine to display the "day" heading for the calendar.

USING THE WINDOWS

From DOS ready type CAL <ENTER>

Pressing <F1> will display a "cursor" at top left of window (screen) "0" and allow input of text in the "overwrite" mode.

Pressing <F2> will display a "cursor" near the centre of the screen and this represents the top left of window (screen) "1". Entering text in this window will demonstrate the scrolling techniques.

Pressing <F3> will display the current month calendar in the bottom right corner. While the calendar is displayed pressing the <UP-ARROW> will display the previous months calendar and pressing the <DOWN-ARROW> will display the next month. Continued pressing of the <ARROWS> will "roll" through the months of the current year.

Pressing <ENTER> at any time will return to DOS ready.

Some further enhancements that I can think of and which other readers may like to develop for their own applications are as follows:-

1. During keyboard input interface the <RIGHT & LEFT ARROW> keys to allow corrections to input.

2. Limit character display to ASCII characters (20H-7FH) only. Characters >7FH are already excluded.

3. Saving the text inputs or "windows" to a buffer and/or disk file to enable recall at a later date.

4. Access to "WINDOWS" or "CAL" from BASIC. A possible method is by use of USR routines and data statements. Note that "CAL" is written to be a relocateable programme although initially assembled at 3000H.

5. Use bank switching facility to enable use of alternate video screens.

6. Highlight the current date in calendar by use of inverse video.

7. Use the computer to create the MTHTAB to suit other than the current year.

8. Use one window as a "calculator" window.

I have learned considerably by "playing" with "WINDOWS" and "CAL" and look forward to seeing other readers comments/inputs.

**. Barry has supplied to me a copy of CAL/CMD and also CAL/SRC. The source listing is 373 lines long. Should there not be suffient room in this issue to print the complete listing, and if any Member is in a hurry to have same, then please forward a disk to me, in a suitable mailer, together with 24p. return postage. If your disk is not formatted, I will format in LS-DOS 6:3, 40T, S/S, D/D, then copy the files over. I shall be at Swindon with the above files. Ed. **.

BITS and BOBS

Dear Gordon,

Just to keep the editor happy and to help with filling up the pages enclosed is disk containing 1,000+ words about nothing. The subjects are sometimes a bit difficult to find and, yet, I feel that I should make an effort.

I had four messages on Prestel as a result of quoting my MBX number and one of the chaps promised to write something on the subject of bits and bauds. I am also trying to get my friend in NI to put his fingers to the keyboard but I must remember to tell him that you can accept IBM format disk.

Don Bannister sent me a message too (one of the four). He is very busy these days and hardly has any time to touch a computer apart from occasional logging onto Prestel. Best wishes, ANON.

Not a long time ago I wrote about Prestel and I included, in the closing paragraph, my MBX number. This time there were some results and I received four messages. So now I know - including my friend in N Ireland and myself there are at least six of us on Prestel. A few more and maybe we could have something in Clubspot 810. Tandy used to be on Prestel in the good old days, but it has disappeared as the number of Tandy users decreased or at least Tandy owners were not using the facilities. And yet it seems impossible that there are less Tandy machines than, let's say, were there four or five years ago. Machines are still sold and even those of us who replace equipment from time to time sell the old stuff and someone buys it and uses it. So why is our membership not growing ? Of course there was a period when we stopped advertising the group in the computer papers and I don't think we are doing it now either - at least not in the Personal Computer World. Funnily enough, Personal Computer World published in the August and September issues a directory of users groups and we are listed but under contact there is still Brian's name. I don't know whether this is intentional or is the ACC not aware that we have now a different secretary ?

Two of my contacts were from Scotland - one even further North than I am and one, I think, a couple of islands to the South of me. So I am not the only one in the Highlands and Islands.

Some time ago, when NATGUG used to run its own BB, there was talk about E-mail and using E-mail for submission of the articles, letters etc. dBASE group, who are now starting own BB at #23 pa for private member with the access limited to off-peak periods (I'm sorry Dr P - I won't be joining as it is too expensive for a retired old codger), also accept articles by E-mail (Telecom Gold) but I wonder whether it is worth it as far as the cost is concerned. In the days when I was still using Model 4 and MDM730, MDM told me on one occasion that the time necessary to send a medium size file at 300/300 speed would be (if I remember rightly) some 100 minutes. At this rate it is much cheaper to pay for a first class stamp. Somewhere recently I read an item about BT Gold's new price structure. Apparently they are lowering slightly the time charges but are increasing the charges for volume of data. This is a 'heads you lose, tails I win ' situation. If one operates a slow modem BT Gold cashes on the access time (and BT on telephone charges) and, if one tries to reduce the time by using 1200/1200 modem then BT Gold coins it on the amount of data sent. E-mail is of value where quick transmission of data is important but, otherwise, too expensive for the amateurs. Those interested in BT Gold could do well to read an article by Peter Toothill in the September issue of Personal Computer World about a cheaper way of accessing BT Gold through Microlink.

My admission of ignorance regarding the difference between the bps and bauds provoked a threat to enlighten me on that subject by an article in NATGUG. I expect you to keep your promise, ???, and I will read it with pleasure but whether I will understand, that is quite a different matter. I find that as I am getting older (or got old) the ability to grasp is getting less and less. This applies not only to the brain - the hands are getting affected as well.

It is nice to read that Tandy will co-operate with NATGUG and that, maybe, we will gain some new members but what I would like to know is why Tandy is no longer attending the different shows. I have not seen Tandy represented (apart from Molimerx) at the last few Compecs, which I attended, and they will not be at this year's PCW show. Nor have I seen any adverts from them for quite a while in the Personal Computer World. Is it possible that Tandy (UK) tries to fade away without actually announcing that they are abandoning the UK market ?

Some few weeks ago, before I smashed the car and had to order a new one, and also before the lowest tender for house extension (which we must have as half of our possessions including all my woodworking machinery are still in Oban store) turned out to be #44K, whilst the

surveyor costed it at #26K, I ordered an EX1000 printer as I suspect that my FX100, which is now about 3 - 4 years old, will require replacing sooner or later. Needless to say I have been talked into it by my NI friend - as usual. EX has turned up and I have been playing with it. This is a fairly heavy bit of equipment and has quite a few improvements on FX100. To start with it is much faster - printing at 300 characters per second in elite, 250 in pica and 50 in NLQ mode. It has both centronic and serial interfaces, 8K memory and it can work either in Epson or IBM mode. It has international character sets for 13 countries and can do some fancy graphics but I was never good at graphics so I don't understand that part of the manual at all. The type of print can be set on the dip switches or selected from the panel on the printer so there is no longer any need to send the control codes from WS. The panel selection can be: in draft mode - pica or elite and normal or condensed and in NLQ mode Roman in pica or elite, normal or condensed or Sans Serif as for Roman but proportional print can only be normal. Additional characteristics can be obtained through software control such as emphasizing, double striking italics, double width, condensed double width and, of course, the usual underlining, subscripts and superscripts. The manual lists some 98 different commands which can be sent to the printer. The printer has an in-built tractor on the back (controlling paper into the roller) and also a very nice arrangement for single sheet feeding. With the printer off-line the paper is pushed until resistance is felt, the paper bail pulled forward and the roller rolls, feeds the paper to about the top of the roller and, as the paper bail is pushed back, the paper is rolled back with the top edge under the printer head - fancy that. There are some optional extras too like single sheet feeder, memory buffers of 32K or 128K which can be installed by the owner (and the manual says how) and a colour option. Ribbons are expensive - about #9 each but no doubt cheaper clones will appear sooner or later on the market. The machine can only be described as noisy but it shifts. It just eats the paper. I used to have trouble with printing from FSE and the computer used to freeze after printing about six or seven complete lines. I suspect that the printer could not keep up in spite of mode LPT1:,,P and so was giving up and refusing to accept any more data for evermore. I used to get stuff printed but I had to print it in bits. EX1000 makes nothing of FSE - just belts through the text without pausing. Well, all I can say is I am glad that the extension tender and smashed car came after I ordered the printer as I have another expensive toy to play with. After all one does need some amusement after cutting expanses of grass with a strimmer whilst being surrounded by clouds of midges.

Anon.

Dear Editor,

I have not got a small rock that I could write on ! but in response to your comments on page 7 of the August Newsletter.

(**. Ken goes on to say that he has already renewed for 80 Micro and Northern Bytes (note comment in Sex's Report [formal]) and is interested in The Misosys Quarterly and maybe in the West Midlands workshop, (no further action to be taken with this). Ed. **)

The last two paragraphs of Ken's letter are as follows:-

For sometime I have been going to do you a note on adding two external Tandon drives (as the internal) to the Model 4P. Basically as the Jan. '86 80 Micro. From my work notes however I was able to write to the Rev. R. S. Wilson to offer a possible solution to his query on page 59 of V.9, Is.1. He later wrote to say it had solved his problem !

I hope the forgoing is of some use to you, and thanks for the much improved Newsletter and all the work it entails.

Sincerely, Ken T. Rogers.

(**. Ken, Thank you very much for your comments and for sharing your work notes with us all. This has helped at least two of us, your Treasurer and myself, we had just been looking at using our ex 4P Tandon drives. Thank you also for your report of the "Blandford Open Day", I echo your thanks to Os, etc. Your notes now follow. Ed. **)

USING TANDON DRIVES EX.4P AS EXTERNAL DRIVES

As installed in the Model 4P the Tandon drives are obviously drives 0 and 1 and Tandy select the two drives by removing the appropriate pins from their internal edge connectors to de-select the unused drives. If one is going to use these drives externally then it would seem that all one has to do for drive selection, is to make sure that (D)rive (S)elect lines DS2 and DS3 are continuous to the appropriate external drive and that DS0 and DS1 are not connected externally. There is however a snag !

If you look carefully at the left rear of the drive PCB where the edge connector fits you will first see the empty socket for the terminating resistor block, than a series of "links" in a 16 pin DIL

socket marked U19. Viewed from the rear and counting from your right, the links are No.2 - DS0; No.3 - DS1; No.4 - DS2; No.5 - DS3. Note that 2,3,&4 all have 'solid' links but No. 5 (DS3) is broken.

To get a drive to work as No. 3, remove the link block, remake link No. 5 and 'open' links 2,3&4. For drive No. 2 merely 'open' links 2&3. The other links (1,6,7&8) are left undisturbed !

BLANDFORD OPEN DAY

Yes! its come and gone again and for those that did not make it this year, you missed a very good day not to mention the lunch.

By mid morning there were some twenty machines in the systems room and it was worth a walk round just to see the different types. There were two Model I's both working and the one attracting quite a bit of attention as it was sitting under a banner announcing its tenth birthday and displaying a 'rolling caption' (if that is the right term) discribing its history.

Possibly at the other end of the scale, Leon Heller demonstrating his Amstrad PC modified to take a board using a 'Transputer' was doing things at mind boggling speeds.

There was only one Model III in evidence and this was demonstrating Packet Radio in operation. At first one might think what has happened to all the III's so quickly but by the number of 4P's in use bearing in mind the 'P' stands for portable; perhaps as in my case the III stays at home and the 4P travels!

During my first look around I noticed two youngsters glued to a colour monitor which clearly displayed the words "Taxes to pay", I passed on thinking its all getting beyond me. Around mid-day however they were still sat there but this time the screen said somthing about "Monopoly", I felt better!

In addition to the systems room of course there were lectures in the "Chalet" and not to be missed, although actually at ground level, Oz's "Bargain Basement". Here were books, progammes and equipment much of it at greatly reduced prices. Some of the programmes on the racks clearly marked all at #1.00 each still carried their original prices - just to make you think!

Before I forget, it happened again this year and produced the usual shouts of 'who pulled the plug out', yes the power failed! Due I understand to the adaptor that had seen better days and so produced an immediate response from the main fuse!

Well one could go on, but to sum it up another gloriously hectic day among friendly people, plenty of help on tap, quite a few laughs, and of course Os's hospitality available all the time but highlighted by an excellent lunch, which thanks to the good weather was taken 'on the lawn'.

I am sure I can speak for all those who attended when I say a sincere THANK YOU to our club officers, to Os House personally, to his family and staff for their hard work in providing a very enjoyable day! - and - Please may we come again next year ?

Ken Rogers, 8 The Crescent, Worlebury, Weston-S-Mare. BS22 9SR

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ADVERTS

For Sale:-

Alpha Clock - Real time clock for Model IV & IVP.
Date and time correct on power up. Brand new.
Documentation and software for LDOS (Model III mode) and TRSDOS VI.

50.00 pounds. (cost $112)

J. D. Christie, 10 The Bramleys, LONGHOPE, Glos. (0452) 830141

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Wanted for TRS-80 Model 1

Double Density board suitable for use in GNOMIC DP 1000; or alternately, DP 1000 or 2000 with DD board fitted.

Also, I recently ordered some Model 1 games direct from Infocom - unfortunately they sent 2 "Sorcerer"'s and no "Enchanter"'s (I had ordered one of each).

FOR SALE : Infocom's "Sorcerer" (Model 1, 32K, single density)

Mint, still-sealed, price 19 pound (incl. P&P)
WANTED : Infocom's "Enchanter" (Model 1)
OR : will exchange "Sorcerer" for "Enchanter".

Michael Cross, 41 Redland Drive, Kirk Ella, Hull, North Humberside. HU10 7UX. Tele: (0482) 656866

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For Sale

This office has a TRS-80 Model 12 and a DWP II wide column printer for sale. Thus it maybe of interest to others who are currently operating on the TRSDOS System. Enquiries to:- Russell H Baker

AIM International, 37 Alexandra Park, Bristol. BS6 6QB. (0272) 429771

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MULTI USER XENIX COMPUTERS

Two Tandy Model 16B Computers fully expanded
with
15 Meg Hard Disk & 8 inch Floppy Disk
and
768 K Memory and 5 RS232 ports

Each of these computers will support the main console and up to five extra users logged on as terminals. Software is available and included to allow Model II's, 4's or 16's to act as terminals.

Both computers come complete with:
i) Xenix Run-time system
ii) Full Xenix Development System
iii) Microsoft Multi-User Basic
iv) Multi-User Scriptsit
v) Multi-User Profile
vi) Multi-User Multiplan
vii) All above complete with manuals

Price 1100 pounds each

Also available is one only Model 16A with twin 8 inch drives, this is offered free with the above. As are single copies of Tandy's Multi-user Stock control, Payroll and accounts packages.

Contact: Kevin Hawes or Laurie Shields on (0246) 73181

The Aldersgate accounts package has recently been re-written for multi-user Xenix and this could be made available through Os House

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READER'S FORUM

THIS IS WHERE YOU ARE INVITED TO ASK ALL THOSE QUESTIONS THAT YOU HAVE NEEDED ANSWERS FOR, OR TO MAKE ANY COMMENTS, OR .... ???

FROM: The Gables, 21 Gilling Road, Richmond, North Yorkshire, DL10 5AB

Dear David,

I hesitate to comment on anyone's programs, but thought that you would like to know that in my opinion your program on page 19 of the August NATGUG News, will not work on a Model 1/Video Genie running under LDOS (my normal DOS) or under NEWDOS 80.

The first problem is in the second part of Line 60:-

"IF Y = "N" OR "n" then 30"

will result in an error message - probably type mismatch. It will run correctly if it is changed to read:-

"if Y = "N" OR Y = "n" then 30"

The second, third and fourth problems are in Line 61:-

a. The second is I think a typing error. I'm pretty sure that you meant to put "y" not "n".

b. The third is similar to that in Line 60 - Y <> "y" must be used.

c. The most important problem is the "OR" in line 61 - it should be "AND".

As you have written Line 61 (using OR) if Y = "Y" then Y obviously cannot equal "y" so the program will branch to Line 60 when it tests Y <> "y". Similarly if Y = "y" then it cannot equal "Y" and the program will also branch to Line 60. So if Y ="Y" or equals there will be a jump to Line 60.

The way I think of the "OR" in Line 60 is to say:- if Y equals "N" or if Y equals "n" then GOTO 30. That is a jump to Line 30

must be made if Y equals "N" or "n". Whereas in Line 61 I say:- if Y does not equal "Y" and Y does not equal "y" then GOTO 60. That is a jump to Line 60 will only be made if Y does not equal "Y" and it does not equal "y".

My last point on this program is that the "ELSE 40"at the end of Line 31 is redundant. Having it there will not effect how the program runs but it will run just as well without it. If the "ELSE 40" is removed when the program reaches Line 31 if A does not equal 999 then it will simply jump to the next program line which is Line 40.

Finally a comment on the rounding routine. You didn't mention that having used the rounding routine to get TA it should be printed using PRINTUSING with two places of decimals. If you don't then if T1 is for example "23.50" TA will equal "23.5" and printing it without the 0 will look untidy (PRINTUSING with two places od decimals will automatically put in the 0).

I must say that I am very pleased that you are reviving interest in the Model 1/Video Genie (I use a Video Genie by the way and am unlikely to change, especially if the 1M board is made available) and I do hope that this letter will encourage you to write more articles. At least you know that someone has read the current item with much interest and will read anything you write in the future with as much interest.

Hubert (Hubert Butler)

(** Dear Hubert, Your letter was passed onto me by David. I cannot let David take the 'blame' for all the incorrections that were in that article, some 'typos' got in as well from my fingers. Thank you for taking the time to send in the above. Ed. **.)

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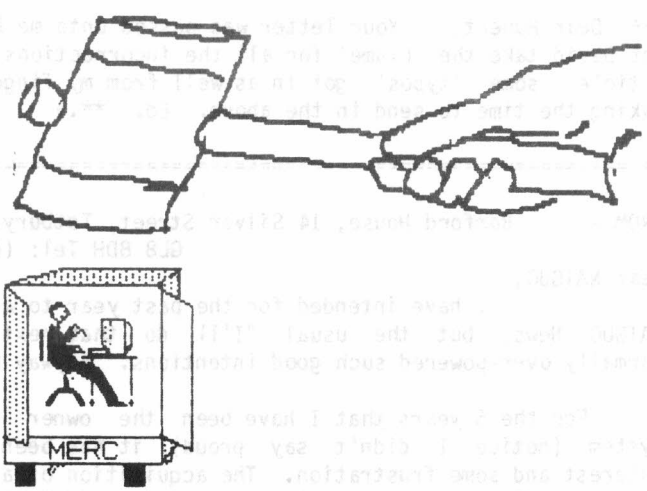
FROM:- Bamford House, 14 Silver Street, Tetbury, Gloucestershire. GL8 8DH Tel: (0666) 52214

Dear NATGUG,

I have intended for the past year to write a letter to NATGUG News, but the usual "I'll do that next week." feeling has normally over-powered such good intentions. Anyway here goes !

For the 5 years that I have been the owner of a Video Genie system (notice I didn't say proud) it has been the source of some interest and some frustration. The acquisition of a printer, followed by twin floppy drives and then LDOS from MOLIMERX about 3 years ago improved matters but introduced new problems.

There is a mistake on the previous page. The page number should read $56\frac{1}{2}$ Not 57



Many years of computer programming experience - I'm not saying how many - and an enjoyment in assembler level coding led me to also purchase from MOLIMERX a copy of EDAS - an excellent product.

However the Model I is a BASIC system and it was a desire to speed up the operation of various BASIC programs that caused me to acquire ACCEL4. Yes, it works and gives a reasonable increase in throughput but ! - and its a big BUT - a large program, on an extended run with lots of string handling reveals a serious bug usually resulting in a system crash, or worse still, a sort of creeping system paralysis ! Anybody else had this experience ?

I then took the hardware approach, perilous (you haven't seen me with a soldering iron) and purchased a Hi-speed CPU (4 Mhz) from ARC Electronics. Installed and correctly adjusted it did result in the claimed average 60% increase in speed. However, what turned out to be a 'dry' joint (not one of mine I may add) resulted in about a years unreliable operation which, coupled with ACCEL4, almost killed it off.

The BASIC/S Compiler System, again from MOLIMERX, was the last straw. BASIC/S obviously wasn't released, it just escaped - anybody have any joy ?

Right, I thought, I can do better than this - why don't I write my own BASIC Compiler - staggers back in amazement ! So 18 months ago I started. The compiler itself had to be written in BASIC and capable of compiling itself. It had to support as many of the features of LBASIC as possible and it should also compile the standard tokenised (SAVEd) version of a BASIC program. The run-time support library also had to be designed and coded in assembler using the excellent EDAS, and had to use routines from the ROM and LDOS system calls wherever possible.

Against all odds I think I have succeeded, and now have a 2 pass compiling system that generates assembler source code for input to EDAS and produces a /CMD version of the original BASIC program. A point of interest for all Model I users is that the run-time system implements a completely different string handling mechanism to that of standard BASIC and avoids completely the 'garbage collection' freeze. Also the compiled programs occupy less memory than when run under LBASIC. The compiler itself, for instance, will no longer run interpretively as it is too large, but runs in compiled mode with 17K bytes to spare !

Needless to say the run-time speed is tremendous - the following benchmark test which can SORT 400 random strings takes for ever under

the interpreter, takes nearly 7 minutes with ACCEL4, but about 1 minute 20 seconds compiled !

Quick Sort Algorithm:- this may be of use to members.

```
100 CLEAR 10240: DEFINT A-Z: DIM X$(400),L(100),R(100)
200 INPUT "No. of values to sort";M: IF M<1 THEN STOP
300 PRINT "Quick SORT - Start: ";TIME$;: GOSUB 900:
    GOSUB 1000: PRINT " Finish: ";TIME$
500 GOTO 200
900 FOR I=1 TO M: X$="": FOR J=1 TO RND(32):
    X$=X$+CHR$(64+RND(26)): NEXT J: X$(I)=X$: NEXT I: RETURN
1000 S=0: L=1: R=M:
1100 I=L: J=R: A$=X$((L+R)/2)
1200 IF I>J THEN 1500 ELSE IF X$(I)<A$ THEN I=I+1: GOTO 1200
1300 IF J<I THEN 1500 ELSE IF X$(J)>A$ THEN J=J-1: GOTO 1300
1400 IF I=J THEN I=I+1 ELSE X$=X$(I): X$(I)=X$(J): X$(J)=X$:
    I=I+1: IF I>J THEN 1500 ELSE J=J-1: IF J<I THEN 1500 ELSE 1200
1500 IF I<R THEN S=S+1: L(S)=I: R(S)=R
1600 IF J>L THEN R=J: GOTO 1100 ELSE IF S>0 THEN L=L(S):
    R=R(S): S=S-1: GOTO 1100 ELSE RETURN
```

Would NATGUG members be interested in more information ? - field test perhaps. I could also offer a compilation service for those users without EDAS - please let me know. I would also be pleased to write a longer article on my compiler if asked.

Alan Stout.

==========

FROM: 28 Pound Road, Little Sutton, South Wirral. L66 1HU. 051-339 5696

Dear Gordon,

I have just rejoined the NATGUG after a few years of absence and am pleasantly surprised to see that the Mod 1 is still going strong. I still have mine, but it gets used very little these days.

I have been reading some of the back issues of the NATGUG News. Reading the article in Issue 8/9 from Ariela Taylor, which she bemoans the lack of a directory display or maintenance utilities in MS-DOS. Well I have some good news. There is an MS-DOS version of the CP/M programme SWEEP called CWEEP. It is PD, but I cannot remember where I got it from. Also I can recommend a programme called HDIR (HotDir) for improved directory displays. This is Shareware and the asking price is only 20 dollars. The programme is available on BB's in an archive file

called XANADU which contains various other utilities. Well worth the 20 dollars for HDIR alone. I will be at Swindon in October.

Donald Sutherland

Donald also supplied a copy of SWEEP.DOC the documentation for CWEEP which includes the following: CWEEP a SWEEP like program for MS-DOS. Copyright (C) by Gary M. Berg/Chemineer Inc. Software has been released to the public domain by the author. All commercial rights are retained by the author. It may be freely passed on to others as long as no charge is made except for possibly a small copying charge. Although this software is thought to work as described, no warranty of fitness is made for this software.

CWEEP is a program to provide the same capabilities for the MS-DOS user as the program SWEEP does for the CP/M user. It provides the ability to take a sorted list of the files on a disk and move forward and backward in the list. Files can be viewed, copied, deleted individually and in groups.

CWEEP (Display for 2.x version)

sp/cr Advance to next file [M] Mass copy tagged files
[A] Re-tag '#' marked files [N] Calculate CRC
[B] Back up one file [P] Protected mass copy
[C] Copy file to drive [R] Rename a file
[D] Delete a file [S] Sort directory
[E] Erase (un)tagged files [T] Tag a file
[F] Free space on a drive [U] Untag a file
[H] Hexidecimal display [V] View file
[I] Print size/time for file [W] Wildcard file tag
[J] Jump to a named entry [X] Exit program
[L] Log new drive/filename [Z] Change subdirectory
[?],[/]Print this message [=] Goto settings menu
[-?], [+?] List other help messages, [@] for printer

(I have not included all of the 17K file here. Thank you Donald, Ed.**)

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From: 17 Greygoran, Sauchie, Clackmannanshire. FK10 3ET. (0259) 213515

Dear Gordon,

First I would like to say how much I am enjoying NATGUG NEWS under your editorship. Knowing when in the month to expect it is also very helpful. (** Thank you Ian - I do like this man. Ed. **)

Having recently changed over from a Model 4 to an IBM clone, and needing all the help I can get, I am very pleased to see that Dave Holman is starting an MS-DOS column. I seem to have had an easier time than he had in transferring files and programmes across. I saw adverts for both TRSCROSS and HYPERCROSS in 80MICRO. The former claimed to transfer in both directions (which I did not need) but was quite a bit more expensive, so I plumped for HYPERCROSS, and was not disappointed.

I had fitted double sided drives to the Model 4 a couple of years ago, and found there was no problem in formatting 360k discs to the MS-DOS format in drive 1 of the Model 4. I had quite a few of these done before I bought my NTS/AT, and found that, contrary to what I had read, it had no difficulty in reading them or writing to them in the 1.2 mb drive.

In fact, transferring data with HYPERCROSS was amazingly easy. To give an example, I had one TRS-DOS 6.2 disc with 95 LeScript files on it, totalling nearly 360k. To format a blank MS-DOS disc in the Model 4, transfer all the files to it, put the disc into the AT and transfer all the files to the hard disc took all of 6 minutes!

BASIC programmes also proved to be no problem because HYPERCROSS translates Model 4 BASIC to BASICA "on the fly". I use "PRINT@(x,y)" a lot, and that is translated direct. Those who prefer "PRINT@(nnnn)" get a warning at each line where this occurs and have to calculate the row and column numbers themselves. All my BASIC programmes ran immediately.

All my programming these days is in ZBASIC, and those programmes, of course, ran completely unaltered because it is designed to be interchangeable between Tandy's, IBM's, Apples, and one or two other machines - all except the second line, that is. On the Model 4 I used a trick I learned from another NATGUG member which is to start all programmes like this:-

```
1 GOTO 10
5 CLS : PRINT "SAVING progname" : SAVE "PROGNAME" : STOP
10 rest of programme
```

ZBASIC on the IBM does not permit using "SAVE" and "RUN" in programme lines, so I have had to overcome this by making line 1 of every programme:-

```
1 REM - progname - A PROGRAMME TO ....
```

I then always press the HOME key to display this line before saving a programme - yes, I have in the past used the wrong name and over-written another programme just before it was backed up!

My main reason for changing to MS-DOS was lack of memory in the Model 4. One or two of my MULTIPLAN spreadsheets had no room left, and in one of my main ZBASIC programmes I have a 96k random access file with over 1000 records in it. When the record numbers were sorted into alphabetical or address order and then listed out it seemed to me that the disc drive head was working an awful lot harder than it should. Now, of course, with 1 megabyte of RAM to play with, it just gets stuck into the RAMDISC automatically whenever that set of programmes is loaded, alongside the full 80,000 word TURBO LIGHTNING dictionary and the full Thesaurus. Incidentally, it just takes 5.7 seconds to load all three of those files, 440k in total!

Speaking of memory, it is quite surprising how profligate you get when you have plenty of it. I was brought up with a start the other evening when a ZBASIC programme I was working on would not compile. I had exceeded the 64k limit for variables even though all the string variables had had their maximum lengths defined. But I must say it is a great help to be able to read into memory a whole file of 45 records, each one 1046 bytes long. It makes it so much easier, and quicker, to manipulate the data and produce a variety of analyses from it.

I would like to pass on one word of warning to anyone relying on the Norton Utilities 'undelete' facility. Late one night (or rather, early one morning) I wanted to check a directory I had been cleaning up before backing up. So I typed "DEL *.EXT" when I had meant to type "DIR *.EXT". After a minute or two of black dispair I remembered the Norton Utilities. After a quick check in the manual I decided to use the QUICK UNERASE because nothing had been written to disc after the files had been erased. That was fatal. The programmes all reappeared, but on checking them I found that after the first 70 or so lines the rest was gibberish.

A frantic phone call the next day to John Miller revealed the cause. If a file is not stored in one continuous block, but is split up over several parts of the disc, then QUICK UNERASE cannot be guaranteed to find the start of the second or subsequent block. Apparently the full UNERASE utility needs to be used for a fragmented file - in other words, anything over 2k, to be safe. I was lucky that time because the really important programme which I was working on was the only one to be recovered fully - all 28k of it! I then ran LISTFRAG which showed that out of about 900 files on the hard disc

(where do they all come from?) about 115 were fragmented, some of them into as many as 15 different parts. One run through of PACKDISK, though, sorted all that and left none fragmented.

.....and another letter from Ian dated 13th Sep. 1987, follows:-

Dear Gordon,

I enclose another offering for NATGUG News. Thank you for returning the last disc. It was very interesting to see that you were able to transfere my LeScript file over to your Model 4 so easily.

In reply to "What am I missing?" Part 1, there are several things that Barry Thrippleton might find his extra 64k useful for.

Rapid access to files. Under TRS-DOS the MEMDISK has to be fomatted and has its own directory track, so there is only about 57k available, I think. I have several sets of programmes in which I leave the files on the disc for the programmes which alter the data, but put them into MEMDISK for the programmes which access the data for reference or analysis.

This seems to me the best of both worlds, because when the data is written directly to disc file there is no chance of forgetting to transfer the files out of MEMDISK at the end of a session, and nothing is lost if (when?) the system crashes, but at the same time, I get the rapid access when the data is just being referenced. Generally, when altering records or creating them absolute speed is not really essential.

Yours sincerely, I. Howard Wright.

From: 20 Edison Road, Holland on Sea, Essex. (0255) 814455

Dear Editor,

Thank you for your prompt delivery of the data sheets for conversion of the Tandy Double Density board to Percom type. I have successfully carried out the conversion despite a number of errors in the text. I am very pleased with the results and would recommend the modification to anyone with a similar board. I list below corrections to enable the text to be ammended.

1. Fig. 3 U3 incorrectly marked - should be U9.
2. List of requirements should specify a 14 pin socket.
3. On chip U11 cut between pin 1 & 2 on chip side of board then between 2 & 13 on underside (The text specifies 1 & 13).

4. Traces should be cut before soldering in socket, check all plated through holes beforehand as I damaged one removing a chip and had to solder an extra jump wire to repair.
5. Cut between socket header pin 39 and ground at point between condensor and ground.
6. Jumper wires between U10 pin 2 & 16 (+5V)
   U10 pin 3 & 8 (ground)
7. Jumper wires between U9 pin 10 & U11 pin 5 (not U9 pin 8 as in text)

I hope these comments will be of use to anyone else wishing to improve their equipment. Yours sincerely, F. W. Emery.

(Thank you, this is the feedback I like to see. Ed. **)

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

STOP PRESS

Swindon Update

As at September 14th less than 30 rooms remained available - if yours isn't yet booked then (0793) 28282 - QUICK !

Programme changes so far ::: A new talk by Wolfgang Lilliefelb on Saturday at 16:15 to discuss the new MS-DOS 'language', PCL. The review of the day scheduled for Saturday 21:00 now becomes Review of the Weekend to be held on Sunday at 15:30. We anxiously need to hear what more you want covered at this last meeting of the year. In particular, Ariela is waiting for dBase questions. D.W.

How many of you go around hiding your lights under bushels ? I ask because I've only just discovered that ages ago our own quiet little Peter Hall wrote and developed his own version of Tasmon for use on CP/M systems. Anyone interested should contact Peter on (0273) 684286 - but remember that Peter earns his living with his computer and this is definitely not PD software ! D.W.

<u>For Sale</u> Model 1000EX, fitted with second disk drive and colour monitor, only 4 months use. 450.00 pound is asked, contact:-
Ms. T. Luhrmann, Christ College, Cambridge.

LOCAL CLUB NEWS

BOURNEMOUTH 1st & 3rd WEDNESDAY at Kinson Community Centre 7.30pm. Ring Carl Rabe on (0202) 730617

MS.DOS User Group. 2nd & 4th Wednesday 8 pm in rear room Sports Centre, Hurn. Contact: Mark Austin (0202) 428856.

CHELMSFORD 1st WED. of each month at 7.30pm. Contact: Richard Creak, Woodcote, 59D Little Baddow Road, Danbury, Chelmsford, CM3 4NT. (0245) 413725

MILTON KEYNES Alternate Sundays, October to March. Brian Pain (0908) 564271

LONDON Nth East London-80; 77 Old Church Road, Chingford, LONDON. E4 6ST. Meets first Sunday every month.

Nth West London; Central Common Rooms, Northwick Park Hospital. 1st Sunday of month 10.30-1.30. Geof Smith, 01-950 6345 after 8 pm.

SUDBURY 2nd Wed. at:- 3a Gainsborough Street. John Kilpatrick (0787) 79504.

SWINDON WEEKEND next meeting October 16th-18th.

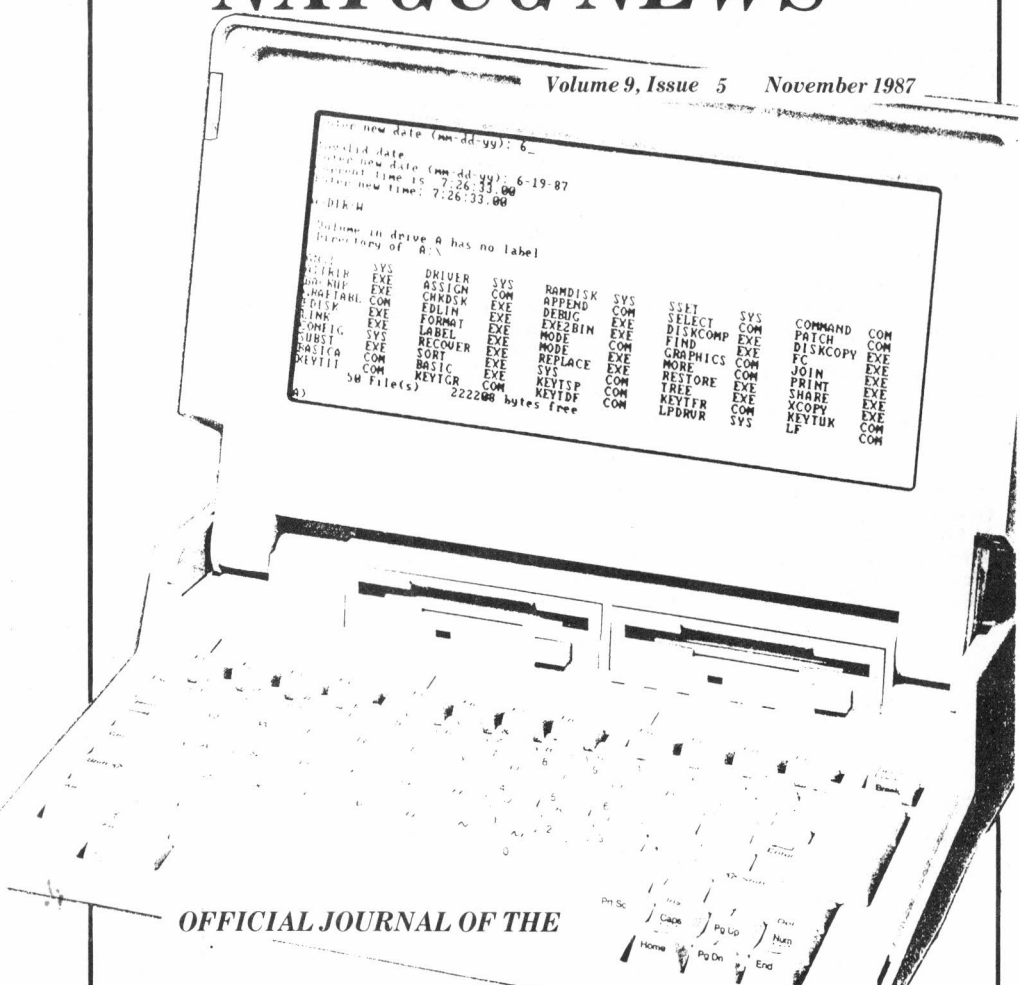
If your club is not mentioned above then its your fault, not ours ! For your FREE advert, write with details to:- Gordon Collins, Editor.

Could any member please let me know if any of the local groups listed below still meet.

East Mids TRS-80 User Group - Notts area. Was run by Mike Costello
TRS-80/VG Users Group (Notts). Run by Geoffrey Hiller
Educational User Group for TRS-80 & VG - Southhall. Run by Dave Futcher
Hull & District TRS-80 User group. Run by R. V. Souter
Isle of Wight TRS-80 Club. Run by M. Collins
Merseyside TRS-80/VG User Club. Run by Peter Tootill
Scottish TRS-80 User Group. Run by Dick Mackie
TRS-80 Level 1 User Group - Merseyside. Run by N. Rushton
TRS-80 Northwest Group - Bolton area. Run by Melvyn Franklin
Tyne & Wear TRS-80 User Group. Run by Dr. S. Tetlow
TRS-80 User Group London branch. Run by J. Wellsman
West Herts 80 User Group (St, Albans). Run by Terry Bradbury
and a group listed as TOPIC run by a David Washford (Who ?)

NATGUG NEWS

Volume 9, Issue 5 November 1987



OFFICIAL JOURNAL OF THE

National Amstrad, Tandy
&
General User Group

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

Thank you to all the people who have sent in articles, they are still coming in regularly (though not so many this last month). I have to admit to having not included three articles which I had when I sent the copy out for Vol. 9, Iss. 4, they are included in this copy. This was due to two peculiar reasons.

I called into the PCW show at Olympia as I was passing on the Friday. Our PR Officer was manning NATGUG Section of the stand. Our thanks go to John for all the work he put in there for six days and evenings, we are fortunate to have people like John who are willing and able to volunteer to do this type of work for us. Our thanks also to Leon who volunteered to have us on a stand which he had booked for QUANTA. John also used the opportunity to AGAIN try and have the entries for NATGUG that are on various data bases, corrected. These include PRESTEL and ACC. The committee thank all the people who have pointed out these to us. We have tried a number of times to have them corrected, but as someone else has already said on these pages, "There is no such thing as bad advertising." A NATGUG stand has been booked for next years show, it is not to early to let the committee know if you are prepared to spend some time manning the stand please.

I got very angry the other day when a member phoned to tell me what has happened to him. The story briefly is that, when LDOS 5:3 was announced, the member ordered, in good faith, from Molimerx, this DOS. The disk arrived with a note saying that this was a temporary product. Many phone calls have been made to Molimerx, as the member wished to have a 'permanent' product. As Molimerx has now ceased trading, he wrote to Misosys. The outcome is that according to Misosys, the LDOS 5:3 with an serial number of TC0A0020, sold to the member by Molimerx, is a COPY of a disk sold to someone in Canada. (Yes they can check on where each copy was sold to), Roy Soltoff, of Misosys is, understandably, also not very happy. Mr. John Harding if you read this and wish to reply to me, as we do not seem to be able to contact you, I will make space available in this Newsletter for your reply. Does any member know how Mr. John Harding can be contacted please ? We do know of the PO Box 10, address at Bexhill. It appears that Mr. Harding is now ex-directory. If any Member who has purchased LDOS 5:3, and it has

the serial number as given above, would they please write to me giving details.

UPDATE. The following is in addition to the above, and is an item that I understand that will appear in the next Misosys Quarterly, which is in response to a customers question.

Molimerx and LDOS 5.3

"Fm MISOSYS: Molimerx no longer is involved with the TRS-80 software market, to my knowledge. Molimerx was also never authorized to distribute LDOS 5.3 nor were any copies ever sold to them by MISOSYS. We are the only supliers of LDOS 5.3. The evidence we have pinpoints the copies of LDOS 5.3 which Molimerx was (or is) selling are copies of the LDOS 5.3 upgrade kit we sold to a Canadian company. That serial number was TC0A0020 and was registered to J&J Electronics Ltd. There was never any authorization for that nor has MISOSYS received any funds for those unauthorized copies sold by Molimerx. Funny how dozens of copies of a disk we sold to a Canadian company have wound up in Great Britain. Such is life ! And folks still complain about me not wasting my time on a Model I release !!!"

Some Members who send in articles are spending a lot of time formatting those articles. Rightly or wrongly, as in ignorance, it may be me doing something that I need not do, I find that to have a standard format that will fit into the pages of NATGUG News, I have to reformat. I have been using a margin of zero and a line length of 71. This was found to be the most economical format, consistant with readability. This could now change a little, if we find that a dot matrix printer output is acceptable, this will be used with 17 c.p.i., so as to get screen dumps (80 chrs/line), for example, across a page without having to chop them about. I have found out that I can control the pitch of the line feeds on the printer, so that the pages towards the back of the last issue were printed with 48 lines per page in the same page length, instead of 43, as I had been using. So the message is, Please do not format, just send in the ASCII File. There have been three members who have sent in LeScript files, those have been easy for me to reformat. If I do not put all articles through the same process I cannot number the pages as you have seen them up to now, the only other way is to cut-and-paste.

Thank you to those members who have answered my request to share the answers to other members problems through the pages of NATGUG News, this does benefit the whole of NATGUG.

UPDATE - Advertising. We are still pursuing selling advertising space in NATGUG News, Tandy has agreed, and we should have their artwork shortly. Does any Member know of anyone else we can approach. The payments received from advertising save the committee from increasing subscriptions. Get enough advertising and the committee could (maybe) cut the membership subscription to a nominal amount.

Did you have a look at the label which was stuck on the envelope bringing your Newsletter ? This now includes a date to advise YOU when YOUR membership subscription expires, if you do not agree with this date, Roger will be very happy to receive your written reason why. DO NOT THROW AWAY THE ENVELOPE WITHOUT FIRST CHECKING THIS DATE, NATGUG would not like to loose you because we had not given you the opportunity to renew your membership in time.

UPDATE - TANDY. I have had a further meeting at Tandy [U.K.], this was to take the forms to be given out from Tandy Stores telling about NATGUG. Also, to agree about certain arrangements and to discuss new points. Those who attended Swindon will have seen Tandy's representatives there.

UPDATE - 80 MICRO. We have now had two letters from 80 Micro. One asked us for all details about NATGUG, as they are going to run a listing of user groups in their December issue, and second we have been advised to apply to become dealers for 80 Micro. More on this when we have made further enquiries.

Those Members who use LS-DOS 6.3 might like to read an article starting at page 101 of the August '87 issue of 80 Micro.

If any Member has any suggestions, such as alternate venues, or on any other theme, and would like your committee to follow it up, please get in touch with one of us.

Well done to John with his page 56.75 in last months NATGUG News, I don't know who the character was with the hammer raised above his

head, must be another clanger - due to sound. Could this be my reward after SILENTLY pointing out to him, one of his errors.

I hope all those who attended the Swindon Workshop enjoyed themselves. Some people left their booking to late and found the hotel fully booked, the moral is - BOOK EARLY.

Gordon Collins, Editor. **

SEXNOTES

Short and sweet this month since a) we've promised that Officers won't take up too much of your space, and b) I'm having to write this BEFORE Swindon, when so much News is likely to break.

Have you seen that Tandy stores are now selling the Spectrum +2 ? I can assure you that we are NOT likely to change our name to cater for this - after all, lack of care might turn us into NASTyGUG !!! Anyway, haven't a couple of Members already set up a User Group for Sinclair ?

More seriously, three people so far have asked me to explain the IGEL shown in my recent Newdos BASIC listings. Since this would probably occupy at least three magazine pages I would like to know how many members are interested, since it might serve your interests better for me to write to them individually and leave the magazine free for other articles. Once again, I ask you to let me know.

And related to that plea, several of you know that I make great use of an ansaphone. Please, don't be afraid of it - just leave your name and address (since replying by post is much cheaper than by phone) and tell the machine what your query is - it's a very good listener. I get really upset when I come home and the machine says it had 8 calls, but 7 of them just hung up !

Happy Computing - hope that I'll have met a lot more of you at this Swindon meeting.

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

A Cobol Data Base.

Last week I took a couple of days out to write the following data base program. I do not like those Data Base programming languages (Such as dBase II) as they usually don't do quite what I want them to. Hence I usually write my own program for a data base.

This program was designed for me to keep record's of Job applications that I am sending out. It consists of two programs:

CREATE/CBL Is the program to Create and Initialize the Data file that I am going to use to store the data.

LOOK/CBL Is the program to Access the Data File.

I record name and address of the company, along with the job name. I then store four dates concerned with the application. The date I send for the application form. The date I send in the application form. The date I receive a reply from the company (Some don't even bother to reply). Finally the date of my Interview with the company (If I get that far).

Now for anybody who has done an elementary course in Cobol, to alter these programs to your own ends is quite simple. Indeed for anybody who has no knowledge of Cobol then it should not provide to great a headache. One note is that Full Stops are VERY important in Cobol, do not add or remove one it could change the flow of the program !

I am printing this for two reasons:-

a) This program has taken me several days to write and I think it might be useful to other members (well maybe not you but your family).

b) It uses the Indexed Random file access mode in addition to the printer. Many people find using a Indexed file in Cobol confusing, and I certainly find using the Printer from Tandy Cobol very confusing. So I am using this program to demonstrate programming ideas for Cobol people.

If you (the Reader) would like me to do a quick course in cobol for you, then ask the Editor and we will see what I can do.

```
000100 IDENTIFICATION DIVISION.
000110 PROGRAM-ID.     CREATE-DATA-FILE.
000120 AUTHOR.         PETER KNAGGS.
```

```
000130 DATE-WRITTEN.   10/07/87.
000140
000150 ENVIRONMENT DIVISION.
000160 CONFIGURATION SECTION.
000170 SOURCE-COMPUTER.    TRS-80-MODEL-3.
000180 OBJECT-COMPUTER.    TRS-80-MODEL-3.
000190 INPUT-OUTPUT SECTION.
000200 FILE-CONTROL.
000210     SELECT MASTER-DISC-FILE
000220         ASSIGN TO RANDOM, "DATAFILE/APL"
000230         ORGANIZATION IS INDEXED
000240         ACCESS MODE IS DYNAMIC
000250         RECORD KEY IS MASTER-KEY.
000260
000270 DATA DIVISION.
000280 FILE SECTION.
000290 FD  MASTER-DISC-FILE
000300         LABEL RECORDS ARE STANDARD
000310         DATA RECORD IS MASTER-REC.
000320
000330 01 MASTER-REC.
000340     02 MASTER-KEY          PIC X(20).
000350     02  ADDRESS.
000360         03  ADDR-1         PIC X(20).
000370         03  ADDR-2         PIC X(20).
000380         03  ADDR-3         PIC X(20).
000390         03  COUNTY         PIC X(10).
000400         03  POST-CODE      PIC X(10).
000410     02  JOB-NAME           PIC X(20).
000420     02  DATES.
000430         03  LETTE          PIC X(8).
000440         03  APPL           PIC X(8).
000450         03  REPLY          PIC X(8).
000460         03  INTER          PIC X(8).
000470     02  JOB.
000480         03  OFFER          PIC X.
000490         03  TAKE           PIC X.
000500
000510 WORKING-STORAGE SECTION.
000520
000530 PROCEDURE DIVISION.
000540 START-UP.
000550     OPEN OUTPUT MASTER-DISC-FILE
000560     MOVE SPACES TO MASTER-REC.
000570     WRITE MASTER-REC.
000580     CLOSE MASTER-DISC-FILE
000590     STOP RUN.
000600 END PROGRAM.
```

```
000100 IDENTIFICATION DIVISION.
000110 PROGRAM-ID.      JOB-APPLICATIONS-DATA-BASE.
000120 AUTHOR.          Peter J Knaggs.
000130 DATE-WRITTEN.    8/7/87-10/7/87.
000140
000150* Menu Driven data base system
000160
000170 ENVIRONMENT DIVISION.
000180 CONFIGURATION SECTION.
000190 SOURCE-COMPUTER.     TRS-80-MODEL-4.
000200 OBJECT-COMPUTER.     TRS-80-MODEL-4.
000210 INPUT-OUTPUT SECTION.
000220 FILE-CONTROL.
000230     SELECT MASTER-DISC-FILE
000240         ASSIGN TO RANDOM, "DATAFILE/APL"
000250         ORGANIZATION IS INDEXED
000260         ACCESS MODE IS DYNAMIC
000270         RECORD KEY IS MASTER-KEY.
000280     SELECT PRINTER
000290         ASSIGN TO PRINT, "PRINTER".
000300
000310 DATA DIVISION.
000320 FILE SECTION.
000330 FD  MASTER-DISC-FILE
000340     LABEL RECORDS ARE STANDARD
000350     DATA RECORD IS MASTER-REC.
000360
000370 01  MASTER-REC.
000380     02  MASTER-KEY       PIC X(20).
000390     02  ADDRESS.
000400         03  ADDR-1       PIC X(20).
000410         03  ADDR-2       PIC X(20).
000420         03  ADDR-3       PIC X(20).
000430         03  COUNTY       PIC X(10).
000440         03  POST-CODE    PIC X(10).
000450     02  JOB-NAME         PIC X(20).
000460     02  DATES.
000470         03  LETTE        PIC X(8).
000480         03  APPL         PIC X(8).
000490         03  REPLY        PIC X(8).
000500         03  INTER        PIC X(8).
000510     02  JOB.
000520         03  OFFER        PIC X.
000530         03  TAKE         PIC X.
000540
000550 FD  PRINTER
000560     DATA RECORD IS PRINT-LINE.
000570
```

```
000580 01  PRINT-LINE          PIC X(79).
000590
000600 WORKING-STORAGE SECTION.
000610
000620 01  DASHES              PIC X(63) VALUE ALL "-".
000630 01  STARS               PIC X(63) VALUE ALL "*".
000640 01  BLANKS              PIC X(63) VALUE ALL SPACES.
000650 01  EOF                 PIC 9   VALUE 0.
000660     88  END-OF-FILE     VALUE 1.
000670 01  DUMMY               PIC X.
000680     88  DUMMY-VALID     VALUES ARE " ", "@".
000690     88  RETRY           VALUE " ".
000700     88  ABORT           VALUE "@".
000710 01  MENU-OPTION         PIC X.
000720     88  VALID           VALUE "A", "D", "E",
000730                               "V", "I", "Q", "@",
000740                               "P", "X", "L".
000750     88  LEAVE           VALUE "Q", "@".
000760 01  TEMP-8              PIC X(8).
000770 01  TEMP                PIC X(20).
000780 01  NAME                PIC X(20).
000790 01  TEMP-LINE.
000800     02  PART-1          PIC X(16)   JUSTIFIED RIGHT.
000810     02  FILLER          PIC X       VALUE IS SPACE.
000820     02  PART-2          PIC X(20).
000830     02  FILLER          PIC X(5)    VALUE IS SPACES.
000840     02  PART-3          PIC X(22)   JUSTIFIED RIGHT.
000850     02  FILLER          PIC X       VALUE IS SPACE.
000860     02  PART-4          PIC X(8).
000870
000880 01  PRINT-TEST          PIC 9   VALUE 0.
000890     88  PRINTED         VALUE 1.
000900 01  LINE-COUNT          PIC 99.
000910 01  TEMP-INDEX.
000920     02  FILLER          PIC X(5) VALUE SPACES.
000930     02  NAME-1          PIC X(20).
000940     02  FILLER          PIC X(10) VALUE SPACES.
000950     02  NAME-2          PIC X(20).
000960
000970 01  SYSTEM-DATE.
000980     02  SYSTEM-YEAR     PIC 99.
000990     02  SYSTEM-MONTH    PIC 99.
001000     02  SYSTEM-DAY      PIC 99.
001010 01  DISPLAY-DATE.
001020     02  TODAY-DAY       PIC Z9.
001030     02  FILLER          PIC X   VALUE "/".
001040     02  TODAY-MONTH     PIC Z9.
001050     02  FILLER          PIC X   VALUE "/".
```

```
001060      02  TODAY-YEAR       PIC 99.
001070
001080 01   SYSTEM-TIME.
001090      02  SYSTEM-HOUR      PIC 99.
001100      02  SYSTEM-MINUTE    PIC 99.
001110      02  FILLER           PIC 999.
001120 01   DISPLAY-TIME.
001130      02  HOUR             PIC Z9.
001140      02  FILLER           PIC X   VALUE ".".
001150      02  MINUTES          PIC 99.
001160      02  FILLER           PIC X   VALUE SPACE.
001170      02  NOON             PIC X.
001180      02  FILLER           PIC X   VALUE "m".
001190
001200 PROCEDURE DIVISION.
001210 MAINLINE-CODE.
001220      PERFORM INITIALIZATION.
001230      PERFORM PROGRAM-BODY UNTIL LEAVE.
001240      PERFORM CLOSE-DOWN.
001250      STOP RUN.
001260
001270* Initialize the system.
001280
001290 INITIALIZATION.
001300      OPEN OUTPUT PRINTER,
001310           I-O    MASTER-DISC-FILE.
001320      PERFORM CONVERT-DATE.
001330      PERFORM CONVERT-TIME.
001340
001350* Convert Date into English format
001360 CONVERT-DATE.
001370      ACCEPT SYSTEM-DATE FROM DATE.
001380      MOVE SYSTEM-YEAR  TO TODAY-YEAR.
001390      MOVE SYSTEM-MONTH TO TODAY-MONTH.
001400      MOVE SYSTEM-DAY   TO TODAY-DAY.
001410
001420* Convert time into English
001430 CONVERT-TIME.
001440      ACCEPT SYSTEM-TIME FROM TIME
001450      MOVE SYSTEM-HOUR    TO HOUR.
001460      MOVE SYSTEM-MINUTE  TO MINUTES.
001470      IF HOUR > 12
001480          MOVE "p" TO NOON
001490          SUBTRACT 12 FROM SYSTEM-HOUR GIVING HOUR
001500      ELSE
001510          MOVE "a" TO NOON.
001520
001530* Close the system down
```

```
001540
001550 CLOSE-DOWN.
001560     DISPLAY "************************" LINE 6.
001570     DISPLAY "***                    ***".
001580     DISPLAY "***  End of Program    ***".
001590     DISPLAY "***                    ***".
001600     DISPLAY "************************".
001610     CLOSE PRINTER,
001620           MASTER-DISC-FILE.
001630     DISPLAY SPACE ERASE LINE 1.
001640
001650* Display menu and distribute selection
001660
001670 PROGRAM-BODY.
001680     PERFORM DISPLAY-MENU.
001690     PERFORM GET-SELECTION UNTIL VALID.
001700     PERFORM DISPLAY-TITLE.
001710
001720     IF MENU-OPTION = "A"
001730           PERFORM ADD-A-RECORD THRU ADD-EXIT.
001740     IF MENU-OPTION = "D" PERFORM DELETE-A-RECORD.
001750     IF MENU-OPTION = "E" PERFORM EDIT-A-RECORD.
001760     IF MENU-OPTION = "I" PERFORM VIEW-INDEX.
001770     IF MENU-OPTION = "L" PERFORM LIST-FILE.
001780     IF MENU-OPTION = "P" PERFORM PRINT-A-RECORD.
001790     IF MENU-OPTION = "V" PERFORM VIEW-A-RECORD.
001800     IF MENU-OPTION = "X" PERFORM PRINT-INDEX.
001810
001820* Display Options Menu.
001830 DISPLAY-MENU.
001840     PERFORM DISPLAY-TITLE.
001850     DISPLAY "A - Add    an Entry"  POSITION 7 LINE 5.
001860     DISPLAY "E - Edit   an Entry"  POSITION 7.
001870     DISPLAY "D - Delete an Entry"  POSITION 7.
001880     DISPLAY "V - View   an Entry"  POSITION 7 LINE 9.
001890     DISPLAY "I - List  the Index"  POSITION 7 LINE 10.
001900     DISPLAY "P - Print  an Entry"  POSITION 37 LINE 9.
001910     DISPLAY "X - Print the Index"  POSITION 37 LINE 10.
001920     DISPLAY "L - List  all Entries" POSITION 37 LINE 11.
001930     DISPLAY "Q - Quit out of program"
001940                                    POSITION 20 LINE 13.
001950     MOVE " " TO MENU-OPTION.
001960
001970* Wait for key selection from Menu.
001980 GET-SELECTION.
001990     MOVE " " TO MENU-OPTION.
002000     DISPLAY "Make Selection =>" POSITION 5 LINE 15.
002010     ACCEPT MENU-OPTION LINE 15 POSITION 23.
```

```
002020      IF VALID
002030        DISPLAY MENU-OPTION POSITION 23 LINE 15
002040        DISPLAY "Confirm"   POSITION 25 LINE 15
002050        MOVE " " TO DUMMY
002060        ACCEPT DUMMY LINE 15 POSITION 33
002070        IF DUMMY NOT = " " AND DUMMY NOT = MENU-OPTION
002080            MOVE "@" TO MENU-OPTION.
002090      DISPLAY "                " LINE 15 POSITION 23.
002100
002110* Display Title (Screen) Mask
002120 DISPLAY-TITLE.
002130      PERFORM CONVERT-DATE.
002140      PERFORM CONVERT-TIME.
002150      DISPLAY "Date:" LINE 1 POSITION 50 ERASE.
002160      DISPLAY "Time:" LINE 2 POSITION 50.
002170      DISPLAY DISPLAY-DATE LINE 1 POSITION 56.
002180      DISPLAY DISPLAY-TIME LINE 2 POSITION 56.
002190
002200      DISPLAY "Job Applications Data Base"
002210              LINE 1 POSITION 12.
002220      DISPLAY "Written in RM-COBOL by P. Knaggs. (c) 1987"
002230              LINE 2 POSITION 4.
002240      DISPLAY DASHES LINE 3 POSITION 1.
002250      DISPLAY STARS LINE 16 POSITION 1.
002260
002270* Select Record to Edit, View, Print, Delete.
002280 SELECT-RECORD.
002290      PERFORM DISPLAY-RECORD-MASK.
002300      MOVE SPACES TO NAME.
002310      ACCEPT NAME LINE 5 POSITION 18 TAB PROMPT.
002320      IF NAME = SPACES GO TO SELECT-RECORD.
002330      MOVE NAME TO MASTER-KEY.
002340      READ MASTER-DISC-FILE
002350           KEY IS MASTER-KEY
002360           INVALID KEY GO TO NOT-FOUND.
002370      PERFORM DISPLAY-RECORD.
002380
002390* Record not found.
002400 NOT-FOUND.
002410      DISPLAY "Entry is not in the system"
002420              LINE 14 POSITION 19.
002430      PERFORM RETRY-ABORT.
002440      IF RETRY GO TO SELECT-RECORD
002450          ELSE GO TO PROGRAM-BODY.
002460
002470* Display the screen mask for the record.
002480 DISPLAY-RECORD-MASK.
002490      DISPLAY "Company Name:"     LINE 5 POSITION 4.
```

```
002500      DISPLAY "Address:"          LINE 6 POSITION 9.
002510      DISPLAY "County:"           LINE 9  POSITION 10.
002520      DISPLAY "Post Code:"        LINE 10 POSITION 7.
002530      DISPLAY "Job Description:"  LINE 12 POSITION 1.
002540      DISPLAY "Letter Sent:"      LINE 6  POSITION 43.
002550      DISPLAY "Application:"      LINE 7  POSITION 43.
002560      DISPLAY "Reply Received:"   LINE 8  POSITION 40.
002570      DISPLAY "Interview:"        LINE 9  POSITION 45.
002580      DISPLAY "Job Offered:"      LINE 10 POSITION 43.
002590      DISPLAY "Job Accepted:"     LINE 11 POSITION 42.
002600
002610* Display the contents of the record on the screen.
002620 DISPLAY-RECORD.
002630      DISPLAY MASTER-KEY  LINE  5 POSITION 18.
002640      DISPLAY ADDR-1      LINE  6 POSITION 18
002650              ADDR-2      LINE  7 POSITION 18
002660              ADDR-3      LINE  8 POSITION 18
002670              COUNTY      LINE  9 POSITION 18
002680              POST-CODE   LINE 10 POSITION 18.
002690      DISPLAY JOB-NAME    LINE 12 POSITION 18.
002700
002710      DISPLAY LETTE LINE 6 POSITION 56.
002720      DISPLAY APPL  LINE 7 POSITION 56.
002730      DISPLAY REPLY LINE 8 POSITION 56.
002740      DISPLAY INTER LINE 9 POSITION 56.
002750
002760      IF OFFER = "Y" DISPLAY "Yes" LINE 10 POSITION 56
002770                ELSE DISPLAY "No " LINE 10 POSITION 56.
002780      IF TAKE  = "Y" DISPLAY "Yes" LINE 11 POSITION 56
002790                ELSE DISPLAY "No " LINE 11 POSITION 56.
002800
002810* Wait for a Space or @
002820 RETRY-ABORT.
002830      DISPLAY "Press <Space> to re-try, or <@> to abort"
002840              LINE 15 POSITION 12.
002850      ACCEPT DUMMY LINE 15 POSITION 54.
002860      IF NOT DUMMY-VALID GO TO RETRY-ABORT.
002870      DISPLAY BLANKS LINE 14.
002880      DISPLAY BLANKS LINE 15.
002890
002900*Add a Record to the system
002910 ADD-A-RECORD.
002920      DISPLAY "  Add a Record  " LINE 16 POSITION 24.
002930      PERFORM DISPLAY-RECORD-MASK.
002940      ACCEPT NAME LINE 5 POSITION 18 TAB PROMPT.
002950      MOVE NAME TO MASTER-KEY.
002960      READ MASTER-DISC-FILE
002970           KEY IS MASTER-KEY
```

```
002980           INVALID KEY GO TO CREATE-REC.
002990      DISPLAY "Entry already exists !"
003000              LINE 14 POSITION 21.
003010      PERFORM RETRY-ABORT.
003020      IF RETRY GO TO ADD-A-RECORD.
003030      IF ABORT GO TO ADD-EXIT.
003040
003050* Create a new Record.
003060 CREATE-REC.
003070      MOVE SPACES TO ADDRESS,
003080                     JOB-NAME,
003090                     DATES,
003100                     JOB.
003110      PERFORM EDIT-REC.
003120      MOVE NAME TO MASTER-KEY.
003130      WRITE MASTER-REC.
003140
003150 ADD-EXIT.
003160      EXIT.
003170
003180*Edit a record in the system
003190 EDIT-A-RECORD.
003200      DISPLAY "  Edit a Entry  "
003210              LINE 16 POSITION 25.
003220      PERFORM SELECT-RECORD.
003230      DISPLAY "Is this the correct Entry <Y/N> ? "
003240              LINE 15 POSITION 15.
003250      MOVE "X" TO DUMMY.
003260      PERFORM GET-KEY UNTIL DUMMY-VALID OR
003270                            DUMMY = "Y" OR
003280                            DUMMY = "N".
003290      IF DUMMY = "N" GO TO EDIT-A-RECORD.
003300      IF DUMMY = "Y" OR RETRY
003310              PERFORM EDIT-REC
003320              REWRITE MASTER-REC.
003330
003340* Edit a record in memory (Excluding Name)
003350 EDIT-REC.
003360      DISPLAY BLANKS LINE 15.
003370      MOVE ADDR-1 TO TEMP.
003380          ACCEPT ADDR-1 LINE 6 POSITION 18 TAB.
003390          IF ADDR-1 = SPACE MOVE TEMP TO ADDR-1.
003400      MOVE ADDR-2 TO TEMP.
003410          ACCEPT ADDR-2 LINE 7 POSITION 18 TAB.
003420          IF ADDR-2 = SPACE MOVE TEMP TO ADDR-2.
003430      MOVE ADDR-3 TO TEMP.
003440          ACCEPT ADDR-3 LINE 8 POSITION 18 TAB.
003450          IF ADDR-3 = SPACE MOVE TEMP TO ADDR-3.
```

```
003460      MOVE COUNTY TO TEMP.
003470          ACCEPT COUNTY LINE 9 POSITION 18 TAB.
003480          IF COUNTY = SPACE MOVE TEMP TO COUNTY.
003490      MOVE POST-CODE TO TEMP.
003500          ACCEPT POST-CODE LINE 10 POSITION 18 TAB.
003510          IF POST-CODE = SPACE MOVE TEMP TO POST-CODE.
003520      MOVE JOB-NAME TO TEMP
003530          ACCEPT JOB-NAME LINE 12 POSITION 18 TAB.
003540          IF JOB-NAME = SPACE MOVE TEMP TO JOB-NAME.
003550
003560      MOVE LETTE TO TEMP-8.
003570          MOVE 6 TO LINE-COUNT.
003580          PERFORM READ-DATE.
003590          MOVE TEMP-8 TO LETTE.
003600      MOVE APPL TO TEMP-8.
003610          MOVE 7 TO LINE-COUNT.
003620          PERFORM READ-DATE.
003630          MOVE TEMP-8 TO APPL.
003640      MOVE REPLY TO TEMP-8.
003650          MOVE 8 TO LINE-COUNT.
003660          PERFORM READ-DATE.
003670          MOVE TEMP-8 TO REPLY.
003680      MOVE INTER TO TEMP-8.
003690          MOVE 9 TO LINE-COUNT.
003700          PERFORM READ-DATE.
003710          MOVE TEMP-8 TO INTER.
003720
003730      MOVE OFFER TO TEMP-8.
003740          MOVE 10 TO LINE-COUNT.
003750          PERFORM READ-YN.
003760          MOVE DUMMY TO OFFER.
003770      MOVE TAKE TO TEMP-8.
003780          MOVE 11 TO LINE-COUNT.
003790          PERFORM READ-YN.
003800          MOVE DUMMY TO TAKE.
003810
003820 READ-YN.
003830      MOVE "X" TO DUMMY.
003840      DISPLAY "***" LINE LINE-COUNT POSITION 56.
003850      DISPLAY "Answer Yes or No <Y/N> ? "
003860              LINE 15 POSITION 19.
003870      PERFORM GET-KEY UNTIL DUMMY = "Y" OR
003880                            DUMMY = "N" OR
003890                            DUMMY-VALID.
003900      IF DUMMY-VALID MOVE TEMP-8 TO DUMMY.
003910      IF DUMMY = "Y"
003920              DISPLAY "Yes" LINE LINE-COUNT POSITION 56
003930          ELSE
```

```
003940              DISPLAY "No " LINE LINE-COUNT POSITION 56.
003950      DISPLAY BLANKS LINE 15.
003960
003970 READ-DATE.
003980      DISPLAY "**/**/**" LINE LINE-COUNT POSITION 56.
003990      DISPLAY "Set to Todays date <Y/N> ? "
004000              LINE 15 POSITION 18.
004010      MOVE "X" TO DUMMY.
004020      PERFORM GET-KEY UNTIL DUMMY-VALID OR
004030                            DUMMY = "Y" OR
004040                            DUMMY = "N".
004050      IF DUMMY = "Y"
004060              MOVE DISPLAY-DATE TO TEMP-8.
004070      IF ABORT GO TO READ-DATE.
004080      DISPLAY BLANKS LINE 15.
004090      DISPLAY TEMP-8 LINE LINE-COUNT POSITION 56.
004100
004110* Delete a record from the system
004120 DELETE-A-RECORD.
004130      DISPLAY "  Remove an Entry  "
004140              LINE 16 POSITION 22.
004150      PERFORM SELECT-RECORD.
004160      DISPLAY "Is this the correct Entry <Y/N> ? "
004170              LINE 15 POSITION 15.
004180      MOVE "X" TO DUMMY.
004190      PERFORM GET-KEY UNTIL DUMMY-VALID OR
004200                            DUMMY = "Y" OR
004210                            DUMMY = "N".
004220      IF DUMMY = "Y" OR RETRY
004230              PERFORM DELETE-REC.
004240      IF DUMMY = "N" GO TO DELETE-A-RECORD.
004250
004260 DELETE-REC.
004270      DELETE MASTER-DISC-FILE RECORD.
004280
004290*Print a record on the printer
004300 PRINT-A-RECORD.
004310      DISPLAY "  Print an Entry  "
004320              LINE 16 POSITION 23.
004330      PERFORM SELECT-RECORD.
004340      MOVE "X" TO DUMMY.
004350      DISPLAY "Is this the Correct Entry <Y/N> ? "
004360              LINE 15 POSITION 15.
004370      PERFORM GET-KEY UNTIL DUMMY-VALID OR
004380                            DUMMY = "Y" OR
004390                            DUMMY = "N".
004400      IF DUMMY = "N" GO TO PRINT-A-RECORD.
004410      IF DUMMY = "Y" OR RETRY
```

```
004420              PERFORM PRINT-REC.
004430
004440 PRINT-REC.
004450     MOVE 1 TO PRINT-TEST.
004460     MOVE "Company Name:" TO PART-1.
004470         MOVE MASTER-KEY TO PART-2.
004480         MOVE SPACES TO PART-3, PART-4.
004490         WRITE PRINT-LINE FROM TEMP-LINE.
004500     MOVE "Address:" TO PART-1.
004510         MOVE ADDR-1 TO PART-2.
004520         MOVE "Date of Letter:" TO PART-3.
004530         MOVE LETTE TO PART-4.
004540         WRITE PRINT-LINE FROM TEMP-LINE
004550               AFTER ADVANCING 1 LINE.
004560     MOVE SPACES TO PART-1.
004570         MOVE ADDR-2 TO PART-2.
004580         MOVE "Date of Application:" TO PART-3.
004590         MOVE APPL TO PART-4.
004600         WRITE PRINT-LINE FROM TEMP-LINE.
004610     MOVE ADDR-3 TO PART-2.
004620         MOVE "Date Reply received:" TO PART-3.
004630         MOVE REPLY TO PART-4.
004640         WRITE PRINT-LINE FROM TEMP-LINE.
004650     MOVE "County:" TO PART-1.
004660         MOVE COUNTY TO PART-2.
004670         MOVE "Date of Interview:" TO PART-3.
004680         MOVE INTER TO PART-4.
004690         WRITE PRINT-LINE FROM TEMP-LINE.
004700     MOVE "Post Code:" TO PART-1.
004710         MOVE POST-CODE TO PART-2.
004720         MOVE "Job Offered:" TO PART-3.
004730         IF OFFER = "Y" MOVE "Yes" TO PART-4
004740                   ELSE MOVE "No"  TO PART-4.
004750         WRITE PRINT-LINE FROM TEMP-LINE.
004760     MOVE SPACES TO PART-1, PART-2.
004770         MOVE "Job Accepted:" TO PART-3.
004780         IF TAKE = "Y" MOVE "Yes" TO PART-4
004790                  ELSE MOVE "No"  TO PART-4.
004800         WRITE PRINT-LINE FROM TEMP-LINE.
004810     MOVE "Job Description:" TO PART-1.
004820         MOVE JOB-NAME TO PART-2.
004830         MOVE SPACES TO PART-3, PART-4.
004840         WRITE PRINT-LINE FROM TEMP-LINE
004850               BEFORE ADVANCING 2 LINES.
004860
004870
004880* Display a Record on the screen.
004890 VIEW-A-RECORD.
```

```
004900      DISPLAY "  View a Entry  "
004910              LINE 16 POSITION 24.
004920      PERFORM SELECT-RECORD.
004930      MOVE 0 TO EOF.
004940      PERFORM VIEW-MENU.
004950      IF DUMMY = "R" GO TO VIEW-A-RECORD.
004960
004970 VIEW-MENU.
004980      DISPLAY
004990      "<P>rint, <E>dit, <D>elete, <N>ext, <R>epeat or <@>"
005000              LINE 15 POSITION 8.
005010      MOVE "X" TO DUMMY.
005020      PERFORM GET-KEY UNTIL DUMMY = "P" OR
005030                            DUMMY = "E" OR
005040                            DUMMY = "D" OR
005050                            DUMMY = "R" OR
005060                            DUMMY = "N" OR
005070                            DUMMY-VALID.
005080      DISPLAY BLANKS LINE 15.
005090      IF DUMMY = "N" AND NOT END-OF-FILE
005100                  PERFORM GET-NEXT-RECORD
005110                  GO TO VIEW-MENU.
005120      IF DUMMY = "P" PERFORM PRINT-REC.
005130      IF DUMMY = "D" PERFORM DELETE-REC.
005140      IF DUMMY = "E" PERFORM EDIT-REC
005150                     REWRITE MASTER-REC.
005160
005170 GET-NEXT-RECORD.
005180      READ MASTER-DISC-FILE NEXT RECORD
005190           AT END MOVE 1 TO EOF.
005200      PERFORM DISPLAY-RECORD.
005210
005220* List the Index of the file on the video
005230*      a screen at a time.
005240 VIEW-INDEX.
005250      DISPLAY "  View the Index  "
005260              LINE 16 POSITION 23.
005270      PERFORM OPEN-SEQUENTIAL.
005280      MOVE 5 TO LINE-COUNT.
005290      MOVE "X" TO DUMMY.
005300      PERFORM VIEW-A-SCREEN UNTIL END-OF-FILE OR ABORT.
005310
005320 VIEW-A-SCREEN.
005330      PERFORM READ-INDEX.
005340      DISPLAY TEMP-INDEX LINE LINE-COUNT.
005350      ADD 1 TO LINE-COUNT.
005360      IF LINE-COUNT = 14 OR END-OF-FILE
005370              DISPLAY "Press <Space> for next page"
```

```
005380                      LINE 15 POSITION 18
005390             MOVE "X" TO DUMMY
005400             PERFORM GET-KEY UNTIL DUMMY-VALID
005410             PERFORM DISPLAY-TITLE
005420             DISPLAY "  View the Index  "
005430                     LINE 16 POSITION 23
005440             MOVE 5 TO LINE-COUNT.
005450
005460* Print the Index of the file on the printer
005470*       correctly paged (if required).
005480 PRINT-INDEX.
005490     DISPLAY "  Print the Index  "
005500             LINE 16 POSITION 22.
005510     DISPLAY "** Printing **"
005520             LINE 8 POSITION 25.
005530     IF PRINTED
005540             WRITE PRINT-LINE FROM SPACE
005550                   BEFORE ADVANCING PAGE.
005560     WRITE PRINT-LINE FROM SPACE
005570           AFTER ADVANCING 2 LINES.
005580     MOVE 60 TO LINE-COUNT.
005590     PERFORM OPEN-SEQUENTIAL.
005600     PERFORM PRINT-PAGE UNTIL END-OF-FILE.
005610     MOVE 0 TO PRINT-TEST.
005620
005630 PRINT-PAGE.
005640     PERFORM READ-INDEX.
005650     WRITE PRINT-LINE FROM TEMP-INDEX.
005660     SUBTRACT 1 FROM LINE-COUNT.
005670     IF LINE-COUNT = 0 OR END-OF-FILE
005680             WRITE PRINT-LINE FROM SPACES
005690                   BEFORE ADVANCING PAGE
005700             WRITE PRINT-LINE FROM SPACES
005710                   BEFORE ADVANCING 2 LINES
005720             MOVE 60 TO LINE-COUNT.
005730
005740* Read the next two Index values into TEMP-INDEX.
005750 READ-INDEX.
005760     MOVE SPACES TO TEMP-INDEX.
005770     READ MASTER-DISC-FILE NEXT RECORD
005780          AT END MOVE 1 TO EOF.
005790     IF NOT END-OF-FILE
005800         PERFORM READ-INDEX-2.
005810
005820 READ-INDEX-2.
005830     MOVE MASTER-KEY TO NAME-1.
005840     READ MASTER-DISC-FILE NEXT RECORD
005850          AT END MOVE 1 TO EOF.
```

```
005860      IF NOT END-OF-FILE
005870           MOVE MASTER-KEY TO NAME-2.
005880
005890* List all records to the printer.
005900 LIST-FILE.
005910      PERFORM OPEN-SEQUENTIAL.
005920      IF PRINTED
005930              WRITE PRINT-LINE FROM SPACE
005940                    BEFORE ADVANCING PAGE.
005950      PERFORM READ-PRINT UNTIL END-OF-FILE.
005960      WRITE PRINT-LINE FROM SPACES
005970            BEFORE ADVANCING PAGE.
005980      MOVE 0 TO PRINT-TEST.
005990
006000 READ-PRINT.
006010      READ MASTER-DISC-FILE NEXT RECORD
006020           AT END MOVE 1 TO EOF.
006030      IF NOT END-OF-FILE
006040           PERFORM PRINT-REC.
006050
006060 OPEN-SEQUENTIAL.
006070      MOVE SPACES TO MASTER-KEY.
006080      READ MASTER-DISC-FILE
006090           KEY IS MASTER-KEY
006100           INVALID KEY GO TO INVALID-FILE.
006110      MOVE 0 TO EOF.
006120
006130* File incorrectly created (Must have spaces key!)
006140 INVALID-FILE.
006150      PERFORM DISPLAY-TITLE.
006160      DISPLAY "***  Data file has been corrupted" LINE 7.
006170      DISPLAY "***  Or has not been CREATED properly".
006180      CLOSE PRINTER,
006190            MASTER-DISC-FILE.
006200      STOP "File Indexing Error".
006210
006220* Wait for a key from the keyboard
006230 GET-KEY.
006240      ACCEPT DUMMY LINE 15 POSITION 63.
006250      DISPLAY SPACE LINE 15 POSITION 63.
006260
006270 END PROGRAM.
```

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HYPERCUBE ARRAYS

In response to your appeals, I have been trying to think of something to write about for the NATGUG news letter. The trouble is this: in the old days everything I wanted to do on my Video Genie was an adventure. To produce a usable result involved solving unfamiliar problems. If I found the solution, it was often worth sharing with other members. If I failed, then perhaps some other user had been cleverer, and there was nothing to lose by using the news letter to ask them.

Since last December I have had my Amstrad PC1512 SD mono and life is different. Everything works the way the book says. I can get cheap and powerful public-domain or user-supported packages. PC-Write, and PC-Calc, serve nearly all of my needs. Basic2 is fine, and Turbo Pascal is fast and flexible (even if annoyingly pedantic about data types). MS-DOS is not as terrible as people make out, because I need to use and learn only a fraction of its apparent facilities in order to do all I want to do.

GEM is less useful, and its OUTPUT function can't be made to work on my minimum configuration (unless I have a dud version) - but GEM can be run under MS-DOS, enabling the <PrtSc> key to produce graphic output. Electric Studio's "IMPRINT" package is an inexpensive and handy alternative to GEM OUTPUT. My Epson MX80 does all I ask of it, just as it did when it was connected to the Genie. So what is there to write about ?

Well, the last issue had a note from Leon Heller about arranging Transputers in hypercube arrays. It occurred to me that many of your readers may never have seen a 4-dimensional object, so for their edification I got out the listing of an old TINY PASCAL program I once wrote for my Genie. It turned out to be very easy to adapt to Turbo Pascal on the PC, and here it is:-

```
{program to draw a hyperobject}

var key: char; var d: integer;


procedure hyper(d,x,y: integer); {draws a d-dimensional hyper object at   x,y}

   const hres=320; vres=200;

   var x2,y2: integer;

   function xoffset(d:integer):integer; {returns a suitable x-offset for the
      next level of drawing}
```

```
      begin if (d mod 2)=1 then xoffset:=hres*(d+4) div 25
            else xoffset:=hres*(d-2) div 20 end;

   function yoffset(d:integer):integer; {ditto for y-offset}

      begin if (d mod 2)=1 then yoffset:=vres*(d-1) div 15
            else yoffset:=vres*(d+3) div 24 end;

   procedure link(d,x,y,x2,y2: integer); {draws links between two d-
      dimensional objects at x,y and x2,y2}

      var xos,yos: integer;

      begin if d=1 then draw(x,y,x2,y2,15)
            else begin link(d-1,x,y,x2,y2); xos:=xoffset(d-1);
               yos:=yoffset(d-1); link(d-1,x+xos,y+yos,x2+xos,y2+yos);
            end {else}; end {proc link};

begin {main part of procedure hyper}

   if d=0 then plot(x,y,15) else begin
         hyper(d-1,x,y); x2:=x+xoffset(d); y2:=y+yoffset(d); hyper(d-
         1,x2,y2); link(d,x,y,x2,y2);
      end {else}

end {procedure hyper};

begin {main prog}

   graphcolormode;

   repeat writeln('enter number of dimensions'); read(d)
   until (d>0) and (d<10);

   graphcolormode; hyper(d,10,10); write(d,'-dimensional object');

   {at this point the program waits for key Q to be pressed to quit display
    of final drawing.  Meanwhile, use of PrtSc key will get the drawing
    printed provided that MS-Dos GRAPHICS command has previously been set
    up}

   repeat read(kbd,key)
   until (key='Q') or (key='q');

end {program}.
```

This little program will draw an object of 1 to 9 dimensions, though objects of 6-D and higher tend to get rather messy and spill over the edge of the screen. It is technically interesting for the use which it makes of the ability of Pascal to handle recursion. If anyone has not come across recursion yet, they can think of it this way:-

Q: how do you draw an n-dimensional object?

A: draw two (n-1) dimensional objects and link them together.

The procedure HYPER keeps calling itself until it reduces the problem to that of drawing a zero-dimensional object (ie plotting a point) which it can manage without further ado. HYPER also calls LINK, which calls itself in a similar way until the linking problem resolves to drawing one line between two points.

John Gale, Hemel Hempstead

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USING THE MODEL 4's EXTRA 64k MEMORY FROM BASIC.

When I acquired the extra 64k memory chips in my Model 4P it was disappointing to find that what the books said was true - you can't get at it from Basic Programs. What made it even more annoying was that all the commercial programs like Multiplan and Visicalc for the Model 4 did use it. Memdisk(s) are only half the answer since you don't always want to store things in a file-type structure, and you can't easily do things like sorting and indexing with out bringing them into memory.

It was a query from my brother in the U.S., who owns a Lobo MAX-80, that really got me thinking about it seriously. The Max-80 is a 4P-similar machine, which he uses in a Model III mode, although there is a version of LDOS 6 for it as well. I wrote the following notes and programs for him and they may be of use to members of the group.

These notes are written from the basis of my experiments with a Model 4P; as far as I know they apply also to the 4 and 4D, but I haven't been able to test them.

Model 4P RAM is divided into 4 banks of 32k each. For the purpose of this description I have numbered them as below (which may conflict with some other writer's definitions):

Bank 0 ... Normal Memory 0000H-7FFFH
Bank 1 ... Normal Memory 8000H-FFFFH
Bank 2 ... Alternate Memory
Bank 3 ... Alternate Memory

Banks 0 and 1 are always fitted, Banks 2 and 3 are optional additions.

Bank switching is achieved by sending a control byte to PORT 84H (write only), called the OPTION port. This port also controls some video functions. The meaning of each bit in this control byte is as follows:

Bits 0-1 select memory configuration 0-3. Normal configuration for Model 4 mode is 1, and for Model III mode it is 0. There are two other modes also, but they are not relevant here.
Bit 2 when =0 selects 64x16 video, when =1 selects 80x24 video.
Bit 3 when =0 selects normal video, when =1 selects inverse video.
Bits 4-5 select the memory bank to switch:
0=Bank 0, 1=Bank 1, 2=Bank 2, 3=Bank 3.
Bit 6 determines where to connect the selected bank:
when =1, connect selected bank to 0000H-7FFFH.
when =0, connect selected bank to 8000H-FFFFH.
NOTE that these appear to be the wrong way round!
Bit 7 selects the video page to use (page 0 or 1).

Switching a bank in simply connects it to the addresses chosen in place of the one previously there, and leaves the previous one unconnected; the content of the memory in any bank is NOT altered by switching it in or out. Information stored in switched-out banks is maintained unless the computer is switched off.

Since the DOS and the running program (or at least part of it) are resident in Bank 0 at addresses 0000H-7FFFFH, we must normally confine any bank switching operations to banks 1,2, and 3 and addresses 8000H-FFFFH.

The control byte to send depends on whether we are using Model 4 or III mode, and on the precise switching to be done:

To swop Bank 2 with Bank 1, control byte=23H (20H for Model III)
To swop Bank 3 with Bank 1, control byte=33H (30H for Model III)
To swop Bank 1 back again, control byte=13H (10H for Model III)

Other swops are not normally possible due to the need to keep Bank 0 intact.

The program to carry out the swop needs to be able to swop, copy data from the new bank into bank 0, and then swop back again. Then the existing basic program can be used to read the data from where it has been stored in Bank 0. It has to be a machine code program, and it is vital that it is located in

Bank 0 so that it does not get switched out halfway through the process. I have managed to get it down to only 20 bytes:

```
0000            00001          ORG     0             ;see text following.
0084            00002 OPTION   EQU     84H
0001            00003 BANK     EQU     $+1
0000 3E00       00004 ENTRY    LD      A,0           ;poke here bank code
0002 D384       00005          OUT     (OPTION),A
0005            00006 BYTES    EQU     $+1
0004 010000     00007          LD      BC,0          ;poke here no of bytes
0008            00008 SOURCE   EQU     $+1
0007 210000     00009          LD      HL,0          ;poke here source
000B            00010 DESTN    EQU     $+1
000A 110000     00011          LD      DE,0          ;poke here destn
000D EDB0       00012          LDIR                  ;copy
000F 3E13       00013 EXIT     LD      A,13H         ;use 10H for Mod III
0011 D384       00014          OUT     (OPTION),A    ;to restore Bank 1
0013 C9         00015          RET
0014            00016 BUFFER   EQU     $
0000            00017          END     ENTRY
```

This program is completely relocatable and can be put anywhere in memory. It can be used in either Model 4 or Model III mode, but needs to be in different places. Since it is so short, it is easy to insert it in a data statement and read it from basic.

Bearing in mind that it must be in Bank 0, I have located it as follows:
For Model 4 mode, in the spare device driver space in low memory.
For Model III mode, in a Dummy File Buffer

The spare device driver space in TRDSOS 6 is not explained in any book I have seen except the "Programmer's Guide to LDOS/TRSDOS" by Roy Soltoff, but a pointer to it is contained in bytes 0206-7H. For DOSPLUS the space is documented as User Memory and there is a pointer to it in @FLAGS. For the programs below I have ignored all this for simplicity, and have assumed that an unmodified DOS is being used, i.e. without any extra devices, exactly as booted from scratch. If you want to use extra devices, you will have to follow the rules, which I have skipped because I think they will confuse this simple demo. I'll be pleased to help anyone on this if needed. For the simple approach I install the program at OFF4H for TRSDOS and 180AH for DOSPLUS. The following Basic program works for either, the first line identifying the DOS and setting the right load point:

```
10 IF PEEK(&H4DC)=74 THEN ENTRY=&HFF4 ELSE ENTRY=&H180A
20 DATA 62,0,211,132,1,0,0,33,0,0,17,0,0,237,176,62,19,211,132,201
30 FOR A=0 TO 19:READ B:POKE ENTRY+A,B:NEXT
40 DEF USR0=ENTRY
50 BUFFER=ENTRY+20:BHI=INT(BUFFER/256):BLO=BUFFER-256*BHI
52 B$=STRING$(236,0):POKE VARPTR(B$)+1,BLO:POKE VARPTR(B$)+2,BHI
60 BANK=ENTRY+1:BYTES=ENTRY+5:SOURCE=ENTRY+8:DESTN=ENTRY+11
70 '
80 '    ********************************************************
90 '    * To use, first POKE the required values into BANK,    *
100 '   *    BYTES, SOURCE and DESTN, and then do X=USR(0).    *
110 '   *                                                      *
120 '   * The rest of this program ia just a demonstration of *
130 '   * one way to use the facility. It is really up to the *
140 '   * user to work out ways that suit him/her best. This  *
150 '   * way simply defines a start address and a length of  *
160 '   * string to be put at that address.                    *
170 '   * Note that when reading you must specifiy the right  *
180 '   * number of bytes to read or you will get rubbish for *
190 '   * everything beyond the string you put there!         *
200 '   ********************************************************
210 '
220 'FNUC$(A$) converts A$ to upper-case.
230 DEF FNUC$(A$)=CHR$(ASC(A$)+32*(A$>="a" AND A$<="z"))
240 '
250 'FNDH!(A$) converts a HEX string to single-prec number
260 DEF FNDH!(A$) =INSTR("123456789ABCDEF",MID$(A$,1,1))*4096
                  +INSTR("123456789ABCDEF",MID$(A$,2,1))*256
                  +INSTR("123456789ABCDEF",MID$(A$,3,1))*16
                  +INSTR("123456789ABCDEF",MID$(A$,4,1))
270 '
279 CLS
280 PRINT @(2,0),CHR$(30)"Read, Write or Quit (R/W/Q) ? ";
290 RW$=INKEY$:IF RW$=""THEN 290 ELSE RW$=FNUC$(RW$):PRINT @(2,28),RW$;
300 ON INSTR("RWQ",RW$) GOTO 310,400,570:GOTO 280
310 '---read routine---
320 GOSUB 490
330 PRINT@(2,0),CHR$(31);:INPUT"Number of Bytes to Read ";NU
340 POKE BYTES,NU
350 POKE BANK,BK:POKE SOURCE,ALO:POKE SOURCE+1,AHI
360 POKE DESTN,BLO:POKE DESTN+1,BHI
370 X=USR0(0)
380 CLS:PRINT@(6,0), LEFT$(B$,NU);
390 FOR A=1 TO 1500:NEXT:GOTO 280
400 '---write routine---
410 GOSUB 490
```

```
420 PRINT@(2,0),CHR$(31);:INPUT"String to Write: ";ST$:LSET B$=ST$
430 POKE BYTES,LEN(ST$)
440 POKE BANK,BK:POKE SOURCE,BLO:POKE SOURCE+1,BHI
450 POKE DESTN,ALO:POKE DESTN+1,AHI
460 X=USR(0)
470 GOTO 280
480 ;
490 '---subr to input address---
500 PRINT@(2,0),CHR$(31);
510 INPUT"Address  to use (as a HEX string eg 2A00): ";AD$
520 IF LEN(AD$)<>4 THEN PRINT"Input must be 4 HEX characters!":GOTO 510
530 FOR A=1 TO LEN(AD$):MID$(AD$,A,1)=FNUC$(MID$(AD$,A,1)):NEXT
540 AD!=FNDH!(AD$):IF AD!<32768! THEN AD!=AD!+32768!:BK=35 ELSE BK=51
550 AHI=INT(AD!/256):ALO=AD!-256*AHI
560 RETURN
570 END
```

For Model III mode make the following changes:

```
 5 CLEAR 2000'---allocate string space
10 OPEN"R",1,"DUMMY1/RND":FIELD 1, 20 AS A$,236 AS B$:CLOSE
15 ENTRY=PEEK(VARPTR(A$)+1)
20 DATA 62,0,211,132,1,0,0,33,0,0,17,0,0,237,176,62,16,211,132,201
       (note changed 17th byte)
```

then lines 30 onwards as above, except modify:

```
lines 280,330,420,500 to read PRINT @(128), ..............
line  290 to read ............. :PRINT @(156),RW$
line  380 to read PRINT @(384), ..................
line  540 to read ............. :BK=32 ELSE BK=48
```

When working in Model 4 mode both Pages 0 and 1 of the screen are in use. Since bit 7 of the control byte switches pages, the screen will blink conspicuously if the cursor is on the second page (page 1) at the time the subroutine is called. I have avoided this by keeping the cursor high on the screen (hence all the PRINT@ 's used). This problem does not occur with Model III as only page 0 is in use.

Finally, do bear in mind that this is only a demonstration program to show how the idea works. Don't try and add any more to it, and in particular don't add device drivers since they will over-write the program in low memory unless you first amend the pointers stored at 0206H (TRSDOS) or in @FLAGS (DOSPLUS). A lot more can be done, but you must understand what you are doing !

Henry Shepherd, 3 White House Close, Shippon, Abingdon, OXON. OX13 6LP
Tel: (0235) 21921

REVIEW OF XTREE Version 2.00

I thought it would never happen. Me, desert Tandy, never! After all, the Model 4 was everything a good honest clean living chap like myself could want. C/PM and Newdos80 V2. could do almost everything. Wordstar, Supercalc2 and dBaseII with a bit of Pascal and Basic thrown in coped with it all. Who in their right mind would want one of those costly I*M clone thingies?. Not me !

Well, blame Mr. Sugar for what happened next. Drop the price of the clone to within reach of ordinary computerists, add a bit of hype and wave it in front of me. Bang - I'm hooked. (What excuse shall I give the wife? - Well dear, you see, in work we are using computers like this one and if I had one then ..... you've heard it before ?).

Anyway, here I am, sold the Model 4 and all the gubbins for a song and sitting proudly in front of a PC1512 HD20 with 640k memory occasionally feeding the mouse. What a difference the hard disk makes. Megabytes upon megabytes to save files on. (Come on -- get to the point). Soon those megabytes dwindle with hundreds of files in dozens of sub-directories.

Herein lies a problem. With all those sub-directories it becomes a pain to copy, delete, move, rename etc. The full directory path of the source and destination files must be typed and even the use of wildcards is limited if there is little or no similarity in the filenames or extensions. With CP/M there was NSWEEP which allowed mass copying, deleting etc of files. Surely there must be some thing similar for MSDOS. I think I've found the nicest utility to match, or dare I say it, surpass NSWEEP. I am referring to XTREE.

XTREE consists of three files, two of which are concerned with installation and customising and XTREE.EXE. Installation is very simple. Run XTREEINS and set up the monitor type as an IBM PC compatible (Quick Display) then change the colour scheme to suit your taste. I like a royal blue background with white text.

XTREE is one of those programs which deserve a place in the sub-directory where you keep all the utilities and which is included in the PATH command, ie, it will be found no matter which sub-directory you happen to be in at the time.

Once loaded, XTREE displays a screen with several windows. The largest window shows a representation of part of the directory tree structure with the root shown as a backslash \. A vertical line represents the first sub-directory level with branches off it. As only part of the tree is shown, it is possible to scroll up or down using the mouse, arrows, PgUp, PgDn, Home and End keys. The cursor is displayed as a rectangular block which moves over each of the directory names.

```
+-----------------------------------------------------------------------+
| \                                                  FILE: *.*          |
|  !__CC                                             -------------------|
|  !__DB                                             DISK: C:FIXED_DISK |
|  !  !__DBFILES                                     | Available        |
|  !  !__LABELS                                      |   bytes: 7,823,360 |
|  !__DOSPLUS                                        -------------------|
|  !__GAMES                                          DISK Statistics    |
|  !__GEMAPPS                                        | Total            |
|  !__GEMBOOT                                        |   Files:     961 |
|  !__REFLEX                                         |   Bytes: 12,274,481 |
|  !__TURBO                                          | Matching         |
|  !  !__PASCAL                                      |   Files:     961 |
|  !  !__TOOLBOX                                     |   Bytes: 12,274,481 |
|  !  !__SOURCE                                      | Tagged           |
+-------------------------------------------------+  |   Files:       0 |
| AUTOEXEC.BAT  CONFIG  .SYS  DOS     .SYS        |  |   Bytes:       0 |
| COMMAND .COM  DB      .BAT  DOSPLUS .COM        |  | Current Directory |
| COMMS   .BAT  DM      .BAT  DOSPLUS .SYS        |  | \                |
| GEM     .BAT  IO      .SYS  MSDOS   .SYS        |  |   Bytes:  204,008 |
+-------------------------------------------------+--+------------------+
| DIR      Available  Delete  Filespec  Log Disk  Makedir Print Rename   |
| COMMANDS ^Showall   ^Tag    ^Untag    Volume    eXecute                |
|  scroll  RETURN file commands  ALT menu        F1 quit   F2 help       |
+-----------------------------------------------------------------------+
```

At this stage, before proceeding to describe the operations within the full file display window, I shall mention the other windows displayed at the beginning. On the right hand side is a small window which shows the disk drive which you are logged onto and its volume name, if any, together with the Available Bytes remaining on the disk. The FILE:*.* above it means that all files are displayed.

Below this is a larger window showing various disk statistics such as the total number of files on the disk and the space they occupy.

The reference to 'Matching' means that because we have the wildcard *.* specified then naturally all the files on the disk match. Tagged files refers to a process of 'tagging'. More of this shortly. The Current Directory shown in the diagram above is the root shown as \ and contains files totalling 204,008 bytes.

Along the bottom three lines are various commands. These are directory commands.

```
Available - Show space available on any disk.
Delete    - Remove the current directory.
Filespec  - Selects a new File Specification for XTREE operations.
Log disk  - Log on to a different disk drive.
Makedir   - Make a new sub-directory in current directory.
Print     - Print directory information on the printer.
Rename    - Rename the current directory.
Show all  - Displays all matching files in all directories.
^Show all - Displays all matching tagged files in all directories.
Tag       - Tag all matching files in the current directory.
^Tag      - Tag all matching files in all directories.
Untag     - Untag all matching files in the current directory.
^Untag    - Untag all the matching files in all directories.
Volume    - Change the disk volume label.
eXecute   - Execute a program or DOS command.
```

Amongst the above list, probably the most used is the facility to make new directories, log a new disk and Filespec. This latter command allows the display only of files matching a particular filespec, for example on a hard disk searching for Supercalc files one would press F then *.CAL. This has the nice effect of masking out all other non-matching files.

As the cursor is moved over a directory name, the files within that directory are displayed in a window below the main one. This window is not large enough to show all files. To display them, simply press the Enter key twice, first to move the cursor into the lower window then to expand it to almost fill the screen.

```
+-------------------------------------------------------------------+
| 123      .BAT      NW .BAT                 FILE: *.*              |
| AUTOEXEC.BAT       PAT      .BAT           ----------             |
| COMMAND .COM       RPED     .EXE           DISK: C: ROBERTS       |
| COMMS    .BAT      SC3      .              | Available            |
| CONFIG   .BAK      SC3BKUP  .BAT           |   Bytes: 6,866,944   |
| CONFIG   .SYS      SK       .BAT           ----------             |
| DB       .BAT      T        .BAT           DIRECTORY Stats        |
| DM       .BAT      WS       .BAT           | Total                |
| DOS      .SYS      WSBKUP   .BAK           |   Files:        29   |
| DOSPLUS .COM       WSBKUP   .BAT           |   Bytes:   204,075   |
| DOSPLUS .SYS                               | Matching             |
| FLS      .BAT                              |   Files:        29   |
| FS       .BAT                              |   Bytes:   204,075   |
| GEM      .BAT                              | Tagged               |
| IO       .SYS                              |   Files:         0   |
| MC       .BAT                              |   Bytes:         0   |
```

```
¦ MSDOS   .SYS                                  ¦ Current File      ¦
¦ NVR     .EXE                                  ¦   123      BAT    ¦
¦ NVAL    .BAK                                  ¦   Bytes:       91 ¦
L-------------------------------------------------------------------¦
```

This is the window where most of XTREE's operations take place and there are a set of specific commands available. These are for Single File Operations

Attributes - View or modify the DOS file attributes of the current file.
Copy - Copy the current file to a new disk and/or path.
Delete - Delete the current file.
Filespec - Selects a new group of files.
Log disk - Log on to a different disk drive.
Move - Move the current file to a different directory.
Print - Print the contents of the current file.
Rename - Rename the current file.
Tag - Tag the current file.
Untag - Remove the tag from the current file.
View - View the contents of the current file on the screen.
eXecute - Execute a program or DOS command.

The View command is very useful. With it you can look at the text in the file if it is ASCII or Wordstar format without displaying the control codes. EXE and COM files can be examined by using VIEW's 'H' subcommand to give a HEX/ASCII display just like some disk editor programs.

With the eXecute command most EXE and COM programs can be run from XTREE and when they are finished you are placed back in XTREE.

In addition, by holding down the ALT key a further menu of commands is available in the Directory Window.

These commands are used by holding down the ALT key, which displays the ALT Directory Commands menu, and pressing the first letter of the command name.

ALT/File display - Change the format and amount of file information XTREE displays in the File Window.
ALT/Sort criteria - Change the order XTREE uses when it displays the list of files in the File Window.
ALT/Tag - Tag any file on the disk whose file attributes match a specified setting.
ALT/Untag - Remove the tag from any file on the disk whose whose file attributes match a specified setting.
ALT/eXecute - Execute a program or DOS command. When you return to XTREE, it does not re-log the disk.

To sum up then, XTREE is probably the most used program you will possess. It is cheap at #35 and in my opinion worth its weight in gold. I hardly remember the last time I used the copy command with all the pathnames. XTREE does it all and displays it on the screen as it is done.

Highly recommended, especially for hard disk users.

David Roberts. Prestel MBX 247462564 (MBX's welcome).

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

Dear Gordon, Thank you for the prompt return of the last diskette. The following is a short article for the NATGUG magazine.

USING THE MICROSOFT MOUSE WITH SUPERCALC 4

Those of us who have changed over to the Amstrad PC1512 find the mouse an extremely useful device which gives rapid cursor control in many software packages available for the PC. Anyone who uses any of the versions of Supercalc will quickly appreciate the speed with which one can 'fly' around the spreadsheet by simply moving the mouse. This is achieved by having the mouse emulate the cursor keys, enter and escape keys.

Based on my experience at home I purchased and IBM PC/XT for the office together with Supercalc 4 and a Bus version Microsoft Mouse. When the computer arrived the mouse board was fitted and MOUSE.COM duly installed.

When I loaded Supercalc 4, to my horror I discovered that the active cell cursor, or for that matter, the enter or escape keys were not responding to the mouse movements. Even trusty old XTREE didn't respond. Had I bought a 'pig in a poke' ? I phoned the supplier of the hardware and Supercalc 4 for help to no avail. "Leave it with us and we will come back to you". I'm still waiting. Even the software manufacturer could only say, "Supercalc 4 does not support the mouse". The best I could get out of them was to return the card in the back of the mouse manual and ask Microsoft for help.

Several lunch-hours were spent reading the programmers guide for the mouse and after a little bit of experimentation I have solved the problem.

The Microsoft Mouse comes with a programming language which allows one to prepare popup menus. In fact, ready made menus for Wordstar, Multiplan and Lotus 123 are provided. I didn't want the full-blown popup menus for Supercalc 4, just the means to move the cell cursor. On one of the disks supplied with the mouse are two programs: MAKEMENU.COM and MENU.COM.

The following small program should be prepared by any text editor and saved in ASCII. The non-document mode of Wordstar is ideal. Call the file CURSOR.DEF.

```
BEGIN ent,lf,rt,up,dn

lf:     TYPE 0,75          ;simulate the left cursor key
rt:     TYPE 0,77          ;simulate the right cursor key
up:     TYPE 0,72          ;simulate the up cursor key
dn:     TYPE 0,80          ;simulate the down cursor key
ent:    TYPE ENTER         ;simulate the enter key
```

Having saved the text, Type: MAKEMENU <cr>
You will be prompted for the file to convert. Enter CURSOR.DEF <cr>

In a few seconds the message 'Conversion complete' will appear. This conversion process created a file called CURSOR.MNU.

To activate the program type: MENU CURSOR <cr> and bingo! you have full mouse control. That's all there is to it. As you will probably want to use the mouse in all possible situations it is a simple matter to include MENU CURSOR in the autoexec.bat file just after installing MOUSE.COM. Having said that, you must of course have MENU.COM on the disk. MAKEMENU.COM is not necessary after the conversion process.

Just to recap, this process only applies to the MICROSOFT MOUSE and other PCs. Those of us with Amstrads don't have to do anything.

David Roberts Tel 0247-462564 Prestel MBX. 247462564

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READER'S FORUM

THIS IS WHERE YOU ARE INVITED TO ASK ALL THOSE QUESTIONS THAT YOU HAVE NEEDED ANSWERS FOR, OR TO MAKE ANY COMMENTS, OR .... ???

FROM:- 6 Plantation Road, Ballymacormick Road, Bangor,
Co Down. BT19 2AF

Dear Gordon,

Its nice to be back in the fold of NATGUG again after a short lapse. (Aftermath of selling the Model 4 for an Amstrad PC.)

It is some time since I wrote an article for NATGUG so I am enclosing a disk and hardcopy of a review of a nice little utility called XTREE for consideration. As time permits, I may produce something on Supercalc 4 Release 1.1.

I'm afraid I haven't the time to match the volume of my friend Anon way out there in the Hebrides but I hope this will help swell the magazine. Incidentally, congratulations on the quality and quantity.

Yours Sincerely, David Roberts.

==========

FROM: 46 Field Way, Chalfont St. Peter, Bucks. SL9 9SH (0753) 882982

Dear Gordon,

Additional Drives on TRS-80 Model IV

My TRS-80 Model IV has now been giving me good service for about two years. There is however, one feature in which the system would be improved and maybe one of our members could give me hint about what to do.

When I changed my Model I, I had 2 Cumana disk drives and these I transfered to the Model IV but they never worked properly.

I find attempting to copy from the internal drives to the Cumanas or to run programs from them, either difficult or impossible. This is so much so that I am contemplating disposing of these additional drives. However I would be glad to keep them if I could get them to work reliably as they did on the Model I.

Any suggestions would be gratefully received either in the NATGUG News or by phone on (0753) 882982 or by letter to the above address.

Eric Brandes

==========

From: The Oaks, 12 Grailands, BISHOP'S STORTFORD, Herts, CM23 2RG

Dear Gordon,

Although I have had a Tandy for about 10 years now, I am not a writer of programs at all, just a user of the computer and what it can do for me. I use it with programs written by other people either specially for my purpose or standard ones like Scripsit, modified by Geoff Smith.

I upgraded my original Model I with cassette, through expansion boards to finally two external disc drives. The next stage was to a Blandford modified Model III with two double sided quad density discs. This was inspired by seeing one at a Milton Keynes workshop. This reduced my data discs from 14 down to 2. However growth has now got me up to 4 discs. I have always had 2 back-up of each disc so with such large discs back-up alone is a slow business.

I am now having to consider with the still increasing data bank that a hard disc of at least 10 MB and probably 20 MB will have to be the next step.

During this time I progressed through the little Tandy printer to Anadex, then to Epson MX80 and now to an Epson LQ800.

My reason for writing this letter is to ask whether someone can give me advice as to what programs I ought to be searching for to accompany my, by now, fairly large data bank. I guess that the next computer will be IBM compatible.

The data bank consists of the details of a car club to which I belong and records the names, addresses and cars of the members. I am registered under the Data Protection Act for this purpose. The reason for the continual growth is that, for reasons relevant to the club's policy, we do not remove a members name or cars even when he no longer pays his subscription or even when he dies. We also do not remove his cars even when he no longer owns them. Over the years the number of new members has always exceeded the number of resignations. Recently the rate of growth has increased so that the current total is about 1 200 names. The number of members past and present is about 4 000 and about 6 000 cars. To make this at all manageable the owners in Great Britain are split onto two discs one from A to L and the second from M to Z, the overseas owners are now also on two discs.

To simplify the description of my procedure let us imagine that one name list, say GBA, is in complete alphabetical order. If I add new members they can only be added to the end of the list. After I have added a few more names the listing is slow from the subsequent search procedure. A letter such as A will have about 120 names on it while B has had to be split into A-L & M-Z with about 200 names on each. Laurie Shields wrote a sort program for me some years back which I then have to use to put the whole series into alphabetical order again.

As you can see to sort the Great Britain lot needs 30 runs through and the overseas about the same.

I now ask the question I have been leading up to with this long preamble. Is it possible to write or buy a program which will insert a name such as Mr & Mrs A M Brown between Mr & Mrs A C Brown and A S Brown so that I no longer have to sort ? Also now when I want to call up A S Brown I have to call up Brown and reject all the Browns before A S as "wrong" before A S Brown comes up. Could I call up A S Brown and let the program search for only this one Brown? The combination of suffixes for Brown is fairly large - - - Mr & Mrs, Mrs & Mr, Mrs & Mrs, Dr, Dr & Mrs, Capt, Admiral & Mrs and so on.

There are a number of rather special programs I use to abstract certain details from the whole data bank which possibly cannot be much improved, these two are the ones which I use most often and would save me the most time. The programs are written in Basic with Newdos 80.2 ZAP 11.

My next query covers a slightly different aspect and is to do with the Epson LQ800. As you know one of the features of this printer is the 24 pin head which produces for nearly everything a letter indistinguishable from a daisy wheel. The other feature which is one of the reasons I bought it is the availability of alternative fonts which you can plug in. For reasons to do with the final stages of the work I am doing for the club and other things I have selected a sans serif font which is also proportionally spaced

As was mentioned in Derek Traylors article on printers in Natgug News Vol 8 Issue 11/12 using Scripsit with proportional spacing produces a ragged right margin even when using the right justification command. I am aware why this happens, you need a very large memory to cope with the large variations in spacing from commas to the letter m. The variation covers about 5 different widths. Since the Model III when Scripsit is loaded has only about 30K RAM left this is no way near enough. As was also mentioned in Derek's article, columns are difficult with proportional spacing but can be done by the use of a series of codes to the Epson.

What word processing program, which I would almost certainly have to use with a hard disc and about 500K RAM, would cope with proportional spacing to give right hand justification and easy column work ? I would guess that "wysiwyg" would almost be a necessity and would certainly make the work a lot easier

With a data bank of this size I need quick access and no sorting, my typing speed is slow but it is the access time which I need to be faster.

The word processing program must be able to call up the Epson commands to give me Emphasised, Double Strike, Condensed, Expanded, Italic with the ability

to combine several of these together. A nice extra, but by no means essential, would be a graphics program which could load, say, a logo into the Epson memory and be called up when and where needed on a page.

If another language should be considered I would like to have views on this. Although I understand Basic I am not wedded to it and I could probably learn enough to do what I need from another language.

If anyone can help me over these problems I would be most grateful. If anyone has ideas and wants more information on what I do I can provide it.

Yours sincerely Robert P Abraham

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MSDOS Monthly - by Dave Holman

An open Forum on MSDOS and associated subjects.

Firstly this month, an apology. Last months issue was intended to be published the previous month, but as I only got my disk to the editor at the last moment he was unable to include it.

Next a word about this months edition, it is unfortunately going to be a very short one as I am away in Germany until early November.

The first comment is about a program that I mentioned last time. I said that I was looking for something to slow down my Amstrad PC to 4.77mHz and so be fully compatible with an IBM PC in respect of speed. I was pleasantly surprised to find that when my copy of PC Plus (an IBM compatible publication) dropped through my door it contained on its software disk a program called SLOW.COM. This is a short utility to do just what I wanted, I think, although it is difficult without an accurate list of IBM PC benchmarks to check it out.

I have to admit that this last month has been spent preparing to go to Germany and as I write this I am only 2 hours away from departing on the trip. This means that not a lot of time has been devoted to the computer, however I did find time to read my latest copy of NATGUG News. I like many others still own a Tandy machine as well as my Amstrad and recently found that when I wanted to transfer a disk from an obscure Rank Xerox format to a CP/M Machine the only way to do it was on my Tandy Model 4. It was interesting to hear from Ian Howard Wright about his problem with the Norton Utilities QUICK UNERASE, not a program that I have, although my hard disk could probably make good use of the LISTFRAG and PACKDISK utilities. Does anyone know of another similar utility ?

Unfortunately I missed Blandford and being in Germany means that I will miss Swindon as well, the worst news is that an impending trip to a series of islands in the South Atlantic means that I will miss the next Swindon as well. This is not good as I will have been out of actual contact with group members for some considerable time. Hopefully Swindon next autumn is still on for me.

I have received no mail from MSDOS users this time so have no questions to answer but I hope to return to a mass of problems and solutions in November.

Good Luck and Happy "MSDOSing"

Dave Holman, 160 London Road West, Bath, Avon. BA1 7QU

*(Re: David's apology, I have written to David to say that this was not necessary as the reason it did not go in, was not that the article did not arrive in time, but that I had to send the copy to the printers early. Ed. **)*

USING SYS13/SYS

In Vol. 9, Iss. 3, page 20, of NATGUG News, there was an article on the above by OPTICA. Here are my ramblings on the same subject. Whilst writing I will be following the instructions on another Model 4, just to confirm that they will work.

To save anyone doing a lot of reading , and then finding that they are not able to use this, can I now say that this will only work with TRSDOS 6:2:xx and LS-DOS 6:3:xx up. Also I shall be keeping to a very narrow path whilst writing, I would get lost myself if I did not. If anyone understands more of this than me, please feel free to take detours. I shall go through this in stages so that anyone wanting to branch off can do so, you may find out more than I have. I am not a DOS expert, but I am willing to learn whilst listening to others.

My natural inquisitive instinct was aroused, when I read, against a reference to something called an "EFLAG$", "that this byte is used to indicate the presence of an Extended Command Interpreter (ECI) program in the SYS13/SYS slot". Turning to the Mod. IV Owner's Manual revealed nothing. (Because it was written before TRSDOS 6:2 ?). The Technical Manual for TRSDOS 6:2, page 262, has 5 lines which meant nothing to me, and page 190 tells you to remove the file if you have not implemented an ECI. Have I missed something somewhere ?

Over a period of time I found out the following, which is a very brief synopsis of all my workings in the land of the unknown.

BACKUP your system disk to include SYS13/SYS. This backed up system disk should now be put in drive :0. REBOOT and then type DIR SYS13/SYS:0 (S) <ENTER>, you should see that the "File Size" is 1.5K. Make at least 28K of free space on the disk. Type PURGE :0 <ENTER> and answer <Y> to a number of files, <BREAK> when you have removed enough files (I answered <Y> to: BREF/CMD, DOS/HLP, HELP/CMD and TAPE100/CMD), then type FREE :0 <ENTER> as a check. Using Model IV, VC/CMD - which I think most people have - on a disk in drive :1, (I am using this file as an example only, as almost any /CMD file can be copied to SYS13/SYS,) type in the following:

COPY VC/CMD:1 TO SYS13/SYS.LSIDOS:0 (C=N) <ENTER>

As a check type DIR SYS13/SYS :0 (S) <ENTER>, you should now see "File Size" as 27.00K. Still with me ?. Type, DIR :0 (S,I) <ENTER> you should not have found VC/CMD on your disk. NOW at DOS READY, type <*) <ENTER>, yes just an asterisk and <ENTER>, VisiCalc should arrive on your screen. You have just Executed an ECI Program.

This is where it gets a bit more difficult for me. The above is not going to move mountains, but please keep reading. Whilst in VisiCalc <ENTER>, </>, <S>, <Q>, <Y>, you should now be at DOS Ready; you could have just rebooted. At DOS Ready type MEMORY (ADD="E") <ENTER>, the forth line on the screen should read:-

X'006E' = 110 (X'0000', ... etc.

What we are interested in are the first two X'????'s, this shows that the EFLAG$ is not set. The EFLAG$ being at MEMORY ADDRESS X'006E' and is X'00'. Again at DOS Ready type:-

PATCH SYS0/SYS.LSIDOS:0 (D00,7A=FF:F00,7A=00) <ENTER>

This has now permanently zapped the EFLAG$ byte in a file called SYS0/SYS and since SYS0/SYS is always in memory from bootup you will now have to reboot to effect this zap, so now please REBOOT. If you did that, VisiCalc should have appeared on your screen. This is another way of executing an ECI. Whilst SYS0/SYS remains zapped on this disk, on each BOOT'ing, DOS will want to load SYS13/SYS, you will not see "DOS Ready" again.

Just a comment here before moving on. In OPTIKA's article mention was made of having two system disks. On one disk LESCRIPT/CMD has been copied to SYS13/SYS and on the other, VC/CMD. OPTIKA has also AUTO'ed DDUTY/CMD. On bootup DDUTY is loaded, and also SYS13/SYS. OPTIKA then changes system disks and upon going into the second partition of DDUTY, a second SYS13/SYS is loaded. (you could stay with the first system disk and upon then going to the second partition of DDUTY, that SYS13/SYS would load again. A quick way of

getting two programs up and running with a few key strokes. N.B. LeScript, when in SYS13/SYS has to be zapped at record X'12', find "LESCRIPT/CMD" and change to SYS13/SYS, as LeScript looks for its own name before loading, or you could leave the file LESCRIPT/CMD on the disk. Another N.B., is that when using LeScript with DDUTY, note the comment on Page 97 of the LeScript manual.

Now back again. Whilst VisiCalc is on the screen please type the following </>, <S>, <E>, and in the edit line type, MEMORY (ADD="E") <ENTER>, you will now see that the byte at memory address X'006E' has changed to X'FF'. Hit any key to reformat the screen. We now have one big problem, try exiting VisiCalc by typing, </>, <S>, <Q>, <Y>, as we did above. So something just wants to keep loading the ECI, its that EFLAG$ byte we zapped, so with VisiCalc now on screen type, </>, <S>, <E>, and in the edit line, MEMORY (ADD=X'6E',B=X'00'), you will now see that we have rezapped MEMORY ADDRESS X'6E' to X'00'. Hit any one key to reformat the screen and exit VisiCalc as above, and you should get to DOS Ready.

The next stage that I have got to, and here I give my thanks to Peter Knaggs who worked up a zap for me, for VC/CMD, is that I do not remain in that endless loop on exiting VC/CMD. This zap is for VC/CMD, record X'0068' and starting at byte 00. You should find:

02 02 00 30 6D B6 6D B6 6D

change these nine bytes to: 01 03 6E 00 00 02 02 00 30. This zap resets address X'6E' in memory before VC/CMD returns to DOS Ready. If someone could work up and send me an Lcode patch to cover the above, I will publish that. I would also publish any patches to other /CMD files that resets the EFLAG$ memory byte, which I receive. I would hope that the above will lead others to experiment and send their findings to me for publication.

Whilst we have been doing the above it has been necessary to enter passwords for files. If you, like me, wish to save on typing, type the following and <ENTER>:

```
For TRS-DOS 6:2;  PATCH SYS2/SYS.LSIDOS (D02,33=18:F02,33=28)
For  LS-DOS 6:3;  PATCH SYS2/SYS.LSIDOS (D02,50=18:F02,50=28)
```

The following are for LS-DOS 6:3 only. Sorry about this one Roy. Who would prefer to use "KILL" not "REMOVE" ? Then type and <ENTER> the following with NO passwords anymore: (you did do the above PATCH didn't you ?

```
PATCH SYS1/SYS (D02,15="KILL  ":F02,15="REMOVE")
        (there are two spaces after "KILL  )
```

Those who are not bothered about having the correct time and do not wish to see "Time HH:MM:SS ?" after booting:

PATCH BOOT/SYS (D02,C3=FF:F02,C3=00)

Who uses SYSTEM (GRAPHIC=YES) ? Instead, as a one off, type and <ENTER> the following; (you will have to reBOOT for this to be set)

PATCH SYSO/SYS (D00,79=8A:F00,79=00)

Should you wish to single step through a LISTing, then enable the space bar to do this by typing and <ENTER>ing the following;

PATCH BOOT/SYS (D05,E8=00 00 3A 40 F4 CB 7F:F05,E8=30 0B 3A 01 F4 CB 47 (you will have to reBOOT for this to be set)

I have a few more PATCHES that I will print when I have time. Please ask if you require a particular PATCH, or if you have any PATCHES, please send them into me for publication.

Gordon Collins, Editor.

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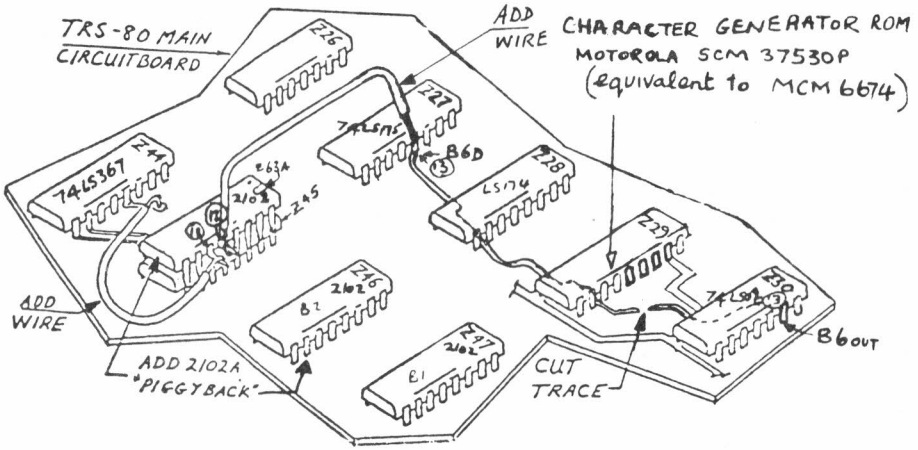
*(**. Some while ago Dave Martin sent a disk to me which I was unable to read, others have also tried and were unsuccessful. I feel that this article will be of use to some of the Model I users, and have therefore tried to recover as much as possible of the article. With appologies to Dave here goes. Ed. **)*

LOWER CASE MOD FOR MODEL I

```
5 CLS:REM SHIFT TO UPPER CASE
10 REM:FOR 48K MACHINES SET MEM SIZE TO 65432
20 FOR I=-104 to -52:READJ:POKEI,J:NEXT
30 POKE 16414,152:POKE 16415,255
40 DATA 221,110,3,221,102,4,218,154,4,221,126,5,183,40,1
50 DATA 119,121,254,32,218,6,5,254,128,210,166,4,254,65,250
60 DATA 125,4,254,97,56,6,0,214,32,195,125,4,254,91,242
70 DATA 125,4,198,32,195,125,4,0
```

```
10 CLS:REM shift to lower case
20 REM:FOR 48K MACHINES SET MEM SIZE TO 65336
30 FOR I=-200 TO -170 :READJ-POKEI,J:NEXT
40 POKE 16414,56:POKE 16415,255
50 PRINT"Shift to lower case, set MEM SIZE to 65336"
60 DATA 221,110,3,221,102,4,218,154,4,221,126,5,183,40,1
70 DATA 119,121,254,32,218,6,5,254,128,210,166,4,195,125,4,0
```

MODEL I LOWERCASE MODIFICATION



Notes:

1) The character generater chip shown on the drawing is often in a socket and produces decenders on lower case.

2) One of the 2102 video memory chips is also socketed on later keyboards. Piggyback two 2102L chips except for pins 11 and 12 on the top one. Attach thin wires to these two pins and fit the combination in place of the 2102N in the socket. This is much easier than sodering "on the board".

3) Cut the track that comes from the 74LS02 (Z30) and goes between pins 11 and 12 on the 18 character ROM (Z29).

4) Solder the wire from the piggybacked chip, pin 11, to pin 13 of the 74LS367 (Z44). Solder the wire from pin 12 to pin 13 of the 74LS175 (Z27).

5) Reassemble the keyboard and switch on. Load one of the lower case drivers, or a word-processor that has one built in, and Viola or whatever her name is ?

Dave Martin. G8IOJ. 37 Longworth Avenue, Tilehurst, Reading,
Berks. RG3 5JU. (0734) 413688

LOCAL CLUB NEWS

BOURNEMOUTH

1st & 3rd WEDNESDAY at Kinson Community Centre 7.30pm.
Ring Carl Rabe on (0202) 730617

MS.DOS User Group. 2nd & 4th Wednesday 8 pm in rear room Sports Centre, Hurn. Contact: Mark Austin (0202) 428856.

CHELMSFORD

1st WED. of each month at 7.30pm. Contact: Richard Creak, Woodcote, 59D Little Baddow Road, Danbury, Chelmsford, CM3 4NT. (0245) 413725

MILTON KEYNES

Alternate Sundays, October to March. Brian Pain (0908) 564271

LONDON

Nth East London-80; 77 Old Church Road, Chingford, LONDON. E4 6ST. Meets first Sunday every month.

Nth West London; Central Common Rooms, Northwick Park Hospital. 1st Sunday of month 10.30-1.30. Geof Smith, 01-950 6345 after 8 pm.

SUDBURY

2nd Wed. at:- 3a Gainsborough Street. John Kilpatrick (0787) 79504.

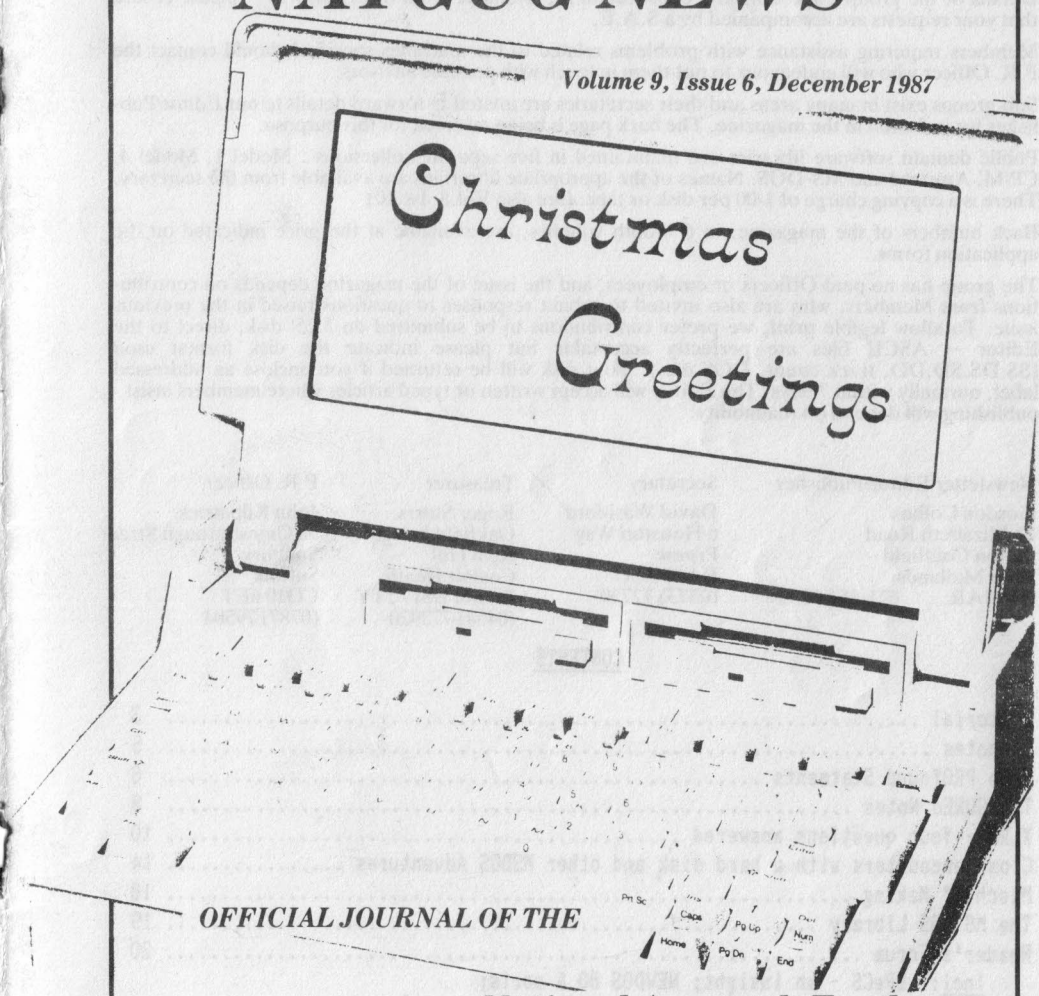
SWINDON WEEKEND '88

next meeting March 11th-13th.
Do not wait - book now !!! ring (0793) 28282

If your club is not mentioned above then its your fault, not ours ! For your FREE advert, write with details to:- Gordon Collins, Editor.

NATGUG NEWS

Volume 9, Issue 6, December 1987



OFFICIAL JOURNAL OF THE

National Amstrad, Tandy
&
General User Group

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.

Newsletter Editor/Publisher	Secretary	Treasurer	P.R. Officer
Gordon Collins	David Washford	Roger Storrs	John Kilpatrick
11 Elizabeth Road	6 Houston Way	Oakfield Lodge	3a Gainsborough Street
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EDITORIAL

A very Merry Christmas and Happy New Year, from all committee members

Thank you to all the people who have sent in articles, there were not so many this last month.

This is the final issue of Volume 9, the reasons for this were given in an earlier issue.

I had my first major complaint about the Newsletter the other day. This was in the form of a request to keep the size of the Newsletter down, so that it can be read during only one visit to the smallest room. What do other members think ?

If you had a look at the label which was stuck on the envelope bringing your Newsletter and you saw the date of DEC 1987, (the month is that month you are paid up to the end of) then please renew your subscription immediately in order to receive the first issue of Volume 10, or please write to Roger if you do not agree with the date. We will be sad if you do not rejoin, unfortunately with limited funds, NATGUG can not afford to spend to much on coaxing you for any length of time, to rejoin. DO NOT THROW AWAY AN ENVELOPE WITHOUT FIRST CHECKING THIS DATE. My aim is to get the first issue of volume 10 to all members just after Christmas, those who have not renewed in time will not get an envelope dropping on their mat.

I hope that David will give some news about the A.C.C., I have to admit that I am still confused as to what A.C.C. is or what they do, although NATGUG are members.

Editorial in Nov '87 80 Micro. I was given a copy about the 21st Oct, a "Thank you" goes to that Member. As this is copyright I can not put it into NATGUG News, but the main statement is that, "Starting as from Jan. 1988 issue, 80 Micro will no longer devote any coverage to TRSDOS machines". We on the committee suspected that this would happen. Without saying too much at the moment, David has followed up on his earlier writings to 80 Micro, as the above mentioned editorial suggested that they are considering several options for a newsletter or small magazine exclusively for the "older" TRS-80's. We await a reply. 80 Micro starting as from Jan. '88 will be devoted entirely to the Tandy MS-DOS systems.

I understand that the Model IV Library files are building up. Mike has promised to send in a report as soon as he gets settled down again.

I have made a decision that, as from now, all program listings sent to me will be passed on to the appropriate librarian. Any program over about 100 lines would probably not get published, amendments to other programs probably would. This will be at my discretion and will depend mainly on the number of

other articles received that month and on how long the program is. Would Members submitting programs please bear this in mind. What would be helpful to me as Editor, is to receive a description of the submitted program, with possibly this only to be used for publication. To save members any further work, if you include the program itself, I will then pass it on to the librarian. As always, if any Member has specific wishes I will go along with those, if they do not mean breaking any rules. I will try to sort out all the programs already submitted and send them to the appropriate Librarian. Please from now on, send to the appropriate librarian for any program mentioned in NATGUG News. It may take me a few weeks to get all the previous ones out to the librarians.

I asked Members to send to me their questions to put to any forums held at the Swindon Workshop, I received none, so there will be no answers here.

SWINDON Oct. '87. We were sorry that storms in the south of England made it impossible for a number of Members to get to this meeting, those included our Chairman and PRO. Those who did attended Swindon will have seen Tandy's representatives there. Both are now Members of NATGUG, we welcome them and all the other people who have joined recently. I believe we are now above the 200 mark. That is a 70% increase in Membership since the AGM. I did some ground work in an effort to have someone do a report on the Swindon meeting, but it seems we were all too busy. I have heard only good verbal reports of the meeting, and have received a letter saying how much it was enjoyed by that Member. So that you do not miss out on attending next March, PLEASE BOOK EARLY BY CONTACTING THE HOTEL DIRECT, don't be one of those who decide at the last minute, and find as this time, that the hotel is fully booked. I understand that Bob Sparling is trying to arrange for the Hotel's printed booking form to be sent out with a NATGUG News, but don't rely on that. NATGUG will not be sending out a booking form, we are trying to keep down costs, it's your money.

SWINDON WEEKEND March '88 Next meeting and AGM, March 11th-13th.
Do not wait - book now !!! ring (0793) 28282

The address is:- The Wiltshire Hotel, Flemming Way, Swindon.

We were promised that NATGUG would be on page 703 of CEFAX the weekend of 1/2 Nov., I am sorry that I have still not seen anything, we do keep trying. Has anyone noticed, that a last, MICRO MART has got our name correct ? (one step forward at least)

I have had no replies to my request for any Member with a copy of LDOS 5:3 with a serial number of TC0A0020 to please write to me giving details, from where purchased, etc. See NATGUG News Editorial Vol. 9, issue 5.

Advertising. We are still pursuing commercial advertising for inclusion in NATGUG News. Does any Member know of anyone we can approach. The payments received from advertising save the committee from increasing subscriptions.

In this issue there is an article from Dick Mackie, Chairman of the Scottish Personal Computing Society, giving some news of that group, thank you Dick for taking the time and answering my request for some news of the 'Local Groups'. Now what about all the other groups sending in just a little news about themselves. Come on, elect a spokes person ! We have been told of a large group in the North West of England, stop hiding, who and where are you ?

I am still wondering what went 'wrong' with the last issue, nobody has pointed out any errors this time.

Thank you for reading NATGUG News, hope we <u>ALL</u> meet again in the New Year.

Gordon Collins, Editor. **

P.S. As of the 6th Nov. '87, there are 115 members to pay by 1st. Jan. 1988

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<u>Sexnotes</u>

I had a really good time at Swindon, but I must confess that I was surprised at how strong a grip the MS-DOS brigade has acquired in such a short time. The Model 4 is a marvellous machine, if only because of the disciplines that one has to comply with due to the memory limitations ! I suspect that a lot of the Messydos popularity is due to just that- one doesn't need to spend hours trying to eliminate seven bytes; with a hard disk, why worry about storage either ? I see nothing wrong with these attitudes, indeed they emphasise the shift from "computerists" to "computer users" that has taken place in the last two years. It's just that I remember so well the good old days ....

And for these Messydossers, I see that OS-2 is now definitely due for 'imminent' release, promising a wonderful new environment for nearly all '286 and '386 machines. OS-2 can address - read this bit slowly - SIXTEEN MEGABYTES OF MEMORY ! (I'm still struggling with 128k !). Lotus are bringing out their long-awaited "AGENDA" next Spring, but the big news seems to be a very belated recognition that ADA, of defence programme fame, is THE language to get into. However, and I don't want to worry anyone who knows about ADA's fame, a recent study by the University of Maryland revealed that naughty ADA lends herself to programs of poor design and specification - facts which have contributed to either project cancellation or massive overrun. Me, I'm more than happy with BASIC and can respond quite speedily to that magic legend "SYNTAX ERROR".

Happy computer using !

David Washford, 6 Houston Way, FROME, Somerset BA11 3EU.

More PROfound ? statements.

To everyone who was hoping to meet me at Swindon, my apologies, I was 'fenced' in by hundreds of trees.

Now that 80 Micro are going to abandon all but MS-DOS machines it would seem that we are even more on our own, NATGUG will be the only lifeline so don't dump your 8 bit machines because as long as the group hangs together the expertise will still be available, it is up to those of us who have the experience to stay with the group to help the others even though we have moved on to 'better?' things.

My thanks to all those members to came & said hello to me at the PCW show, it is such a pity that Tandy can't be bothered to exhibit, they don't even seem to be showing at COMPEC, as that is a 'Business' show it is even more surprising, what is it ? Are they doing so well they don't need to advertise. As soon as I can get round to it I shall have a go at trying out Henry Shepherds program to use the extra ram in a model 4 from Basic.

David Roberts article on XTREE was very interesting, (I use Nusweep all the time when working with CP/M), but he doesn't say where it can be bought.

I have been in contact with Eric Brandes about his drives & have given him some of the information he was lacking, as yet he has not rung back so I can only hope that my information was enough. For the benefit of anyone else, the model 4 looks at the two extra drives expecting them to be configured by their jumpers or dip switches as drive 0 & 1, although they all still called 2 & 3 from the keyboard, also some versions of TRSDOS need patching, the patch is as follows:

```
PATCH BOOT/SYS.LSIDOS:0 (D02,84=C3:F02,84=C9)    This enables drive 2.
PATCH BOOT/SYS.LSIDOS:0 (D02,8E=C3:F02,8E=C9)    This enables drive 3.
```

If of course you have enabled Gordon's patches, used PASSG06 or Super Utility to remove passwords, then ".LSIDOS" does not have to be included. There is another patch to enable FORMAT to automatically format double sided discs, it is as follows:

```
PATCH FORMAT/CMD.UTILITY (D09,5B=02:F09,5B=00)
```

& of course the password ".UTILITY" is not used if you have removed password checking. NOTE the patch on page 23 of the September issue of 80 Micro is wrong there is an error in the second BOOT/SYS patch, it should be F02,8E instead of F02,84 as published, the rest is OK.

Another member rang me & wanted to know if it would be possible to use non Tandy disc drives plugged into the back of one of the new 1000 (HX or EX) series

machines, well I was told by my local Tandy shop that they can be, but they must have their own power supply, however according to OZ that is not so, the power supply comes down the 34 way flat cable, in which case plugging an ordinary drive & cable would blow up the machines power supply. However I see no reason to believe that the DOS will be able to tell the difference between a 3.5" 720K drive & a 5.25" 720K, if anyone knows better I would very much like to know. Whether or not more than one can be daisy-chained is another question.

The October issue of BYTE has a review of all the new Tandy Machines & a list of all the machines they are still supporting in the U.S.A which includes the Model 4D yet it is not mentioned in the latest catalogue available here.

In the June issue of NATGUG News, page 50, I said I was going to write to another firm that was advertising an HD64180 board, well I did & to date I have not heard anything from them, notwithstanding the fact that I included money & an addressed envelope for their reply, so unless enough people are interested in taking up Stuart Ransoms offer then anyone who wants an XLER8er board will have to write to High Tec & take their chances that they will get a reply.

Members who are thinking about an MS-DOS computer might like to know that Tandy have dropped the price of the 1000EX by 100 pounds till Xmas.

Since I started this I have been able to look at the memory enhancement in the October issue of 80 Micro & we are now in the position of having two very different means of adding 256K of RAM to the Model 4,4P range. The XLER8er board which gives us the speed enhancement of the HD64180 but will not work properly in Model 3 mode as yet, & the new enhancement which gives no speed increase & only software for TRSDOS 6.2, nothing for CP/M or Model 3.

The XLER8er is expensive, $249.00, plus customs duty, but does not involve any alteration to the computer, (except the removal of the Z80 chip). The other mod does not give any speedup, it involves some changes to the main PCB, but does not cost very much, about £40.00 at the most, the most expensive item is the extra ram, but that can be bought for £20.00 from SILICONE CITY, MITHIAN, St AGNES, CORNWALL. TR5 0QE. The result is, until suitable software can be written by NATGUG Gurus, you will either have to run in model 4 or CP/M with the XLER8er or stay in TRSDOS with the memory add-on, of course with this add-on CP/M & Model 3 mode can be used but with only the use of the first 64k of Ram, (excluding the second bank under CP/M), at least that's how I think it will work as I have not made up a board to test it yet but will do soon & will write up the results probably in the next issue.

John Kilpatrick, PRO.

TREASUREd Notes

By now most of you should understand the date in the top right hand corner of your envelope label, it indicates the month a member is payed up to the end of. Can I ask all those who see DEC 1987 to pay up for next year. As has been said before, I will accept payment for six or twelve months, but I would obviously prefer you to pay a year at a time. Any of you who have JUN 1988 on your envelope would be very welcome to pay the remaining six months of 1988. For the moment I would prefer not to go beyond December 1988 for reasons discussed below.

I am very apprehensive about raising the membership fees from the present £12 a year. I suspect that we will lose members by such an action. To many lost and we would destroy the whole point of raising the subscription fees. I am working on the assumption that at some time this must be tried. David, Gordon and I discussed this problem at Swindon and came to the conclusion that consideration of a higher fee must be included on the agenda at the AGM. I think therefore, you should consider now about how much you are prepared to pay for membership.

The other thing we need to know concerns the election of officers at the next AGM. David will no doubt discuss this in a "SEX NOTES", but basically we need to know if there are any candidates to stand for the offices. We would like to work out some way of allowing those of you who cannot attend the AGM to vote. This means we need to find out in advance exactly what is to be voted on, so that we can produce the necessary forms of proxy. It is now up to you to make your feelings known and declare your wish to vote by proxy.

The Hon. Ed. and I have taken to meeting in car parks to exchange items and discuss points, not any old car park of course only the best for us, four star hotels no less. If any of you see a Red Mercedes Van parked in a layby, this will be the Gordon hard at work on our next little tome. Just bang on the side (quietly he is prone to miss type etc. when he is distracted) and hand over your discs and articles in person. Gordon is shortly going to write a learned dissertation on fitting a Model 4P and full mod cons to a twelve volt supply.

*(Don't know where Roger got that from. Ed. **)*

From discussions at Swindon it appears that there ARE quite a few more TRS80 local clubs still alive and well around the countryside. I think Manchester, Nunneaton and the North East were mentioned. Who can put us in touch with these groups ?

All Tandy stores would now seem to have our leaflets, although none of the stores that I have visited could produce them quickly. They needed quite a bit of prompting before they would admit there existence. Please visit your local store and just ask for information on Tandy orientated clubs. Hopefully this should make the Managers more conscious of us. I would like to see these leaflets displayed in the window and at the computer sales point. I would not

like to see them put out for the taking, as this might result in an expense which we cannot afford.

Following on from the above paragraph is the problem of the CoCo machine. We are likely to get, indeed both David and I have had them, contacts from owners of this group of machines. John's database contains the names of only two users of colour TRS-80's; are there any others and is there anyone who is prepared to help these potential members ?

LIBRARIES.

I think it might be an idea to recap on the situation regarding the libraries. We have three substantial libraries of PD software and one infant collection for non CP/M Model 4. The later is run by Mike Gordon-Saker who is desperate for your contributions.

The elder library is the Model I/III collection which is run by Leighton Davies. This library is substantial, but is probably not expanding greatly nowadays. It is mainly aimed at the Model I, mostly disc I think, but also a fair amount of tape material. Many items will run on the III and of course the four in three mode. A Model I/III library list is available from me for £2.00.

The CP/M collection can only be described as colossal. Peter Hall is in charge and he will supply the catalogue disk as well as the actual programs. Disks and fees to HIM please.

The MSDOS library is growing at a fantastic rate. It is another demonstration of Ariela Taylor's considerable abilities that she can keep pace with it and cope. I am absolutely convinced I would be in the most awful mess. We tried at first to produce a library list like Leighton's. A few of you have them but there was no way we could keep it up to date. Ariela will therefore supply catalogue disks under the same system that Peter uses.

Ariela can evidently supply on 3 1/2" disks as well as 5 1/4". Only half as many disks are required, but the copying fee is NOT reduced due to the extra work involved.

As an aside I would say here that the club has gained a useful contribution to its funds over the last six months selling Mod I/III library lists. The sale of back magazines, and the various information sheets have also been crucial in keeping us afloat. All copying fees are paid to the librarian, this way the club has no responsibilty for the librarian's equipment. The Library disks are supplied by the club and belong to the club. We would have liked the libraries to be a source of income, but it is more important to make sure they are not a liability. It is now established that if a Librarian retires, then the disks will be handed over to the new Librarian. I think we are very lucky with our four Librarians, they are dedicated and doing a fantastic job.

The catalogue for CP/M and MSDOS are therefore on disk direct from the appropriate Librarian, price £2.00. Do read David's notes in Vol 9 No 4 page 11-13. Those comments now apply to both libraries, except that the standard disk format for MSDOS is 40 track D/S whereas for CP/M it is 80 track D/S. Format your disks, mark them clearly, double the No for forty tracks S/S or better still ring the Librarian first and have a chat. The copying fee for programs is £1.00 per disk for all Libraries. It is only the catalogue disks for CP/M and MSDOS that are £2.00.

In future, Gordon will try to send all programs he receives straight to the appropriate library. Due to cost, he will avoid printing the longer ones. If you send programs to Gordon with notes, please design the notes on the assumption that the reader will not have the program listing until he (sorry Ariela but you are the only she) approaches the librarian.

Roger Storrs, Treasurer.

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XLR8 - Your questions answered

Dear Gordon, Although Barry Thrippleton has asked the authors of the various XLR8 articles to contact him directly, I feel as I believe you do, that these discussions may be of interest to other NATGUG readers and should therefore be discussed in the letter pages of our magazine. Who knows it may even generate more comments.

*(** Yes, this is my view, and thank you John. Ed. **)*

I do not think Barry should be worried about hurt feelings. I often ask myself, after all the work put into the preparation of an article for the magazine and then getting absolutely no feed back, was it really worthwhile ? In this instance however I have been rewarded for my efforts on a number occasions.

I shall now endeavor to answer Barry's questions, starting at 'what am I missing part 2'.

XLR8 - Model 3 compatibility

I hope my article on that particular subject in the September issue of NATGUG has clarified the query. It is just the booting in model 3 mode that is a problem, once the ROM image is loaded there is no further difficulty in getting model 3 up and running. In actual fact the model 4 runs considerably faster in model 3 mode than in model 4 mode. So far I have not experienced any problems in model 3 mode, however, I do not use model 3 mode a great deal.

If you crash or reset the system while in model 3 mode you must first reboot in model 4 mode, install the model 3 image and then boot model 3. A laborious process but at the moment it is the only way to get model 3 running. It is a compromise and must be weighed against the other points if a purchase is considered.

From your comments Barry, I assume you use visicalc in model 3 mode and you would want to use the extra memory the XLR8 board provides. The standard model 3 image provided with your TRSDOS 6.2 or LS-DOS 6.3 does not provide any form of bank switching function and as you are probably aware neither does LDOS 5.1.4 or 5.3, however, MISOSYS can provide a utility disc which contains the necessary software to access at least two additional banks (the 2 banks you already have installed). The remaining 8 banks are not accessible, at least not until someone modifies the model 3 bank controller.

Summarising the above, yes you can run the XLR8 in model 3 mode, however, if you intend to use model 3 mode a great deal of the time, the benefits the XLR8 provides are marginal and perhaps not worth the expense or the gyrations you must go through to get model 3 running.

If you use model 3 occasionally then you may find the method of getting model 3 running acceptable, bearing in mind model 3 basic will not run.

It appears the XLR8 was designed for the model 4 only. To be able to run in model 3 mode appears not to have been addressed. This particular shortcoming must be weighed up when considering the pros and cons of a purchase.

Memdisc Initialisation During Startup

The statement made by John Kilpatrick was correct. Trying to install the system and any other programs into the 256k memory provided by the XLR8, during startup can take some time. It was for this reason that I developed a program (Dumper) which will carry out this task considerably faster than trying to do the job using a JCL. The program was described in September issue of NATGUG. You will still need to wait 35-45 seconds to load everything into a maximum size memory. In my opinion the increase in performance obtained by having the system in memory is well worth the wait during startup, especially when running programs which require frequent disc access.

Normally a crash will leave the contents of memdisc unscathed, therefore after a reboot only the driver should need to be installed (without format). This will only take a 'second or two'. If the crash destroys the memdisc contents then it will be necessary to reload memdisc and wait.

XLR8 Improvements To Model 4 - In simple Terms

It is not easy to establish at what level an article should be 'pitched', especially with the wide audience that NATGUG addresses, however, I feel that

anyone who does not understand an article and would like clarification should make the point known and write !

As I understand from your letter you raised the following points:

1. What practical application would benefit from the XLR8 ?
2. What improvements does the XLR8 provide ?
3. Is any additional software required to run the XLR8 ?
4. Is more hardware required to benefit from the XLR8 ?
5. Is it simple to use ?

I will not address each point separately, although I hope to answer all questions in the text.

Practical Applications

I think increased processor speed speaks for itself. To try and relate the improved performance to something everyone could equate to is difficult, even a statement like X% faster does not mean a lot to everybody, but that is the best that can be done at the moment. Please bear in mind the improved performance is processor speed, disc i/o will not improve, therefore, if your application requires a lot of disc activity performance improvements may not be very noticeable, however, this is where the additional memory comes in useful. Without using disc i/o (using memdisk) performance is really impressive.

Now to provide a number of practical examples. In the following examples I use the extra memory as ramdisc and load the system files and the program at the start into memory with 'Dumper', which takes no more than a minute. I could always leave my data file on disc if it is critical. If things go wrong (crash) I only loose the program which I can reload in a few seconds. My three main applications using the above procedures are:

1. Lescript & Webster (wordprocessor)
2. Multiplan (*) (spreadsheet)
3. Little Brother (*) (database)

In all cases with the operating system and program in memdisk the performance improves considerable. The application relying on overlaying (*) obviously showed the greatest improvement. I am well aware that Lescript is more or less self contained when loaded and requires no disc i/o when running except when saving and loading text. Lescript is quiet happy running on a 128k machine (64k for small text files). Electric Webster, however, does require a considerable amount of disc i/o when running and is an ideal candidate for ramdisc.

I do not want to enter into prolonged discussions over the virtue of these programs with or without ramdisc, they are examples and should be sufficient to help the readers to form their own opinions.

As a programmer I find it useful to be able to install a number of utilities which use additional memory banks, but not as memdisk. It is inappropriate to describe the functions of the utilities here, but for the benefit of users who are familiar with the utilities, I can install DDUTY, edit in one window using SAID, which can also use additional banks, and assemble in another window. Within either window I can utilise PROWAM (alias PRONTO) to carry out calculations, scan memory or disc and perhaps store details in a scratchpad for later. This may seem a little extreme , but it is possible

150ns Ram Chips

The faster ram chips are not really required if you are satisfied with approximately 70% of the maximum processor speed. I am certainly not in a hurry to install the fast chips, but if you feel the need to obtain maximum performance, the technical manual specifies MCM6665 64k DRAMs and they need to be 150ns. How many will depend on what is already installed. I had the extra 64k installed when I bought my model 4, it just happens that they were 150ns, whereas the standard set are 200ns. Each block of 64k requires 8 chips. Source of supply in the UK is not difficult, if asked nicely I am sure OS (O & J House) may be able to help. Price approximately £3-4 each.

Clock

My clock has nothing to do with the XLR8 board, I simply used it as an example to illustrate the problems that may be encountered with external hardware which can not cope with the increased performance.

You are quiet correct as to its purpose, it is simply a means of getting around the keying in of date and time during boot and the time stamping of the directory.

XLR8 Boot

The XLR8 speed is soft configured and when switched on the processor will default to the slowest speed. A small and moderately friendly program will allow you to set the processor speed to meet your requirements. This can be done as a JCL file and then invoked by an auto command on startup.

Software

I am sorry to confuse you with DDUTY and PRONTO, they are simply nice to have around utilities and have nothing to do with the XLR8.

The XLR8 will work with all model 4 programs running either under LS-DOS 6.3 or CPM 2.2. You must specify which operating system you are using if you order the board, you can have both at extra cost.

All the special software necessary is provided with the XLR8. You

definitely need to patch LS-DOS bank driver to be able to access the additional 8 banks (patch is provided) and to utilise these additional banks a utility called 'RAMDISK' is provided, which is similar to MEMDISK.

If you are running at maximum speed you will need to install a filter to slow the processor down when accessing the keyboard, the keyboard PAL is a rather slow device.

Apart from the program which allows you to set the processor speed no further software is required. The software is not difficult to install, the manual provides detailed instructions and is easy to follow.

Well Barry I hope that has answered your questions. I am quiet pleased with the XLR8, but I do not have to cost justify it. You will have to make your own judgment.

John Coyne

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Close encounters with a hard disk and other MSDOS adventures.

It's my contention that MSDOS systems really only become workable with a hard disk based system. I'm not saying that you can't use them with a twin or single floppy system, but programs tend to be so large that you're forever swapping disks to get the right overlay/subsidiary program into memory. Additionally once you've experienced the speed difference between a floppy and a hard disk there's no going back, it's like the difference between tape and floppies. Also it's great to have all your programs and data instantly (well nearly) available. However it is a bit like putting all your eggs in one basket, if something happens, then it tends to be a greater disaster than just trashing one floppy.

The disaster that you think will never happen to you, happened to me a few weeks ago. I was just in the act of making backups of some source code that I'd been working on for 4 or 5 days, when I accidentally hit the edge of my desk with my knee. When the blue air had cleared a bit (it was pretty hard on my knee) I noticed an error message on the bottom of the screen - to the effect that I'd had a general system failure. On re-booting, everything at first seemed OK but when I attempted to recompile my source files, all sorts of errors occurred. The reason was obvious when I looked at the files, most of my patiently crafted code had turned into garbage. That's when I turned to the Hitch-Hikers Guide for advice - don't panic it said. Ok, so let's look at the .BAK file that good old TURBO P generates - even more garbage, it definitely was time to PANIC. A little more examination of some of my files and trying to run a few odd programs showed me that I had a major disaster on my hands. Running

CHKDSK (without the /f option, I only wanted to know the extent of the disaster, not cause more problems) showed that I had 372 crosslinked files and zillions of lost clusters. It appeared that the moment that I kicked the desk had coincided with the moment the head was writing to the directory and the resulting head crash had been the magnetic equivalent of a record stylus skating across the record. I was beginning to worry that I might have not only have lost all that data but also had permanently damaged the platters.

But first, what about all that lost data ? My last full backup was about 3 weeks previously, so the majority of data was OK, and of course I had masters and submasters of all the software anyway. The main problem was two source files of about 50K each. I had backups of the compiled programs but not the sources, I did not even have an up-to-date listing of one of them. Even allowing that I might have the patience to re-enter it all, I was not sure that I could remember all the logical steps I had made and it would therefore be like re-writing the program from scratch. It was now about 1:30 am and I thought I'd better get a full nights sleep before any rescue attempts.

Next evening the magic cpu fairy had not restored my files so I had to find and dust off a floppy version of Norton Utilities. Where to start. Well the first thing is to DELETE the files that you want to attempt to recover. This is mentally hard to do, but that's the way Norton works. Then firing up the program and getting to the appropriate directory will eventually give a list of deleted files. As I suspected, allowing NU to undelete automatically resulted in the same garbage as I started with. I was going to have to actually manually reconstruct my files. Luckily, being PASCAL source code, you know if the file is correct because the program context should make sense. The latest versions of NU allow considerable freedom in choosing and joining clusters to remake a file of the correct size, and allow you to view the chosen cluster in ASCII. The first 6 or 7 clusters were obviously correct but that's where the trouble started. I let NU show me 40 or 50 more clusters before I realised that something illogical was happening since none of the material being viewed now was anything related to PASCAL source. A brainwave then struck and I asked NU to look at clusters BEFORE the correct first half dozen and there they were. The algorithm allocating storage had obviously found some non-contiguous space preceding the start of the file and put the cart before the horse so as to speak. After that, it was a few minutes work to save the restored files and copy to a floppy (twice ! - 2 separate floppies). Reformatting the hard disk and running verify etc. showed that I had not permanently damaged the hard disk, and an hour or two later all was restored.

I think there are several lessons to be learnt from this, the first being - don't think it won't happen to you - it almost certainly will and always when your most precious file is not properly backed up. The second is don't panic, at least not too much. If the disk is not physically damaged then with a bit of luck you can get most, if not all of it back. The third is that with a hard disk, backups are even more important than with a floppy based system, you've got a lot more to loose.

There are a number of quite good backup programs on the market. FASTBACK is very good if you want to make rapid backups (10 MBytes in 4-5 min) of the complete disk contents onto floppies. It saves in a special compressed format with an extra error correcting sector that is claimed to recover data even if a staple is put through the disk. The disk drives are kept running continuously and it probably takes longer for you stuff disks in and out of the drives than it does for the program to copy the data, in fact it keeps a record of just how long you keep it waiting ! You can make selective backups of subdirectories and backups dependent on whether the archive bit is set but it feels a bit clumsy and its options are a little limited. It's also quite expensive at around £135.00.

A better bet is probably COREFAST which offers the same sort of facilities as FASTBACK plus a lot more. Its just as fast, offers both a command line operation or a menu driven one. Its main advantage is the construction of quite intricate (if you need it) catalogues which allow automatic backup of selected files and directories. Its rather cheaper than FASTBACK at about £100.00.

The cheapest utility that I know other than the BACKUP which comes with DOS is CLIP from Keele Codes at £29.95 which appears to offer a lot of the functionality of the more expensive programs at fraction of the price. I've not actually used it myself so cannot comment on any other aspects. One to avoid would seem to be DSBackup Plus which in one review (PC Magazine, April 28, 1987) failed in some aspects of both file saving and restoring. It would not appear to have much going for it !

Seeing the furry rodent perched on the systems desk on the front cover of NATGUG News reminds me to mention that I've recently become something of a convert to the point and click brigade. I had a play with one when we had an Amstrad to evaluate at work, and although the 1512 did not make the grade for our purposes, I was quite impressed with the usefulness of the mouse during the editing phase of working on documents. I would estimate that it could save up to 20% of time that you spend tinkering with your text. With a program such as Microsoft Word which is designed to run with a mouse, it is certainly a more "natural" way to mark blocks of text for moving etc. than with cursor movement. The mouse really comes into its own with a drawing/DTP program, where the ability to place objectsjust where you want them, is just not possible without it.

I was originally going to get a Microsoft mouse, mainly because of software compatibility. However you have two options, one is a serial mouse which is interrupt driven and theoretically you can use on any PC machine, but of course it ties up a serial port. The other is a bus mouse, which has a separate card, which frees the serial port but you have to vivisect your machine to use it on another PC. Also in the case of the Microsoft bus mouse, it is not interrupt driven and relies on the cpu polling it for movement and button presses, and therefore puts even more load on a not particularly lively cpu. While I was debating this situation, a local PC shop, Computer Express, started

to advertise the Logimouse - Plus for £89.00, that's about £50.00 less than the Microsoft rodent. Additionally, unlike the Logimouse-C7, it's a bus mouse, is interrupt driven and the package also contains software for grafting the mouse onto existing non-mouse applications. Microsoft charge extra for similar software. In no time at all I had convinced myself that it was just the thing for me and I bought one. Physically it's a three button opto-mechanical mouse. The opto-mechanical bit means that unlike the purely optical mice you don't have to have a special engraved board on which to exercise your mouse, but the tracking mechanism is not directly coupled to the ball, so that when your mouse runs over the remains of elevenses' jam doughnut there is less chance of screwing the vital bits of the works. The mouse driver appears to emulate the microsoft one quite satisfactorily, with the middle button corresponding to a simultaneous push of both microsoft buttons for those applications that expect a microsoft mouse. The software for grafting the mouse onto existing applications is a compiler for a very simple programming language. A TSR which you normally load from your autoexec automatically links the compiled code to the application. You can in fact build quite sophisticated menus in pop up windows if that is your fancy. Below is a very small example of a program to allow use of the mouse with Supercalc-4.

```
;
; Menu file for Supercalc 4
; Set up labels that correspond to the buttons, direction of
; movement, and values for sensitivity
; and labels for the chords, ie multiple button pushes

BEGIN leftb, midb, rightb, leftm, rightm, upm, downm, 16, 16
CHORDS        lmb, back, mrb, back

; Then set up definitions for labels. Match is a conditional
; statement that in this case looks for the word "Width" on the
; 23 rd screen line starting at position 1. If it finds it, it
; goes to label slash, if not it goes to label return
leftb:        MATCH 23, 1, , "Width:", slash, return
midb:       MATCH 23, 1, , "Width:", slash, esc
rightb:       MATCH 23, 1, , "Width:", slash, colon

return: TYPE ENTER     ;Type a carriage return
esc:    TYPE ESC       ;Type an escape character
colon:  TYPE ":"       ;Type a colon

slash:      TYPE "/"
back:       TYPE BACKSP
leftm:      TYPE 0,75 ; Left arrow (extended 75)
rightm:     TYPE 0,77 ; Right arrow (extended 77)
upm:        TYPE 0,72 ; Up arrow (extended 72)
downm:      TYPE 0,80 ; Down arrow (extended 80)
lmb:        TYPE 0,59 ;f1 help
```

mrb: TYPE 0,61 ;f3 files list

All in all I'm very pleased with my new acquisition and feel that I can recommend it with no reservations.

Finally, a comment in reply to Anon's request (NATGUG News, Vol. 9 Is. 4, p50) for enlightenment on the difference between baud and bps. I'm no expert on comms but I gleaned the following from an article in the PC USER newsletter. Bits per second (bps) is reasonably straightforward, meaning the number of binary digits transmitted per second. This does not mean that if you divide the bps by 8 you will get the number of ASCII characters transmitted per second since there may be stop bits, start bits, 7 bit words etc. However, bps does tell you how many 0's or1's are being transmitted per second, and is being increasingly used to indicate transmission speeds, rather than the perhaps more familiar baud.

The baud-rate actually refers to the number of changes of state per second. If, in the comms system you are using, there are only two possible states, then baud will equal bps, since the two states can only be used to represent 0 and 1. However, with more complicated electronics, the carrier system can be made to have more than two states. If there are four possible states then each state can represent two binary digits, ie.

State 1 => 0 0
State 2 => 0 1
State 3 => 1 0
State 4 => 1 1

Therefore one change of state, transfers two bits of information, and 1200 bps may actually be 600 baud. Similarly if a transmission system (modem) can distinguish 16 separate states, then it can transfer 2400 bps at 600 baud. The ability to distinguish an increasing number of states requires increasingly sophisticated electronics which in part accounts for the disproportionate cost of high baud-rate modems.

Geof Smith (01-950-6345).

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Mischief Making

I think I have been a bad lad winding up several of you and the Editor with my comments on SYS13 and DDUTY. Seriously though its not a bad idea to write a provocative and "slightly" inaccurate article which makes everyone think and inspires somebody to put the record straight. We all then hopefully learn something useful.

I am using SYS13 and DDUTY quite a lot now. I do find that quite often when I convert one of working disks to the system it does not function properly first time. Why - I do not know, but I do feel we had this problem at Swindon when others were being introduced to its delights.

One thing that bothers me somewhat is the alledged protection on LSDOS 6.3. Who is going to unravel all this HYPE and write us a definitive article on this so called DOS protection. My copy is I believe legal although it came from Molymerx, who must now be regarded as "dodgy"

OPTICA.

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The MS DOS library.

A large pile of new programs from the USA came my way recently. Most were for dBase III+ and Clipper and I've not added them to our library but there were some for dBase II and some general utilties too. In keeping with the spirit of pd / shareware I did some exchanging with the librarians of the other two user groups I belong to. It will take a good few weeks to go through the accumulated result and add everything suitable to the library. From the programs I have looked at so far though, these are the ones that are still on my hard disk.

FREZ - this one makes the SCROLL LOCK key do what it ought to - ie stop listings whizzing past your eyes. If you have a 3000 (or any other AT clone presumably) you can also use the SYS REQ key to hold the screen stationary as long as you are pressing that key.

SQUEEZE PRINT. A lot of shareware now comes with large DOC files, laid out as for a book, with lots of blank space. This may look nice but is heavy on paper and filing space. SQUEEZE prints such files (or any other ASCII file) out without the surplus blanks. It offers a choice of formats, from standard 80 col 10 cpi to 180 column condensed superscript. I find the two column 160 cpi format the most useful. It reduces a 100K + file to about 10 pages

Q_DUPS. This checks disks for duplicate files, lists them and lets you delete the surplus one if wanted.

FGREP - This is an improved and much more flexible FIND. It can use wild cards and has lots of display options

TINYPRNT - This is perfect for library disk labels where there are more than about 30 file names to print. It sets the printer to superscript and what looks like about 12 lines per inch.

CMOSSET. Those with 3000s will know that you have to run the SETUP program to correct the date or time permanently. SETUP is a large program with other rarely required functions and I, for one, do not keep on it on the hard disk. Consequently when the clock did need adjusting it was usually some time before I got round to finding the DOS UTILTIES disk and running SETUP. CMOSSET is small and just entering CMOSSET is all that is needed to reset the CMOS.

IOLITE - The COMPAQ that I use to do the dBase Magazine has a Hardcard - which means no light to show hard disk activity and, being rather deaf, I can't hear it either. IOLITE shows a small flashing block at the top right of the screen when the hard disk is being accessed.

I've just added disk no 40 to the MSDOS library. As the programs are almost all ARC'd that means about 35 Mb of public domain and shareware programs. And yes Dave, there is a GOSLOW utility somewhere. And there are at least that many more waiting to be sorted, checked and catalogued.

Ariela Taylor, 42 Davenham Avenue, Northwood, Middlesex. HA6 3HQ (09274) 22773

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READER'S FORUM

THIS IS WHERE YOU ARE INVITED TO ASK ALL THOSE QUESTIONS THAT YOU HAVE NEEDED ANSWERS FOR, OR TO MAKE ANY COMMENTS, OR .... ???

From: 72 Morningside Drive, Edinburgh. EH10 5NU 031-447 6651

Dear Gordon,

SPeCS

You ask in your recent NATGUG News whether the Scottish TRS-80 Users Group is still in existence and the answer must be yes and no. Yes- 'cos the same guys still meet in the same place at the same time each month, but No - because it first transformed itself into STAQLUG, to wit the Scottish TRS-80 & QL Users Group, and then merged with the Scottish Amateur Computing Society last year to become the Scottish Personal Computing Society, or SPeCS.

So why wait all this time to let you know these things; well it's just a simple case of Planning Blight. The place in which we meet is a humble little batchelor's pad now owned and operated by Ted Gladstone's family (Brian, Laurie and Leon could give you some idea of just how humble it is, but let's just say that the main staircase into the hall looks like something out of a Hollywood musical) and is run as an Hotel/Motel. However Ted (he's our librarian) & Co have wanted to upgrade the place a little, building some houses in the grounds to help pay for the work so they can lease it to a hotel company and get the odd

free evening to go to computer clubs elsewhere. Then came the siren call, "given it is such a splendid place, why not get some loot from the Historic Buildings Council etc. " Great idea, and all are in favour, but this has added some years to the delivery schedule, during which the costs have escalated and the start date has vanished over the horizon. This wasn't forseen however, so the bar has closed, the customers have migrated, and the Coach Party bookings which kept it going over the summer months have melted away as they are booked a year in advance, and all was expected to be well under way from that viewpoint. More relevantly SPeCS has had to consider relocating itself, but due to the delays we have continued to meet in the same place, but have never been happy to announce our arrangements as we expected to be in transit at any time. I think this has been with us for about 3 years now, so maybe now that I've told you, the planning permission etc will suddenly come OK.

All in all we still have a successful club night, with many of the original Tandy members still in place, but we are now an all-machine outfit, with DOS probably the way to move where individuals can afford it. However with the Amiga and Archimedes around I doubt if this will take a total hold as many of the SACS members were of the Beeb inclination.

For the record, we meet at the Mansion House Hotel, Milton Road West (A1), Edinburgh at 7. 30 for 8 p. m. on the second Thursday of each month. We no longer have a newsletter as it is more than a little frustrating to write for a dedicated audience in single figures. We do mail a membership of around 40 and probably reach about 20-25 active members. There is no subscription fee at present as we are OK at the Bank so far. We have a committee which never meets, and most of the arrangements (if any!) are made by myself in consultation with Ted. You can contact me on 031-447 6651 out of hours, with Ted on 031-661 4558 at almost any time. Sadly few of our members have taken up membership of NATGUG, not for the want of publicity I may say, and apart from the two above-mentioned, along with John Miller and Ian (Howard) Wright, I don't think any others have joined. I might just try again. Keep up the good work, I will make it to Swindon one of these days. I had hoped to do so this year but somebody screwed up my diary for the Friday and it's a long way to go for just part of a workshop. I'll also rite an arttical, honist!

Yours computingly, Dick Mackie, Chairman, SPeCS.

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FROM: 1 Barrowsfield, Limpsfield Road, Sanderstead, Surrey. CR2 9EA 01-657 1694

Dear Gordon,

Thank you for the November News. Overleaf is a copy of a letter I have sent to Robert Abraham.

I have written all my own programs in basic. Except in one instance they

all use sequential files and the Newdos 80 array sort CMD(0); and even the one random access file program uses CMD(0).

I have often thought of getting a PC type machine but come up against the problem of sort. Because the Newdos 80 sort does it on an array in memory, I don't have to create different names for pre sort and post sort files which I would have to if I used the disk sort supplied with MSDOS. The big advantage of the Newdos 80 sort is that it sorts numeric fields correctly without their having to be converted by me into strings. I can also use it on the same data more than once using different sort keys without having to play around with reading the data again from disk.

Is there a Newdos 80 type sort available for the PC type machines or does anyone have a viable alternative suggestion please.

Yours Sincerely, Peter Kyle. P.S. Thoroughly enjoyed Swindon

*(Follows most of Peter's letter to Robert Abraham. Ed. **)*

Dear Robert

Among other things I am membership secretary for the BMW Club (for motorcyclists not cars) and have to cope with over 4,000 members on file. I wrote my own program and use it on a Model 1, yes, Model 1. I get all the membership on one double sided, single density, 80 track disk by using 13 sequential files. I do have to sort when I make additions but it takes under 10 seconds per sort. However it does take about half a minute to read each file into memory or write it back to disk. I usually find something to do while I am waiting so it doesn't cause me a problem.

I also wrote programs to use the data held for a formatted membership list and for producing statistics of bikes owned, etc ....etc.

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STOP PRESS

Who was the first Member to spot NATGUG on CEEFAX - BBC2, Screen 703, Page 32 of 36 ? I hope the TANDY [UK] will also appreciate the whole page of advertising. A suggestion, would tha Managers of TANDY [UK] Stores like to put one of their TV's on <STOP> to display this page ?

Our thanks to Roger for his persistent trying, well done. Now do as David has asked and get out membership to over 1000 by the AGM !!!

Over a number of months I have intermittently been seeing all sorts of ERROR messages appear on my screen, I must have seen them all. Not being a

Technical expert, it took me some time to track the problem down to one drive - I have access and use up to 10 drives. A report of the suspected drive said that it was only possible to just get the alignment of what I understand to be where the drive writes a cylinder, to spec. Two drives of the same manufacture have now been replaced, so hopefully I am now over my problems. The report went on to say that the drives in question, manufactured by "Hoshin" were notorious in the trade. The point of all this is to both warn members about buying this manufacture of drive and also request members who see, or have seen errors in NATGUG News, to please write to me so that any major errors can be corrected. Also if any member has submitted a item for inclusion in NATGUG News and has not yet seen it there, again contact me please. Yes, the above problem was also affecting the directory tracks, I don't think that I have lost any files.

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MSDOS Monthly - by Dave Holman

An open Forum on MSDOS and associated subjects.

Well the trip to Germany was a great success and it only rained for a total of about 15 minutes during the whole month of October

I was sorry not to be able to attend the Swindon Workshop and I have since heard that it was a good workshop and not to be missed.

David Roberts article on XTREE caught my eye and it looks a good little utility, however there is a public domain version of SWEEP available from the CPMSDOSUGUK library. I have received no letters this month, maybe because I said I would be away. This means that I have nothing to write about.

Therefore this issue is devoted to a few questions that I would like to ask. I am presently using PC-Write as my word processor, this is the Shareware version. I know of many other word processors but have not heard of anyone using them. A publication called the Buyers Guide to the Amstrad PC which reviews all sorts of programs for IBM PC compatibles However all these reviews only give a reviewers eye view and I would like to hear from anyone with personal experience of such word processors as Volkswriter, Newstar in addition some of the more expensive ones sound interesting especially if the earlier versions are now selling for vastly reduced prices.

Next I bought my PC1512 for a good price which has since come down because a new machine the PC1640 has come onto the market. It is similar to the 1512 but has an EGA board instead of CGA. This gives a much better display. I would like to upgrade my machine to this better display but am told that I would need a new monitor to do this, therefore it is not cost effective to do this. Any suggestions apart from selling up ?

Does anyone know of a cheap source of computer paper for Filofax, so that I can input text directly onto it from my word processor and Epson Printer ?

I am a great fan of Fontasy, but some reviews indicate that it is an inferior DeskTop Publisher. Has anyone used anything else which has even a tenth of the fonts used by Fontasy or has anyone found a way of transferring Fontasy Fonts to other DTPs ?

My job has given me some contact with the world of short wave radio and I was interested to know if it is possible to read the transmissions of the various teleprinters (RTTY) in use today. I think Peter Hall was doing something in this line. Does it require both Hardware and Software to do this ?

Finally I have an Aculab floppy tape which I have no more use for, I would be happy to part with for a nominal price or if a charitable organisation has need of it then I would be prepared to give it away. It seems a waste to throw such an item away but no-one seems to use them these days

Good Luck and Happy "MSDOSing"

Dave Holman,160 London Road West, Bath, Avon. BA1 7QU

READERS ADVERTS

FOR SALE:- TRS-80 48K Model 1 plus Green Monitor: Two DS/DD 80/40 track Cumana disk drives: Hi-Res board with manual: Orch 85 board with manual: Newdos 80: Dosplus: Visicalc: Payroll: Inventry control: Datawriter: PowerDot: SU plus, with documentation. An assortment of many other programs and games on both disks and cassettes too many to list. All manuals including Assembly Language Programming. Programming Techniques. Back issues of NATGUG News and 80 Micro. Printer, leads etc, etc. £500.00 ONO.

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FOR SALE:- TRS-80 Model III, Twin disk, high resolution graphics card. Manuals, including Technical Reference Manual and Rodney Zak's "How to program the Z80" in good condition. Any reasonable offer considered. £150.00 secures.

Model 1. In mint condition, because never used. Manuals include "TRS-80 Micro Computer Technical Reference Handbook". Offers please.

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FOR SALE:- Video Genie EG 3003 with EG 3013 Expander 48K; RS232; Printer Interface and Doubler. Cumana twin 40T S/S Drives with Disks and Manuals for Smalldos; Multidos; Newdos 80 and Dosplus. Price Complete £195.00

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Tele:- (0424) 222201

MORE ON USING SYS13/SYS

In Vol. 9, Iss. 5, of NATGUG News, I wrote about using SYS13/SYS. Toward the end of that article I wrote, "I would also publish any patches for other CMD files that have been copied to SYS13/SYS, to reset the EFLAG$ memory byte, which I receive, ... etc.

At Swindon, Peter Knaggs again came to my rescue, thank you Peter, and sorted out a simple patch which can be applied to SYS13/SYS, after any file has been copied to SYS13/SYS, & is as follows, just type in at DOS Ready and <ENTER> (but be prepared to wait a little while)

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PATCH SYS13/SYS (X'006E'=00)
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Now forget the zap I published for VC/CMD after copying it to SYS13/SYS.

Gordon Collins, Editor. **

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STOP, STOP PRESS

With reference to the letter from Peter Kyle and NEWDOS 80 type sort for a PC machine, could I refer you to a letter in the centre of page 11 in November 1987 80 Micro.

In the same issue (page 82) is an article which refers to a program that appeared in The Misosys Quarterly, all of which gives the opportunity to have almost 1,000,000 bytes of Basic data storage on a Model 4.

Also, page 77 a review of CED. Thanks to our own Geof Smith NATGUG News carried a review way back in Vol. 9, Issue 1, pages 34 - 36. Subscribe to NATGUG News and be the first in the know.

I am prepared to have a little wager against any member who has never contributed an article/letter/etc. to NATGUG News, doing so in the next six months. Who is going to prove me wrong ?

If your membership of NATGUG expires on the 31st December 1987, don't let this be some of the last words you read in NATGUG News, please renew your subscription now.

Librarians

I have been asked to again publish the names of the librarians. This information is being put onto one page, if you feel that at sometime in the future you will not be able to remember were this is, then please feel free to photocopy this page and pin it up somewhere.

Model I/(III) Librarian:-

Leighton Davies, Glanmor, Brynna, Pencoed, Bridgend,
Mid-Glamorgan. CF35 6PD (0656) 860398 & Robophone

Full details given in Vol. 8, Issue 10, Pages 10/11

Model 4 Librarian:-

Mike Gordon-Saker, 'Uplands', St. Lawrence Drive,
Cringleford, Norwich. NR4 7RZ (0603) 501072 & restrictions

Full details given in Vol. 8, Issue 10, Pages 11/12

CP/M Librarian:-

Peter Hall, 11 Gerrard Street, Brighton, Sussex. BN1 4NN
(0273) 684286

Full details given in Vol. 9, Issue 4, Pages 11-13

MS-DOS Librarian:-

Ariela Taylor, 42 Davenham Avenue, Northwood.
HA6 3HQ (09274) 22773

For details see the following NATGUG News:-
Vol. 9, Issue 2, Pages 17 - 20
This issue page 9/10
This issue page 19/20

LOCAL CLUB NEWS

BOURNEMOUTH

1st & 3rd Wed. @ Kinson Community Centre 7.30pm. Ring Carl Rabe (0202) 730617

MS.DOS User Group. 2nd & 4th Wednesday, 8 pm in rear room, Sports Centre, Hurn. Ring Mark Austin (0202) 428856.

CHELMSFORD

1st Wed. @ 7.30pm. Ring Richard Creak (0245) 413725 Woodcote, 59D Little Baddow Road, Danbury, Chelmsford, CM3 4NT.

LONDON

Nth East London-80; 1st Sun, 77 Old Church Road, Chingford, LONDON. E4 6ST.

Nth West London; 1st Sun, Central Common Rooms, 10.30-1.30 Northwick Park Hospital. Geof Smith, 01-950 6345 after 8 pm.

MILTON KEYNES

Alternate Sundays, October to March. Brian Pain (0908) 564271

SCOTLAND

2nd Thur. @ 7.30. Mansion House Hotel, Milton Road West (A1), Edinburgh. Dick Mackie, Chairman, SPeCS. on 031-447 6651 out of hours,

SUDBURY

2nd Wed. at:- 3a Gainsborough Street. John Kilpatrick (0787) 79504.

WEST MIDLANDS

Every Wed. Fred Challenor, 40 Whoberley, Coventry, CV5 8EP (0203) 78180

SWINDON WEEKEND '88 next meeting March 11th-13th. ring (0793) 28282

Do not wait - book now !!!

If your club is not mentioned above then for your FREE advert, write with details to:- Gordon Collins, Editor.