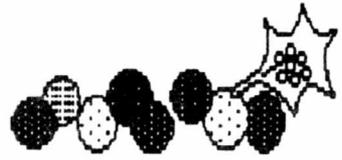


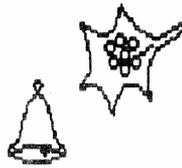
# NATGUG News



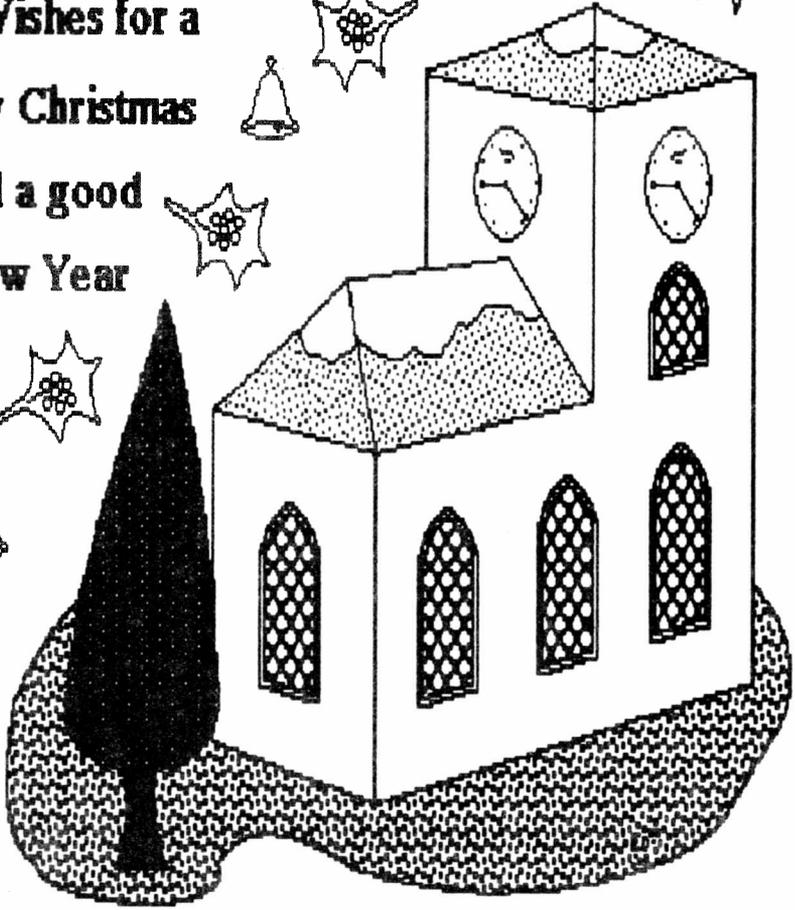
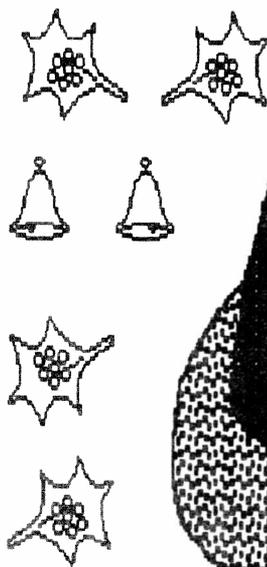
December 1989 Volume 11 Issue 12



Best Wishes for a  
Happy Christmas



and a good  
New Year



## INFORMATION FACTS 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 Treasurer. 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 groups accounts and constitution are available from the Treasurer - please ensure 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 NATGUG News. The back page is usually reserved for this purpose.

Public domain software libraries are maintained in five separate collections: Model 1, Model 3/4, CP/M, Amstrad and MS-DOS. Names of the appropriate librarians are available from the Treasurer and are also published at regular intervals. There is a copying charge of one pound per disk or tape. (see also Vol. 11, Issue 12, page 10)

Back numbers of NATGUG News, 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 NATGUG News depends on contributions from Members, who are invited to submit responses to questions raised in the previous issues. To allow legible print, contributions should be ASCII files, submitted on standard DOS formatted disk - direct to the Editor. Please indicate the word processor, disk format used (DOS, track count, etc) and list files to be used for publication. Also include a hard copy should you require a particular format to be retained for printing. Your disk will be returned if you enclose an addressed label, normally within 7 days. The Editor will accept written or typed articles no longer than 50 words in total - publishing will depend on time to type the articles up and legibility.

NATGUG is an Independent User Group and is in no way connected with or approved by Amstrad plc. We acknowledge that Amstrad is the Trade Mark of Amstrad plc.

The views expressed in the editorial and other pages of this magazine do not necessarily reflect the views of the committee.

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SWINDON REPORT

Friday lunchtime saw well over twenty enthusiasts already entrenched with their machines, in their favourite chosen places ! By 7.00pm there was remarkable little space left in the systems room - especially when Mark Austin turned up with a ginormous A0 sized scanner which spent most of Saturday demonstrating 101 things to do with the front page of The Times ! Scanners were very much the "in-thing" at this meeting, with some half-dozen hand-held variants being displayed; some did a beautiful job of copying the pictures from the S & D Railway Calendar, whilst others showed their capabilities at text-recognition (OCR). Os House's man did a roaring trade in reading in and printing out copies of a certain unauthorised and unofficial 'leaflet' that some wag had stuck on the wall ! Yes, scanners are very much the innovation of the day and I shall be getting one from Os just as soon as I can afford the EGA upgrade as well; unfortunately neither the scanner software nor the OCR software will run with the Tandy 1000TX CGA card.

By Saturday lunchtime we had seen over one hundred attendees, and indeed the whole meeting was much busier than the March event. MS-DOS machines were very much to the fore although there was a Model 1 and a few 3's and 4's; we even had an Atari working in one corner ! Talks included an overview of Wordstar 5.5, Batchfiles revisited, OOPS, business database applications, QuickBasic 4.5, and a very interesting discussion on how best to utilise the extra memory now being seen on so many machines. Laurie Shields drew the attention of BASIC programmers to the 'MBF' function necessary to meet the changed IEEE specification for single and double precision variables.

Neil Ham

Fund

£ 1,731

On Saturday afternoon an auction was held to dispose of various computing and electronic possessions of the late Neil Ham, together with some other items donated by his many friends. I am very pleased to tell you that, including that Genie III from Dr. Geoff Smith, the auction netted £640.00 which, added to all your other donations, has resulted in £1,731.00 being raised for the family; on behalf of Rose, Emily, and Jason, and Neil's mother, I thank you with all my heart for your generosity.

On Sunday morning the EGM was held to consider the new Constitution, and (provided that one spelling mistake - thank you, Leo - was corrected) this was accepted unanimously. However it was not surprising that the members present wished to take the opportunity to discuss other matters that had recently developed, namely the two resignations from the Committee. David Holman was both proposed and seconded to take over as Secretary whilst the Chairmanship could remain open until March. Attention was turned to the situation regarding the Newsletter Editor & Publisher and grave concerns were expressed on hearing that so much material was still being received in an unacceptable format; it was the unanimous verdict of all present that the Editor should be fully justified in rejecting those submissions that could not be quickly and easily absorbed

into his system - even if this meant that the magazine might consist then of little more than the cover pages. It was proposed, and rapidly seconded, that a great vote of thanks and appreciation of his efforts be sent to Gordon Collins for the work done on our behalf. John Kilpatrick pointed out that he had already offered his services to either type or translate articles for those who could not submit ASCII files on disk (or correctly label that disk) and that offer still stands. Members were reminded that a modem had been installed for electronic submissions, but this was not seen as being of benefit to the majority. There was a feeling that perhaps we had not laid out with sufficient clarity - particularly for the relative newcomer - the instructions regarding submissions; some magazines for example do include this information on their 'facts' page. It was felt that simple and basic "instructions for authors" should be published every month, and that this should be written by the Editor himself to avoid any misunderstanding or confusion. Another proposal, accepted by those present, was that every issue of the magazine should carry a disclaimer to the effect "the views expressed in the editorial and other pages of this magazine do not necessarily reflect the views of the Committee"; this would overcome all and any objections to the Editor not being a member of that Committee.

The EGM and the auction apart, this meeting would have been similar to its forerunners were it not for one very important ingredient - the Hotel. All of the bedrooms have now been re-furbished to a very high standard (I could have spent hours in the shower !) and the food that we had this time bore no comparison with anything offered to us before. I have sent copies of three of the menus to illustrate the point; it was so very enjoyable for me because for the first time that I can remember I was not involved with ANY complaints. We don't yet have the finalised date for March, but the Hotel phone number is now (0793) 528282 and I suggest that you really do book early because once the news of this weekend gets out then the rooms are going to be snapped up in double quick time !

Demonstration disks abound nowadays, but one that didn't get the attention it deserves is that from Clockwork Software. SUPERDOS is a great enhancement of XTRA and adds about 35 internal commands to MS-DOS. *Line deleted: see Swindon Report Correction, page 22, this issue. Ed. \*\**

A disk that I'll be pleased to copy is, "Inside Information", an on-disk index to computing magazines. I have just received the October issue together with a request to make it available via a bulletin board; the last I heard was that we hadn't had too much success in that area so therefore I am pleased to offer personal copies. However, if any BBS is available then please do take a copy. I am likely to receive the November & December issues also. For a copy, send me a blank disk (3.5" or 5.25") together with a 20p stamp and S.A.L.

Tony Evetts took a very short video of the Swindon meeting which I am duplicating onto VHS. If you would like a copy then send me £5.00 - after deducting postage and any tape costs the balance will go to NATGUG funds.

David Washford, 6 Houston Way, Frome, BA11 3EU. Tel: (0373) 51335

I believe the spelling mistake in the constitution referred to above by David, is in clause 9.1, which should read, "into whosoever hands the same MAY come", not "same WAY come". Would all members please amend their copies.

Members may realise reading this, that as published in NATGUG News, Vol. 11, Iss. 9/10, page 3, I was not able to attend the Swindon meeting.

I thank the meeting for the vote of thanks. It is heart warming when so much appreciation is shown. Thanks again.

I believe it has now been conceded that there was a error in the letter sent to members with a date of the 3rd October 1989. In no NATGUG constitution, either past or present, is it stated, "that the Editor be a committee member".

The inclusion of a "facts page" must wait until I get time to type that up, but in the meantime would members please refer to the facts Sheet included with the May 1989 issue of NATGUG News, and my article, ASCII Files, this issue. I note it was stated at the E.G.M. that some other magazines do include information on a facts page. Most other groups are orientated, either around one type of computer, or one type of DOS. My first reaction is, how do you give details to cover all the TRS-80 DOS, MS-DOS, CP/M, and their different machines, including disk formats and sizes. Do we have a volunteer? We might manage to keep that to four pages each issue !!!

Reading David's write up, and this paragraph is typed with a little serious frivolity, but I am now wondering if the answer to an editors dreams is in the above, does the purchase of an OCR reader answer them all. Would some kind person care to "enlighten this editor" as to the practicality of their use, and the percentage of accuracy of reading hard copy articles. Is it possible? And if so, in what format (type face) does the article have to be in? I suspect they will not read hand written copy? Os, how much are they please?

I do my best not to stifle members submitting articles, etc. into NATGUG News, so it must be with some hesitancy that I accept the proposition made at the general meeting. It must be obvious to all, that a two line submission, such as an advert for example, is going to entail more work for both the author and myself, if it is sent as a disk file rather than just as a letter. It is quicker for me to type that directly into the adverts section. However, if you submit a two page A4 advert, for instance, that is another matter. I just hope for a little common sense please. A quarter of a NATGUG page should be the hand written or typed up limit.

Ed. \*\*

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*****
*
*
*           COMPUTER NEWS 80
*      Monthly magazine dedicated to the TRS80
*
*
*      £24 a year                £2.50 for a sample issue
*      cheques payable          available from
*      to NATGUG                 ROGER STORRS
*
*****

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*****
*
*           MODEL 1 GAMES ON TAPE
*      All original unused software
*
*
*      SARGON 11 (chess)          STELLAR ESCORT
*      BRIDGE PARTNER            GALAXY INVASION
*      DEFENCE COMMAND           METEOR MISSION 2
*      SUPA NOVA                 ROBOT ATTACK
*
*
*           ALL £1 each from ROGER STORRS.
*
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*
*           NATGUG INFORMATION SHEETS
*
*
*      LAURIE SHIELDS (m/c notes Z80)      £3
*      DISK FILE HANDLING Model 1/111      £2
*      CP/M TUTORIAL (Dave Holman)         £2
*      LIBRARY LIST (model 1/111)          £2
*      SUPERINDEX (Ron Ward)              £2
*
*
*      Cheques payable to NATGUG           Orders to ROGER STORRS
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*
*           NATGUG NEWSLETTERS
*
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*      VOLUME 1 - 7 (12 issues each)        £6 a vol
*      Volume 8 (8 issues year)            £6
*      Volume 9 (6 issues 1/2 year)        £6
*      VOLUME 10 (12 issues year)          £12
*
*
*      Cheques payable to NATGUG           Orders to ROGER STORRS
*
*****

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PC SHOW.

I now know why John Kilpatrick found previous PC shows such hard work. Six days in that hall was certainly a strain and not something I would want to do, too often. We were placed on the edge of the games section and the noise while not actually deafening was continuous and made conversation very difficult. I think I must start by thanking all those people who helped us, particularly the small group who carried all the gear back to my car on Sunday evening. Earls Court is defended by Sterling Guards Ltd, whose prime task is to keep all vehicles as far away from the main building as possible. The show closed at 5.00 PM but it was quite obvious that no cars were to be allowed in until 7.00 PM. I think without help I would have been lucky to leave before 9.00 PM.

A steady stream of members, after struggling to find us, visited the stand, and a significant proportion stopped to help. Without them my week would have been impossible. John Kilpatrick made three visits giving David Washford and I the benefit of his experience. David did most of the setting up and acted as the brains up until Friday night. Saturday and Sunday are the difficult days because they let in all and sundry. I went in on Saturday with great apprehension and when Neville Taylor turned up the relief must have showed all over my face. Eric Brandes also spent the day with us and so Saturday was completed without any great trauma. On Sunday Clive Newland arrived quite early followed by Paul Bishop. Peter Kyle returned at 4.30 for his third visit and to help us load the car. As stated this little group really worked extremely hard carrying all the paraphernalia out to my car. I think beasts of burden would be a fair description of what they were. The fact that I got home before 8.00 PM was entirely due to their sweated labour.

Among those who visited the stand were Laurie Shields, Leon Heller (complete with a Transputer module in his pocket) William Fildes, Peter Hall, Paul Ostwind, John Arthur, Richard Marks, Ariela Taylor, Derek Clarke, John Hickin, Harald Reike, and former members Paul Rutherford and Paul Taylor. They were all very welcome and those of us on the stand were very pleased to see familiar faces. It was also nice to meet face to face members who until then were just a name on my database or a voice down the telephone.

Visitors to the stall "cleaned me out" of my stock of CN80, so I have increased the order to Stan Slater. Those to whom I owe back numbers will probably have six weeks wait.

By the time you read this the EGM should be over and hopefully we will have a new Secretary and a settled future for the Newsletter. I have no idea how this is going to be to be managed, I just pray the EGM can settle these problems easily. I am afraid that those of you who did not attend Swindon will have to wait until Issue 12 for the the result of the EGM. Anyone who wants prior information please give me a ring.

The last two weeks (Sept 24 - Oct 7) have been very busy; first the week at the Show then catching up on everything missed while I was away and then sending out all the flyers about the EGM. I spent hours folding inserts, stuffing, stamping and sealing envelopes. But it was important that all were informed of the situation well before the swindon meeting.

#### COPY FOR NATGUG NEWS

I think many, me included, have not understood what Gordon means by a pure ASCII file. I think this may be stopping potential contributors to the Newsletter. The first thing to realise is that Gordon does not want any control codes. Codes for Allwrite or whatever word processor you use, are only a hindrance. The point is to save only an ASCII file. I would suggest that you write your piece as normal, save it and print it, and save in ASCII under a new name, perhaps your own name or pseudonym, but certainly NOT NATGUG/TXT. Send Gordon the printout of the file as you would like it printed and a print out of the disk directory, so Gordon knows what to look for on the disk. Remember, if he is reading your disk, as an alien disk, on a different DOS machine, he has limited ability to examine the file or directory before transfer.

I hope I have now understood the problem, stated it correctly and done a little to help all. I certainly have not wholly understood the problem myself. Although I actually use Lscript I rarely handle large documents, I do not often use programs like Hypercross and I do not use the chaining ability of Lscript.

DOES ANYBODY HAVE ANY KNOWLEDGE OF MODEL 4 LSCRIPT 2.0. IS IT BUG FREE, FAST AS CLAIMED, AND ABLE TO RUN BRISKLY WITHOUT THE ALPAH BOARD. IN OTHER WORDS IS THERE ANYBODY WHO HAS BOUGHT A COPY.

*I recently wrote to Anitek with regard to LeScript 2:0. I asked a number of questions related to both the TRS-80 version and MS-DOS version. The replies did not impress me sufficiently to feel the need for me to upgrade. I specifically mentioned the fact that dictionary would not load into the XLR8'er board memory, although in an earlier reply to that question I was told, and I quote, "LeScript 1:8 should work fine on the XLR8'er board". That point was not commented upon in the reply. Both "Printing Demo" and "Non-printing Demo" disks can be obtained from Anitek for \$9.95 and \$2.00 respectively. Ed. \*\**

-----

I have the following obsolete equipment which in the main has been given to NATGUG. Most is readily available to members for a small charge - offers.

#### MODEL 1

#### SYSTEM

MOD 1 KEYBOARD EXPANSION INTERFACE MONITOR AND ONE 40 TRACK DRIVE  
 VIDEO GENIE WITH TAPE DRIVE 30003  
 VIDEO GENIE 2 3008

GENIE EXPANSION INTERFACE  
MICROPOLIS TWIN FULL HEIGHT DRIVES

TAPE

IN-MEMORY INFORMATION WITH TAPES 26-1508  
TANDY MANAGEMENT CONTROL WITH TAPE 26-9506  
SALES ANALYSIS WITH TAPE - INSTANT SOFTWARE  
LEVEL 2 BASIC COURSE PART 1 & 2 WITH TAPES

DISK

TRSDOS 2.3 & DISK BASIC 2.2 MANUAL WITHOUT DISK  
TRSDOS 2.1 & DISK BASIC 1.1 MANUAL WITHOUT DISK 26-2104  
LEVEL 2 DOUBLE-PRECISION SUBROUTINE PROGRAM 26-1704  
LEVEL 2 BASIC REFERENCE MANUAL 2nd Ed. 26-2102  
CONV/DCONV DATA CONVERSION LEVEL 1 TO LEVEL 2  
TBUG 2-80 MONITOR AND DEBUGGING AID 26-2001  
DISK MAILING SYSTEM WITH DISK 26-1551  
DISK COURSE WITH DISKS 26-2014  
PROFILE WITH DISKS 26-1562  
PROFILE WITHOUT DISKS 26-1562  
FORTRAN WITH DISKS 26-2201  
DISK MAILING LIST WITHOUT DISK 26-1551  
GENERAL LEDGER 1 WITH DISK 26-1552  
SUPER UTILITY PLUS AND DISKS  
ALTERNATE SOURCE - SEARCH  
CPU WITHOUT DISK  
REPLACE WITHOUT DISK  
BTRACE WITHOUT DISK  
DISKLIB WITH DISK  
RACET - PROLOAD WITHOUT DISK  
REMODEL WITHOUT DISK  
MONITOR PROGRAMS 3 & 4 WITHOUT DISK  
, DCV-1 WITHOUT DISK  
AT-80 - DDIR80 WITHOUT DISK  
SMALL SYSTEM SOFTWARE - DCV-1 WITHOUT DISK

AUDIO TAPES

SCRIPSIT TRAINING COURSE NO MANUAL JUST TAPES

MODEL 3 - DISK

TANDYWRITER WITHOUT DISK 26-9529  
MODEL1/111 COBOL WITH DISKS 26-2203  
DISK COURSE WITHOUT DISKS 26-2014

MODEL 2

COMPLETE SYSTEM WITH ONE EXTERNAL DRIVE - NOT RUBBISH £100 min

DISK

- PROFILE AND DISK
- VISICALC AND DISK
- TRSDOS OPERTING MANUAL AND DISK
- SCRIPSIT AND DISK
- INTEGRATED LEDGER AND DISK
- PROFILE WITHOUT DISK

GENERAL - BOOKS

- THE GOOD COMPUTING BOOK FOR BEGINNERS
- PROGRAMMING TECHNIQUES FOR LEVEL 2 BASIC 62-2062
- ADVANCED LEVEL 2 BASIC 62-2072
- BUSINESS PROGRAMMING APPLICATIONS 62-2074

ROGER STORRS.

NATGUG LIBRARIANS

MS-DOS

Mrs. Ariela Taylor  
 42, Davenham Avenue  
 Northwood  
 Middlesex  
 HA6 3HQ

Tel. 092 74 22773

MODEL 3/4 & CP/M

Mr. David Sampson  
 4, The Coots  
 Stockwood  
 Bristol  
 Avon  
 BS14 8LH

Tel. 0272 830591

MODEL 1/3

Mr. Leighton Davies  
 Glamor, Brynna Road  
 Pencoed  
 Bridgend  
 Mid Glamorgan  
 CR35 6PD

Tel. 0656 860398

COCO

Mr. Eddy Neave  
 31, Ableton Lane  
 Severn Beach  
 Bristol  
 Avon  
 BS12 3PP

Tel. 04545 3444

With the exception of the Model 1 library list which is a hardcopy available from me, library catalogues (two disks) must be obtained from the librarian in question. All catalogues cost £2. Program disks are available from librarians only; the copying fee is £1 per disk. All disks must be supplied by you and all postage must be paid by you. The only exception to this is David Sampson, who is willing to supply disks for an extra £1 and mailers for 50p. It is suggested

that you supply formatted disks, which must be to the standard for your particular system. If in doubt please talk to the relevant librarian or me.

The Model 1 library contains programs which will run on Model 3. Likewise the Model 4 library also has relevance to model 3.

ROGER STORRS.

### NATIONAL AND INTERNATIONAL PD SOFTWARE LIBRARIES

1. NATIONAL PUBLIC DOMAIN SOFTWARE ARCHIVE, LANCASTER The National PD software archive at Lancaster University is maintained for the benefit of the academic community (if you think that this is an unfair privilege, it's actually a kind of backhander from the Government in return for denying us the money to buy the commercial software that we need). It is accessible to outsiders via modem or PSS (see appendix 1). I would not recommend attempting to download the software by modem on the telephone line, as it takes hours and you would bankrupt yourself, but the indexes are easily available and can be TYPED and logged in a terminal session. If there is a strong demand from members for items not already in the NATGUG libraries I should be willing to obtain them for the group, within reason and on request from the librarian (who is a member of said academic community).

The archive includes a) versions of Kermit for almost every type of computer under the sun, including the TRS-80, and b) a large collection of PD and shareware for IBM-PC, Mac, and ATARI ST machines. The PC-BLUE, SIG-M, and COMUG libraries are maintained as subsets, though they aren't altogether up to date.

2. SIMTEL20 The U.S. Army maintains the world's largest library of public domain software at WSMR-Simtel20.army.mil in New Mexico. If you can get access to the Internet at a non-ruinous price you can download it. An alternative source is the TRICKLE servers on the EARN network: to use those you must have access to EARN.

No software for the TRS-80 DOS's is held on Simtel20, but there is a little CP/M software specifically for the models 11 and 4, a large library of generic CP/M software, and an ENORMOUS library of MS-DOS software which includes the usual PC-BLUE, SIG-M, etc. libraries as subsets. The NATGUG MS-DOS librarian now has a list of the MS-DOS software on Simtel20, other than those user group subsets (which are more easily available in this country anyway).

I append 1) instructions from the National PD Software archive on how to reach them, 2) the introduction to the SIMTEL20 CP/M library, without taking responsibility for its errors of English syntax. It raises the question: why aren't there ARC and UNARC utilities for TRS-80 Doses yet?

APPENDIX 1: logged extract from help system at Lancaster

help terminals : sub-topics are :

- janet Terminal access over JANET
- modem Terminal access by dial-up modem
- pss Terminal access over PSS

\*\*\* Next topic (? for help) : modem  
 ACCESSING US WITH A TERMINAL USING A DIAL-UP MODEM

You will need a suitable modem (we support V21, V22 and V23 standards); you should also have either a real terminal, or terminal emulation software that offers scroll mode operation (we do not support Viewdata standard).

All our dial-up ports are Lancaster exchange numbers. They are:

- (0524) 63414 These are V21/V23 (i.e. 1200/75 and 300/300)
- (0524) 67671 autosense modems that will detect the standard
- (0524) 67754 that your modem is operating on)
- (0524) 62423

(0524) 381819 This is a V22 (1200/1200) modem

On all the lines, you should press RETURN on your terminal or micro until a prompt looking like "PAD)" appears. You can then type the command

call pdsoft<RETURN>

You'll then be connected to the system that holds the software, and this asks you for a username and password. The username to give is "pdsoft", and the password is "pdsoft"

--- More (y/n)? ---

\*\*\* RETURN to continue or q to quit :  
 help terminals : sub-topics are :

- janet Terminal access over JANET
- modem Terminal access by dial-up modem
- pss Terminal access over PSS

\*\*\* Next topic (? for help) : pss  
 ACCESSING US WITH A TERMINAL OVER PSS

If you have access the British Telecom PSS network, you can access our distribution services over it (and this method is far better than using dial-up directly to us - it's more reliable, and it'll cost you less).

For terminal access you need to follow these steps:

Call to PSS NUA 23422351919169

You will then be prompted with the message  
"Please enter your authorisation and address in form:  
(user,password).address"

Reply with .000010403000 (note the leading ".")  
Log in to user "pdsoft", with password "pdsoft".

You'll then be connected to the system that holds the software, and this asks you for a username and password. The username to give is "pdsoft", and the password is "pdsoft"

-----  
APPENDIX 2: Sintel20 CP/M introduction

December 21, 1988

This document is intended to give a brief overview of files stored in the SIMTEL20 CP/M software libraries.

Many of the files in the software libraries have been compressed and/or grouped together in a single file by using one of the utilities available to the public domain that either squeezes, crunches, libraries, or archives files. This has been done to minimize disk storage requirements and also to minimize download time.

These processed files are specially named with a filetype and can be identified by the last 3 letters of a filename after the "." that signifies the conversion. These are:

- .ARK for files archived (same as MS-DOS "ARC").
- .LBR for library files.
- .?Q? for squeezed files (middle letter is a Q).
- .?Z? for crunched files (middle letter is a Z).

A library is a group of files collected together into one file in such a way that the individual files may be recovered intact. A library file can be identified by the "LBR" as the extent of the file name. LU (Library Utility) is a CP/M utility used to maintain libraries of files. LU does not perform any compression. Because of this, most people will squeeze or crunch files before adding them to a library if they want to save space. If you want to remove the component files (members) from a LBR file, you should have a copy of LU310.COM, NULU152A.COM, or other LBR extractor utility. (LU and NULU are 8080/8085/286 compatible.)

Recently, popular CP/M Public Domain software files and information files are being distributed using ARCHIVE files. Archive files are similar to library (LBR) files, in that they take a logical group of files and put them together in a single file. The main difference, is that the members of the "ARC" or "ARK" file are automatically compressed. The compression algorithm chosen is one of three which will produce the smallest file.

Archive files have been available to the MS-DOS and PC-DOS areas, but, and been made useful in the CP/M environment with the introduction of the "UNARC" program. The current version is 1.6, and is available with extensive documentation, and two executable COM files, a 8080/8085 version and a Z80 version. The Z80 version takes advantage of the expanded Z80 (and equivalent) instruction set for speed and size, and therefore is machine dependent. There is also a modification overlay to adapt the program to non-standard CP/M 2.2 and 3.0 operating systems, such as CP/M68k and CP/M emulators. Programs are available on many machines to process "ARC" files, the Atari ST, systems running the UNIX, systems running MS-DOS, and CP/M.

ARK040.COM is the CP/M utility available to make an "ARK" file (Now ARK10.com - CRJC). Archive files may also be made in the MS-DOS/PC-DOS or UNIX environment. (ARKs made on other systems may produce different results as the CP/M ARK program -- UNARC16 is able to extract and decompress these files.) To avoid confusion on RCP/Ms that support both MS-DOS and CP/M callers, Archive files have a file extension of "ARK" for CP/M software and information files.

Some files in the SIMTEL20 CP/M software libraries have been compressed, using one of the standard public domain utilities, to minimize download time and to save storage space.

Files that have been compressed can be identified by the filetype (the last 3 letters of a filename after the ".") that signifies the compression. These are:

.?Q? for Squeezed files (middle letter is a Q).

.?Z? for Crunched files (middle letter is a Z).

USQ120.COM is used to unsqueeze, or expand files that have a "Q" as the middle letter of the filetype. Such files have been squeezed, or compressed with SQ111.COM or similar utility. These programs use Huffman Encoding to reduce the size of the target file. Depending on the distribution of data in a file it can be reduced in size by 30% to 60% by squeezing it. If you download a file with a filetype indicating that it is squeezed, you will need USQ120.COM to expand it before you can use it. There are other programs available, written in different languages and take advantage of special hardware, but USQ120 is 8080/8085/Z80 compatible.

Other utilities are available that have the unsqueeze coding imbedded and function with squeezed or unsqueezed files. There are programs that perform file maintenance functions (NSWP), bi-directional display utilities (BISHOW), and

string search programs, (FYNDE and FINDU). This method of compressing files has been used for some time now and programs to uncompress the files are available to several microprocessors and main frame computers.

CRUNCH uses the Lempel-Ziv-Welch (LZW) techniques to compress files. These "crunched" files are identified with a "Z" as the second character of file type. This method is fast and offers compression ratios around 55%. Highest compression is achieved with graphics data, values of 90% are typical, followed by text, with 50%, and COM files and other binary file of around 20%. See CRUNCH24.LBR for the Z80 CRUNCH and UNCRunch programs. See FCRNCH11.LBR for the 8080/8085 and V20 CRUNCH and UNCRunch programs.

Since this method of compression is relatively new, there are only a few utilities available that processes crunched files are "typer" utilities such as TYPELZW, TYPEQZ, LT, and QL which also type members of libraries and squeezed files. If running a 8080/8085 processor, check the documentation to determine if the utility will only process files on systems using the Z80 processor. UNCR232.ARC contains a program to uncrunch files in the MS-DOS/PC-DOS environment.

MicroSoft BASIC programs are always saved as ASCII files. (Saved with the ",A" operand.) They may than be squeezed or crunched. This has been done to allow them to be converted for use with other BASIC compilers without the need to convert them with MBASIC first.

Some executable files have a file extension of "OBJ". These are really "COM" files that have been renamed to "OBJ" to avoid execution on RCP/M systems. Rename them back to "COM" to use them as commands on your system.

Below is a list of utilities in the CP/M software libraries that work with the above mentioned files. For the current version, check the directory.

FCRNCH11.COM Uncruncher for 8080/8085 systems  
 UNARC16.COM Unarcer for Z80 processors  
 UNARCA16.COM Unarcer for 8080/8085 CP/M systems  
 UNCR24.COM Uncruncher for Z80 processors  
 USQ120.COM Unsqueezer for all CP/M systems  
 MULU152A.COM Library maintenance utility

## GETTING STARTED

CP/M-80 files:

PD2:<CPM.STARTER-KIT>COMPRESS.TXT (--explains compressed files  
 PD2:<CPM.STARTER-KIT>CRUNCH.COM (--LZW file cruncher (Z80 only)  
 PD2:<CPM.STARTER-KIT>CRUNCH.HEX (--use LOAD.COM to make CRUNCH.COM  
 PD2:<CPM.STARTER-KIT>DELBR11.COM (--extracts file from LBR's  
 PD2:<CPM.STARTER-KIT>DELBR11.HEX (--use LOAD.COM to make DELBR11.COM

PD2:<CPM.STARTER-KIT>DELBR11A.C <--Aztec C II source for above  
 PD2:<CPM.STARTER-KIT>LU300.DOC <--explains CP/M "LU" program  
 PD2:<CPM.STARTER-KIT>LU310.COM <--the LU program itself (does LBR's)  
 PD2:<CPM.STARTER-KIT>LU310.HEX <--use LOAD.COM to make LU310.COM  
 PD2:<CPM.STARTER-KIT>LU310.HLP <--and a help file for it  
 PD2:<CPM.STARTER-KIT>SQ111.COM <--CP/M-80 file squeezer  
 PD2:<CPM.STARTER-KIT>SQ111.HEX <--use LOAD.COM to make SQ111.COM  
 PD2:<CPM.STARTER-KIT>SQUEEZE.TXT <--explains squeezed files  
 PD2:<CPM.STARTER-KIT>UNARC.COM-Z80 <--extracts files from ARCs (Z80 only)  
 PD2:<CPM.STARTER-KIT>UNARC.HEX-Z80 <--use LOAD.COM to make UNARC.COM  
 PD2:<CPM.STARTER-KIT>UNARCA.COM-8080 <--ditto, for 8080  
 PD2:<CPM.STARTER-KIT>UNARCA.HEX-8080 <--use LOAD.COM to make UNARCA.COM  
 PD2:<CPM.STARTER-KIT>UNARC.DOC <--how to use UNARC  
 PD2:<CPM.STARTER-KIT>UNARC.INF <--technical info on UNARC and ARC files  
 PD2:<CPM.STARTER-KIT>UNCR.COM <--LZW file uncruncher (Z80 only)  
 PD2:<CPM.STARTER-KIT>UNCR.HEX <--use LOAD.COM to make UNCR.COM  
 PD2:<CPM.STARTER-KIT>UNCR8080.COM <--LZW file uncruncher (8080)  
 PD2:<CPM.STARTER-KIT>UNCR8080.HEX <--use LOAD.COM to make UNCR8080.COM  
 PD2:<CPM.STARTER-KIT>USQ120.COM <--CP/M-80 file unsqueezer  
 PD2:<CPM.STARTER-KIT>USQ120.DOC <--how to use it  
 PD2:<CPM.STARTER-KIT>USQ120.HEX <--use LOAD.COM to make USQ120.COM  
 PD2:<CPM.STARTER-KIT>UUDECODE.BAS <--decodes uuencoded files (BASIC) (slow)  
 PD2:<CPM.STARTER-KIT>UUDECODE.COM <--decodes uuencoded files  
 PD2:<CPM.STARTER-KIT>UUDECODE.HEX <--use LOAD.COM to make UUDECODE.COM  
 PD2:<CPM.STARTER-KIT>UUDECODE.PAS <--Turbo Pascal source for above  
 PD2:<CPM.STARTER-KIT>UUENCODE.COM <--makes uuencoded files  
 PD2:<CPM.STARTER-KIT>UUENCODE.HEX <--use LOAD.COM to make UUENCODE.COM  
 PD2:<CPM.STARTER-KIT>UUENCODE.PAS <--Turbo Pascal source for above

Christopher Currie, 14 Keston Road, London N17 6PN.

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## ASCII Files

ASCII - American Standard Communication Information Interchange.

It has been brought to my attention, that there are a few NATGUG Members who are unsure of what is meant, when I, and other computer newsletter Editors, request, "ASCII files only". I will try to explain, whilst pointing out that I am no expert of every word processor sold. The following is written after first hand experience of the "problems" I have encountered whilst editing NATGUG News.

This is a difficult subject to cover, explain, and one which is not easy for me to give statements of definite guidance, only because I do not know the relative details about every word processor. I will have to leave the reader to refer to their own word processor manual in order to obtain specifics. As the following is mostly generalities, it can be applied to MS-DOS, CP/M and TRS-DOS.

Characters from decimal 1 to 32 are never printed (seen) on the screen - although you see their effects, and for example include controls for the cursor to backspace, line feed, carriage return, etc. Characters from decimal 32 to 128 are mostly standard (95, 96 & 97 can be the exceptions) and include the decimal numbers and alphabet, these are referred to as the "ASCII Standard". Characters from decimal 129 to 256 are the problems, these are often referred to as "ASCII Extended", and would appear to have no "standard" when used in word processors. An ASCII file should contain only characters from decimal 32 to 128.

After checking a number of dot matrix printer specifications, all those referred to, state the "Character Set" printable is 96 in number. It never says which of the 256 the 96 are, but as a guess, I suspect they are those from decimal 32 to 128 (128 - 32 = 96). So, under normal circumstances, even if you do send a file with "ASCII extended" characters in it, and then, assuming the computer and program accepts them, it is a safe bet they are unable to be output by the "normal" printer. O.K. I know there are exceptions, and at times I have managed to print them in NATGUG News, but please believe me, it does use a disproportionate amount of my time in order to do it.

You use a certain word processor. I, quite likely, use a different one, and under a different DOS. This is where the problems start to occur. All word processors embed unseen (by the user) control codes within the document when you type, they are used by your program, and are "peculiar" to that program. These

directeΣ áme% anΣ waΣ pusheΣ forw  
arΣ b· winΣ anΣ tide◀ á ¶ áoftef i  
le¶ m· legΣ dro= anΣ coulΣ fee= n¶ bottom¶ bu¶  
whef ¶ waΣ áalmo¶ i  
gone% áanΣ ablo t¶ strugglo n¶ longer% ¶ founΣ myselµ áwith  
ie ám· i  
depth¶ anΣ b· thiΣ timo tho storθ waΣ muc◊ abated◀ Tho ádeclivit· i  
waΣ á  
s¶ ásmall% átha¶ ¶ walkeΣ nea≥ β milo beforo ¶ ágo¶ á¶ átho i  
shore% áwhic◊ á¶ á  
conjectureΣ áwaΣ abou¶ áeigh¶ áo'clocó áie átho i  
evening◀ ¶ thef advanceΣ forwar  
Σ nea≥ halµ β mile% bu¶ coulΣ áno¶ i  
discove≥ an· sigf ou houseΣ o≥ inhabitants¶  
a¶ leas¶ ¶ waΣ ie ásn i  
weaó áβ condition% tha¶ ¶ diΣ no¶ observo them◀ ¶ áwaΣ áe  
xtremel· i  
tired% anΣ wit◊ tha% anΣ tho heaf ou tho weather% anΣ abou¶ halµ i  
β p  
in¶ ou brand· tha¶ ¶ dranó aΣ ¶ le¶ tho ship% ¶ founΣ ámyselµ i  
muc◊ inclineΣ t¶  
sleep.

control codes do not appear on the screen, nor subsequently on the hard copy if the file is printed. You most likely will never encounter them. Some word processors additionally, do show control codes on the screen, but these are also not printed when a request is made for hard copy. One possible way you can get to see these control codes, and the effect they have, is, after having saved a file, return to the DOS prompt, and if using MS-DOS, <ENTER> TYPE filename.ext, or on a TRS-80, <ENTER> LIST filename/ext. What you then see on your screen is most likely what I get on my screen when I load your file. If at this stage you are happy with what is on the screen, you can be almost certain that I will. But, should you see mostly garbage, you will be doing us both a favour in not posting off the file. Any small discrepancies that are still in the file from my view point, I will alter. I urge all members to follow this procedure if you are at all unsure of what has been saved to disk as a file.

The effect of the control codes problem arises when I receive the file. Another word processor does not recognise the control codes, used by, and peculiar to your word processor. Up-to-date I have found Wordstar files (apart from Scripsit) the most difficult to re-format. For instance, most words, when using that word processor, end with a character which is not the one you typed (use the method above to see what I mean) but one which Wordstar recognises as the one you did type on the keyboard. These characters possibly signify to Wordstar that the following character is a space, I don't know for sure. I have included, above, (did I do right to spring that surprise on you there ?) a print out of part of a file using a set up to print most of the characters from decimal 32 to 256, to demonstrate visually the point I am trying to make. Did you manage to read that part ? If not, perhaps you will appreciate the problem I am sometimes up against.

Answering my plea in NATGUG News Vol. 11, Iss. 11, page 35, a member has been kind enough to do some research, and writes, "The short answer is Wordstar is incapable of saving ASCII files ! However I am in the throws of researching an article on this for NATGUG News." (Thank you member. Ed.) In view of this comment, I must urge members who send Wordstar files, to please add an additional note to that effect, I can then use a file conversion program to convert that file to ASCII.

I do have some word processor file conversion programs which convert the file from a particular word processor format to an ASCII file, but, in order to make use of them, I have to know which word processor was used. I would prefer not to have to take that road, as it can be very complex and time consuming.

The more "up-to-date and enhanced" word processors, have a large amount of "controlling" characters at the front of the file proper. These convey all sorts of information for that file - understandable to that word processor only, such as type of printer, page format, page size, font, etc. If these are not characters from decimal 32 to 128, and included as part of a normal ASCII saved file, it will take me an extremely long time, to first make sense of the file, then reformat it without those surplus characters. I was also going to include

a print out of the "front end controls" from the word processor I use, these are before the file proper starts. As this came to 12 pages of print, it is not included. The file proper, a short note, only contained six lines. I hasten to add, there is no intention of being detrimental to any word processor program, I am just pointing out the problems I face. Also, no member should feel slighted by what has been said, I have no intention of doing that either. On the contrary, this is written in an attempt to encourage more input to NATGUG News.

Many word processors have a means of saving a file as an ASCII file, the problem appears to be that most manuals define that type of file as something else, and when members have checked their manuals to find out, have found no reference to "ASCII". To help, I have seen the following descriptions, TEXT, DOS and DOCUMENT. This is where I will have to leave the reader to check again with their particular word processor manual.

I hope you are able to find functions of your word processor for saving an ASCII File, this will then automatically NOT save all the control characters and such like, so making the operation of saving an ASCII file transparent to you. If you are unsure about what is going to happen, save two types of file, (but of course, using different names), one as you normally would, the other by the method you think maybe ASCII. But please, I do ask you to include a written note giving details of what has been saved to your disk. (files names, word processor used, etc.). If you ask me to include a note when I return the disk, as others have done, asking how I got on with the files, I will.

All word processors I have seen, have means of importing an ASCII file. ASCII seems the only common method of exchanging files between word processors.

For those who use Word Perfect. Saving the file as a "GENERIC" file appears to leave me with no formatting work to carry out. But please also save, and send, a "TEXT" file.

Should you use a DOS TEXT editor, it is nearly 100% certain the files are saved in ASCII by default, or are so close as to not matter. You are safe in submitting this type of file. The method, I would suggest, as you may find it difficult to substitute this type of program as a word processor, is only suitable for short files, like adverts you wish to have placed in NATGUG News.

Another little problem is TAB's. For example, you may have your TAB's set at every six characters, when typing. Mine, at the moment, are set at every eight. Straight away I will see something different to which you intended. If you do use TAB's, then please set to 8. It is just not possible for each member to use something different for files submitted to an editor who uses a "chained file" output.

Yet another problem is the use of spaces. If you do use multiple spaces, that is a string of spaces (" "), and wish me to output the copy for NATGUG News as you had it on your screen, then it is imperative that you also include a

hard copy from your printer. I would prefer that multiple spacing, including indents, be kept to a minimum.

I use a line width set at 80 characters for NATGUG News. Articles arrive, some with more characters per line, the majority with less. I do not know the reason for it, but most, including a combination of the aforementioned, have all lines ending with a carriage return. If you are able to save files with carriage returns at the end of paragraphs only, this would be appreciated. I do ask members not to concern themselves too much with this, as I soon get rid of these carriage returns with a "search and delete" function. If you can avoid carriage returns at the end of each line, so much the better.

I feel sure members would be amazed at the affect, seen on my screen, of a combination of; lines with a character length greater than 80 which have a carriage return, and include tab settings other than 8, blocks and blocks of spaces, and control codes. You would then easily understand why I ask for hard copy to be included with your disk should you require a particular format. It is very difficult for me, if you do not send an ASCII file, and also do not include other information, including word processor used, as I then have no point to even start to convert your file to an ASCII one.

Without going into lengthy explanation for the reason why, so do please believe, the first thing I must ensure is that files are in ASCII format before I can start to make the copy for NATGUG News. Like most computer newsletter editors, if files received by me are not in ASCII format, I have to convert them. They are then formatted to the form as you see in NATGUG News. The pages in NATGUG News are as they come off my printer, no other work being done before the plates are made for printing. All files are chained together by me for printing, that is, they are not printed as individual files. It is for this reason, that if individual files had different TAB settings, line lengths, etc, there would be a clash of formats.

I am very happy to receive articles for NATGUG News which are all ready for the plate making process. Saves me a lot of work see. Could I though, ask those who wish to take this option, to measure the page size of NATGUG News, printed area only, not including the heading, and keep within this size, 4 3/4" x 7 5/16". Use condensed print (16.66 c.p.i.) or, if using a D.P. program (also graphics are permissible and acceptable, but not to large please) a font of like size or smaller if readable. Please do not have vast expanses of space in the article. Please post off early so that I have time to format the other articles around it, and not creased. I will add the normal page numbered heading on each page. I must point out, that should anything be included in this form of submitted material the Editor feels is not suitable for publication - and common sense prevails here, it is most likely your material will be returned with a rejection note. Articles submitted on disk, have any unsuitable item deleted at the formatting stage.

Having written the above with the intention to try and be helpful, it does look rather long, I sincerely hope I have not put any "first timer" off sending an article. Please, I beg you, do not be frightened of giving it a try. I welcome any other article on this subject which is going to be more authoritative than the above, or any comments you may wish to make. Further, if any member still has questions about the above subject, would you please drop me a line.

If, having written an article, you are still uncertain it might be of a suitable formatted form for use in NATGUG News, please do as others have done. Send the file on disk, including a note drawing attention to your reservations. It is the unexpected which causes me frustration and confusion. Should you make the request, when your disk is returned, I will attach any suitable advice requested. Please remember, the great majority of files submitted by members, unsure they had formatted and saved them correctly, have been perfectly acceptable for publication. So surely you all now have no excuse. Please remember to include information about the DOS used, track count, no. of sides and file name(s) to look for. Use standard DOS formatted disks only. If you send a number of files on a disk, it would help if the file name relative to the disk file could be printed on each hard copy. A print out of the DIR, and add notes to that, might be the easiest way. It helps greatly if an S.A.L. is included. And see also, NATGUG News, Vol. 11, Issue. 11, page 37.

The 10th of a month is the closing date for receiving files for the next months issue of NATGUG News. Written articles received close to the 10th of a month will most likely have to wait until the following issue, as will also any disk files received on the 11th of a month or after.

Please, NEVER assume I use a certain word processor. For expediency, I tend to change around dependent on a number of factors. You may not realise, but I do become used to receiving certain types of file(s) from those who regularly contribute, so as one member found out, to suddenly change without giving me a hint, can certainly throw me.

In order to correct any false impressions members might have about Gordon Collins, may I print the few following points. I am a self-employed service engineer, my customers expect me to be available for breakdowns, 28 hours per day, 8 days per week, and 366 days per year, at least. This alone, leads me unable to book anything in my diary with any predictability. Regularly I am away from home any number of days each week, travelling from customer to customer all over the U.K. as and when called, and not returning home between calls. Holidays, for example, are taken on the spur of the moment, when I can see a few days may be available - my family have always expected me to suddenly leave in answer to a customers call, returning a few days later to continue the holiday. I travel with a Tandy 1400LT and a disk containing files for NATGUG News, after copying them across from your disk - these are then formatted whilst I am away. NATGUG News takes two full weekends to output the copy, including a number of other odd days each month. Having spent (toiled) at least two weekends

on NATGUG News in a month, with the certain prospect that another two weekends are going to be spent on each issue during the following months, apart from all the other calls/letters I reply to, it is then very difficult to fit in another "NATGUG weekend" to attend a meeting at Swindon, or wherever, no disrespect to anyone intended - I do have a family to consider, whom I enjoy being with. Just think, including working away, how much time I have NOT been with them. This is not a complaint, I just mention it so that members are in the picture. If I am unable to carry out the editing in the way I do at the moment, then I am unable to output the copy for NATGUG News, because most certainly I am not at home the length of time it would take to only do the job there. Perhaps members find my position difficult to appreciate, but that is how it has to be. I ask members to accept my situation, and for a little understanding, PLEASE !!!

One final point. The Editor outputs the copy for NATGUG News. If you send your disk to the Secretary, Treasurer, or anyone else, they have to post it on to the Editor, this just wastes time and postage. Members might be surprised at the amount of mail sorting (extra unnecessary work) the officers of NATGUG do, it is puzzling why this happens !!!! There are two exceptions which members have the option to take up, and that is John Kilpatrick's offer to type up your article and save to disk. Or if you use NEWDOS, John will first transfer the file to another DOS disk, all will then be sent on to the Editor by John.

Gordon Collins

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### SWINDON REPORT CORRECTION

In my report on Swindon I said that I could supply copies of Clockwork Software's demo disk. Sorry, in my haste to "file my copy" I completely overlooked the fact that these disks are sent out with a 30-day protection - by the time you send in for a copy it would be useless !!

Can I suggest that if you are interested in either batch files, or DOS text file editing, then you send direct to Clockwork Software, Bidbury House, HAVANT, PO9 3JG, enclosing two pounds and ask for demo disk A. The same fee will get you demo disk B, which relates to SUPERDOS, which is the professional version of XTRA.

Sorry about that, hope I haven't caused too much hassle.

David Washford.

*David has sent photocopies of two menu's for meals presented at the last Swindon weekend, these are published on the following page. Ed. \*\**

COMPUTER WEEKEND

FRIDAY

Home made soup of the day

Prawns St. Lucia  
(Plump Prawns, sweet peppers, celery and juicy  
pineapple, daintily bound in a light curry dressing)

Mushrooms Arezzell  
(Small Button Mushrooms, cooked in butter with garlic  
and herbs, finished with White Wine and cream)

-000- 000 -000-

Escalope of Turkey Italienne  
( A Breaded Panfried Escalope, topped with Tomato Concasse and  
coated with Mozarell Cheese)

A Traditional Roast of the day

Halibut Steak Julienne  
(Poached with strips of fine vegetables and served on a  
puree of vegetable sauce)

-000- 000 -000-

Selection of vegetables

-000- 000 -000-

Choice of Sweet from the trolley

-000- 000 -000-

Freshly brewed coffee

COMPUTER WEEKEND

SATURDAY

Home made soup of the day

Coup Miami  
( An Exotic combination of Kiwi Fruit, Mango, Pawpaw  
and Passion Fruit steeped in malibu)

Tacmouche  
( A Bolognaise filled pastry case)

-000- 000 -000-

Breast of Chicken Rossini  
A Panfried Breast of chicken served on a pate  
topped with croutons and coated with Maderia Sauce)

A Traditional Roast of the day

Rainbow Trout Grenobloise  
(Local Trout, oven baked with Prawns, Capers and  
lemon)

-000- 000 -000-

A selection of vegetables

-000- 000 -000-

A choice of sweet from the trolley

-000- 000 -000-

Freshly brewed coffee

Varifile and Change/var

Dear Gordon,

23rd. October 1989

In the hope that there are still a few other people using Basic, I wonder if my solution to the Variable list problem would be of interest ?

You will not wish to publish a long letter on this, so I have put details of the process in a Read-me file.

Yours sincerely,

Instructions for Varifile and Change/var

I was taught that it was sound practice to keep an annotated list of the variables used in a complex program, but in practice there are snags. First the list must be compiled. This is easy using one of the utilities such as BREF, but then it has to be annotated. This done one finds that the program has to be re-numbered, so the whole job has to be done again. I have not anyway yet discovered how to put the output from BREF into a disk file.

I am convinced of the value of such lists. I have just finished compiling them finally (I hope) for a suite of Accounting programs consisting of a master program and ten overlays. They were originally written about seven years ago, and have just been re-written to do another job. The variable lists have thrown up about a dozen which are no longer used, one case, fortunately unimportant, where the same variable has different meanings in different parts, and one case where there are two variables with the same meaning !

There are two problems. The first is to compile a list which can readily be edited, both for minor changes and for the odd addition, and the second is to make changes to the line numbers on renumbering.

The two programs on the disk, which I have sent to the library, do this. The first, Varifile, is a much revised version of a Basic program I wrote years ago called Varilist. (There is also a revised version of Varilist). The principal change is that it files the whole thing to an ASCII disk file. It uses a machine-code sort which I got with Micro-Systems Software Inc. Basic enhancements, so anyone using another Basic will need to rewrite the sort.

To use it, load the program to be listed and merge Varifile with it, then enter run 60000 and follow the instructions. The program is slow but does the job. Now convert it as required for your word-processor. I thought it would be simple to convert to a Scripsit file using the A command, but I found it didn't work. (For the matter of that it would not convert a Basic program either.) The trouble is that Scripsit does not recognise the end-of-file marker used. The remedy is simple if you have TED. Load TED, load the file and immediately resave it. This (which works with a Basic program too) puts a recognisable end-of-file marker in place.

Once loaded into Scripsit, (or whatever word-processor you use) you need to adjust the margins and tabs. Using 12 chars/in. I set the left margin at 5 (to allow for hole punching), tabs at 18 and 48 and the right margin at 75. You will then find that it aligns itself as below:

A# /space for description 1000, 1020/2, 1050

Type in the descriptions, paginate and head as required, and print.

Now disaster, you need to renumber ! First use Varifile to make a new list from the new version, but do NOT convert it for your word-processor.

Next make a new copy of the first file under a new name and convert it back to an ASCII file. Remove print instructions and headers (TED will do this easily). Do NOT remove tab signs.

Now call the second program, Change/var, and follow the instructions. The result will be a new ASCII file with the old descriptions and the new line numbers. Any new variables will be listed at the end, whence they can be moved with your word-processor to their correct positions, and any disused ones will have no line numbers and can be edited out. It will be necessary to edit the tabbing in places.

All this sounds long and complex, but it is surprisingly quick to do, especially compared with the alternative of re-entering a new list manually.

M.C.Matthews Shirley Stables, 5a West Walks, Dorchester, Dorset. DT1 1RE  
(0305) 264464

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### PROfound Notes

Swindon once again has come and gone, far too quickly, why can't the weekend last a week, but if it did I would want it to last a month, no pleasing some people is there.

At the Extraordinary General Meeting we accepted the new constitution & also found someone to step into David's shoes, no easy job but as it is another Dave, David Holman, it should help.

There seemed to be just as many people there as usual, by Saturday lunch time there was not much room left on the tables for any more equipment, with Model 1's cheek by jowl with the latest '386 machine, with equipment being stripped & reassembled as always, just inside the door was a very large vertical scanner that was producing lots of wonderful pictures & maps on a large colour screen & being re-designed from the keyboard.

I noticed there were several hand scanners in evidence as well, they seem to be able to read in normal sized script without too much difficulty.

The auction of Neil Ham's equipment & the sale of Geof Smith's Video Genie III lifted the Fund total to a magnificent £1750.00 pounds.

There has been some discussion as to whether we should confine the Group's activities to MS-DOS machines only now, I for one would think that a pity, for example there are 122 people who still own Model 1's, 34 with 3's one of whom has his model 3 networked to 9 model 1's, 79 with model 4's, 25 with 4P's, of these 14 have a 1, 3 & 4, not to mention all the Co-Co's, 2's, 16's & laptops but only 132 members have told that they include MS-DOS among their operating systems, as one of the first people to join I would like to see the group carry on as it is, still supporting ALL the Tandy machines as well as any others that feel we can help them.

It is surprising how many phone calls I get from people with model 1, 2, 3, 4 or 16 problems, not to mention those who have phoned Tandy with a problem on any machine other than this years model & have been referred to me by Tandy. So if we drop those machines, who can their owners turn to?

Can anyone help me with a problem concerning the DWP II printer, I need the operating instructions, also where I can get new ribbons & daisy wheels, someone has brought me one to see if I can fix it, it runs & prints to a blank sheet of paper but without a ribbon I can't see if it is any good.

I have at last had some feed-back from Howard Medical Computers through my airline pilot friend, they still don't know what to do, they have my second letter at last, that had a copy of my first letter on the back, but they keep saying they haven't seen my first, (too much strain to turn the letter over), anyway it seems they are unwilling to commit themselves making excuses like they don't know about the voltage etc, I told them I did not need the external power supply, so I am going to drop them off my list & will go for the cheapest option the same as Mike Ganley, that is to buy a Western Digital WX1 MFM controller board & cables only, from Discount Computer Supplies for \$149 plus shipping, I shall then make up a box with power supply to house the drive as soon as I can afford it.

It may be possible for me to get a drive that will mount inside my machine in place of the 360K floppy, & run it's cable out of the back with a separate power supply & use the internal supply for the hard drive the way Howard Medical do, that will not be 'till next year now, too many offspring to buy Xmas presents for at the moment.

If anybody wants more information send me an SAE & a couple of first class stamps to cover photo copying & I will send a copy of the information that Mike Ganley has sent me.

This will probably be the last issue before Xmas, so I will wish you all the best of the seasons greetings.

John Kilpatrick.

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### Please Join My Club !

A member, Nat Nathan of; 50 Gardner Close, Eastern Avenue, London. E11 2HN. Tel: 01-989 6297, has written saying that he would like to start a "club". It is intended that this would be primarily for model 1 users, but both model 3 and Video Genie users would be welcome. The idea is for a grouping of compatible people with the aim of helping each other.

I hope all those members who have recently written to me regarding these machines, asking about how to enhance them, and also what software is still available, will contact Nat in an endeavour to help him get this off the ground, and ultimately help yourselves.

Even if you do not live in the London area, I suspect Nat will not mind having "country members". Please include a S.A.E. if writing. I know Nat works nights, so the best time, if phoning, is possibly in the early evening.

Nat would also welcome hearing from members, about any items for the above machines you may wish to dispose of.

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### TRSTimes

Subscriptions for this excellent magazine, which covers items for TRS-80 model 1's, (and applicable to the Video Genie) 3's and 4/4P's, are now invited. Please send cheques for £15.00, and made payable to " NATGUG ". They should be sent for the attention of:-

\*\*\*\*\* PLEASE NOTE CHANGE OF DISTRIBUTOR \*\*\*\*\*

Mr. Tom Ridge, 34 Fullerton Road, Weybridge, Surrey. KT14 7TA

TRSTimes is a bi-monthly magazine which covers all sorts of subjects for the above mentioned models. Lance Wolstrup, the editor and main administrator, is a very approachable person, who seems to thrive on answering all manner and type of question regarding the use and general running of those machines. A very strong impression comes over, that he can also call on any amount of "backup" support he requires.

TRSTimes carries, each issue, something for every one of the above

machines: programs, utilities, reviews, tutorials, etc., also something for each DOS used on those machines is covered. There are ample adverts for all sorts of products, including hardware, software, etc, and at prices far lower than they used to be advertised at.

A time saver for those who hate typing, is the availability of a disk which covers every three consecutive issues of TRSTimes. This includes all the listings for those issues. I expect Tom will give details at a later date.

I take this opportunity to thank everyone who subscribed to TRSTimes in the past, it was very kind of you to give your support.

Gordon Collins

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### The New Sex Notes by Dave Holman - Dateline 24 October 1989

Hallo, this is my first SEX Notes as your new secretary. As you all know Dave Washford has had to resign from the post on advice from his doctor. I have been elected at the EGM at Swindon as his replacement. I am currently only a temporary stand-in and will confirm my intentions to stand again before the AGM in March. I am currently in the process of changing jobs and hope that my new employment will allow me to stand for reelection in March.

Enough of the boring bits, Dave's stint as secretary is going to be a hard act to follow and I have to set myself strict deadlines for completing The Sex Notes and the other duties required of me.

As you may know a new constitution was voted in at the EGM at Swindon. I would like to emphasize a few points from it so that you will know my views on NATGUG.

#### Firstly paragraph 2.1

"To provide a means of communication between professional and/or amateur computer programmers, technicians, enthusiasts, user groups and other individuals interested in personal computing related to the use of the Amstrad and Tandy microcomputers or such other computers as NATGUG in General Meeting shall from time to time determine."

To me this means the continuing support for the newsletter and for workshops so that "COMMUNICATION" between members can be continued to everyone's mutual benefit. To me the main means of communication has been the Newsletter, as I have not had constant access to a telephone. I have submitted a number of articles to the Newsletter over the years and have gained a great deal of knowledge from it's pages. Communications is a two way process and we all must play our part.

The second paragraph that I wish to point out is paragraph 2.2

"To represent the interests of computer users and where appropriate to lobby any statutory body, standards organisations or bodies, manufacturers, and suppliers or dealers in hardware and/or software."

This is where the members of the committee come into their own and I wish to assist in the implementation of this objective, during my time as secretary.

In addition to my other duties, by popular request, I have agreed to do a series on MSDOS, called "THE BEGINNER'S GUIDE TO MSDOS". This will be along the lines of the CP/M tutorial I wrote some years ago.

I am now able to be contacted on the phone and I have had one of those dreaded answering machines installed, I hate talking to them as much as you probably do, this will mean that you can contact me even during periods when I am away on business. For those who are not aware of it, my address and telephone number is:

D. C. Holman, 3 Harbour Court, North Parade, Portscatho, TRURO,  
Cornwall. TR2 5HH Tel: Portscatho (087258) 720

Finally Dave Washford passed on some demo software to me for review. It is by Clockwork Software and contains the following programs

- SIMON        a simple to use text editor.
- XTRA         a limited DOS enhancer.
- SUPERDOS    the professional version of XTRA, with many more facilities.  
Enhanced batch displays with windows and extra display fonts.
- SHOWME     a directory program allowing examination of files in ASCII and Hex.
- PIANOLA     a music program with simulated 4 voice harmony, you just can't get  
the real thing from a standard PC. Some good tunes played to good  
effect.
- TOOLBOX     a suite of utilities, including, FASTCOPY, REDATE and FOSSIL, which  
is a redundant code finder for your assembler source files.

Clockwork software supply a pair of demonstration evaluation disks, one of which is a full working copy of certain of the programs. This disk has a 30 day time lapse protection. The other disk is a demonstration and explanation disk, without the full facilities.

I should write a full review on the demo disks that I have for the next newsletter. That is all that I have to say for this time, I must now promise myself to make a full effort to meet the next newsletter deadline. Good luck and I hope to COMMUNICATE with you all in the future.

Dave Holman

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READER'S ADVERTS

FOR SALE: THREE model 4P's for sale with 15 meg hard drives, a DMP 410 and two model 16's for sale.

Contact: Mr. P. N. Rutherford, Noxel Corp. (UK) Ltd, N. House9, St Edwards W, Romford, Essex. RM1 1UJ (0708) 22616

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FOR SALE: Two model 2's with expansion drives and a 32K model 1.

Contact: Mr. Dave Verberg, 9 Wendover Road, Burnham, Buckinghamshire, SL1 7ND (06286) 64275

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FOR SALE: Two model 16's, complete with 12 meg HD, Lineprinter V, and original software/docs, all in perfect condition. Price around £750.00 - will split

Contact: Ted Barnes, 4 Depleach Road, Cheadle, Stockport, SK8 1DZ 061-428 2560

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FOR SALE: TRS-80 model 111 and Line Printer VI Offers.

Contact: Trevor Brodrick, White Chimneys, Paulton Road, Hallatrow, Bristol. Avon (0761) 52409

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FOR SALE: 20 MB Tandy hard drive unit, ready to plug in and go. Complete with documentation, software and manuals. Suitable for models 3, 4/4P. (Spare 5 MB bubble included) £130.00 O.N.O. Buyer collects or postage extra.  
Pace "Nightingale" modem with documention and software £30.00 O.N.O.

Contact: Bob Dunn, Medical Centre, Fire Service College, Morton-in-Marsh, Glos. GW6 0RH Tel: (0608) 50831 Ext. 292

At the end of November, Graham Walsh, 36/3 Restalrig Drive, Edinburgh, EH7 6JF, will put out with the rubbish, many TRS-DOS items including the following: M4 graphics board, Labelmaker, Geap & Dotwriter, Modem80, Turbo-BASIC, The Produce DOSPLUS IVa, Screen Editor, Super Utility Plus, ZBASIC for CP/M and some books.

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### From SYDTRUG News

The following articles were types up by Barry Morley from SYDTRUG, Newsletter of the Sydney TRS-80 User Group.

#### VOLUME 8, ISS. 9, Page 3. Using Program Overlays With M4 BASIC - John Mercer

A number of years ago I had occasion to develop an application for the TRS-80 Model 1. The knowledge which I had managed to glean from the manuals which came with the computer, and the disk operating system which I acquired later, were insufficient to enable me to achieve the required result.

One of the first requirements of the job was that the operator should find the exercise as simple as possible, and not require to load various different programs to perform different parts of the job. Because of the nature of the job it was impractical to include all the BASIC code in the memory available on the Model 1, and I wasn't about to attempt an exercise of that magnitude in Assembler. This posed quite a challenge, until I read "BASIC FASTER AND BETTER". Here I discovered the technique of first loading a master program which held the main menu and most of the code which was common to all sections of the job. Then as various different sections of the task had to be performed, the appropriate overlay could be loaded by the master program and the job could continue with only a few seconds delay. The operator wasn't even aware that another program had been loaded.

This proved to be a very effective technique and when some time later I wished to do something similar on the Model 4 I was quite confident that there would be no difficulty. How naive can you get ?

One of the capabilities which was touted on the advertising literature for the Model 4, was the fact that it had the CHAIN statement. So out came the Model 4 Disk System Owners Manual, and I looked up the CHAIN statement. At first reading it seemed to just what the Doctor ordered. However, there did seem to be some potential difficulties. The chained program had to be saved in ASCII format, and if it was required that the variable be kept intact, the MERGE parameter had to be included. Did I hear someone ask "So what ?" Well, to grasp the significance of this, you have to appreciate what is involved when BASIC goes about merging two programs.

Unlike the process of just loading a BASIC program into memory from disk, and goodness knows, there is more to THAT than meets the eye, merging a new program

involves BASIC analyzing EVERY LINE of BOTH PROGRAMS. Because the new program is saved in ASCII format, it takes longer to load anyway, but in addition BASIC has to check each line number in the new program. As it finds a line number which is lower than the highest line number in memory, it checks to see whether the line number is the same as that of a line already in memory.

If it is, it replaces the line already in memory with the line from the program being merged. Unless the new line is exactly the same length as the line it replaces, all the program lines in memory which carry higher numbers than the one being replaced, will have to be moved to ensure that the next line follows immediately after the one that has just been merged. Then, as if the moving exercise wasn't enough, BASIC has to go through every higher line and recalculate the address pointer for the following line.

If the line number is not the same as an existing line number, BASIC will search through the lines on memory, to find two lines between which it can insert a new line, and thus keeping the line numbers in ascending order. This, of course, requires that all the higher numbered lines in memory be moved, and the address pointers recalculated.

The practical effect of all this is, that merging programs can be as slow as a wet weekend. While this is no great problem when you are adding precoded sections to a new program development, it is highly undesirable when running applications. Some application programs would call for overlays to be loaded quite frequently, and the time spent in loading them by means of the CHAIN statement becomes significant, and in some cases quite unacceptable.

So where does one go from here? I remembered that when reading BFB there had been a chapter on modifying the Model 1 routines for use with the Model 2. I also knew that TRSDOS 6 had been written in such a manner that it could be compiled for use on either the Model 2 or the Model 4. I hasten to point out that I didn't think that one through properly, or I would have realised that when Lewis was writing BFB, TRSDOS 6 had not been released. However, I decided to go back and have another look at BFB.

I tried some of the Model 2 variations on Model 1 routines, and quite naturally they didn't work. After all, it was rather like expecting to run a CP/M program under NEWDOS. Ah well, back to the drawing board. The major problem I ran into, was that Lewis's technique depends heavily on the use of BASIC's various pointers, and no matter who I consulted on the subject, including Tandy Customer Services and Logical Systems Inc, no one seemed to know, or care very much, where these pointers were located. The most positive statement which I received was, "If it's not in the manual, you'll have to work it out for yourself", with the implied addendum, "don't call us, we'll call you".

So, as the matter was not of earth shaking importance, I put the whole thing on a back burner and proceeded to forget about it. Then one day recently I was discussing something else with Gary Bryce, who frequently features in our

newsletter, and the matter was mentioned in passing. I expressed the view that because Model 4 BASIC differs from Model 1 and 3 BASIC, there might in fact not be any need for some of the pointers which are essential in Model 1.

The File Buffers in Model 1 are located BEFORE the Program Statement Table, or PST, so there is an obvious need for a pointer to the start of the PST, so that BASIC can find out where the first line on the program is located. This is because the PST will start in a different place if you have invoked say, six file buffers from where it would start if you invoked only two. In the Model 4 the file buffers are NOT located before the PST, and it seemed possible that Microsoft, in their wisdom, may not have provided a pointer for this. However, it did seem essential that some of the other pointers should be provided.

A few days later I received a phone call from Gary, informing me that he had located the pointer to the PST in Model 4 BASIC. It was in fact located at X'6E9E' and X'6E9F'. Our own "Sherlock Holmes" had done some smart detective work and located where this pointer was hiding. Now that the trail had been located we decided to follow it up.

By consulting another valuable reference book, namely "MICROSOFT BASIC DECODED", by James Farvour, we were able to ascertain that the 104 bytes of memory which Lewis saves prior to loading an overlay, started with the Literal String Pool Table or LSPT pointer, and ended with the Variable Declaration Table or VDT. One point about the LSPT pointer is, that when BASIC is loaded, the pointer, which occupies two bytes, contains the address of the next byte in memory. So all that was necessary was to load BASIC, and search through memory to find a two byte location which held the address of the next byte. So DEBUG was invoked, and lo and behold, at X'7155' and X'7156', the address of X'7157' was found. This could be what we wanted. Now the LSPT in the Model 1 according to Jim Farvour, consists of ten, three byte fields, each with the usual format of string pointers. That is to say, the first byte gives the length of the string, and the next two bytes are the address in LSB/MSB order. So what was to be found at X'7157'?. There, reposed the following: 06 2D 73. So if everything was according to Jim, this should point to a six byte string located at X'732D'. So this area was examined and sure enough there was the HEX representation of "Ready" followed by a Carriage Return.

The next task was to find the location of the Variable Declaration Table. When a program is being run, if a variable is not explicitly typed by appending either %, !, & or \$, then BASIC consults the VDT to decide what type it should be. The VDT consists of twenty-six consecutive bytes, one for each letter of the alphabet. When BASIC is loaded, the default type for all variables is single precision, so each byte is X'04'. If you include in a program, the statement DEFINT A-Z then each of the bytes in the VDT is changed to X'02'. The statement DEFDBL C-E, would cause the third, fourth and fifth bytes of the VDT to be changed to X'08'. Likewise, the statement, DEFSTR F, would result in the sixth byte becoming X'03'.

Sure enough, at locations X'71A7' to X'71C0' twenty-six bytes of X'04' were found. When BASIC was reactivated and the statement, DEFINT A-Z was keyed in, it was discovered upon return to DEBUG, that the byte in question had indeed been changed to X'02'. So this confirmed that these were indeed the VDT.

So now to try and test the theory. Could the same method be used as with the Model 1. The simplest approach was to modify the program Lewis used in BFB to demonstrate the top loaded overlay method. It is called "OVERLAYT/DEM" and can be found on page 67 of BFB.

To conform to the syntax of Model 4 BASIC, all reserved words should be followed by a space. Individual alterations are as follows:

- Line 1 - M4 BASIC handles the string space dynamically, so the CLEAR statement does not need to specify an amount for string space, so delete the 1000.
- Line 10 - As the screen is 80 columns wide, change the 63 to 79.
- Line 180 - Also for screen layout, change 832 to 1040.
- Line 190 - Ditto, change 896 to 1120.
- Line 29000 - This subroutine set three pointers to the Variable List Table and the Free Space List, change 30000 to &H8900, &HF9 to &H9F and &H40 to &H71.
- Line 29100 - This is the Variable Pass Routine, change TWO instances of 104 to 108, change &HB3 to &H55, change &H40 to &H71.
- Line 29200 - This is the Variable Receive Routine, change 3000 to &H8900, change 104 to 108, change &HB3 to &H51 and &H40 to &H71.
- Line 29300 - This line POKEs new values into the PST pointer, change &H40A4 &H6E9E and &H40A5 to &H6E9F.
- Line 29998 - This line computes the address of the next byte after the end of the line, change 48 to 53. Otherwise, Line 29998 should be EXACTLY as in BFB. This is all for the main program, now for the two overlays:

Again, spaces after all reserved words, and four alterations, all in Line 30001. Change to POKE locations &H40A4 and &H40A5 to &H6E9E and &H6E9F and change to POKE arguments from 186 and 104 to &HED and &H83 respectively.

Now, if you save the three programs under the names given, when you RUN "OVERLAYT/DEM" from BASIC you should see what it is all about.

Next time you have occasion to write a program which has a need of overlays, I believe that you will find this method much quicker in operation than the CHAIN statement. Also, it will enable you to use your M4 for programs which otherwise would require much more memory to contain the whole amount of code all the time.

VOLUME 8 ISSUE 9 - Page 11      How does the keyboard work? - Terry Bibo  
(Reprinted from "Canberra Micro-80 Newsletter", January 1988)

If I am honest have to say I still don't know. But in trying to find out I learnt a lot that I found interesting and which may be of some use to you.

The Model 4 keyboard can be considered a matrix of columns and rows where each key is identified by its position in the matrix according to its column and row intersection. Keyboard memory is from F400H through F480H, and the keyboard map is shown below.

| Address | Bits | 0  | 1    | 2    | 3  | 4  | 5  | 6  | 7 |
|---------|------|----|------|------|----|----|----|----|---|
| F401H   | @    | A  | B    | C    | D  | E  | F  | G  |   |
| F402H   | H    | I  | J    | K    | L  | M  | N  | O  |   |
| F404H   | P    | Q  | R    | S    | T  | U  | V  | W  |   |
| F408H   | X    | Y  | Z    |      |    |    |    |    |   |
| F401H   |      | !  | "    | £    | \$ | %  | &  | '  |   |
|         | 0    | 1  | 2    | 3    | 4  | 5  | 6  | 7  |   |
| F420H   | (    | )  | *    | +    | <  | =  | >  | ?  |   |
|         | 8    | 9  | :    | ;    | ,  | -  | .  | /  |   |
| F440H   | EN   | CL | BK   | UP   | DN | LF | RT | SP |   |
| F480H   | LS   | RS | CTRL | CAPS | F1 | F2 | F3 |    |   |

When a key is pressed, the appropriate bit in the above table is set. The operating system checks keyboard memory, and if it finds the bit set takes appropriate action.

Characters may be produced by a character operator chip. I don't know. But for the sake of this article I will assume that each key is linked to a specific address which holds a character appropriate to the key label. When the CPU is directed to accept input from the keyboard the character associated with the key is then stored in a temporary buffer, from which it is moved to the screen, or a printer, or wherever the running program directs it.

It is necessary to have this buffer because the keyboard is polled for both key press and key release. Thus if two keys are pressed almost simultaneously, the first of these is the one accepted by the operating system and the other does not get to fill the buffer which has only space for one character.

This single character buffer is not to be confused with the space given to a command line buffer, which obviously accepts many characters, and is made up of a string of keyboard buffers.

The rate at which the keyboard is polled and its characters processed is variable, and is set in the operating system to control the rate at which keys held down will repeat. Both Montezuma and TRSDOS support variable key rates.

The TRSDOS command SETKI (WAIT=n,RATE=n) where n is any number between 1 and 128. WAIT sets the initial delay before the first character appears after the key is pressed, and RATE sets the repeat rate when the key is held down. Montezuma's key rate is set in option B of the CONFIG program. Wordstar users should try a rate of 14 to 28 to improve the cursor movement rate. I use 14.

TRSDOS also supports an expanded keyboard buffer which allows more than one character to be stored. These will be executed in sequence, providing a type-ahead facility. This feature is activated by default, but can be turned off or on with the command SYSTEM (TYPE=switch) where the switch is YES or NO. Montezuma's code is so tightly packed into the limited space available to CP/M that there is simply no room for a type-ahead facility, although this is supported by programs running under CP/M.

The value of a key varies depending on whether it is pressed alone or in conjunction with another key, - shifted keys are different from keys pressed without the simultaneous use of the shift key.

Montezuma offers a range of values for shifted and controlled keys, - (those used in conjunction with the control key) in option B of the CONFIG program. TRSDOS offers a very large range of values depending on what combination of shift and control keys are used with the basic key. A keyboard map showing all possible combinations under TRSDOS is on page 384 of the Model 4 Technical Reference Manual.

TRSDOS uses scan information from the keyboard to generate codes. In Montezuma CP/M the alpha keys, whose value will not change, are processed 'on the fly' using scan information. Non-alpha keys, which can be redefined without detriment, have a table of values in the Keyboard Device Control Block. Here we have three entries of 24 bytes each in the order:

|       |       |       |    |      |      |       |       |
|-------|-------|-------|----|------|------|-------|-------|
| 0     | 1     | 2     | 3  | 4    | 5    | 6     | 7     |
| 8     | 9     | :     | ;  | ,    | -    | .     | /     |
| ENTER | CLEAR | BREAK | UP | DOWN | LEFT | RIGHT | SPACE |

The first entry in the table defines the keys used alone, the second shows them with the SHIFT key, and the third with the CTRL key. Then follows the definition order for the function keys.

NON-ALPHA KEY LISTING FOR CP/M, WITHIN THE KEYBOARD DCB.

```
EEA0 EE B0 07 00 00 01 30 31 32 33 34 35 36 37 38 39 .....0123456789
EEB0 3A 3B 2C 2D 2E 2F 0D 18 03 0B 0A 08 0C 28 30 21 :;, _/.....0!
EEC0 22 23 24 25 26 27 28 29 2A 2B 3C 3D 3E 3F 0D 1B "{'%'()*+<=?...
EED0 03 0B 0A 08 09 20 30 7C 32 7E 34 5E 36 60 5B 5D .....02`4^6[]
EEE0 3A 3B 7B 5F 7D 5C 0D 7F 03 0B 0A 08 09 20 4C 20 ;{ }\.. ....
EEF0 41 3A 0D 00 00 00 00 00 4C 20 42 3A 0D 00 00 00 A:.....L B:...
EF00 00 00 4C 20 4D 3A 0D 00 00 00 00 00 50 49 50 20 ..L M:.....PIP
EF10 41 3A 3D 00 00 50 49 50 20 42 3A 3D 00 00 00 A:...PIP B:...
EF20 50 49 50 20 4D 3A 3D 00 00 00 44 55 50 0D 00 00 PIP M:...DUP...
EF30 00 00 00 00 43 4F 4E 46 49 47 0D 00 00 00 53 59 ....CONFIG....SY
EF40 53 32 4D 20 00 00 00 00 CD 4B EA 00 3A C8 F0 CD S2M .....K.....
```

This table can be found on track 1, beginning in sector 19 and ending in sector 20 of any sysgened disk. With a DEBUG program or a disk editor, we can easily alter any of these values and save the modified version back to the operating system or direct to disk. This sort of thing could be fraught with peril if done carelessly, but does have definite uses and advantages. Multiplan, for example, uses a multiplicity of control codes for stepping around the spreadsheet and for editing formulas and lines of text. Some of the lesser used keys like the >, unless required for use within the spreadsheet, can be redefined to perform some useful function like move-word-right within its text editing.

Montezuma's KEYDEF program rewrites the BIOS definition of some keys, permitting great flexibility of use of the arrows, control, shift, break and function keys, and recognising that easy redefinition of some keys should be a facility made available to the operator. This is an extension of the facility provided in option B of CONFIG, and permits the keys to have different values depending on what application program is being run. It is especially powerful when used with Monte's Menu which automatically loads key definition files carrying the same name as the application program and having file type .KDF.

Obviously then, if the keys can have different values stored in ROM, we could redirect it to a new value of our own choosing. A very simple example of this is the filter program almost universally available to turn a QWERTY keyboard into a DVORAK keyboard.

I don't know of anyone using a Dvorak keyboard in Australia, but they are apparently widespread in some of the States of America. The QWERTY keyboard is not efficient and was laid out to slow down typing speed to prevent mechanical keys jamming. It is not appropriate to the electronic keyboard, but has become entrenched through such long usage.

Once this filter is installed the keycaps are simply removed, and replaced according to the Dvorak layout.

But this is only replacing one character with one character. We would have much more flexibility if we could arrange to have keys produce text, and this too is fairly simply achieved.

The address used by the key can be made to be at the start of a block of addresses rather than just a single byte. Now we can store commonly used phrases in these blocks of memory and recall them with single keystrokes.

Various public domain and proprietary programs exist which do that in effect, though they may employ different methods to achieve it. Among the public domain programs are KEYSTROK for the Kaypro, but running on Model 4 under CP/M, and PF/FILTER for redefining the function keys under TRSDOS6.

More extensive programs are the KSM filter in TRSDOS which allows the 26 alphabet keys to hold up to 255 characters each, including control codes, and

the Smartkey type of program for CP/M and MS-DOS, which permit entire paragraphs or documents to be called up with a single key.

I have covered KSM in past articles, and it is adequately catered for in the Disk System Owners Manual. PF/FILTER is an 80 Micro program, and is probably readily available through the user group. KEYSTROK is on the public domain disks freely available in the club. Two of the best commercial programs available are FBN Software's Smartkey, and Xpert Software's XtraKey. Both of these are very powerful programs that do far more than just change the key definitions. I use XtraKey for pop-up help menus within Wordstar.

Nobody should be working within the limitations of an unenhanced keyboard.

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### Editorial

I wish every Member of NATGUG, and including associated friends, a very happy Christmas. I also send personal thanks to everyone who, in the past, has sent contributions to NATGUG News, it has allowed YOUR newsletter to continue, and be a very worthwhile magazine.

Yes, it is still me here. I do thank everyone who attended the E.G.M. for the, "great vote of thanks and appreciation" given at that meeting.

Tandy has issued a catalogue devoted exclusively to computer products.

David Holman is now elected as Secretary, welcome David, I hope you do not get worn out before having had chance to volunteer again at the next A.G.M.

Also passed unanimously at the E.G.M., (with one slight amendment for a spelling error) was the new constitution. When on the committee, I worked with Stuart in drawing up this constitution, and would like to give my thanks to him for all the hard work he put in, also the large amount of patient explanation he gave in why certain words and phrases had to be used. The unanimous passing of this work, is testament to the thoroughly good job you did Stuart. Thanks.

In passing the new constitution, there is at least one other additional commitment for a committee to have to carry out, that is to organise proxy voting. Proxy voting can be a very onerous task to organise, which also consumes a great deal of someone's time. A facility, which if seen to go unused, does not take a great mind to visualise, will be one of the first clauses voted out of the constitution. Can I urge every member who is not able to attend any general meeting, to please use YOUR proxy vote, both as YOUR ability to be able to partake in the democratic happenings of YOUR organisation, and as a continuing benefit for future members unable to attend meetings.

Use it or lose it.

I have 1 only, M1 double density kit remaining. On enquiring, I am told there are absolutely no more of these kits available "as new". Price £12.40

Would all those members with TRS-80 computers please read the TRSTimes article, this issue. Also those who wish to subscribe to TRSTimes for 1990.

As we now head into the last decade of the twentieth century, and while there is time, will someone look into finding a solution for the DOS date stamp to take us into the 21st century ?

Soap Box Time I read in John Kilpatrick's report, "There has been some discussion as to whether we should confine the Group's activities to MS-DOS machines only now". My apologies to all who may go along with that suggestion, but can I say most emphatically, THAT NOW, in my opinion, IS CERTAINLY NOT THE TIME TO THINK ABOUT THAT. I just wonder if the suggestion was made after someone had gazed ONLY at the machines present at the Swindon meeting. For only that sight, would definitely not be representative of the membership of NATGUG at present. If that assumption is wrong, please forgive me. I would like to know the true reason though. These pages are open for a debate. I receive many calls from members with TRS-80 machines, mainly for help, and like John, calls from people who have been recommended by Tandy, as Tandy have been unable to help them. Before helping a non-member, I usually gently persuade the person to first join NATGUG - How many new members have we obtained that way ? My overwhelming feeling gained from all the telephone calls and other contacts, such as letters I receive (and as they are marked "not for publication", are not published) is that the MAJORITY of the membership is not yet in the world of MS-DOS. Many, many members only still own their original TRS-80 machines, they work, they do the job required of them, the member is happy with his machine - what more could you want - why move to MS-DOS? I also know many members are not so fortunate as to be able to afford to attend meetings, let alone purchase the latest gizmo, but I know they are still interested in computers. If the above suggestion is carried through, this would only serve, I feel, to break NATGUG up. I very much doubt that two small organisations, run as NATGUG is at present, could survive - the committee soon found out 2 1/2 years ago that with under 100 members you soon go bankrupt. The comradeship that exists within NATGUG is second to none, I for one would feel very depressed should a division take place, this would also mean the lose of some friends. Perhaps in the future, when more members have MS-DOS machines, and it can be proved we have no active TRS-80 users, then, I suggest, is the time to repair the suggestion. And before anyone suggests it, I am not burying my head in the sand, I feel I am being very practical, having been privileged of having a "grandstand view" of NATGUG for 2 1/2 years. I am certain the atmosphere within NATGUG has never, even from its beginnings, held back those who wished to be in the forefront of progress as regards the latest machines and operating systems, while at the same time, NATGUG has been available to hand-hold those who have wished to remain a little behind. What an admirable position for NATGUG to be in. And should remain that way.

Regards to all, Ed.

Local Club News

BOURNEMOUTH

TOPIC Computer Club. MS-DOS & Tandy 1st & 3rd Wed  
at Kinson Community Centre 7.30pm. Ring Barry Smith (0929) 463093  
(The two Bournemouth Clubs have now amalgamated)

CHELMSFORD

1st Wed. @ 7.30pm. Ring Richard Creak (0245) 413725. Woodcote,  
59D Little Baddow Road, Danbury, Chelmsford, CM3 4NT

GTR. MANCHESTER

Last Wed of Month 8 pm, Barton Aeroclub, Barton Airport  
Brian Disley, 061-723 5033

LONDON

Nth West London; 1st Sun, Central Common Rooms, 10.30-1.30 Northwick  
Park Hospital. Geof Smith, 01-950 6345 after 8 pm

Nth East London-80; 1st Sun, 77 Old Church Rd, Chingford, LONDON. E4 6ST

MILTON KEYNES

Alternate Sundays, October to March. Brian Pain (0908) 564271

SCOTLAND

2nd Thur. 7.30 pm Cluny Church Centre, Cluny Avenue. Morningside,  
Edinburgh. Dick Mackie, Chairman, SPECS. 031-447 6651 out of hours

SUDBURY

2nd Wed. at:- 3a Gainsborough Street. John Kilpatrick (0787) 79504

TYNESIDE

North East Users Group 2nd & 4th Wed. 7.30pm in Hebburn, Tyneside.  
Contact: Mike Easey (0661) 843781

WEST MIDS

Every Wed. Fred Challenor, 40 Whoberley, Coventry, CV5 8EP. 0203 78180

2nd Tuesday, on even months from 7.00 pm at the Editors House

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

For 1990 subscriptions please contact:- Mr. Tom Ridge, 34 Fullerton Road  
Byfleet, Weybridge, Surrey. KT14 7TA (09323) 41862

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