NATGUG NEWS

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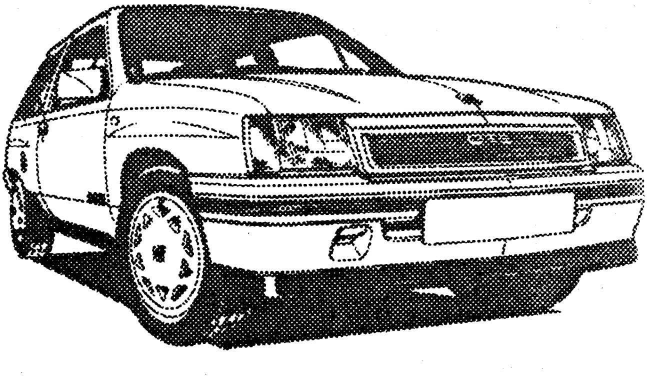

INFORMATION ON THE GROUP

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

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

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

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

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

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

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

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EDITORIAL

I hope you will not mind me using these pages to thank all the many members who sent Christmas cards and new years greetings to my family and me, far to many for me to reply to each individually. THANK YOU. Thank you also for the many messages of thanks included for the time I have given to NATGUG.

The good news this month, following my opening paragraph of last months Editorial, is that, in numbers, and using seasonally adjusted figures, the membership of NATGUG is higher now than for a long time. This must be in part, due to a number of members having responded to my recent requests, thank you, but please don't relax, even more members will be very welcome. The committee thank you all for the confidence shown, and appreciate your continued support.

In recent months I have received correspondence and phone calls with a common theme that, "...... there are not the articles in NATGUG News covering my interest/s". Can I point out that I have, on more than one occasion in the Editorials, asked members to write into NATGUG News stating what they would like to see, and that I will publish same. Also monthly, under the heading of "Readers Forum" is a similar invitation. You all must have read my personnel published requests, and also those from other members, for information. All my requests have been answered in very short time by members, and I am always grateful. I do not understand why members sit back and WAIT for something to happen, then just complain when it does not, write in to NATGUG News please and make it happen. Surely you must realize that solutions will only be found to YOUR computer requirements or problems, if YOU personally start the events rolling by taking action. Could I ask ALL members to make a little time available and read "Information on the group" printed on the inside front cover of every NATGUG News, just so that you will know what your commitments are in participating with NATGUG.

> Did you all, as requested last issue, PLEASE remove any reference you have in relation to Gordon Collins, or Editor, or NATGUG, and a telephone number 021-354 3299, even deleting that number from any records, as this number is no longer available. Then making a note of the following number, listing this against a reference to the Editor/Publisher of NATGUG News:- 021-355 7150. This number is solely for the use of NATGUG, and should not have any reference related to it and Gordon Collins - PRIVATELY. PLEASE DO THIS NOW, LATER ON YOU MAY FIND YOU HAVE FORGOTTEN !!! From certain calls made in the last two weeks, some of you have not.

Having spent a great deal of time trying to get to grips with MS-DOS during the past month, I have not had any time to type anything up on that subject. No good printing a list of frustrations. Thanks to the two members who phoned re my FORMAT problem, after following suggestion, I am still not able to format 80 track disks.

As an AGM is to take place next month (March 11th), can I please make a statement ? This so EVERY member will have no doubts as to what I am promising to undertake for NATGUG, should I be elected for a third term to the office of Editor/Publisher of NATGUG News. I would wish there to be no ambiguities or misunderstandings out there in membership land. I am prepared to have my name put forward for election again. If any member wishes to stand for the same office, I would be very happy to withdraw from nomination, as someone else may have more free time and/or expertise than I have. I would then be very happy to give that person all the help I am able to, if requested. I am very aware that I only have limited time available, and therefore impose restrictions on the time I spend carrying out work for NATGUG. I do however promise, if elected, to Edit/Publish NATGUG News each month - if sufficient articles have arrived with me, as I have done previously, even putting off other personnel/business work to that end. What I can not promise, is that having output the copy of NATGUG News, to then spend more time which may not be available, on other NATGUG work. You all must have read my pleas in recent months.

After having published the following last month, . . . "I am not going to immediately jump fully over to MS-DOS and abandon my model 4's, my model 4P will still go with me when I am away, that is until someone GIVES me an MS-DOS laptop." Only one day following sending off the copy of NATGUG News to the printer, I received a telephone call offering to exchange two of my model 4's for a 1400 LT. After careful consideration (for $^1/_{100}$ of a secónd) I thought I would do the person a favour and acceded to his request. Now a 1400 LT goes with me when I am away. It is a lot lighter to carry about, and does not need access to a power socket for up to 5 hours.

Make a note of February the 14th - (now what else is it that happens on that day ?), for the next meeting at the Editors House.

I invite subscriptions to TRSTimes Vol. 2 - 6 off for 1989. For those who wish to subscribe, make a payment - to: Gordon Collins - for £13.20 to cover for 6 issues. (£2.20 for one issue). Don't forget to give your full address if you are a new subscriber, or new address if you have moved in the last 6 months. Back issues, 1-6, for 1988 are available at £2.00 each

Only one application, together with a recent photograph, has so far been received for the vacant situation of an Editors assistant, perhaps I might print a copy of her photograph next month.

Thank you Roy (Soltoff) for your letter giving no objection to publishing the whole content of the review of "LITTLE BROTHER".

BOOK NOW for the <u>March '89 meeting and AGM</u>, this will be from the 10th to 12th March 1989. RING/WRITE (0793) 28282
The Wiltshire Hotel, Fleming Way, Swindon. SN1 1TN.

Best Regards to everyone, Ed. **

David Holman

Thank you for your greetings David. David has requested that all members please note his new address which is as follows:-

D.C. Holman, 3 Harbour Court, North Parade, Portscatho, TRURO, Cornwall. TR2 5HH

All correspondence to David and with reference to "MS-DOS Monthly, should be sent to the above address. David is now hoping there will be a period of stablility in his life, and very much hopes to be a Swindon in March.

* * *

The LITTLE BROTHER Database Manager

Available from:- MISOSYS, Inc., PO Box 239, Sterling, VA 22170-0239 U.S.A.

A users review. By B Thrippleton
8/1 Hannah Street, Morwell VIC 3840, Australia

Continued ..... PART 3

USING FILES:

1.5Adding data

Before you can add data to your file you must have completed the following: Defined a data base
Defined a screen
Selected that Data Base name at option 1 of the main menu.

If you are planning on adding more records than you currently have allowed you should first use option 7 of the main menu to allocate additional records.

Select:- <2> Add Records

The following Add mode scan menu will appear at the bottom of the screen:

```
__ Index:None _______________ Add Records ______________________________
Enter screen number to use (1 - 10) ..
```

Enter the number of the screen you wish to use for adding data. This screen must be one of those defined when the file was created.
The previously defined screen will be presented on the screen with the following prompts shown at the bottom:

```
__ Index:None _______________ Add Records ______________________________
Help          Quit       Add        Screen      Index
```

To select any option either key-in the first letter or move the option highlight using the right/left direction arrows or space bar.

<H>elp: Displays help information regarding Adding Data.

<Q>uit: Exits Add Records mode.
Note: Does not automatically save any information.

<A>dd: Allows you to add data records to your file. The cursor will move to the first defined field and on <ENTER> will advance to the next. The scan menu at this time will be replaced with the following message:

"Press <F3> to save, <ESC> to abort."

<S>creen: This option allows you to switch between different screen format files

<I>ndex: This option allows you to toggle the special Add Index file on/off.

2. Updating or deleting records:

As for the Add records mode you are prompted for a screen number to use during update and deletion of records.

```
__ Index: None _______________ Update or Delete _____________________
Enter screen number to use (1 - 10) ..
```

Once you have selected a screen it will be displayed with the bottom appearing as follows:

```
__ Index: None _______________ Update or Delete _____Record No....___
Help         Quit       Delete       Edit     Index   Screen  Find
```

To select any option either key-in the first letter or move the option highlight using the right/left direction arrows or space bar.

<H>elp: Displays help information regarding the update/delete mode.

<Q>uit: Exits the Update/delete mode.
Note: Does not automatically save any information.

<D>elete: Used to delete the currently displayed record.
You are prompted with: "\3Delete this record (Y/N) ?\£
Once a record has been deleted it cannot be restored and the old record number will be automatically reused.

<E>dit: Allows you to edit existing data records.
Note: On completion the new data must be saved by pressing <F3>.

<I>ndex: Selecting this option will give you three choices:
1.Use an existing index file.
You will be prompted for the number (1 to 5 or "A" for the Add index) of the index file to use.

2. Create an index file.
Allows you to create an index file to suit the particular manner you may wish to view your data. This new index file will become the active index file.

3. Cancel the active index file.
You can use this option to cancel any active index file and return to sequential access of data records. This may be useful if you wish to use the "<F>ind" option to search for data that is in a field other than the one on which the index file is based.

<S>creen: Allows you to change the format of the displayed data.

<F>ind: This option is used to locate particular data records in the file. Its use will depend on whether an index file is active or not. The number of options available is very wide and they are all dealt with in detail in the manual.

3. Printing records

Select:- <4> Print Records

You will be prompted to enter the print format number you wish to use:

```
__________________________ Print  Records __________________________
Enter Print Format Number (1-10) ..
```

Enter the number of the print format you wish to use for printing the data records. This format must be one of those defined when the file was created. The previously defined format will be presented on the screen with the following prompts shown at the bottom:

```
__________________________ Print  Records __________________________
Help        Record Range    Use Index     Create Index      Quit
```

To select any option either key-in the first letter or move the option highlight using the right/left direction arrows or space bar.

<H>elp: Displays help information regarding printing your data records.

<R>ecord range: Selecting this option causes your records to be printed in record number order. Before printing commences you will be prompted for the starting and ending record numbers.

<U>se index: Selecting this option will cause only the records specified in the active index file to be printed. Before printing commences you will be prompted for an index number (1 to 5 or "A" for the Add index).

<C>reate index: This selection functions the same as the <U>se index option however you will be allowed to create an index to use.

<Q>uit: Exits the print records mode.

Another option is presented before printing commences and that is:

"Print <N>ewlines - <T>of ? ."

This option allows you to position your paper in the printer so that both Little Brother and your printer agree as to where the top of the page is.

During printing the printer can be temporarily stopped or printing aborted. When printing reports on single sheet, manually fed paper the <ESC> key can be used to pause the printing operation to allow a new sheet of paper to be fed into the printer. In this mode the printing will stop at the end of each report irrespective of when <ESC> is pressed.

4. Expand allocated record space:
Select:- <7> Expand Data File

You will be presented with the following prompt at the bottom of the Main Menu:

```
Name: DB6          Index:None    Screen:0   Allocated:360   Used:345
____________________________________________________________________
Expand file. Records available =  1748   Use how many? .....
```

The number shown (1748) as being available is that which can be saved to the drive nominated as holding the data. It does not include the number already allocated (in the above case 360). Answering 40 to the prompt would cause the allocated number to change to 400. As this facility is always available it is better not to allocate many more than you really need. Note that the allocated size cannot be reduced.

5. Sort or Select Records:

This option allows you to create index files dealing with a particular data set. The index files may be unsorted or may be sorted in ascending or descending order. A data set may be indexed on all records or only on records containing certain information.

Briefly the limits of indexing are:
Up to 5 index files may exist at one time.
Up to eight fields can be used for selection.
All field types except calculated may be selected.
The total "sorted length" cannot exceed 254 characters.

Select:- <5> Sort or Select Records.

Upon selecting <5> the first 8 data field descriptions will be displayed at the top of the screen. This part of the screen can be scrolled using the <UP>/<DOWN> arrows.

The middle part of the screen will be used for data entry.
The bottom part of the screen will contain the following prompts:

```
____________________________ Select Records ______________________________
Help           Quit        Index       Select
```

To select any option either key-in the first letter or move the option highlight using the right/left direction arrows or space bar.

<H>elp: Displays help information regarding the Select mode.

<Q>uit: Exits the Select mode.

<I>ndex: This option is used to create a sorted index of all active data records, sorting on a single field.
Depending on the field type you are indexing there will be up to 3 prompts to answer:

1. Data field number.
   This is the number shown at the left of the screen opposite the field descriptions.
2. Sort direction.
   You are presented with this prompt:
   Sort on this field (A, D, N) ? .
   Only 2 of these options are applicable to the Index option ie "A" (ascending) or "D" (descending).
   The "N" (no sort) option applies to the <S>elect option.
3. Upper and lower case treatment.
   This applies to all non-numeric fields and controls whether Upper and Lower case characters are treated as equal or not.

Once the field information is complete you will be asked which number index file you want to create.
Answer with a number between 1 and 5.

<S>elect: This option lets you specify more than one sort field and select only certain matching data fields.
There are several prompts that have to be answered.

1. Select field number.
   As for <I>ndex option above.
2. Sort direction.
   All three options (A, D, N) are available. This prompt will ONLY appear for the first field. Any additional fields attached for sorting purposes will use this direction.
3. Upper and lower case treatment.
   As for <I>ndex option above.
4. Select criteria.
   You will be prompted for data to be compared against the data field stored on disk. There are "Wild card" facilities which allow strings to be built up as required.

5. Attach field to sort string.
   If you are sorting in ascending or descending order this option allows you to have the secondary sort fields also sorted in the same order.
6. Enter the relation.
   The "relation" is one of the following, and determines how the select criteria string will be compared against the data records stored on disk when looking for matches:

LT - Less than	LE - Less than or equal to
GT - Greater than	GE - Greater than or equal to
EQ - Equal to	NE - Not equal to

7. Connective.
   The "connective" is the logical way that your different select fields will be compared.
   There are 2 connectives:
   AND - means this field AND the next field must match
   OR - means this field OR the next field must match
8. Select file number.
   This is the prompt for the number of the index file you wish to create. It must be a number between 1 and 5.

As the data file is being scanned to find matching records the bottom line of the screen will display the records searched and the matching records found. This display is updated every 50 records.
If you are selecting but not sorting then the bottom line will show the total number of matching records.
If you are sorting the sorting module will automatically execute once the selection is finished. During a sort the screen will display various pieces of information such as:

List the field you are sorting.
Total records to sort.
How many passes the sort will take.

Also at the top of the screen will appear the following messages:

Reading:
Sorting:
Writing:

These numbers will be followed by the number of records being processed in increments of 50.

6. <u>View field definition</u>

Select:- <13> View Field Definitions.

On selecting this option the screen will be cleared and the definitions of the currently active file will be displayed.
The field name, type, length and protection will be shown.
If there are more fields than can be displayed on one screen then pressing <ENTER> will display the next screen.

7. Set screen/add index

This option lets you set two default conditions. These conditions will be re established any time the data set is used.
They are: Default Screen Format.
Add Index.

Select:- <11> Set Screen/Add Index.

On selecting <11> you be prompted with:

"Give screen number, <ENTER> to cancel, or <A> for Add Index."

1. Responding with a number will cause that screen to become the default screen and on subsequent loading of the Data Base Name (Option <1> at Main Menu) this default screen will be automatically loaded.

2. Responding with <ENTER> will cancel the current default screen.

3. Responding with <A> will allow you to change the status of the Add Index.
   The Add Index is a special index file that will keep track of all new records added to the data set.
   There are 3 status levels for this file: ON, OFF and NONE
   (The default or initial setting is NONE)
   1. If the status was NONE when <A> selected then an Add Index file will be created and status changed to ON.
      (When ON, all newly added records will be written to the Add Index file)
   2. If the status was ON when <A> selected then the status will be changed to OFF.
   3. If the status was OFF when <A> selected you will be prompted to either: <U>se (and extend) the current index
      or <D>elete it.
      <U>sing the index will retain the current file and change the status to ON.
      <D>eleting will cause the index file to be removed from disk and the status reset to NONE.

   Note: The Add Index File status can be changed while in the Adding records (Option <2> of Main Menu) mode however can only be created in the (Option <11> of Main Menu) mode.

8. Auto run

The automatic mode is designed mainly to automate the use of the Main Menu options 5 and 4, selecting and printing data. However the other options, except 1 and 10, can be executed when creating a job file.

The 3 main areas of the Auto Run option that are discussed in the manual are:

1. Creating a job file
2. Manually using a job file
3. Using the TRSDOS JCL utility

These areas are discussed in some detail in the manual but as the applications depend entirely on the user they are not discussed here.

9. Change password

When the data set is first created with the Define File Option (Option <10> of Main Menu) the optional password may be assigned.
If the Password was assigned during the Define File Option it can be changed or removed with this option.
Note: In order to change or remove an existing password it must have been used at Main Menu Option <1> when the file was opened.

Select:- <12> Change Password.

1. If a Password exists.
   The current password (if existing) will be displayed.
   To change the Password use the input editor feature to change it and then press <ENTER> to save it to disk.
   To remove the Password use the backspace key to erase and then press <ENTER>.

2. If no Password exists.
   To establish a Master Password simply type in the Password in response to the prompt and press <ENTER>.

PART 4.

ADDENDA

1. Description of programme files.

The following files may all be required to operate the Little Brother programme. An indicative size (as shown by DIR :) is shown alongside each file.

LB	21 k	The start up code file	(mandatory)
LB0	12 k	The main menu module	(mandatory)
LB3	13.5k	The Define File option code	
LB4	15 k	The Define Screen option code	
LB5	10.5k	The Add Records option code	
LB6	7.5k)	The Define Print Format option code	
LB6A	6 k)		
LB6B	7.5k)		
LB7	15 k	The Sort and Select option code	

LB8	18 k	The Edit Records option code
LB9	18 k	The Print Records option code
LBSORT	19.5k	The Sort Index File code (called by LB7 as reqd.)
LBHELP/HLB	24 k	The Help message text

The following files are those that may be created by the user during use of the Little Brother programme. The filenames all take the standard format ie. "*filename/ext*". Only the "*ext*" code is shown below and this is added automatically by the programme during the various Save operations.

/DEF	File for data field definitions
/LB	File for actual data entered. (stored in ASCII format)
/VDn	Screen format file(s). The "n" will be a number 0-9 representing the 10 possible screens formats.
/PRn	Print format file(s). The "n" will be a number 0-9 representing the 10 possible print formats.
/SLn	Index or select file(s). The "n" will usually be a number 0-4 representing the 5 possible index files. It may be "A" which will be for the Add Index File.
/JOB	The job file created for automatic operation.

The following files are temporary files created during use of the programme. They are created when required and killed when the operation is complete.

/ENV	File created on start up which contains information such as data set name, password etc. It is used to transfer information between the various option modules.
/TMP	File created by the Select option and used when creating a sorted index file.

2. Maintenance Utility

The Little Brother Maintenance Utility can be purchased as an extra to the Little Brother Database Manager Programme.
This utility is supplied on a separate disk with a 14 page manual.
On the disk are 2 programmes:- LBMAINT and FIXDEL.

LBMAINT: This is a utility which allows you to create new data base files using existing data. This facility overcomes the problem of not being able to modify file format definitions or reduce allocated record space while in Little Brother. It also enables you to recover an unuseable data base file, ie if you have a mismatch between a data and definition file, if you have a data file that contains unreadable records or if you have an unreadable definition file or have inadvertantly deleted your definition file.
The actual installation and use of LBMAINT is covered in detail in the supplied manual.

FIXDEL: This utility is designed to read a data file and construct a chain of deleted records. It can be used to correct a deleted record chain damaged by such things as power failures during deletes, removal of disks from the drives at the wrong time etc.
As for LBMAINT the installation and use of FIXDEL is covered in detail in the supplied manual.

3. XLR8 enhancement use

If you have an XLR8 board installed you can greatly improve operation of Little Brother. This is especially applicable if you also have D/S disks fitted.
The method I use is to create a RAMDISK using the "DUMPER/CMD" programme by John Coyne and included on NATGUG library disk MD4LIB04.
A directory of this disk is shown below:

```
Drive :2  LBSTART    40 Cyl, DDEN, Free =    30.00K /    360.00K,  Date 25-Sep-88
Filespec      MOD Attr   Prot  LRL  £Recs  EOF  File Size  Ext  Mod Date   Time
-----------------------------------------------------------------------------------
BOOT/SYS          SIP    EXEC  256    16   255      4.50K   1
CONFIG/SYS        IP     NO    256     4   205      1.50K   1  25-Sep-88   5:07p
DIR/SYS           SIP    READ  256    36   255      9.00K   1
DUMPER/CMD               FULL  256     9   226      3.00K   1  12-Mar-88  11:21a
FIXALL/FLT               FULL  256     3   145      1.50K   1  23-Jun-86  12:00a
FIXBANK/CMD              FULL  256     3   169      1.50K   1  22-Sep-86  12:00a
LBSTART/DMP   +          FULL  256  1024   255    256.50K   6  25-Sep-88  10:17p
LBSTART/JCL   +          FULL  256     1   109      1.50K   1  25-Sep-88  10:32p
SET180/CMD               FULL  256     3   222      1.50K   1  23-Jun-86  12:00a
SETUP/JCL                FULL  256     1   181      1.50K   1  11-Sep-86  12:00a
SYS0/SYS          SIP    NO    256    18   176      4.50K   1  26-Aug-87  12:44a
SYS1/SYS          SIP    NO    256     6    56      1.50K   1  10-Feb-87  12:00a
SYS10/SYS         SIP    NO    256     2     0      1.50K   1  10-Feb-87  12:00a
SYS11/SYS         SIP    NO    256     4   253      1.50K   1  10-Feb-87  12:00a
SYS12/SYS         SIP    NO    256     4   237      1.50K   1  10-Feb-87  12:00a
SYS2/SYS          SIP    NO    256     6     8      1.50K   1  10-Feb-87  12:00a
SYS3/SYS          SIP    NO    256     5    50      1.50K   1  10-Feb-87  12:00a
SYS4/SYS          SIP    NO    256     6    26      1.50K   1  10-Feb-87  12:00a
SYS6/SYS          SIP    NO    256    52    59     13.50K   1  26-Aug-87  12:44a
SYS7/SYS          SIP    NO    256    27    10      7.50K   1  10-Feb-87  12:00a
SYS8/SYS          SIP    NO    256    37    14     10.50K   1  10-Feb-87  12:00a
SYSTEM/JCL    +          FULL  256     1    64      1.50K   1  29-Oct-88   1:25p
===================================================================================
                      22 files of  22 selected,    330.00K
```

The one thing I cannot do is to load the LBHELP/HLB file into memory (due to size limitations) however I transfer this file to my data disk and it is therefore always available.
I find that I do not use the on-line HELP facility very often as it is more convenient to refer direct to the manual.

I have also written a simple JCL programme to load all the Little Brother files into RAMDISK once the date/time have been entered and <LBSTART> is keyed in. This loading process only takes about a minute.
The various sequences are as follows:

```
. LBSTART/JCL Loads the LBSTART/DMP programme.
SET180 (M=0,I=1,R=80)
DUMPER LBSTART/DMP:0 (L)
SYSTEM (SYSTEM=2)
```

This JCL leaves me with System and Little Brother files on Drive :0 (RAMDISK) and the 2 physical drives vacant. These I can use for data (say drive :1) and word processor and/or spreadsheet programmes in drive :2 (physical drive :0)

CONCLUSION

I have only had the Little Brother Database Manager for a couple of months and already I have found it to be a very compact and user friendly programme. I have not used the capabilities of the programme to any where near their limit but I am sure that with more use I will find the programme equally successful.
Initially, when I was running it without the XLR8 board, I found it a little frustrating due to the time delays in changing between the various options which necessitated numerous disk access procedures. I am certain part of this frustration was due to inexperience. However since using it in conjunction with XLR8 those frustrations have disappeared.
The manuals are very well presented and are easy to understand and use. This applies to all 3 manuals: Installation, Use and Maintenance. ------------- END

Re:- Ivor Tandy: *From a letter more recently received, Barry has replied to Ivor Tandy's query as follows. Thank you Barry.*

This is just a short note to perhaps assist "Ivor Tandy" with the problems he is having with the enhancements to Scripsit ex. 80 Micro, Jan '85. I also had problems but managed to solve them and have had no problems since making the following alterations:-

LINE 01660	Delete label "RDLOOP" (label only)
LINE 01680	Add label "RDLOOP" (ie, move label from 01660 to 01680)
LINE 01740	change to read LD A,1CH (code was omitted)

Note: If the line width is required to be amended the location of the byte to alter is at 5AE7 when assembled from 3900H. I believe originally this was 84H (132Dec) but changing this to AOH will change maximum width to 160 characters.

The line actually reads LD C,84H or when changed, LD C,AOH

Regards, B. Thrippleton, 8/1 HANNAH STREET, MORWELL VIC 3840, AUSTRALIA

The Sorcerers Apprentice

MODEL IV LS-DOS 6.x

The wind howled mercilessly outside, the window rattled with the spatter of rain against the glass. "Brrr," said the Sorcerer as he pulled the heavy curtain, shutting out the British summer. "Let us talk about quills my young friend," he said, turning to his console.

I was already familiar with Lescript (incantations 1.43 1.68 1.70), and had used the spell TED/CMD supplied with the DOS, why should I use anything different ? I spake of my misgivings to the Sorcerer.

"See this text file," he said pointing to the screen, "Now the letter 'e' is the most commonly occurring. Let us alter each 'e' with the string 'zzzz' and see how long Lescript takes."

After making coffee we returned just in time to see Lescript finish its task. "Aha," exclaimed the Sorcerer, "see how slow it is ! Now let us try Allwrite." He fiddled with the keyboard for a short while, brought the same text file into view. "Now watch this!" He said confidently. I blinked, I had missed it!

"Good grief!" I exclaimed (or was it something else?), "That was fast. Show me how to use this scribe I must master it."

After much instruction I felt confident enough to try Allwrite for some of my real-life applications. Having also recently tried Lescript 1.80 I thought that I would try to give a broad outline of some of the major differences between the quills in my possession.

What do we want from a word processor or text editor ? Well I guess that we can divide the various functions into different groups, basic functions and more advanced. To help determine our requirements we should divide the creative process into two stages, editing and printing.

If you are writing a simple /JCL file you never need to print it out on paper in a fancy way ! Ideally you want to be able to go back to your file, delete a word here and there, maybe insert a line or two and perhaps move a whole section to a different place.

So, we have just outlined a few basic functions our 'editor' should be able to perform; insert, delete and simple block operations. Other operations we might class as simple could be; string search and replace and cursor positioning, skipping through the text page by page for example.

What of the differences between the various quills in my library ? Well, let us start with TED/CMD, a simple text editor provided with ELESDOS the Spell-maker and also in the package PRO-WAM/Mister ED.

TED is a small file, taking up very little room on your working disk, it also loads very quickly. The main features are; cursor control enabling, page forwards or backwards, go to top or end of text and position to beginning or end of line. TED allows you to overtype or use an 'insert' cursor whilst still permitting deletion of single letters or from cursor to beginning/end of line or text.

You may also mark blocks of text and copy, move or delete the marked section. Strings may be searched for and replaced, but only one at a time. Finally you can of course save your text to disk and retrieve another, which will be concatenated to the end of your present text (if you have any). Since TED works from 'within' the DOS you can make full use of /KSM files and since the resultant text is 'pure' ASCII it can be loaded and read by any other program.

So far it sounds quite good but there is one drawback, you can only print your text using the following DOS incantation;

```
LIST name/TXT:d (p)
```

This is rather limiting in that you cannot automatically line-up the right margin and generally present a good looking document on paper. This is where the other quills, Lescript and Allwrite come in since they both edit and format.

Both scribes have a number of editing features in common, both allow deletion of single letters or lines and both permit marking of blocks for deletion, moving or copying. Both will let you position the cursor as in TED and both provide a search and replace facility. The advantages over TED lie in the enhancements, you may delete a word at a time for instance, Allwrite permits deletion of a sentence or paragraph too. Both Lescript and Allwrite allow a global search and replace, but as I have intimated Allwrite is very much faster.

The difference over TED is the introduction of special formatting instructions in the body of the text, although usually on separate lines. Both Lescript and Allwrite use a special character to tell the program that the following text is presentation instruction (actually Allwrite uses ';' although you may re-define it).

These instructions allow for powerful manipulation of the appearance of the finished document on paper. You may easily change the margins for instance or produce a smooth right edge to the text.

The major differences between Allwrite and Lescript are in the appearance of the screen during editing and in the way they interface with the DOS. Lescript tries to emulate the document appearance on the screen as you type, this means that you get a good idea of what you are producing immediately. Since enhancements like bold type or italics are represented by flashing symbols over the text you may easily see your handiwork. Allwrite on the other hand does not attempt to show you the finished work until you call up the formatting program (a separate /CMD file on disk), the underline and superscript etcetera are represented by symbols additional to the text. This means that although the text is not quite so readable it is easy to edit the enhancement markers, Allwrite has a powerful search and replace facility.

What other features do they have in common ? Both allow for headers, footers and footnotes. Columns and form letters are also handled by both programs. Both provide an on-line help facility; Allwrite provides a menu which loads help screens into memory, removing them when you finish. Lescript provides a help file that you may load into the alternate text buffer.

If you use a spelling checker then both programs have the ability to access Electric Webster directly. I have the different versions of EW/CMD etc. stored in DiskDisk and ADE files, with the dictionaries separate. This means that I can access the correct version of Webster depending upon which quill I am using.

So what about tabulating some of the main differences between these programs ?

Delete:

TED: character, line (forwards/backwards), to top/bottom of file, block.
Lescript: character (forwards/backwards), line, word, block.
Allwrite: character, line (forwards/backwards), word, scentence, paragraph, block.

Insert:

TED: toggle insert cursor.
Lescript: insert cursor, insert line.
Allwrite: insert cursor (for one character if reqd), open line.

Blocks:

TED: copy, move, delete.
Lescript: copy, move, delete, save/load (to/from) disk.
Allwrite: copy, move, delete, save/load (to/from) disk.

Search/Replace:

TED: search (case sensitive), replace.
Lescript: search, replace, auto search and replace.
Allwrite: search (case sensitive or not), replace, auto search and replace, search/replace up from cursor to top of file.

Form Letters:

TED: No.
Lescript: Selective variable substitution.
Allwrite: Selective variable substitution, simple substitution.

Columns:

TED: No.
Lescript: Allows any width of text and gutter. _(not my version of 1:8 Ed. **)_
Allwrite: Allows any width but all columns even.

Help facility:

TED: No, but you can zap the Misosys message at the foot of the screen using FED. You could also write your own on disk and load it as required, you would then delete the help page before continuing.
Lescript: Provides a help file on disk, loaded by entering the alternate screen.
Allwrite: Help file on disk, only required areas are loaded for the time they are needed.

Miscellaneous:

TED: Can be loaded over another program when used with PRO-WAM/Mister-ED.
Lescript: V.1.8 has in-built spelling checker. _(but has faults. Ed. **)_
Allwrite: Special tabs, can cope with proportional print, swap order of two words, Index facility.

This comparison is only designed to give a broad outline of the differences between the various programs, I am sure that I have only skimmed the surface. If you use Lescript then I do not necessarily advocate the use of Allwrite or vice versa but if you get the oportunity then I would certainly give it a try. Allwrite especially is very fast and the index facility very useful if you write large documents or club magazine (what about it Ed ?).

Finally a word about Lescript 1.8. I have had absolutely no problems at all, apart from the date stamp that is. I have been using from out of an Alpha-Tech board (1/2 megabyte) and as long as there is not too much in high memory there does not seem to be any real problem. The spell check works fine and is especially good if you use the auto 'as you type' facility. The search for sound alike words can take a long time (even out of memory), and produced a few raised eyebrows when I tried it a couple of times, but gave no problem.

I have noted the "Ed" bit and question mark, but have no clue as to what you are alluding to. I have previously listed bugs I have experienced with my LeScript V1:8. The date problem is one Anitek corrected in one of the many (possibly five) versions I have received from them this year. I agree that on a cursory *use of V1:8 you may experience no problems, but use it for some while and they start to show up. I might add that there do seem to be a number of versions of 1:8 about, the latest LESCRIPT/CMD file date I have is 30/5/88, so what one person may experience, another may not. When added to, or deleted from a number of times, the dictionary becomes corrupt, at first to the Z's. This progresses forward through the alphabet, where minor spelling changes take place, because of this, a word which was given as spelled correct yesterday, is given as misspelled today. Following are the six words that are now at the end of my dictionary file; zur, zurs, zurred, zurring, zurrer, zurrers. When trying to move on through to the end of the dictionary all that will happen is that I get a recurring scroll of these six words, at this moment only, next time this will be further forward in the dictionary. Could the cause of the raised eyebrows have been because your dictionary had already become corrupt ? Try also printing columns, or a directory listing using CTRL-@. Also boot up with the KSM function active and then type either a ("), (£) or (!) to the screen, the quotation mark will also not print out to paper. Perhaps yours is a more well behaved version of 1:8 than mine ? I repeat, as previously printed, I use version 1:8 to output the copy for NATGUG News, but have also found a "work-round" to most of the problems. The last time I wrote to Anitek was with a list of 15 problems I had experienced, each "fresh" version received back had different problems. I gave up writing when I was told, among other things, and I quote, "If your dictionary becomes corrupt then we suggest you copy the originals back to your working disk". I object to having to do all the previous work over again. Anitek did acknowledge this about the dictionary, and I quote, " .. words are not supposed to be in exact alphabetical order". But my thoughts then are, if they are not in alphabetical order, how do I go about finding a word ? 20 words are listed on screen in a vertical column, do I scroll up or down ? It would be nice to have KSM working fully and correctly. I also do not like having to revert to V1:7 in order to print columns. My ever niggling suspicion is that Anitek use TRS-DOS 6.x and not LS-DOS 6:3 when testing V1:8 - a personal view which has never been confirmed. But as a point, why should it take Anitek at least two attempts before they could find and acknowledge a fault with the file date stamping ? And another, look at the file date stamps on the master disk, even those saved in 1988 give the date as 1980. Also why is it that you can't do a BACKUP $d: d: under LS-DOS 6:3 from a LeScript master disk, you are asked for a master password, which of course you do not know. I was also assured, and I quote, "LeScript 1:8 should work fine on the XLR8er board". My LESCRIPT/CMD will load on my 4P and XLR8er, but only takes 1 - 2 seconds before everything 'locks', as witnessed by a number of people an Blandford. The dictionary files refuse to load into the extra 256K memory. And on .. and on ..*

*I expect to gradually move to the MS-DOS machine so perhaps I will leave these problems behind. Ed. ***

It would have been better to allow automatic replacement of the misspelled words rather than the sound alike facility perhaps, but maybe the next release will be better.

By the way, this document was written using all three scribes mentioned, TED, Lescript and Allwrite. The spelling was checked using both Electric Webster and Lescript 1.8.

The keeper of model IV spells has asked me to convey a message to all out there in TRS80 land. He says that he now has in his possession many more spells in the library, and that by the feast of X-mas he should have many, many more. So why not drop him a line in order to get the catalog disk ? The fee is but a few groats and the copying service for said library disks just as reasonable.

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PROfound Notes

Welcome to all in this New Year, I wonder what new & exciting changes will be offered to us by all the computer suppliers this time round,

I have just discovered that 4164 64K RAM chips are not all the same, some are 7 bit refresh & some 8 bit, I knew that Texas chips were 8 bit but I assumed that they had a different part number, but I am wrong, to ensure getting 7 bit, they should have the part number 4564 or 4864, those I am told are all 7 bit.

At the current Chelmsford User Group meeting I had the opportunity to try a Quadram multisync colour monitor on my 1000EX & it works OK, this would mean that anyone wanting to get a colour monitor for their current machine would be able to get one that will not need changing when they upgrade even to the latest MCA machines on the market, that has made up my mind as I was debating whether to get a hard disk or a colour monitor, not until after Swindon though.

I have been able to dispose of the Spare Model I that I had to someone who will now join the club, he was quite surprised at the level of help available.

For members who want magazine support for the laptop portables, I gave the address of the only American magazine still supporting them last year but will repeat for new members. It also supports all Tandy PC compatibles & is;-

PCM Magazine, Falsoft, Inc: The Falsoft Building, P.O. box 35 Prospect.
Kentucky 40059. U.S.A.

The subscription rate is high, 64 Dollars per year, but as it is the only window into what is happening in the Tandy market in the U.S.A. I for one think it is worth it, you have to wait about six weeks for your first copy to arrive as it is surface mail, airmail is 85 Dollars for anyone who can afford it.

I have had several inquiries lately from people who first contacted Tandy for help with second hand machines bought from ex government sales, the only thing I could tell them was that I would only be able to help them if they first joined the club, I do not give out any names or phone numbers to non members.

I have been making Christmas cards using the program Printmaster on my 1000EX & Epson MX80, I found that the printer would not always print out correctly usually if I had made corrections to part of the layout, the printer would start printing OK then start lines of garbage, each time I had to reboot & start again, anything less would not work, later I tried the program Printmagic, a much better program but my printer would only 'beep' instead of printing, I have been told it is because I have the Graftrax 80 ROMS in my MX80, I should have the Graftrax plus instead, has anyone had a similar problem? if so could they let me know about their solution.

Looking forward to seeing you all at Swindon in March, don't put off booking 'till the last moment, hammocks slung in the car park are not very comfortable.

John Kilpatrick, PRO

* * *

READER'S ADVERTS

I have available the following items, members wishing to purchase any item should send a cheque made payable to Gordon Collins. Most hardware is in its original box - unless otherwise stated. The price includes VAT, postage and packing. YOU PURCHASE THEM ON THE UNDERSTANDING THAT THERE IS NO GUARANTEE, and can not be returned for refund. I have not the experience for advice on fitting/running, but it is possible other members may be able to help. A number of items have been fitted, & I have not heard that any are not running. I have now been let down a number of times by members making a telephone call requesting items be reserved, I then hear nothing further. From now on, I will only take action on receiving written orders, which include payment.

RS Part No.	No. Held	Item	Price
62-2061	1 off	TRS-80 Level II BASIC	5.00
62-2069	1 off slight marks	Using the TRS-80 in your home	5.00
62-2072	1 off	Advanced TRS-80 Level II BASIC	5.00
62-2074	1 off slight marks	Business Programming Applications	4.00
62-2079	1 off	Business Programs for TRS-80 Model 1/3	6.00
26-3016	5 off	CoCo Low Profile Keyboard	8.00
26-1120	6 off	Mod I Level 1 - 2 upgrade	6.00
26-1143	3 off	Mod I Double Density Adapter	14.00
	1 off	Mod I/III Arranger II	20.00
	1 off	Mod I/III MODEM 80	12.00
	1 off	Mod I/III PowerMAIL Plus	36.00
	1 off	Mod I/III Super Utility Plus V.3.2	28.00
Breeze/QSD	1 off	Mod I/III Power DRAW - All DOS version	14.00
	1 off	LDOS 5.1.x TOOLBOX	21.00
PowerSoft	1 off	Mod III PowerDOT II	25.00
	1 off	Mod III DOSTamer TRS-DOS 1.3 version	15.00

	1 off	Mod III DOSTamer - All DOS version		25.00
	1 off	Mod 4 DOSTamer		25.00
26-1121	3 off	Mod III BASIC		5.00
26-1148	6 off	Mod III/4 RS232 Upgrade Kit		15.00
25-1125	2 off	Mod III Hi-Res Graphics Kit		30.00
Host Adapter Boards for use on a model 3/4/4P for Hard Drives, tested				20.00
Model 3 to 4 upgrade kit, new not boxed				85.00
Model 4 64K to 128K upgrade kits c/w PAL chip and 128K 'button'				20.00
	1 off	6.2 Plus - enhance TRS-DOS 6.2		20.00
26-1512	1 off	Mod 4 Target PlannerCalc		10.00
26-1630	1 off	Mod 4 TK!Solver		40.00
26-1530	1 off	Mod 4 Multiplan		36.00
The above is complete with 26-1631, Financial Man: 26-1632, Intro. Science and 26-1633, Mech. Eng. Packs. Was priced around				230.00
Model 4P looks brand new, 64K 40 track drives, c/w free 64K-128K kit				260.00
10 meg hard disk system		Suitable for Mod 4/4P - uncased, tested		190.00
26-3018	3 off	CoCo Extended BASIC		4.50
26-4105	9 off	Mod II 64K RAM Board		6.00
26-6010(?)	1 off	Mod II to 16 Upgrade		15.00
(Only the two boards can now be supplied, but software and manuals available)				
68000	5 off	16 bit CPU PCB		15.00
26-1102E	9 off	16K RAM upgrde		6.00
25-1004	1 off	Mod 1000 memory board		55.00
25-1007	1 off miniscrib	Mod 1000 Hard Disk Controller Card		105.00
25-1009	1 off	M 1000 512K Mem. Card Incl 256K Memory		115.00
25-1010	1 off	Mod 1000 Mouse/Clock/Calendar		39.00
26-6508	1 off	Mod 1000 BASIC Reference Manual		14.00
25-1014A	1 off	RS232 Upgrade		27.00
25-3046	1 off	Deluxe Graphics display M3000/1200		69.00
26-6508	1 off	Arcnet Active Hub		50.00
	16K RAM Chips,	used but not soldered	each	0.80
	64K RAM Chips,	used but not soldered	each	1.40
	256K RAM Chips,	used but not soldered 150 ns	each	4.50
	256K RAM Chips,	used but not soldered 200 ns	each	4.00
26-3866	2 off	Mod 200 24k RAM		???.??
26-????	2 off	Mod 2000 Arcnet		???.??
26-5140	1 off	Mod 2000 Hi-Res Graphics (Colour)		40.00
26-5141	9 off	Mod 2000 Colour Chip Kit		10.00
26-5160	9 off	Mod 2000 128K RAM Board		8.00
8" Floppies		Boxed 10's S/S D/D		12.00
Tandy MC-10 colour computer c/w power supply and manual				18.00
Telemod II V23 Modem c/w user guide and Mod III Mironet Software				40.00
Samna Word III Word Processing Software				50.00
5 off OKI Toner Laserline Cartridges				offers
Centronics 36 way, IDC or solderable;				male 3.35; Female 3.60
25 way series 'd'				male 3.00; Female 3.25
Casio FX-720P Personal Comp. (like Tandy PC-4, + function key) in boxes, as new, incl. FA-3 cassette interface, 4K/2K modules and manuals.				£65.00

1 off CP/M Primer	by Murtha & Waite	11.50
1 off Soul of CP/M	by Waite & Lafore	12.50
1 off Mastering VisiCalc	by Douglas Hergert	12.00
1 off The Power of VisiCalc	by Williams & Taylor	6.00
1 off The Power of VisiCalc - Volume II	by Williams & King	6.00
1 off A User's Guide to dBASE II	by Perry & McJunkins	10.00
1 off Working with dBASE	by M de Pace	7.00
1 off BASIC Comp. Progs. for Business Vol 2	by Charles D. Sternberg	9.00
1 off The Complete Guide to corporate Desktop Publishing		10.00
Service Manuals: Mod 4/4P Gate Array; Mod 1000; Mod 2000;	LP 1000	ea.30.00
(and enquire for others)	DMP 100	ea.16.00

If members would like other items - like the above - would you please send me a letter with S.A.E. if you require a reply, otherwise look for further news here. I will then compile a list and see if they are obtainable. Please do not expect an immediate turn round.

Gordon Collins, 11 Elizabeth Road, Sutton Coldfield, West Midlands. B73 5AR

rarararararararararararararararararararaarararararararararararararararararar

WANTED:- Model III software - FORTRAN, FORTH, PASCAL disks with documentation.

Roger Lancaster, 26 Bridgeleap Road, Downend, Bristol. BS16 6TW (0272) 563523

rarararararararararararararararararararaarararararararararararararararararar

FOR SALE: WD1001-05 controller board. £35.00 ??? also a Host Board, £??.??
Bob Dunn, 9 Thorfinn Place, Thurso. KW14 7LN (0847) 66477

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MS-DOS The 1st lesson for the Ed. **

First, some people may remember that I wrote an article in September '87 about the different computers that I have owned. I now have another to add to the list, an IBM clone. The make is Elonex, the type is AT, and includes 1.2 Meg 5.25" floppy, 1.44 Meg 3.5" floppy, with 40 Meg hard disk. The price included Gem, 1st Word Plus, and Gem Paint. (I don't mention MSDOS, as anyone selling this as an extra is not worth patronising).

As recommended by John Miller in the February '88 newsletter, it is a good machine with no known quirks. The Northern branch of Elonex (in the Bradford University Science Park) have been very helpful with any queries, and the southern headquarters were very quick to send me a substitute serial card when it was thought that mine was faulty. It wasn't, the fault was traced to some quirks in the boot-up routine and the serial cable.

The reason for going MSDOS is that most commercial applications are available under this operating system, and prospective employers ask if experience has been gained on IBM/MSDOS equipment, even though the major part of the computing is undertaken on a minicomputer or mainframe. It appears that even large computer installation users are moving into the PC user field. I know of one large Building Society that is planning to use networked PCs in the "front office" in branches, even though it runs several nationwide mainframe networks. It is therefore a practical move for anyone concerned in non-home computing. I understand the reasons behind many people hanging on to the older Tandys for home use, but to bury one's head in the sand and deny the existence of IBM/Clones/MSDOS is, in my opinion, being foolish.

I too have spent much money on systems bought in the early days of microcomputing, but when I average out the cost per year, I find that it is still MUCH cheaper than alternative hobbies such as smoking or drinking, and I have something to show for it at the end of the day. There is always a limit which each each individual must decide for himself/herself, but I feel that with the advent of the cheap IBM clone, the XT particularly, it may be false economy to keep putting money into the old Tandy models. What are other peoples views on this ? Please reply through the newsletter, with no invective please, as my comments are not meant to be any kind of slur on those people who have decided to go a different route to my own.

I remember reading comments in earlier times that the various DOS for the Tandys were much better than MS-DOS, more powerful, more friendly etc. This may have been the case at one time, but MS-DOS has grown up a lot since then, and has become quite sophisicated, and I feel that no-one need feel that MSDOS is mysterious, or unreliable. I have heard tales that MSDOS is prone to losing files and data, but have not (touch wood) had these problems myself, either on my own machine or those at work. Perhaps the fault lies with the machine and the implementation of the BIOS ?

One last remark on operating systems: why, oh why did Microsoft go the route of OS/2 when a multi-tasking operating system was required ? They already produced Xenix (A Unix implementation), and this is multi-USER AS WELL AS multi- TASKING. Surely it would have been easier to put a friendly front-end on Xenix for the PC, and with the volume sales possible, we could all have had a PROPER operating system for perhaps £100 pounds ?

The reason for this letter/article is a request for information by Gordon Collins on how to format a 5.25 disk to 720K on his AT. I tried this on my AT and found it impossible. The reason is as follows (to the best of my knowledge). The AT needs to be told what equipment it is dealing with, and has a setup program to allow the user to enter that information. The 720K disk size is for a 3.5 disk only. While I can persuade the AT that my 3.5 drive is a 360K

5.25, and format it as such, I cannot persuade the AT that the 5.25 drive is a 3.5 720K. During formatting it simply reports back the message:

"Invalid media or Track 0 bad - disk unusable"

I have tried to format the same disk as a 1.2M disk and it passes verification on the first track, so the "invalid media" message must be the operative part of the message. I believe this to mean that the 1.2M drive and the 720k format are incompatible. It must be remembered that the 1.2M drive does not operate in the same manner as a standard 5.25 drive. It runs at 360 rpm instead of 300rpm. The data transfer rate is faster and has to be altered for the 360k format. Besides this, there may be signals that the 3.5 drive gives that the format program expects to use, and that the 5.25 drive does not give out. I doubt this as I have used 3.5 and 5.25 drives on the same ribbon cable on other computers, and had no problems. The most likely reason is that the AT software does not have the option built into it for formatting.

Another reason for writing is that during my conversation with Gordon on this point, I mentioned several things that Gordon said were new to him, concerned with the environment. I mentioned altering the size of the environment, to allow more environment variable to be incorporated, including lengthy paths. I find on looking through the back numbers of NATGUG that these topics have been adequately covered. I mentioned the TZ (TimeZone) environment variable which allows the setting of the computer time to GMT (or any other time zone). Gordon believed that this had been covered by setting the country code in CONFIG.SYS to 044. I include a program in Microsoft C which shows the differences (if any) between GMT (Universal Time, perhaps this is what they use in Star Trek), and the local time in the computer. I append the output of two runs of the program, one with the line SET TZ=GMT in the autoexec.bat, and one without. In both cases the country code was set to 044 in config.sys.

Output of timedata with no setting of TZ in autoexec. bat

```
daylight savings time flag = 1
difference (in seconds) from GMT = 28800
standard time zone string is PST
daylight time zone string is PDT
ctime():        Wed Jan 04 20:33:37 1989
local time:     Wed Jan 04 20:33:37 1989
universal time: Thu Jan 05 04:33:37 1989
```

Output of timedata TZ=GMT. (SET TZ=GMT in autoexec. bat)

```
daylight savings time flag = 0
difference (in seconds) from GMT = 0
standard time zone string is GMT
daylight time zone string is
ctime():        Wed Jan 04 20:40:43 1989
local time:     Wed Jan 04 20:40:43 1989
universal time: Wed Jan 04 20:40:43 1989
```

Program in Microsoft C for above

```
/*
 Title: timedata.c

 Purpose: To print out time and date
 */

£ include <stdio.h>
£ include <time.h>

main()
{
 long now;
 struct tm *tbuf;

 tzset();     /* Get timezone data into global variables */

 /* Display the global time values */
 printf("daylight savings time flag = %d\n",daylight);
 printf("difference (in seconds) from GMT = %ld\n",timezone);
 printf("standard time zone string is %s\n",tzname[0]);
 printf("daylight time zone string is %s\n",tzname[1]);

 /* Display the current date & time values for local & universal time */
 now = time(NULL);
 printf("\nctime():\t%s\n",ctime(&now));
 tbuf = localtime(&now);
 printf("local time:\t%s\n",asctime(tbuf));
 tbuf = gmtime(&now);
 printf("universal time:\t%s\n",asctime(tbuf));

 exit(0);
}
```

Follows, the program in Microsoft C to demonstrate the above.

```
/*
 Title: timedata.c

 Purpose: To print out time and date
 */

£ include <stdio.h>
£ include <time.h>
```

```
main()
{
 long now;
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 tzset();     /* Get timezone data into global variables */

 /* Display the global time values */
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 printf("difference (in seconds) from GMT = %ld\n",timezone);
 printf("standard time zone string is %s\n",tzname[0]);
 printf("daylight time zone string is %s\n",tzname[1]);

 /* Display the current date & time values for local & universal time */
 now = time(NULL);
 printf("\nctime():\t%s\n",ctime(&now));
 tbuf = localtime(&now);
 printf("local time:\t%s\n",asctime(tbuf));
 tbuf = gmtime(&now);
 printf("universal time:\t%s\n",asctime(tbuf));

 exit(0);
}
```

The fact that the TimeZone is not set to your local time may be irrelevant to your operation of the computer. I include it for interest, and the program, in a seperate file, shows how to access the system time.

I also mentioned to Gordon that I placed my programs in many different directories, in order to keep easier track of them. Being a Unix person at work, I felt at home immediately with the tree-structured filing system of MSDOS 3.3 and set about organising my file system in a similar manner to that of a normal Unix system. I enclose an outline of my system directories to show one possibility of laying out a filesystem. Other people may have other tastes, but I find that this layout enables me to find my way to any type of file very quickly.

```
root-+-- bin
     ¦
     +-- tmp
     ¦
     +-- comms -+-- kermit
     ¦          +-- procomm
     ¦          +-- lap
     ¦          +-- mirror
     ¦
     +-- dbss  -+-- dbase
     ¦          +-- lotus
     ¦
     +-- games
     ¦
     +-- wordpro -+-- ed (pcwrite)
     ¦            +-- ibmpe
     ¦            +-- wordstar
     ¦
     +-- program -+-- asm
                  +-- basic
                  +-- cobol
                  +-- masm
                  +-- mixc
                  +-- msc -+-- bin
                           +-- tmp
                           +-- exe
                           +-- lib
                           +-- include -+-- sys
                           +-- source  -+-- doc
                                        +-- sample
```

Note that very little is kept in the root directory. Only those system files which MSDOS requires are kept in root. The only other executable files in root are batch files. All the other executable files are kept in \bin, as in Unix. The system knows where to find them by setting the PATH environment variable to include C:\bin. The APPEND environment variable is set to include C:\bin so that any data files that the executable files access can be found. This is something that Unix does not have (as far as I am aware), each program having to rely on the operator setting up the correct environment variables.

I use batch files to set up the environment and change to the appropriate directory for a particular application. For example the msc.bat in \ sets up the environment as required by Microsoft C, and then changes directory to the working directory, which is \program\msc\source.

This is the relevant part of my autoexec. bat

```
@echo off
@echo START OF AUTOEXEC
@PATH=C:\;C:\BIN;C:\WORDPRO\WORDSTAR;C:\WORDPRO\IBMPE
@APPEND /E
@APPEND C:\;C:\BIN;C:\WORDPRO\WORDSTAR;C:\WORDPRO\IBMPE
@set TZ=GMT
@ECHO Time zone set to GMT
@mode com1:12, n, 7, 2, ,
@mode com2:96, n, 8, , p
mode lpt1:=COM2:
@PROMPT $P$G
```

I hope these notes are of use to somebody. After I have re-read the back numbers (again), I will try to send more information on MSDOS. I also have some utilities written in C which may prove useful to someone, even if only to see how someone else writes in C.

Phillip Marsden, 6 Kennerleigh Grove, Leeds. LS15 8NQ

Dear Phillip, I added the title at the top in anticipation of further articles. Thank you for the disks files, also the phone call, both very much appreciated. As mentioned during the phone call, I have read 80 track disks on the 5.25 1.2M drive, also in Help Sought that I can format 40T 360K disks. I understand the drive "senses" the disk somehow, and switches between 360 and 300 RPM. As a novice to MS-DOS it just puzzled me, particularly as all the manuals I have read indicated that by entering certain parameters and/or setting DRIVER.SYS, 80T 720K disks can be formatted on that drive. There must be some difference between the XT and AT machines, as I understand you can format 80T 720K 5.25" disks on the XT's. I am going to experiment with writing to an 80T 720K already formatted disk, using my machine. If that works I will have to bulk format a number of blank disks on an XT machine for later use. It just seems a shame to have lost 360K of file space with each disk. To save other members being left puzzled as to why I am doing this, it just seems nice to be able to do a disk copy from 5.25" 80T 720K disks to 3.5" 720K disks for running on the 1400 LT.

10/01/89: update to above. Our Hon Sec was kind enough to send me two 5.25 80T 720K MS-DOS formatted disks (from now on 'the disks') with a number of files on. I was able to read and copy those files off the disks. I then deleted all files from the disks and copied a mailing label program which has 850 addresses, onto one of the disks, ran the program and read the addresses O.K. I then tried to do a DISKCOPY A: A: of the disk to one of my disks, the message, "Copying 80 tracks, 9 Sectors/Track, 2 side(s) appeared on screen, but when the target disk was inserted, I got an incompatible disk error message. I then tried a DISKCOPY A: A: to the second already formatted 80 track disk, the files where transferd across with no problems. Just as a check, I used the second disk and ran the program once more, all 850 records where again read OK. I suppose the acid test is to see if our Secretary can read the disks when returned. I am now looking for someone local with an XT 80T drive machine so that I can format about 200 disks, or do I just hang an external 5.25 80T drive on the 1400 LT ?

*You mention the amount of MS-DOS info in back copies of NATGUG News, I make no apologies for not having read through all the back copies yet again, I am sure you can imagine the amount I have already read of other manuals in order to be able to operate this beast. Not only machine manuals and MS-DOS, but all the software manuals as well. A few weeks ago, everything MS-DOS was "NEW" to me. I sometimes wonder what I inflicted on myself. I am still happier using a model 4 to output the copy for NATGUG News. I WILL be going over all the back issues though. <Hint, hint, someone out there, it would help to have an up-to-date index of NATGUG News, I do understand it is near completion though>. Ed. ***

Sec's Notes

Sorry about missing last month - I hadn't recovered from the cover of the previous issue ! As forecast in my last article, I am writing this using WordPerfect 5.0 on the 1000; however I was using my Model 4 this morning running a large CPM database program. May I take the opportunity to thank all those Members who were kind enough to send Seasonal Greetings to myself and fellow Officers - Thank You All.

Every member understands the necessity of taking regular backups, right ? May I, tongue deeply buried in cheek, ask how often those backups are checked ? I ask because, very carelessly, I recently erased all those files on the root directory (CONFIG.SYS, AUTOEXEC.BAT and all the other batch files) and so had cause to use my own backups recently - and found that they were corrupt. Now, after painstakingly re-creating those files, they have all been backed up using the Copy command - and have all been personally verified ! Whilst I do appreciate that none of you could possibly lose any files in such a careless manner, I do suggest that you examine those backups just in case they might be needed one day. I am very grateful that Leo Knaggs had impressed upon me the need to have every file in a separate directory wherever possible - ERASE does not affect directories - Thank You Leo.

I am typing these notes in the first few days of the New Year, yet by the time they reach you Swindon will be almost upon us. I hope that all Members are aware of the dates - MARCH 10th to 12th - and that the AGM will be held on Saturday. This means that you have a double reason for attending, pleasure in the Systems Room and Discussion Rooms plus the opportunity to vote in YOUR Officers for 1989/90. The Swindon meetings are organised by Bob Sparling, of the Swindon Computer Club and Bob has contacted me to confirm that the Wiltshire Hotel management is dedicated to making this our best meeting yet. Please DO BOOK EARLY, on (0793) 28282, and avoid the hassles so often caused by late booking. Bob is making arrangements, for those who so desire, for an alternative Chinese Dinner just a short distance away from the Hotel; if you would like to take advantage of this, or if you have any queries or problems concerning the Hotel aspect of the weekend then please contact Bob on (0793) 740762. The October meeting saw quite a few new faces and brought home to me how we "oldies" tend to take it all for granted; may I take a few moments to describe the "booking in" procedure ? You are allowed to park on the double yellow lines in front of the hotel whilst you register, during which you ask the Receptionist for a car park ticket; you then drive into the adjacent car park and, keeping to the outer circuit, drive approximately three-quarters round the third floor of the car park to where there is an unmarked door leading straight into the Systems Room inside the Hotel. Once you have unloaded all your equipment, park in a normal bay and clearly exhibit the ticket that the hotel gave you. Couldn't be easier, could it ?

The full Swindon schedule has yet to be finalised, but will certainly heavily feature those two Knaggs, Leo and Peter. Leo will be tackling the complex subject of Batch Files, whilst Peter intends to cover the heavy stuff like Forth, Object Orientated Programming, and Zed. Please, if you want to either cover a topic yourself, or to attend a talk on a particular subject, then contact me, David Washford, NOW. Don't be frightened if you get the ansaphone, it really is a very good message taker but it gets the sulks when callers hang up on it ! A highlight, albeit towards the end, of the October meeting, was the duel fought on two machines linked via RS-232 using the Microsoft Flight Simulator - Bob Sparling has announced a very special prize for the Champion Fighter Pilot that we can produce in March ! Get practising now, folks !!

The Swindon meeting is to be held at the Wiltshire Hotel, Fleming Way, Swindon (opposite the "nick", and very near to bus and rail stations). It starts on Friday 10th March with a get together in the Wiltshire Suite (Systems Room) from around 10.30am and will end with us all being forcibly ejected at about 4.30pm on Sunday 12th. The Hotel has a very special all-in price for NATGUG members of £66.50 which covers:

Friday dinner and overnight accommodation.
Saturday breakfast, buffet lunch, dinner, & room.
Sunday breakfast and pub lunch.
Entrance to all systems and discussion rooms.
All the coffee that you can drink during the 3 days !

There are small reductions for those sharing a twin room, and also for taking bed and breakfast terms only. Ring the Hotel either to book or to make further enquiries.

MS-DOS Users, have you heard of CompuAdd ? Operating from Bristol this company offers some very low-priced software - I have just purchased QuickBASIC 4.0 for 49 (plus VAT) and I see that they also list, for example, Fontasy for 26 + vat. They do charge delivery, but offer a free telephone call service - ring them on 0800 373535. Other examples are the Microsoft Flight Simulator for 25, Turbo C for 47, or Quattro @ 108 (all plus vat). They also list various hardware items, and it might be worth ringing for a catalogue.

As I said, I have purchased QuickBASIC 4.0 (after Paul Ostwind's intro at the last Swindon I just had to get it) and I am truly delighted at the ease with which it helps me to convert my Model III/IV Basic programs to MS-DOS Basic. I haven't yet mastered their equivalent of the Newdos Igel (for which I shall always be grateful to Charles Davies) but I feel confident that it won't be long ! Considering that this package comes complete with three hefty manuals then at this price you have absolutely no excuse for not adding it to your collection. If you've already got QuickBasic then I expect that like me you'll have lost no time in sending for a copy of Christy Gemmell's utilities - and Thank You, Christy for a very informative article last month.

In fact, I think that you'll all agree that we had a very good magazine for January; Thank you, John Bodsworth for a good cover, Thank You, Gordon

Collins for a good Editorship, but most of all, THANK YOU, MEMBERS, FOR ALL YOUR INPUT. KEEP IT UP FOR '89 !!

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

PS. Next month I might try sending this by E-Mail. Would other Members like to use NATGUG's new system, housed at Gordon's, before I unleash my ancient Maplin modem on it ?! Ring 021-355 7150

PPS. Just a reminder that "my other job" still necessitates my arising at 5.00am so I make good use of an ansaphone after 8.30pm!

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PROFILE Turns Relational

The talk these days is of relational databases. The old "flat file" databases are out. And you can see why from a simple example - an example relevant to my wife's business and which made me look at my trusty PROFILE 4+ again.

My wife runs a translation agency. Translations come in and the details are logged on to the database. For invoicing purposes the database holds the financial details of the job plus the name of the firm and its address. Each job has a particular "job number" and each job relates to a particular firm. One firm might want an English to French translation one week, and another a promotion leaflet put into 5 languages the next. 1992 is on its way!

As PROFILE stands (and I think it's a great program) you have to enter the address of the firm every time you make a new entry in the database. Now this is rather a shame, because many of the firms come back week after week and although the database has over 1600 entries they relate to only 250 or so firms. The database contains a lot of duplicated addresses.

One way around this is to use two databases: one for the job details and one as an address list. A simple 3 digit code (1 to 250) in the job details indicates the firm and its address. With a program like DDUTY you can split a 128K Model 4 in two and run two copies of PROFILE. One examines the jobs and the other the addresses. This works, but you have to keep swopping from one partition to the other, and you have to read the 3-digit address code yourself and manually enter it into the address database as the record number to find.

But there is a neater solution. You fool PROFILE into thinking that the address database is part of the jobs database.

PROFILE allows you to split a database into 4 disk files: say, JOBS/KEY, JOBS/DAT, JOBS/DA2 and JOBS/DA3 (it pads these names out with 0000's to make 12 characters each, but I will omit these for sake of clarity). In my case I use the first two segments for the data, and the last two segments (JOBS/DA2 and JOBS/DA3) remain as null files. For what follows it is important that your database does not need to use the last two segments.

What I wondered was whether PROFILE would read the JOBS/KEY and JOBS/DAT records for a particular job entry (and these hold all the details of the job including the 3-digit code for the relevant address in the address database), and then examine the address code just read and use this to look up the appropriate entry in another database entirely. I wanted it to fetch the 3 digit address code stored in JOBS/DAT and treat it as the record number for accessing another database, ADDRESS/KEY and ADDRESS/DAT.

In fact it was easier than I thought. Some fairly small patches allow PROFILE to access two databases, finding its position in the second by referencing data in the first. The cross reference field is known in relational database jargon as the key field. The patches are applied to the EFC9/CMD module, which is the module responsible for "Inquire, Update and Add".

The patches can be applied directly to the EFC9/CMD file, but if they are you end up with an EFC9 which will only work with one particular combination of databases. So I decided to make the changes more general by writing a short program (called EFC9R/CMD - the R stands for relational) which loads an unmodified EFC9 into memory and then patches it according to data entered on the DOS command line. But more of that in a moment. First, a quick look at the patches, of which there are five:

First, the original EFC9/CMD contains the names of all the files it must read in formats like 00000000/KEY, where /KEY is the extension and the 00000000 is overlaid with the database name selected on entry: in my case either JOBS or ADDRESS. The first patch enters the names of the second database (ADDRESS/KEY and ADDRESS/DAT) in the places where PROFILE expects to find the JOBS/DA2 and JOBS/DA3 filenames. It also turns off the overlay procedure which would substitute JOBS as the first four characters.

The second patch traps where PROFILE runs a routine to read the /DA2 and /DA3 records. PROFILE stores the record number to be accessed in a specific memory location (at CD27H to be precise). Instead of fetching this record number, PROFILE is patched to jump to a new user routine (see next patch) inserted in what appears to be an area for updates.

The third patch is the routine to read the ADDRESS record number from the last JOBS/DAT record loaded. A bit of hunting showed where this was held in memory. It adds the offset for the key field from the beginning of the record and reads the relevant bytes. It then performs a decimal to hex conversion and returns with the key field held in the appropriate register so that, as far as PROFILE is concerned, it seems as though it was read from CD27H in the normal way. This extra routine also stores a copy of the converted key field.

The fourth patch is applied to the writing routine. Again, normal EFC9 fetches the current record number from CD27H. In the new EFC9 this is changed to the location where the converted key field was stored under patch three.

Finally, there is a fifth patch which modifies the /MAP file loaded. JOBS/MAP defines the field lengths and allocates the field numbers by which each field can be displayed on the screen. If you combine two databases you should be able to display the fields from both the databases on any screen. The fifth patch simply changes the map filename used by EFC9 to JOBS/MRP, but you do need to create this file first. To do this you copy the original JOBS/MAP to somewhere safe, along with the two null segments JOBS/DA2 and JOBS/DA3. You then expand the JOBS database as though you wanted to add the same fields as you have in your ADDRESS database. This creates a new larger JOBS/MAP, and /DA2 and /DA3 segments which are empty but are no longer null files. These expanded segments may be deleted immediately (since we'll be using segments from the ADDRESS database instead) and the null JOBS/DA2 and /DA3 restored to the disk. The newly created JOBS/MAP should be renamed JOBS/MRP, and the original JOBS/MAP restored to the disk.

Using the relational PROFILE is simple:

The command line used to call EFC9 now needs to contain extra information to specify the second database and the place to find the key field. A typical command line (which may be embedded in user menus or typed direct from LSDOS) is:

```
EFC9R (JOBS0000,1,Update records) [D46;3=ADDRESS0]
```

The first part of the command is standard, except for the use of EFC9R instead of EFC9. The portion in square brackets forms the relational link. It says that the second database is ADDRESS and that the key field is in the /DAT segment (if it was in the /KEY segment you would enter K46;3=ADDRESS0), is 3 digits long (max), and is at a displacement of 46 from the start of the record. The displacement value for each field, before you get too worried, is listed whenever you do a hardcopy of the file definition.

And that's it. Of course, for the link to be established both databases must be available. In fact EFC9R does a quick check to make sure the second database does exist. If it does not EFC9R simply loads and runs EFC9 unmodified. So it uses the old /MAP for the field definitions, and it accesses the null /DA2 and /DA3 files.

Not wishing to miss an opportunity I've also added a few more features to EFC9R. If you enter the "at sign" as the link code in the key field, the modified EFC9 will search through the second database looking for the first record which has either a null (00 hex) or an "at sign" as the first byte of the /KEY record, ie it will hunt for the first deleted or empty record in the second database. When it has found this record it will store the record number in the key field and (depending on the screen design) display the empty second database fields for updating. This is a handy way of finding a blank address record for a new address from within the jobs database. Further searches for empty records will start from the last empty record found, and not from the start of the file.

You can also add to the command line four further options, and an example is perhaps the clearest way of explaining:

```
EFC9R (JOBS0000,1,Update) [D46;3=ADDRESS0,I=/IY2,M=/XXX,S=/YYY,H=20]
```

The I option changes the extension of the index used. You may therefore access records according to one of the print indexes (/IY1-5) instead of the standard index /IX1. The M option changes the /MAP extension to allow you different ways of structuring your data; the S option (S means "Sums") changes the /MTH extension. This last option I find useful since I occasionally want to update the database without the record being recalculated (fiddling the VAT etc). By specifying a maths file which doesn't exist, the maths calculation is turned off. You could, of course, have different maths files for different discount rates etc. Finally the H option indicates the number of lines to be printed whenever <H>ardcopy is selected. I don't like it printing the bottom ruler, and this allows me to stop the printout before it reaches it. Incidentally, my other annoyance is the printing of full stops as field terminators. If you want to remove this change D3F,D7 in EFC9/CMD from 2E(Hex) to 20. It wasn't worth an EFC9R option.

The two databases will work quite normally as separate databases if they are called via EFC9 and not EFC9R. Indexing will work as normal so long as you do not try to use fields from /DA2 or /DA3 in the index. The ADDRESS database can be indexed and expanded as it always was. The only important thing is to ensure that the key field in JOBS/DAT does not reference a record not in the ADDRESS database (eg calling record 500 when you only have 250 addresses). If you do, it unceremoniously dumps you back to LS-DOS Ready.

If you want to print out reports containing fields from both the JOBS and the ADDRESS databases then you will need a similar patch to the report module. I've looked into this, and there is some hope, but the method of calling the segments is different and is less amenable to patching.

At this point you may either be yawning and asking why on earth you'd want to mess around like this, or (possibly) seeing this as a useful addition to PROFILE. This article has already gone on long enough so I don't propose to publish the code of EFC9R. But if you want a copy, do send a formatted (SS, 40 Track LS-DOS) disk with return postage, and I will copy everything across. The modifications have certainly improved my use of PROFILE and turned it into a very powerful business database.

Vernon Blackmore, 48 Stephen Street, Rugby. CV21 2ES

A little model 4 pot-pourri

I have been a little disappointed with MICRO-LABS. Following the special offer flyer from Micro-Labs I thought the Grafyx Solution at $99.95 was an offer to good to miss, especially as it is the only hi-res hardware still available and probably not for much longer. I must give Micro-Labs credit for prompt delivery, I had the board 3 weeks after placing the order, but I was charged $129.95 which is the price as advertised in magazines. Adding on duty & VAT it was not as attractive as first assumed.

The second problem applies only to the 4p with an XLR8. I specifically pointed out to Micro-Labs that I had a model 4p with an XLR8 fitted because I knew space may be a problem. They mentioned nothing so I assumed everything would be alright. I was wrong ! The hi-res board will not fit with the current XLR8 umbilical cable. The Micro-Labs board is considerably larger than its RS counterpart, therefore the XLR8 umbilical cable will need to be approximately twice as long as the original cable. Making the cable is not a problem, but getting the 40 way DIL ribbon header plugs was. It is not something your local electronics shop normally keeps on the shelf. I am also a little concerned about making the XLR8 cable to the length required; I may end up with noise problems, however, as it turned out I never really got sufficient time to test for noise. The board fitted alright, but when the extended cable was in place it ended up putting pressure on both the XLR8 and the hi-res board. They both bowed when installed, not the kind of situation I was very happy about. The hi-res worked alright, but in the end I decided I was not happy with the installation and the hi-res board was removed. Is there any body out there who would like to swap a Micro-Labs board for a RS hi-res board; I would certainly be happy to oblige.

I must say, Michel Houde has done a fine job with the new XLR8 utilities. It provided so much space in low memory that I didn't quite know what to do with it all ! Previously, during the system configuration, I had no difficulty forcing the hard disc driver into high memory; this time I really had to work at it. Perhaps there is no longer a need to move it into high memory with all the space below. We shall see.

I did have a little problem with ERAMDISK (one of the XLR8 utilities), it would not allow a warm boot. ERAMDISK had a problem determining that the ramdisc was already formatted. For those who have an urgent need I have worked up the following patch:

```
Change byte @ X'3C1A to X'C8 was X'08

Patch ERAMDISK/CMD (DOC,56=C8;FOC,56=08)
```

This will give you a working copy. Any problems with the above please let me know.

I have been using diskDISK for some time now and only recently, through being a little careless, came across a problem. I can install a DD drive on top of an active DCT (Drive Code Table, the table that contains all the parameters for a disc drive) ! I did not think DD should allow this. I have checked for any patches in TMQ but cannot find any, although it is possible I may have missed them. I would certainly feel more at ease if I knew the software would not allow me to trample over an active drive. It is not critical, and a user should know what he is doing, however, I am constantly swapping drives around and it is easy forget what is where. The following patch will protect me from my own mistakes.

```
.DD1/FIX - Patch DD to recognise an active DCT
.
X'28D9'=A4 2E
X'2EA4'=CD 84 2E 3A B1 28 B7 C0 FD 7E 00 FE C3 C0 21 B8
X'2EB4'=2E C3 24 26 44 72 69 76 65 20 61 6C 72 65 61 64
X'2EC4'=79 20 69 6E 20 75 73 65 21 0D
.eop
```

Reference the patch (NATGUG News, page, 8 vol 10/8) to avoid the printer timing out whilst trying to feed paper into the printer. The patch is correct, but the patch address is not. It should be:

```
PATCH SYS0/SYS.LSIDOS (X'0E21'=3E 08 EF FE 80 00 00 00 00 00 00)
```

The patch overlays the printer time out loop and scans the keyboard for the break to terminate or, if the printer is ready, to continue printing.

I have just received GO:SYS & GO:CMD (two discs out of the golden oldies collection) from Misosys. Now there was a bargain to good to miss. Firstly if you send in the coupon that comes with The Misosys Quarterly you get 30% discount, then if you send in selected master discs of a program on one of the GO: discs you get a further $10.00 off for each master disk traded in. Alright, you may already own most of the utilities on the discs; but how many patches are attached to these utilities; so why not get them refreshed and take advantage of some of the minor enhancements that are now included. _(30% discount offer closes end Jan. '89. $10.00 offer closes 31st March. Ed. **)_

The following is a brief summary of the changes I have noticed during the short period I have had the programs. All have had changes to the programs, probably the inclusion of patches, but most of these are not visible to the user. As far as I am aware, other than Doconfig, all the old versions of these programs worked with 6.3, disregarding any dating function of course.

GO:SYS

DOCONFIG The old Doconfig would not work with 6.3. There have been some major changes to is program, however, they are all internally and a familiar user would not notice any difference (other than the logon message). There was a small bug in the program I received; it wouldn't work. I have prepared a patch and Misosys have been informed.

```
.DOCONFIG/FIX - patch doconfig version 2.0.0
.
X'2A4F=CD 26 2F 00 00 00 00
X'2F26=7E E6 07 F5 D5 CD 6C 2C D1 F1 C9
.EOP
```

DOCONFIG is certainly a program I would recommend if you normally have a need to keep several specially configured boot discs. Also, once you have used it, because it is easy to use and it can be used 'on the fly', you will find many uses for it. For example; the comms package is something only installed when required, but it can be sysgened, and because it is extremely long winded to setup it may be expedient to keep a special boot disc just for a comms configuration. With Doconfig this is no longer necessary. Doconfig will create a config file on your boot dics and a one line command will change configurations without having to reboot.

DOEDIT There appear to have been no noticeable changes made to this program.

KISTORE This program also appears to have no noticeable changes.

MEMDIR Memory bank details have been added to the display in a similar fashion to the BANKER memory display.

PaDS The old PDS would work with 6.3 providing the user password in the build module is patched, however, the dating beyond 1988 would be inaccurate. In the new version the dating function in all the modules that use date have been updated to conform to 6.3. Also, append has now been modified to record to mod date of any modules added to a library, rather than the date the library was created, as was the case in the original version. Again, this was the merging of a patch which has been around for some time. A new facility has been added to PDS, but I am not sure what benefits this new facility offers. The SQUEEZE facility duplicates a PDS library, however, it will only copy active files across, leaving the old library with all the killed members intact. For non PDS users, killed file can be recovered for as long as the library exists; only when the library is purged are killed files lost and the space is re-used.

I have just come across a bug in the PaDS Build module; it will not create an empty library. It seems to go through the motions of building the shell, but it does not seem to install the FEL (front end loader), hence it is not recognised as a PDS library. I have only just discovered the problem and have not had a chance to have a closer look. No doubt Roy will already know about it and a patch will be on the way shortly.

PARMDIR This program is new to me so I am unable to comment on changes.

SWAP Other than the logon message this program seems to be the same as the original version.

WC Wildcard has had some changes implemented, however, they are not apparent to the user. It was probably the inclusion of any patches. This is a very small and unobstrusive program, yet I find it immensely useful.

ZSHELL Zshell is a very versatile program and would prove difficult to provide an assessment, however brief, for the short time I have had this version of the program. From the user point of view there appear to be no changes.

GO:CMD

COMP There are no apparent changes to this program.

FASTBACK This is a new program in my collection.

FASTREAD This is a new program in my collection.

FED2 There are no visible changes to FED, however, it appears to have had all the known patches merged. I have always been impressed with FED and there have been remarkably few problems. It is a very powerful utility, and in my opinion, for those who do not own FED2 yet, this program alone is worth the price of the whole disc.

IFC This program has changed considerably. I think the best way to note the changes is to tabulate them.

1. Firstly the date & time stamping has been updated to comply with 6.3.
2. The tag marker has been moved to the left of the display, although most users have already patched the old IFC to do this.
3. Tagging by attributes; another command has been added. This command allows mass flipping of the tagged files to untagged and vice versa.
4. A command has been added to allow IFC to directly execute a file to which IFC is pointing. The file must, of course be an executable file eg BAS, CMD or JCL.
5. The MASS facility has had a new command added; a MOVE command. It is the same as COPY except the file from the source disc gets deleted after the move.
6. An option is now provided to toggle three parameters; verify, invisible and print. Verify during copy, display invisible files on the screen and print will send any listed file to the printer rather than the screen.

One final point IFC has now absorbed the IFCLIST which use to be separate.

PRO-CESS This is a new program to my collection therefore I am unable to comment at this stage. This is one of the programs which I was desperate to get hold of after Misosys discontinued many of the non-profitable programs. It is the only utility which can sensibly extract modules from the LS-DOS library (SYS6 SYS7 & SYS8).

ZCAT ZCAT has had its dating mechanism updated to conform to the 6.3 standard.

I certainly believe the GO: collection are worth the price, especially with the current offer. Furthermore, if they disappear again it is unlikely they will ever reappear.

Regards, John Coyne

*John phoned me last night (10-1-89) asking me to mention that Roy (Soltoff) had been his usually speedy self in replying to John's letter, and has acknowledged the need for patches to PDS and DOCONFIG, also all disks sent out by Misosys from just before that date include the required patches. Roy has pointed out to John that diskDISK was written with code to install a DD drive on top of an active DCT (Drive Code Table). Please also see note of caution about patching below Ken Roger's letter in Reader's Forum. Ed. ***

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Don't Quote Me But........

NATGUG News has arrived and, I notice, the Editor (bless his little cotton socks) addressed a remark to me saying that he will not be likely to join Prestel. Well, as the readers may remember I used to recommend Prestel as a good source of information and programs for IBM compatibles' users. The CED program, which I have placed in the Library and without which I would find life less easy, was down-loaded from PC Support on Prestel. Programs for down-loading are well tested so there is no danger of 'catching' a virus - something which may easily occur when down-loading from any BBS.

But things have happened on Prestel. As I say 'don't quote me' but my, and a few others', impression is that the Prestel people made a serious attempt to get rid of the private, hobbyist user. After all, we did log on after 6pm and, apart from a telephone call at the local rate, we paid nothing. So Prestel have introduced new charges from the 1 Jul 88. These are:

Standing charges Prestel only	Residential	£ 8.00 per quarter
	Business	£ 18.00 per quarter
Prestel and Micronet annual	Residential	£ 79.95
	Business	£119.95
Prestel and Micronet quarterly	Residential	£ 20.00
	Business	£ 30.00

Time charges Mon - Sat 8am to 6 pm	7p per min
All other times	1p per minute.

Micronet is free between midnight and 8 am but this only applies from the moment one logs on into Micronet. The initial logging to Prestel is charged. So, if you wait till after mid-night to have a look at Micronet and you have nimble fingers, you get away with 1p only.

Now to the result of these changes in tariff. Well, to put it crudely, they played hell with PC Support and just about killed it. It was something to read the messages after these tariffs were announced and before the 1st July. There were all sorts of schemes for forcing Prestel to abandon these changes, ranging from writing to Prestel, to taking court action. The general view was that, if many customers threatened to resign, Prestel management would relent. Well, in practice it was no such thing. Many have resigned, but Prestel did not relent. In fact they finally achieved the object of not having lines overloaded by hobbyists.

I used to log on to PC Support daily and at least read all the letters. There used to be between 80 and 130 of those daily. These days I log on 'once in a blue moon'. The number of letters varies between 12 and 25 and only on odd occasions (Red letter day ?) exceeds 30. These letters are written mainly by three dealers - one of whom writes pages trying to flog Apricots. Well Gordon - I am not waiting for you to join Prestel and in fact were you to contemplate such a foolish step, I would try hard to dissuade you. I am still a member - paid up to the end of December - but whether I continue after that ? In fact I don't know whether I will continue with telecomms at all. Once I leave Prestel there will be only BBS'. Then there would be the question of higher telephone charges (and one can mount those up logging on a London number from Outer Hebrides and having 20 minutes hike through the menus) and also of a virus danger when down -loading programs.

Which brings me, almost neatly to the subject of EMAIL to the Editor. There are two things to consider ie cost and corruptions. It is much cheaper to send the Editor a disk which he usually promptly returns than to pay telephone charges for sending 10K or so file. Secondly files get corrupted during transmission which could leave the editor with the task of trying to sort out strings of funny characters. One of these problems may be overcome in the future when 22bis modems come down in price and our telephone lines will be able to take such speeds. (22bis refers to 2,400/2,400 transmission).

Packet radio - I was wondering when we would come to this subject. Packet radio in computering has existed now for a while and there is even a BB devoted to it, software to down-load etc and no expense other than the original outlay. I even have a friend who just has taken the exam for an operator's licence and I have heard that the exam is, to put it bluntly, a 'swine'. And this is the whole point - one has to have a licence to operate packet radio and even though Morse is not required for a simple licence there is still plenty to learn. My friend has been studying now for a few months attending evening classes at the technical college. I would advice any enthusiast to pass the examination before spending some £500.00 on a dish and other equipment.

I am afraid that you have been had Mr. M. Matthews in buying CP/M+. I have been had also like you, and having played with it for a little while, I decided that Tandy CP/M+ is a very bad implementation of the program. I remember the original delays, the many visits to Tandy shops and the constant assurances of the program being available 'real soon now' and further assurances that delays were due to the fact that Tandy would no accept the DR product unless it was bug-free and 'really wonderful'. Like hell ! CP/M+ can use the full 128K of memory by moving some of it's programs into the second bank but it is not much use without a hard disk. Floppies formatted under Tandy CP/M+ have some miserable 150K space and, by the time the system files are written, there is not much left for the user. There have been attempts to alter BDOS to accept other types of disk but so far I know of nobody who managed to do it. Apparently all that has been achieved was a crash after BDOS has been altered. There is plenty of correspondence on this subject in the old issues of NATGUG.

There is however the 'good' CP/M 2.2. So their version has been advertised by Montezuma Micro. This version not only can accept most types of drives but also permits assignation of physical drives to different logical drives. And so, in my system, on booting in physical drive 0 the control was automatically transferred to logical drive A: which in fact was physical drive 2. When I fired up the hard disk, which was partitioned into 4 5MB logical drives, hard drive covered logical drives A:-D:, my dual Cumana D/D D/S 80 track drive was assigned E: and F: and the two SS DD 40 track drives in Model 4 were G: and H:. In addition MM CP/M can read and write some forty odd types of disks including 156K IBM CP/M86 format. This became very useful when transferring data from Model 4 to Amstrad 1512. DOSPLUS on Amstrad also can read that format. Other pluses of the 'good' CP/M are: If Model 4 has 128K, the second bank automatically becomes Ramdisk designated M:.

*(If you have an XLR8er board installed, and using the supplied utilities, Ramdisk uses the whole of that memory also, 256K ?. Very useful when transferring all the files for NATGUG News. Ed. **)*

With the Config program it is possible to have nine function keys (usually F1 - F3, shifted dto and <control> dto). All these variations can be saved either by SYSGEN or option H from CONFIG and they are loaded into memory on booting up. I had different booting up diskettes for WS and dBASE II as I wanted the function keys to do different things.

In a similar way the Break, Clear and arrow keys can also be defined to do different things. In the WS setup arrow keys were used to move line, page or beginning and end of the file and letter, word left/right, start or the end of the line. Break in each combination was <escape> and Clear was used to delete letter or word or line.

CP/M can have 16 User areas (0 - 15. In MM implementation User 0 area can be accessed from any other areas - the only implementation I know of, which permits such interaction. The obvious answer was to have all application programs in User 0 and the data in other areas, ie dBASE II in user 0, insurance DBF in user 1, addresses in user 2 etc. I think that I wrote all about it already.

Do you have IBM compatible with 20 MB hard disk ? Would you like to have 33MB hard disk without buying more hardware ? You would ? - Well you can ! There is a program called More Disk and this can turn your 20 MB hard disk into 33MB one. I read about it with, I must admit, a certain amount of scepticism and wondered until I heard from my friend who was unfortunate enough to crash the hard disk on Amstrad 1640 and had to reformat it. He decided then to try out this program and 'lo and behold' - he has drive c: of 1MB where he has all the MSDOS etc files and 32MB drive D: where he has programs and data. Being a cautious bod I will wait and see how he gets on. At present he is very pleased and says that his hard disk access became faster too. There is only one apparent snag though - saving a file takes about six times longer than it did before installation of More Disk. If after a few months time, and he doesn't experience any disasters, I will have to do something about my computer. At present I have still some 7MB+ spare on my 1640 having transferred from 1512 only frequently used programs and leaving on the 1512 all the other rubbish. 1512 belongs now to my boss but she lets me have occasional access to it.

I think that I mentioned NEC V30 chip (replacement for 8086) and the speeding up of the computer. But I don't know whether I did mention that NEC V30 also recognises Z80 code ? With a little program, which can be got as shareware, one can run CP/M programs on IBM compatible.

Maybe you use data management program by a firm slightly related to certain type of mint ? Maybe you got the bright idea of inserting new records in data base at the proper alphabetical place and thus thinking to save time on sorting or indexing. If you do then you may have a surprise. If, on coming out of edit, you typed INSERT (without either BEFORE or AFTER) you will find that you inserted two identical records - one where you intended and the second at the end of your data base.

I know of someone who upgraded from WS4 to WS5 and tried to print one of the letters created in WS4. In no way he could use any other font than non-proportional 10 pitch draft. WS5 kept telling him that his printer did not support any other fonts regardless of what his printer manual said. I have also read somewhere that another poor soul was told by WS5 that his Epson printer did not and could not have a sheet feeder. Obviously his eyes were deceiving him. And one more - someone tried to load SideKick from WS5 opening menu using R command. Next thing he got screenfuls of rubbish and computer froze so much that even Alt Crtl Del would not work. There is quite a story in the development of WordStar. When I became familiar with it - it was the v.3.3 - pretty basic but a most reliable program. You mastered the commands, defined ^P

ERQW and off you went happily. I never lost a file with v 3.3. Then I started using for a short time NewWord, which was acclaimed as the program WordStar should have been. In fact it was all WordStar but with extra CHANGE program which permitted more customisation than is possible in WINSTALL. I used it till I lost a file - long one at that and it was not backed up (of course). But I went back I went to WS. Microsoft bought New Word and promptly issued WS4 - almost no different from NewWord apart from the fact that this program completely disregarded any printer setting on the printer panel and, generally, printed everything in pitch 10 draft mode. WS5 has many innovations including pull down menus in help level 4. I can imagine the pain in the neck if one tries to underline, print double or bold, move word right or left etc having each time to, firstly, find the proper pull down menu from selection of seven and then move cursor to the appropriate command and press <enter>. Ideal for any one unemployed and having determination to learn word processing. Much easier to take the list of commands and memorise them - just as one does the Highway Code. Anyway December issue of Personal Computer World has a sizeable article on WS5 - those interested please note.

We do back up our programs and data - don't we ? Well, judging by what I know of my fellow computer enthusiasts (myself included) we generally don't. There is a nice program called DSBACKUP+. This can back up individual files, whole directories, directories and their sub-directories, changed files only, in a normal or squeezed manner. One of course can restore from backups or retrieve files. Program states how many floppies are required and though it cannot format and backup in the manner of DISKCOPY one can alternate backing with formating ie having filled first floppy one is given an option of formatting another disk before continuing with the backup.

I was greatly surprised when I was told by our butcher cum grocer cum green grocer cum baker, that he has got a computer. Of course I had to see it straight away and there was young Valerie sitting at an Amstrad 1512 working on the mono screen. As this was really a CGA machine I have shown her how to set up colours with NVR. That Amstrad has 20MB Western Digital hard card - a bit slow I thought. So there are now three Amstrads in our village. Maybe one of these days we will have enough to have a local computer club. My insurance agent in Stornoway also has an Amstrad 1512 in addition to terminals linked to the main frame on the mainland and he uses it for word processing. In fact I have seen an Amstrad or two in other businesses so not only our Long Island is catching up with the technological progress but also Amstrad is establishing itself as a small business computer.

By the time this will appear in print (please, please Mr. Editor) Xmas and New Year will be over. As I already said, Xmas is not celebrated here (last year there was collection of rubbish on Xmas Day) but New Year is quite a different matter. The first footing and visiting will be rather complicated this year for two reasons. One of them is the new 'polis' who is rather keen on breathalysing (especially on an occasion like this or late at night) and the second is that the New Year is on the Sabbath and visiting on the Sabbath apart from the closest family, is just not on. I think that we will take our bottle on Monday and make the rounds on foot.

Anyway slainte and bliadhna mhathur ! ANON

That last bit confused the spelling checker. Someone was "at the" Gaelic Xmas.

Can someone please give me a GOOD and REASONABLE explanation as to why you have to take an exam, which includes having the knowledge of morse code, when you are most likely never going to use that knowledge again for your chosen application. I can only think that is used as some type of protection device for elitism. No I won't be thinking of using packet radio, not until they have a revision of the rules related to the above.

I took the opportunity of visiting a club last month to see a demonstration of packet radio, although it was demonstrated to work, I was not impressed by the amount of equipment required, and at times the great difficulty of being able to log onto the particular station you required to send to, just like a telephone and always getting the engaged tone. No, it is not for me in the near future.

My computer has been accessed at 2400 baud, there was a little line noise, but the message was easily seen and with a word processor, the line noise easily removed. For those who have not "seen" line noise, it appears as garbled characters which makes no sense at all, such as: $%&Tg£ d y[zR!"']q. If members do not save a file to disk using an ASCII option, the result when I put the file in my word processor, can be worse than line noise, as each word processor saves its own unique control codes along with the words that you have typed. One word processor naturally can interpret its own control codes, but they are double dutch to another word processor. If you have two word processors just try it, or using a file which has been written with a word processor, then use the DOS function, LIST or TYPE the file and see what happens to your screen. You will then see why I plead with members to please see if the files they send to me have been saved in ASCII format. Ed. **

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READER'S FORUM

This is YOUR spot where YOU are invited to make any comments, or whatever. !!!

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FROM: 8 The Crescent, Worlebury, Weston-S-Mare. BS22 9SR (0934) 624070

Dear Gordon, With regard to the patch to freeze the computer if the printer is off line, as you published in NATGUG News Jan. 89, page 55, and refering to my letter. I have had a phone call from John Coyne who has advised that the address was wrong and should be changed to '0E 21'.

I have made the change as under, and am glad to report it now works OK!

TO CORRECT, CHANGE THE X'0E 2F' IN THE PATCH TO X'0E 21'

(Can I suggest caution when applying any patches, perhaps the cause of the above problem was that the patch was intended for a different version of the DOS. If you use a zapping utility and care to look at some of the system files, you will notice the code has moved addresses slightly from version to version. Make sure you know which version of the DOS the patch is for. A good reason for using an 'Frecord,byte' patch. John has confirmed that his patch address should be OK with both 6.2 and 6.3. Ed. **)

With regard to the TRSTimes Disk 2. I have had a couple of problems! - Any attempt to try and run CHANG080/BAS produced the "Direct statement in file error" the problem seems toi be that line 90 is too long. I have split the line in two, and numbered the second part as line no. 95 it now works correctly!

The second problem is with LABEL204/BAS whilst it loads OK, when run I get the small intro' screen then the full screen of options complete with the pointing finger, but the machine then locks up completely so I am unable to select the arrow keys! I have no answers to it!!

Sincerely, Ken. Rogers

(Has any member, or may be yourself Lance, also tried the above, and could offer a solution ? Thank you John for replying to Ken, and also Ken for your letter and greetings, my same to you. Ed. **)

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The committee <u>HERE</u> thank <u>ALL</u> members who send letters to NATGUG. Would members please accept that I do not have time available to answer every letter individually and output the copy for NATGUG News.

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Help Sought .... Please.

I have asked that when members receive help with a problem, to please share the information, it has brought in contributions. I will not publish the name of any contributor, if such a request is received, this should save anyone from being 'embarrassed'. If you are about to embark on a contribution or article, please let me know and I will publish the fact here, then, hopefully, we will not have two minds sending in something about the same subject. Ed. **

? = Asked for by. * = person who will do write up.

? ???? Does any member know how to drive an Epson LQ 500 using LeScript V1:7 please. Replies to our PRO.

? Ed. **. Can anyone please tell me if it is possible to format an 80T, 720K disk on an MS-DOS AT drive please. The drive is a 5 1/4" 1.2 meg unit and normally defaults on entering <FORMAT A:> to format a 1.2 meg disk. I use FORMAT A:/N:9/T:40 to format a 40T D/S 360K MS-DOS 3.3 disk. On entering FORMAT A:/N:9/T:80 the message "Invalid Parameter" is returned.

? Ed. **. Does any member have any information as to how and on what software the COPY II Deluxe Option Board will work. Before I purchase, I would like, if possible, to have a read of a manual. Any postage costs will be refunded.

STOP PRESS

Further to the previous comments about hard drives for TRS-80 machines, Mod 1, 3, 4 and 4P: external and internal for all machines. An advert appeared in the most recent edition of TRSTimes for complete hard drives, priced from $295.00, presumably prices start for the 5 meg capacity and go up to 35 meg. Contact: Rob Stewart, 10391 Oakhaven Drive, Stanton, CA 90680. (714) 952-2700

Are you sitting comfortably please Mr. Peter Tootill, and no it is not April Fools day. There is now a program called PC-Three, in addition to PC-Four, a TRS-80 Model III Emulator. Run all(?) your Model III programs on an MS-DOS machine. Available from Hypersoft.

I have found it very gratifying over the last few weeks, whilst during my contacts with various authors, they have said how many members have contacted them expressing their thanks for their articles being published. When you, the membership, take this action, it does go a very long way in making my work a lot easier in getting articles submitted to me for NATGUG News. Now, all of you who have taken the time and trouble to do this, please accept my very sincere thanks. Can we please make this an ongoing practice, authors do deserve it.

I now have a way of formatting 720K 5.25" MS-DOS disks, an external DRIVE C: is fitted to the 1400 LT using one from a model 4. I would still appreciate information should anyone know how to do this format on an AT machine please.

I have plans to hand the copy for the April issue of NATGUG News to John our printer, when I arrive at the Swindon meeting. You have been warned. Any late arriving articles will most likely not make that issue.

Thinks aloud ! I wonder how many members will approach me this time at Swindon with the comment, "I nearly gave you a ring to ask you to bring so and so". As mentioned before, I have not yet secured a crystal ball, and no member has helped. Many of you will be disappointed if you have not made any contact before that time.

The latest issues of The Misosys Quarterly and TRSTimes have a wealth of information for the TRS-80's. In TRSTimes an advert for "SYSTEM 1.5" an upgrade to TRS-DOS 1.3, and Lance's "Z-80 without tears" an assembly language tutor.

I am certain you, Mr/Ms. Member have noticed, that due to your own very great efforts NATGUG News is now a "bumper bundle" each issue. Don't deprive others of all this information, which only wastes some of the effort you have put in, please broadcast the news to all, tell them how good you have made NATGUG News. Roger will be only to pleased to send a membership form to anyone, just let him have an address, or ask at Swindon.

I have asked a member to type up for NATGUG News, a copy of an article which appeared in another newsletter, covering the fitting of Hitachi's HD64180 to a Model 4. This will be a DIY job for you to carry out.

Ed. **

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FOR SALE: I have two or three surplus articles of computer equipment which I would like to offer for sale. They are as follows:

1 off	DeLuxe Colour Graphics Adaptor for Models 1200/3000 (I've just got myself an EGA board)	£50.00
1 off	Model 3000 AT-style 84-key keyboard (with curly lead) (I now have the extended keyboard)	£35.00
1 off	Tandon TM 262 20MB half-height internal hard disk - this is minus controller and is slightly used, but is in very good condition. There are no flawed sectors at all. Suitable for most PC/XT compatibles.	£45.00

Christy Gemmell, 22 Peake Road, Northfields, Leicester. LE4 7DN (0533) 767960

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SCREEN TEST

I want to use this column to consolidate the work we did in last month's article and to add three new video routines to our assembly language library. Video routines form an important part of any programmer's toolbox and rightly so, since the display screen is the interface between your program and the people who use it. Other things being equal, the user will prefer the program with the tight, professional display every time.

You have already learnt how to send large amounts of text to the screen in a flash. Nearly as important is the ability to selectively clear portions of the screen, without effecting the rest of the display. Two of the routines in this article handle this, but first I want to return to the subject of video paging.

As we have already mentioned, computers which are fitted with colour adaptors can store more than one screenful of information in memory. A typical graphics board will reserve 16K of memory for normal text, enough for 4 full screens in 80-column mode, (8 in 40-column mode). We could, for instance, keep a menu on the first screen, use the second for data entry and keep the other two for help text. Each screen would retain its information while it was off-line, and switching between them would be instantaneous.

Okay, here's how we do it ...

```
            public  SetPage

            .model  medium
            .code

ActivePage  db      0                    ; Current video page

SetPage             proc     far                 ; Select active page
            push    bp                   ; Save Base pointer
            mov     bp,sp                ; Establish stack frame
            mov     ah,0Fh               ; BIOS Video Service 15
            int     10h                  ; - Check video mode
            mov     cs:ActivePage,bh     ; Store active page
            cmp     al,7                 ; Mono display?
            jne     Page1                ; No, okay to proceed
            xor     ax,ax                ; Else report failure
            jmp     short Page4          ; and depart
```

As you can see, the first few lines are almost identical to the start of FASTPRINT. This, in fact, is the standard method of initialisation and you will see it repeated in nearly all the examples given in this column. Notice, however, that the case of machines with monochrome monitors is handled differently. Since mono computers do not support multiple pages, the routine aborts, with a return value of zero in AX, if a graphics adaptor is not available. (XORing - eXclusive ORing - a register with itself is a quick way of clearing that register).

Remember those last two lines of code, they will be important later.

Our next job is to find out which page we are being asked to select. This is the only parameter that is passed to the routine, so the index to it is just above the return address in the stack, six bytes above our pointer. We should compare the page requested with the one currently being displayed, which we obtained from our BIOS call on the way in. If they are the same, then we need do nothing further.

```
Page1:
                mov     bx,[bp+6]          ; Get page number
                mov     ax,[bx]            ; requested into AL
                cmp     al,cs:ActivePage   ; Same as current page?
                jne     Page2              ; No, proceed
                jmp     short Page3        ; Else do nothing
```

The rest is simple since we can get the computer's ROM-BIOS to do the work for us. Interrupt 10 (Hex) provides more services than the Video Mode function we have already used. Service 5, in fact, does everything we want. Calling it with the page number in AL will instantly switch the display to that page. We don't even have to do our own error checking as the function does it for us, refusing to budge if the page requested is not available. If only all our programming were this easy ...

```
Page2:
                mov     cs:ActivePage,al   ; Set page flag
                mov     ah,5               ; BIOS Video Service 5
                int     10h                ; - select display page
```

All that remains now is to tidy up and leave, setting an appropriate value in AX to show success. As before, we retrieve the original contents of our Base Pointer (BP) register and discard two bytes of parameters, leaving the stack in the state we found it.

```
Page3:
                mov     ax,-1              ; Return code
Page4:
                pop     bp                 ; Clean up the stack
                ret     2                  ; Return to QuickBASIC
SetPage                 endp
```

All right, I lied to you. Those of you who spotted it can go to the head of the class. QuickBASIC already provides a perfectly good method of switching the display page in the SCREEN statement. In any case, it is never a good idea to write programs which will only run on machines with one type of video hardware. It restricts the market too much.

So why go through all this rigamarole for a useless routine ? That's just the point, since our programs must be able to run equally well on both types of computer, we need a method of telling which type of display adaptor the host machine is fitted with. Making use of this information we can tailor the display to the user's system, without having to write and maintain two separate versions of the program.

SETPAGE is designed to be used as a QuickBASIC function. It returns Logical TRUE (-1) if the computer is fitted with a graphics board, Logical FALSE (0) if not. You will find the function declared at the top of nearly every program I have written.

```
DECLARE FUNCTION SetPage% (NewPage%)
```

I only call the function once, but the information it returns is used in conditional statements throughout the program, thus ...

```
CGA% = SetPage%(0)

IF CGA% THEN Colour% = 31 ELSE Colour% = 112
FastPrint 25, 3, "Press any key to continue", Colour% + 128
```

Get the idea?

If you're going to use the routine, and believe me it will come in very useful, don't assemble it yet. To reduce the number of object files hanging round your disks, we'll combine this and the following two routines into one module. Let's add the name of the next routine to the PUBLIC statement at the top of our source file.

```
---------------------------------------------------------------------
:                              END GAMES                             :
---------------------------------------------------------------------

          public  SetPage, ClearEnd
```

CLEAREND performs two useful functions. If called with a parameter of zero, it will clear, from the cursor position, to the end of the current line. If any other value is supplied, it will carry on and blank out every subsequent line to the bottom of the screen. The cleared portion will be filled with blank spaces of the same background colour as the character under the cursor. The cursor, itself, is not updated.

You should be familiar with the introduction by now ...

```
Columns             db      0                  ; Screen width in columns

ClearEnd    proc    far
            push    bp              ; Save Base pointer
            mov     bp,sp           ; Establish stack frame
            mov     ah,0Fh          ; BIOS Video Service 15
            int     10h             ; - Check video mode
            mov     cs:ActivePage,bh ; Store active page
            mov     cs:Columns,ah   ; Store screen width
```

Notice that, this time, we also store the current screen width on return from our BIOS call. We'll need this information to decide how much of the current line there is left to clear. Don't bother to test for a monochrome adaptor, this routine will work with either.

We do, however, need to gather some other information and, once again, our BIOS call comes in useful ...

```
mov     ah,3              ; BIOS Video Service 3
int     10h               ; - get cursor position
push    dx                ; Save co-ordinates
mov     ah,8              ; BIOS Video Service 8
int     10h               ; - attribute under cursor
mov     bl,ah             ; Attribute to BL
```

Calling interrupt 10h with 3 in the AH register, returns the current cursor position in DX. When we call it with 8 in AH, we obtain the ASCII code and attribute value of the character under the cursor, this time in the AX register. It is just the attribute which we are interested in, and it will need to be in BL when we get to use it.

```
xor     cx,cx             ; Clear CX
mov     cl,cs:Columns     ; Find number of characters
sub     cl,dl             ; remaining in this row
cmp     cl,1              ; Are there any remaining?
jb      Clear2            ; No, skip next bit
```

This section of code tests to see how many characters there are remaining, to the right of the cursor, on the current row. We have the current column position in DL, thanks to our previous ROM call, If we move the number of columns available in the current display mode into CL and subtract one from t'other, it will leave CL with the number of columns remaining on the row. If this is zero, then the cursor is already at the right-hand edge of the screen and we can skip the next bit.

The BIOS video services do not only return useful information. We have already seen how they can be used to select the current video page. Now we are going use ROM to write information to the display. We could, of course, use FASTPRINT but service 9 has an interesting twist. Calling interrupt 10h with AH set to 9 will result in the character whose ASCII code is in AL being output to the display at the current cursor position and given the display attribute whose value is in BL. Furthermore, if the number in CX is greater than one, the process will be repeated that number of times. CX now contains the number of characters left on the row, so all we have to do is load AL with the ASCII code for a blank space, put 9 into AH and call BIOS.

```
mov     ax,0920h          ; Clear to end of row
int     10h
```

That's the first part of the job done. Let's see if we are being asked to carry on and clear to the end of the screen.

```
Clear2:
              push    bx               ; Save attribute for now
              mov     bx,[bp+6]        ; while we check if end
              mov     ax,[bx]          ; of screen is wanted
              pop     bx               ; Recover attribute
              cmp     ax,0             ; Just end-of-line?
              ja      Clear3           ; No, clear rest of display
              jmp     short Clear4     ; Otherwise depart
```

Nothing new here. The address of the parameter to be examined is obtained by indexing through our stack reference pointer (BP). If the value passed is zero, then we've finished and can return to Quick BASIC. If not, we've the rest of the screen to do. While we're at it, we'd better make sure that we're not at the bottom of the screen already, you never know who may be using our program.

```
Clear3:
              cmp     dh,23            ; Already at the bottom?
              jb      Clear4           ; No, proceed
              jmp     short Clear5     ; Else depart
```

We are now left with a rectangular area to clear, starting at column one of the row immediately below the cursor, and ending at the rightmost column of row 25. Can BIOS help us again ?

You bet it can. There are, in fact, not one but two video services which can be used to scroll or clear rectangular areas of the screen. Service 6 scrolls the rectangle up and service 7 scrolls it down. We'll use service 7 but, before we call it, we need to set up a few registers.

First we have to set the x/y-coordinate of the top-left corner of the rectangle into CX. The current cursor row is already in DH so all we need do, here, is add one and move it into CH. CL gets the column co-ordinate which, because the BIOS routines number rows and columns starting at zero, is not 1 but 0. Next, we must get the bottom-right co-ordinate into DX. DH is easy enough, the bottom screen line is row 25, whichever mode we are in. DL is a bit more difficult, but, since we have already stored the number of columns in the current display, it poses no great problem. Mustn't forget to make all these values Base zero, though.

Nearly there. The background colour or attribute which we want the rectangle to be cleared to, ought to go in BH. Well, its already next door in BL from when we tested the attribute under the cursor, only takes one instruction to copy it into the high byte. Now, how many lines do we need to scroll clear? No need to count 'em, ROM makes it easy for us. If we load AL with zero, then the whole of the rectangle defined by the other registers is wiped clear.

```
Clear4:
                inc     dh              ; Bump to next row
                mov     ch,dh           ; Top-left of panel
                mov     cl,0            ; to CX
                mov     dh,24           ; Bottom-right
                mov     dl,cs:Columns   ; of panel
                dec     dl              ; to DX
                mov     bh,bl           ; Attribute to clear to
                mov     ax,0700h        ; Scroll down entire panel
                int     10h
```

And that's it. All we need do now is perform our usual tidying up of the stack, and then return to QuickBASIC with another useful routine under our belts.

```
Clear5:
                mov     ax,0            ; Set Errorlevel
                pop     bp              ; Clean up the stack
                ret     2               ; Return to QuickBASIC
ClearEnd        endp
```

Here is the procedure declaration to stick at the top of your Quick BASIC programs:

```
    DECLARE SUB ClearEnd (Switch%)
```

Once that is in place, you can call the procedure from anywhere in the program with:

```
    ClearEnd 0 :            ' Clear to the end of the line
    ClearEnd 1 :            ' Clear to the end of the display
```

We'll add it to our Assembly-Language Library a bit later. For now I'd like you to think again about that last scrolling routine we used. Quite a neat trick wasn't it ? If we could only call it direct from QuickBASIC, specifying the area of the display we want to clear and the colour we want to clear it to, that would give us some real control over the video display. Okay, here it is, we'll call it ...

```
    ----------------------------------------------------------------
    :                          SCROLL                              :
    ----------------------------------------------------------------
```

```
            public  SetPage, ClearEnd, Scroll
```

It usually helps to set out the objectives of a new piece of code first, before you jump in and start writing it. What we want to do is to define the co-ordinates of a rectangular area of the screen which is to be scrolled. Since we are calling the routine from QuickBASIC, we'll be using QuickBASIC's system of numbering rows and columns from one, so the routine will have to handle the conversion to Base zero which BIOS requires. Better put in error trapping to prevent the rectangle from running over the edge of the screen, while we're at it. We must also specify the number of lines to be scrolled, zero if we want the whole panel to be scrolled clear, and the colour or display attribute to be given to the cleared area. Finally, so as not to have to write two routines, we need to supply a flag to determine the direction of scroll, up or down.

I make that seven parameters we need to supply. Let's list them so that we'll know what's going on when we come back to maintain the program next year.

```
;     The following parameters should be supplied :
;
;     a = scroll direction (0 - up, 1 - down)
;     b = row number of top-left window corner (1 - 25)
;     c = column number top-left window corner (1 - 80)
;     d = row number of bottom-right window corner (1 - 25)
;     e = column number bottom-right window corner (1 - 80)
;     f = number of lines to scroll (0 = scroll whole panel)
;     g = display attribute of area to be cleared
```

I don't know how you feel about Remarks in BASIC programs, it depends a lot upon your own personal style, I suppose. When it comes to assembly-language, however, there is only one sensible point of view. Use 'em, lots of 'em. Assembly-language isn't difficult, nor is it especially complicated. (Heck, even I can do it !) What does give it the reputation for fiendish complexity, however, is the fact that, unless you know what's going on and what the programmer is trying to do, all that register juggling looks like meaningless heiroglyphics, even to the programmer herself, six months later. As you've noticed, I comment nearly every line of my assembly code. It's a sensible practice. Use it.

```
Scroll                proc     far
            push      bp                  ; Save Base pointer
            mov       bp,sp               ; Establish stack frame
            mov       ah,0Fh              ; BIOS Video Service 15
            int       10h                 ; - Check video mode
            mov       cs:Columns,ah       ; Store screen width
```

There's our standard intro. Save the screen width because we'll need to use it later when we're checking for legal co-ordinates.

The next stretch of code is a bit tedious, I'm afraid. What we're doing is to extract each screen co-ordinate from the parameter list, testing each one to make sure that it lies within the borders of the current screen, and then placing them in the registers expected by our BIOS call. Each byte register is decremented, to convert to the co-ordinates to the proper numbering system, in the process.

```
        mov     bx,[bp+16]        ; Get top row
        mov     ax,[bx]           ;      into AL
        cmp     al,1              ; Check
        jb      Scrl_02           ;      for
        cmp     al,25             ;      legal
        ja      Scrl_02           ;       values
        mov     bx,[bp+14]        ; Get top column
        mov     cx,[bx]           ;      into CL
        cmp     cl,1              ; Check
        jb      Scrl_02           ;      for
        cmp     cl,cs:Columns     ;      legal
        ja      Scrl_02           ;       values
        mov     ch,al             ; Combine them into CX
        sub     cx,101h           ;      and make base zero
        mov     bx,[bp+12]        ; Get bottom row
        mov     ax,[bx]           ;      into AL
        cmp     al,1              ; Check
        jb      Scrl_02           ;      for
        cmp     al,25             ;      legal
        ja      Scrl_02           ;       values
        mov     bx,[bp+10]        ; Get bottom column
        mov     dx,[bx]           ;      into DL
        cmp     dl,1              ; Check
        jb      Scrl_02           ;      for
        cmp     dl,cs:Columns     ;      legal
        ja      Scrl_02           ;       values
        mov     dh,al             ; Combine them into DX
        sub     dx,101h           ;      and make base zero
        cmp     cl,dl             ; Make sure that the
        jae     Scrl_02           ;      top-left corner is
        cmp     ch,dh             ;      above and to left of
        jae     Scrl_02           ;       bottom-right corner
```

Last of all, we compare the two sets of co-ordinates to make sure that the top-left corner of our rectangle is, indeed, above and to the left of the lower-right corner.

In the next stretch of code, we collect the number of lines that the caller wants the interior of the rectangle to be scrolled. Beware, incidentally, of letting negative values sneak through your error traps. You might think that BIOS, itself, will trap such errors, refusing to even consider scrolling such a ridiculous number of lines as, say, -1. What actually happens in such cases is that the negative number is treated as being an unsigned positive number, and the unsigned equivalent of -1 is 65535. Scrolling that number of lines takes quite a time. Even in machine code !

```
        mov     bx,[bp+8]         ; Get lines to scroll
        mov     ax,[bx]           ;      into AL
        cmp     al,0            ; Check
        jb      Scrl_02         ;       for
        cmp     al,25           ;       legal
        ja      Scrl_02         ;        values
```

We can accept a value of zero, of course, because this is a special case, meaning scroll up the entire panel. Choosing an upper limit for the number of lines is more debatable. You might decide to limit it to the number of rows that the rectangle actually covers, in which case you'll need to add a little calculation to obtain this figure. I have chosen an arbitary figure of 25 lines, the height of the whole screen. If you can think of any circumstances where you might want to scroll the panel more than this, you are welcome to leave those lines out. It can't do any actual damage, but, once again, beware of large numbers !

With so many arguments to hold onto, we're running a bit short of registers, so the final section will require some fine juggling. Let's load the direction parameter from the address that BX is pointing to, directly into BX and save an intermediate register.

```
        mov     ah,6            ; Scroll up by default
        mov     bx,[bp+18]      ; Get scroll direction
        mov     bx,[bx]         ;       into BL
        cmp     bl,1            ; Scroll down?
        jne     Scrl_01         ; No, use default
        mov     ah,7            ; Scroll down it is
```

Scroll up and Scroll down are two separate BIOS services. Like all interrupt functions, they need to be called with the service request number in AH. On the assumption that most callers will want to scroll the display up, we preset AH to 6, the request number for scroll up. Only if the caller explicitly demands downward scrolling, by setting the first parameter to 1, do we change the contents of AH to 7.

Only one parameter to go now, that's the display attribute and we don't have to check this for legal values since the BH register, where it is going, will only hold values of between 0 and 255, which, curiously enough, is exactly the range of legal values for display attributes. (Whether the attribute supplied will produce a PRETTY display is another matter, but that's the user's business, not ours.)

```
Scrl_01:
        mov     bx,[bp+6]       ; Get screen attribute
        mov     bx,[bx]         ;       required
        xchg    bh,bl           ;       into BH
        int     10h             ; Call BIOS driver
```

Whew, made it. Let's put everything back into the bit bucket before we leave. We only pushed one register (BP) when we came in, but there are also those 7 parameters to discard, before our routine can make its long jump back to QuickBASIC.

```
Scrl_02:
            pop     bp              ; Clean up the stack
            ret     14              ; Back to QuickBASIC
Scroll              endp
```

Finally, don't forget to tell MASM that it's the end of the assembly.

```
            end
```

You'll find the complete listing at the end of the article as usual, I'd better give you the QuickBASIC procedure declaration, as well ...

```
DECLARE SUB Scroll (A%, B%, C%, D%, E%, F%, G%)
```

Refer to the comment section at the head of the assembly listing if you need to be reminded what each argument corresponds to. It doesn't actually matter what names you give to the variables in the parameter list, what is important is that the parameters should be in the order that SCROLL expects.

Since all three of the routines in this module are concerned with the video display, I will call the source file DISPLAY.ASM. If you are using MASM, assemble it with the command:

```
MASM /V/W2/Z display;
```

If all goes well, you should have an error-free assembly, resulting in an object file named DISPLAY.OBJ. If errors are reported, then you must load the source file back into your editor and check it for typing mistakes. As it stands, the source listing will produce a clean assembly.

BUILDING ASSEMBLY-LANGUAGE LIBRARIES.

DISPLAY.OBJ can be linked directly to a QuickBASIC .EXE file or made into a Quick Library for use within the environment, just as we did with FASTPRINT. As we build up our collection of assembly-language routines, however, it will become inconvenient to have to keep a whole slew of object files cluttering up our compiler disk. What I propose to do with the programs in this series of articles, therefore, is to combine them all into a single library.

Two libraries, actually. We shall need to keep separate versions for linking to our executable programs and for use in the QuickBASIC environment. I shall call the first ASSEMBLY.LIB, the second will be ASSEMBLY.QLB. Here's how we build ASSEMBLY.LIB ...

First you must collect together the two object files we have produced so far, and put them into the same disk directory which contains the Library Manager supplied with your QuickBASIC compiler.

A directory listing should now include the following three files:

```
LIB.EXE
FASTPRNT.OBJ
DISPLAY.EXE
```

Next, type in and enter the following command;

```
LIB ASSEMBLY.LIB+FASTPRNT+DISPLAY,ASSEMBLY.CAT;
```

The directory listing will now include two additional files;

```
ASSEMBLY.LIB
ASSEMBLY.CAT
```

ASSEMBLY.LIB is your stand-alone library. If you type ASSEMBLY.CAT, you should see something like this;

```
CLEAREND........DISPLAY          FASTPRINT.........FASTPRNT
SCROLL..........DISPLAY          SETPAGE...........DISPLAY

FASTPRNT       Offset: 00000010H  Code and data size: f6H
  FASTPRINT

DISPLAY        Offset: 000001f0H  Code and data size: 112H
  CLEAREND       SCROLL             SETPAGE
```

ASSEMBLY.CAT is a list of the modules and public symbols which are contained in ASSEMBLY.LIB. You can see that the names of all the routines we have produced, are included. As you build up your collection, you will find these 'catalogue' files very useful when you need to know which routine is in which library.

You can now produce a QuickBASIC executable file which makes calls to any of the routines listed, by linking it with the following command:

```
LINK yourprog,,,ASSEMBLY.LIB;
```

You should, of course, also DECLARE the names of the routines which you intend to use at the top of your QuickBASIC source code. This tells the compiler that they are external routines whose call addresses will be fixed up later. It also tells the Linker which object modules to include in the final executable file. Since LINK only extracts those modules which contain public symbols that are explicitly referenced by the main program, this prevents your programs from being burdened with unnecessary code.

To produce ASSEMBLY.QLB, the command is this:

```
LINK /QU FASTPRNT DISPLAY,ASSEMBLY.QLB,,BQLB40.LIB;
```

LINK.EXE and the two object files should be in the same directory, as should also be the support file BQLB40.LIB. Alternatively, you can store BQLB40.LIB and your other libraries in a separate subdirectory and use the DOS 'SET' command to point an Environment variable, 'LIB', to the this subdirectory. Paragraph 1.7.2 of 'Learning and Using MicroSoft QuickBASIC' tells you how to go about doing this.

To use the routines from the environment, you can now start up QuickBASIC with the command:

```
QB /L assembly.qlb
```

MIXED-LANGUAGE LIBRARIES

No doubt you are itching to try out the new routines. I've included a short QuickBASIC program which you can use to put them to the test, although you can come up with something better, I'm sure.

Notice that I've had to include the delay procedure from the Quick BASIC programming manual, to slow the action down enough for you to see what's going on. Assembly-language is FAST !

The other SUB program, PANEL, is new. Similar in purpose to SCROLL, although it doesn't actually call it, this is a QuickBASIC routine which draws rectangular panels on the screen and encloses them with a single or double-lined border. It uses FASTPRINT extensively, so it's still pretty fast, even though it's mainly written in a high-level language. Because the test program keeps throwing random numbers at it, I've had to put rather a lot of error trapping into PANEL, but, If you use it for yourself, you should be able to take most of this out.

If you ARE going to use PANEL, by the way, don't you think it would make a good candidate for the Library ? One of the nice features of QuickBASIC libraries, is that they don't have to be restricted to a single programming language. Our ASSEMBLY libraries, as their names suggest, only include assembly-language routines so far, but there is no inherent reason why they cannot include support routines in Quick BASIC itself, or even in other MicroSoft languages like C or Pascal.

Let's make both ASSEMBLY.LIB and ASSEMBLY.QLB into mixed-language libraries by adding PANEL to them. We'll make provision for future additions by starting a separate source file for QuickBASIC support functions. If you've already got PANLTEST.BAS typed out, load it into your editor, extract the PANEL subprogram and copy it to a separate file. Otherwise type the following listing. Save the result as ASSEMBLY.FUN.

We now need to compile the source file, using the QuickBASIC stand- alone compiler, BC.EXE. Make sure that it is in the same directory as ASSEMBLY.FUN, and then enter the following command:

```
BC /T ASSEMBLY.FUN;
```

This will produce the file ASSEMBLY.OBJ which we can now proceed to add to our libraries. In the case of our Quick Library, ASSEMBLY.QLB, we'll have to rebuild the whole library. Make sure that the other two object files are in the Linker directory, and then type;

```
LINK /QU ASSEMBLY DISPLAY FASTPRNT,ASSEMBLY.QLB,NUL,BQLB40.LIB;
```

Now for the stand-alone library. This time we don't have to rebuild the whole of ASSEMBLY.LIB from scratch. LIB.EXE allows us to add new object files to an existing library. We can also use the program interactively, rather than typing all of our instructions on a single command line. This is how it's done:

1) Type 'LIB' and press <RETURN>
The program will respond ....

```
Microsoft (R) Library Manager Version 3.xx
Copyright (C) Microsoft Corp 1983-1988.  All rights reserved

Library name:_
```

2) Type in 'ASSEMBLY.LIB' <RETURN>
The program will then ask ...

```
Operations:_
```

3) Reply, '+ASSEMBLY.OBJ' <RETURN>
The next question is ...

```
List file:_
```

4) Your answer is, 'ASSEMBLY.CAT;' <RETURN>

The final semicolon tells the Librarian to use defaults for any remaining options, it will rewrite ASSEMBLY.LIB to include our new object file and produce a new version of ASSEMBLY.CAT to reflect the change ...

```
CLEAREND........DISPLAY       FASTPRINT.........FASTPRNT
PANEL...........assembly      SCROLL...........DISPLAY
SETPAGE.........DISPLAY

FASTPRNT      Offset: 00000010H  Code and data size: f6H
  FASTPRINT

DISPLAY       Offset: 000001f0H  Code and data size: 112H
  CLEAREND      SCROLL           SETPAGE

assembly      Offset: 000003e0H  Code and data size: 269H
  PANEL
```

LIB also preserves the previous version of the library, changing its name to ASSEMBLY.BAK. You can delete this from your disk as soon as you're sure that the new library is working properly. To test it, make a copy of PANLTEST.BAS, edit the copy to remove the PANEL subprogram, load the edited source file into QuickBASIC, together with the new version of ASSEMBLY.QLB, and run it. The results should be the same as before.

By the way, what do all those screen panels remind you of ? That's right - WINDOWS ! Well you'll have to be patient, I'm saving the real windows for next month.

I would like to take this opportunity to express my thanks to Gordon and Ariela for welcoming me to NATGUG, and to all of you who took the trouble to phone or write, expressing interest in my first article and asking for more. Inevitably, I suppose, there were one or two hiccups in its translation into print and, although there were no actual mistakes in the program code itself, some points may need a little clarification:

1) In the diagram on page 34, which illustrates the state of your program stack immediately after FASTPRINT is called, I have, it seems, inadvertently transposed the SEGMENT and OFFSET words of the return address. In its usual topsy-turvy fashion, the Intel micropressor actually pushes the OFFSET address first.

2) When describing the SNOWCHECK routine on page 40, I failed to make it sufficiently clear that this is actually a seperate procedure from FASTPRINT. It should be placed at the very end of your source code listing, between the last line of the FASTPRINT procedure and the final 'END' statement:

```
FastPrint     endp
                .
SnowCheck     goes here
                .
              end
```

3) In the list of display attribute values on page 44, the value for Inverse Video is given in Hex, not decimal as stated. The decimal value is 112.

Finally, in the first paragraph on P. 32, I state that all that is necessary to convert FASTPRINT for use with MicroSoft C is to reverse the order in which the parameters are passed. This is not quite true. As several people have pointed out, C, by default, pushes the actual value of parameters onto the stack before calling external procedures, not their addresses. This, in fact, makes writing assembly-language routines for C programs a bit easier than for QuickBASIC.

I can only apologise for the above gaffe and confess that, when it comes to C, I am still a novice. In an attempt to make amends I have converted FASTPRINT and several other routines from my library into the correct format for C calls. If you would like a copy send me a disk. Don't forget postage and label. Ed. **

Must mention that I have just received my upgrade to version 5.10, of MASM. The new version only costs £25.00 if you are a registered user of version 5.00, and with it you get a complete set of new manuals AND the MicroSoft Programmer's Editor. More about MASM next month.

Christy Gemmell, 22 Peake Road, Northfields, Liecs. LE4 7DN (0533) 767960

Christy sent a number of files, for which I am most grateful. Unfortunately the page limit for NATGUG News has been over exceeded, now all the rest will have to be held until next month, including the listing for PANLTEST.BAS referred to above. Christy also submitted a Model 4 memory resident programmers calculator program, perhaps more on that next time, but I will send this to the library. This was a program used on the 'Unpublished Gems' disk by 80 Micro.

One other factor that altered the format of Christy's article was, and as he is a new member, it had not been appreciated that I use a model 4 to output the copy of NATGUG News, the format on an MS-DOS machine can be very different. For example, Christy had used very nice double lined boxes around his headings, it is not possible to produce these using a Mod 4. Also tabbing can be a problem. I find it very difficult (read impossible) to translate the tabbings that have been used in some articles. I hope the above does not distract in anyway from the readability of any article or its technical content. Other members articles may be affected for the same reasons. Have I ever mentioned about ASCII Files?

I hope at sometime in the near future that, for copy which has its origins in MS-DOS, to output that copy on an MS-DOS machine, and those from TRS-80's, to continue with a model 4. For the moment, I just have not had sufficient time with an MS-DOS word processor to be able to achieve this aim.

For those 'speculating'. NATGUG News copy is output on a Citizen LSP-10. There are 50 lines per page, and near enough 7 lines/inch, as I use a 1/72 setting. It is 80 characters wide in condensed mode, easy for screen dumps. No reduction or enlargement is used before the plates are made for printing.