

SINCLAIR BUSINESS USER

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Latest Masterfile database reviewed

Mike Wright looks at business programs for the Spectrum

Data storage made easy

THE LATEST VERSION of **Masterfile** from Campbell Systems has been available for some time and has received many good reports. That version is version 8 and incorporates **Microprint 42/51**, a program which is available separately from Myrmidon Software and which increases the number of characters per line from 32 to either 42 or 51 when merged with your program.

For those who are unfamiliar with it, **Masterfile** is a database program for the 48K Spectrum — **Masterfile 16** is a version for the 16K machine. A database can be thought of as a computerised card index consisting of the cards — called records in computer jargon — and the different pieces of information on the cards, called items or fields.

The more advanced the database the more options are available for manipulating the data. Options often include the ability to define the way the information is displayed and on the more sophisticated a method whereby the user can combine any subset of the data to produce more figures; e.g., given an invoice and the VAT group, it could generate the amount of VAT due and produce an itemised list of VAT and a total. Databases have many uses, some of which are address lists, library catalogues, stock inventories, lists of customers and debts.

Masterfile is on cassette with two copies of the program and a slim manual. The program is in two parts, a Basic program which includes a set of sample data and the main machine code program. The machine code is loaded into approximately the top 8K of RAM. That means that before the program can be loaded that area must be cleared.

That is done with the command **CLEAR 57001**. The program can then be loaded in the usual way with **LOAD " " " " " "**. Once loaded the program runs automatically and displays the main menu:

- A Add a record
- C Choose a report
- D Display/Print
- E Edit report def
- L Load a file
- N Name data ref
- S Search the file
- I Invert Selection
- R Reset Selection
- P Purge Sel recds
- T Total/Avg
- V Save prog/file
- U User Basic code

At that stage you will also see, at the bottom of the screen, the file statistics.



That shows the number of records stored on the file, the number of those records which have 'Select' status for using in reports and the amount of space, in bytes, remaining in memory. The example file contains 14 records, each with five data items and five report formats. The screen displays:

Rec=00014 Sel=00014 Spa=30135

showing 14 records all selected for use in the reports and 30135 bytes of memory left for use.

The file is useful for demonstrating the capabilities of the program and for practising but before any serious work can be done a blank file must be created. To do that not only must all the records be erased but also the data names and report formats.

The manual does not, perhaps, help your understanding of how to use the program, with the references to different modes and how to adapt the program for use on a Microdrive, though to be fair the manual is much better written than many. Towards the end is an exercise, designed for people who believe that the only way to learn how to use anything is to use it.

The exercise takes the user step by step through the creation of a blank file, then the creation of two data names — name and telephone number — and five records — a list of five names and telephone numbers. The next stage is to practise setting-up a report format.

Those who update an earlier version of **Masterfile** without reading the manual for the extra options created by **Microprint 42/51** might be bewildered. The addition of **Microprint 42/51** enhances a program which already contains many of the features one would expect to find on a large system.

Data entry is done via options N and A. N allows a name to be given to, replaced with or erased from a data item. Up to 26 names can be used, corresponding to data reference codes A-Z. Pressing option A creates a new record and allows the data to be entered in two ways — either by using option A

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on the subsidiary 'Add a record' menu and entering the data reference, followed by the data or by choosing P and letting Masterfile prompt the data names while the user concentrates on entering the correct piece of data with the correct data reference.

That continues until all the items on one record have been prompted and entered. At that stage the user may discover that more than half of the options presented on the 'Add a record' menu are not open. To save space Masterfile uses the same menu wherever possible, so the 'Add a record' menu also doubles as the 'Name data ref' and the 'Update top rec' menus.

Once a record has been entered the only way to update it or add new items is to go into what the manual calls Display mode. That is done by pressing D at the main menu and causes the data for selected records to be displayed in the report format last used. That can be changed by R and the code for the desired format.

Display mode also has a menu to guide the user but it is hidden to avoid over-writing the display. It can be reached at any time by pressing Q from Display mode. Pressing Q again clears

"Masterfile can be used by a novice after a day's training"

the menu from the screen, leaving the display as previously and allows the user to continue working. Apart from being updated, the top record can also be erased, copied or even omitted.

Display mode also has two other useful options, T and S. Selecting T gives the total and average for the selected records of any data reference named; if any record contains alphanumeric characters for the reference the record can either be skipped or updated for that item. Option S allows a search to be made through the file of either the unselected records — option A — or of the selected records — option L.

Choosing either option causes the program to prompt for a data reference for the search. The search can then be made on either character or numeric data, although all data is held in character format. Either of those options allows the search to be made against the usual range of equal to, unequal to, less than, greater than, or a string scan — i.e., a search for a given sequence of

characters. The effect of a search is to change the select status, while keeping the select status of those already selected with option A.

Option L de-selects those records with select status which match the criteria.

Another feature which demonstrates the class of Masterfile is its ability to display and print chosen items of data



from selected records in a format which has been defined by the user and not by the programmer. In fact, up to 36 formats are possible for one file, although it is unlikely that all of them would be used.

Selecting option E from the main menu gives access to Edit mode. That is concerned with editing the report formats and not the records. Initially the options are (A) add a report, and (R) review report definition. Choosing either prompts for a report reference to be given. That is in the range 0-9 or A-Z.

Once it has been entered the 'Edit report def' menu appears. That shows the element of the report being considered. It always starts with the general attributes of the report, i.e., paper and border colours, the number of lines — the interval — used by each report and the data reference of the item by which the report is to be sequenced. The default values are set to white for the paper and border and two lines for the interval. The options then open are probably those one would expect to find and are:

Add a new element	R
Erase element	E
Next element	N
Display/Print	D
Copy report def	C
Delete report	X
Previous menu	M

Choosing to add an element gives more options on the visual layout of the report, such as drawing horizontal and vertical lines or boxes, entering literal text — e.g., as a heading. It also allows a data item to be selected for inclusion in a report.

It is the longest of the options but each stage is prompted. 'Line=' asks for the first line on the screen at which the data item is to be printed. Subsequent items are printed at the interval defined in the general information section. Next the user is given the option of using Microprint 42/51 to increase the number of words per line or not and, if Yes, whether the 42 option is to be used. Answering Yes, then No selects the five-character printout automatically. 'Column=', 'Width=' and 'Depth=' subsequently ask for the first column in which the data item is to be printed, the width of the field and the number of lines over which the field is to extend.

It is not necessary, nor in some cases even desirable, that the values are set with the maximum number of characters the data will use. More prompts are then given for the printing attributes — paper colour, brightness and inverse printing. Finally, options are given to pad out a field to its full length and to enter a defined text if a data item is not found for a particular record.

Once that has been negotiated successfully return to the 'Edit report def' menu from which the report just created can be displayed and subsequently altered, should it prove necessary.

Up to that stage Masterfile has behaved like any other normal user-friendly business program, offering a menu or prompt at each stage. Remembering, of course, that good business programs have to be exceptionally well idiot-

"The manual is not very logical in its sequencing"

proofed, they should be designed to allow the user to break into the program and possibly corrupt it.

Masterfile, however, is no ordinary program. It encourages the user to break into the Basic program listing and to patch-in one's own Basic program to manipulate the data. That is perhaps the feature which makes Masterfile stand out from other databases for the Spectrum. It certainly makes it more powerful than some of the databases which were available for mainframes a short time ago.

The manual also gives instructions on how the Basic program can be altered so that it can be used on the Microdrive, as well as a section on how to increase the number of possible data

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references, should you need them.

To obtain the most from Masterfile, it is helpful to have some understanding of computers and a working knowledge of Basic. For the vast majority of uses Masterfile can be used by a novice after perhaps a day's training and practice. That may deter the odd business user who expects a computer to be all-singing, all-dancing and also to be operated by thought control; for the remainder Masterfile is probably the best program of its type available for the Spectrum.

If one is to find fault, it lies with the manual which has been photocopied from a printout by a dot matrix printer. That has highlighted the dots, or in some cases the lack of them, and consequently is difficult to read. The manual also is not very logical in its sequencing of chapters for someone working through it. The exercise, which is excellent, takes the user through most of the steps involved in using the program in a logical and interesting manner.

For those who wish to run an automated office, word processing is one of the current vogues. If one is really intent on doing it on a Spectrum or ZX-81, the addition of a real keyboard is essential. Although the Spectrum keys are a vast improvement on those of the

ZX-81 they are still nowhere near accurate or positive enough for continued typing — even of the two-fingered variety.

Assuming that you have one already or that you are content to use those of your machine you will need a word processing program. **MicroPen** from Contrast Software is one such program for the 16K or 48K Spectrum and costs less than £6. Its features include word-

“The program seems prepared to continue looking indefinitely”

wrap — words spanning two lines are wrapped automatically on to the second line; right justification — spaces are entered between words so that the last character of any line is in column 32; a word search — the option of printing multiple copies with or without double spacing. It does not feature word or block deletion — only the Spectrum character delete. Nor does it include an ability to move a word or blocks of words around the text.

The manual which is repeated in the program consists of a single A5 sheet,

badly-printed and photocopied from the program instructions. In use the program was found to be slow enough to cause problems for a one-fingered typist using the Spectrum keyboard.

A flash of insight obviously caused Contrast to include a paragraph in the instructions headed Murphy's Law, or what to do when something goes wrong. If you try to search for a word which is not there you encounter problems. The program continues and seems prepared to continue looking indefinitely. The only way out is to break into the program and then follow the instructions to start again. Trial and error should eventually allow you to return to the main menu.

MicroPen is not the comprehensive word processor claimed for it, nor is it suitable for the small business user who at least must have a program to keep pace with his typist. It may, however, still have a use for the occasional home user.

Masterfile: Campbell Systems, 15 Rous Road, Buckhurst Hill, Essex IG9 6BL. £15.

MicroPen: Contrast Software, Farnham Road, West Liss, Hampshire GU33 6JU. £5.95.

Micro-Print 42/51: Myrmidon Software, PO Box 2, Tadworth, Surrey KT20 7LU. £5.

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