SINCLAIR BUSINESS USER

February 1984

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.

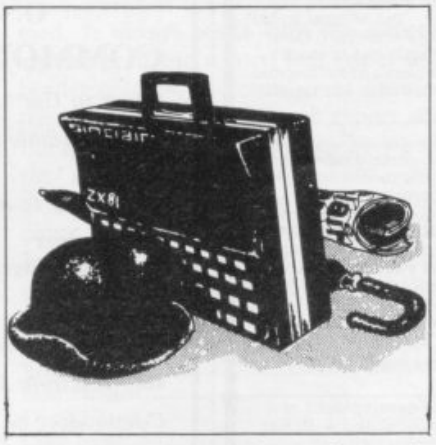
For those who are unfamiliar with it, Masterfile is a database program for the 48K Spectrum — Masterfile 16 is a version for the 16K machine. A database can be thought of as a computerised card index consisting of the cards — called records in computer jargon — and the different pieces of information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

Continued on page (iii)

Professional Software for Spectrum and ZX81

SPECTRUM 48K

■ **Payroll:** Weekly, monthly, hourly. All tax codes, and pay levels. Guaranteed correct. £25.00 ■ **Statutory Sick Pay:** Better than programs costing 10 times as much on other machines. £40.25 ■ **Stock Control:** Over 1500 lines. Find, add, delete, in 2 seconds! Sinclair or full-width plain paper printer (with interface) supported. £25.00 ■ **Spectrum Demo Tape:** Demonstration versions of payroll, stock control, SSP. On one tape. £3.95 ■ **Critical Path Analysis:** Enter network of over 500 activities. Program finds critical path. Durations and costs can be modified, and the calculation repeated. Full-width printer supported. £15.00

SPECTRUM 16K (usable on 48K)

■ **Mortgage:** See how repayment amount affects duration and total amount paid. While paying: see how much interest and how much capital you are paying. Month-by-month table printed. On the same tape – ■ **Loan:** Calculates true interest when paying instalments etc. £8.00 (both programs together)

Parallel Printer Interfaces:

■ **The Standard Interface:** Centronics interface to link your ZX Spectrum to many popular dot matrix and daisywheel printers. The package includes: interface, simple word processor, 3 sets (different) of printer software, cable, centronics plug, full instructions. The **LLIST** and **LPRINT** commands are supported. Many other features also. £45 inc. VAT. Post free. ■ **The Deluxe Interface:** Includes all the features of the standard package, and also has a 3.5 mm jack socket and special circuitry which allows the ZX Spectrum to **Save** and **Load,** without having to unplug or switch anything! £55 inc. VAT. Post Free. ■ **The Professional Interface:** Includes all the features of the deluxe package, but also allows the ZX Spectrum to be used as a very powerful peripheral processor for a bigger computer! Software is supplied which post-processes word processor output with straight right and left margins. £99 inc. VAT. Post Free.

Tape Loading Problems With Your Computer?

■ **Loading Aid:** Allows you to get tape playback level right first time. Helps with dropouts and to check tape quality too! Standard model £5.95, De luxe model £7.95 ■ **The Microcomputer User's Book of Tape Recording:** Is a practical guide to help you get programs in and out of your computer. Written for the computer user – but several audio and computer professionals have found it useful! ISBN 0 946476 00 4. ONLY £3.15 incl. postage (£2.90 in shops – temporarily out of stock) ■ **Test and Alignment Cassette:** Tape loading problems are often due to a mis-aligned tape head. Align your tape head by ear with our tape – no instruments required! £4.90

ZX81 16K

■ **Beamscan:** Computers bending moment and shear force diagrams for a simply supported beam with 1-99 point, uniform and uniformly tapered loads. £25.00 ■ **Time Ledger:** For up to 17 employees, 200 clients. £15.00 ■ **Optimax:** A powerful linear optimisation program up to 75 variables <,=,> constraints. £40.00 ■ **Payroll:** As above but only up to 30 employees. £25.00 ■ **Stock Control:** As above but 400 stock lines in 16K or 2000 lines in 64K. £25.00 ■ **Critical Path Analysis:** Up to 500 activities in 16K. Over 500 activities in 48K. £15.00 ■ **Budget:** Keeps track of expenses and compares with budget. 50 headings plus 12 months or 12 categories. £15.00 ■ **Financial Pack:** Contains three programs: Mortgage, Loan and VAT £8.00

All items are post free and include VAT. Programs are supplied with comprehensive manuals.

Remember – We at Hilderbay pride ourselves in the development of high quality professional software that is fully functional and with full support.

Contact us now for further information on these products and our full range of Apple II Software.

TRADE ENQUIRIES WELCOME ON ALL PRODUCTS

Hilderbay

Professional Software

Hilderbay Ltd Dept. SU2 8-10 Parkway Regents Park London NW1 7AA
Telephone: 01-485 1059 Telex: 22870

ULTIMATE BUSINESS

48K SPECTRUM

PROGRAM WILL PREPARE

INVOICES, DAY BOOK, STOCK CONTROL STATEMENTS, ADVICE NOTES, GROSS CONTRIBUTION

FOR 200 ACCOUNTS & 1,000 LINES OF STOCK

This one clever program will prepare advice notes and invoices with account name and address, stock description, V.A.T. and discounts by entering customer number, stock numbers and quantities. A facility exists to deal with non standard accounts and stock items. Cheques received can be entered allowing statements to be produced detailing invoice numbers, cheques and total outstanding. This allows a close check to be kept on account balances.

Stock totals are automatically changed when invoicing or raising credits and stock can be added or subtracted at random. All of this plus more allows the business man to obtain the exact information he requires at the touch of a button.

SHOPKEEPERS SAVIOUR

CONTROLS & PRICES UP TO 2,000 LINES OF STOCK

RETAILERS ASK YOURSELF THIS "ARE YOUR STAFF HONEST"? "SURE"?

Put a halt to these doubts with this superb stock control program. It will give you the advantage of knowing exactly what stock you should have, its value and the daily gross contribution. You simply enter stock numbers and quantities and the Spectrum will act like an electronic cash register. It will also prepare price tickets with stock numbers if required.

ULTIMATE BUSINESS £14.95, SHOPKEEPERS SAVIOUR £14.95, BOTH FOR £25
SEND CASH P.O. OR CHEQUE TO **McNEIL SOFTWARE**
35 CASTLEHILL DR., NEWTON MEARNS, GLASGOW
TRADE ENQUIRIES WELCOME.

kemp

THE BEST BUSINESS SOFTWARE ON ANY HOME MICRO

COMMODORE 64 48K SPECTRUM

"Easy to Use" Personal Computer News.

"At last viable business software for the Sinclair" ZX Computing.

"Very easy to use . . . very good." Soft.

Sales Ledger	Up to 1200 entries per month
Purchase Ledger	,,
Stock Ledger	,,
Stock Control	Unlimited entries

Suitable for limited companies, partnerships, etc.

48K Spectrum £14.95 each.

Commodore 64 £24.95 (ring for availability)

Access/Barclaycard — Logic Sales 01-882 4942

Available at Spectrum Computers For All, Selfridges and all good computer shops.

Distributed by Microdealer U.K., P.C.S. Distribution, and T.W. Distributors Ltd. (Eire).

Cheques/P.O.'s to

Kemp Limited, 43 Muswell Hill, London N10 3PN

Hotline 01-444 5499

Continued from page (i)

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 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.

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

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 test — 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 progam, offering a menu or prompt at each stage. Remembering, of course, that good business programs have to be exceptionally well idiot-proofed, they should be designed to allow the user to break into the program and possibly corrupt it.

> "The manual is not very logical in its sequencing"

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

Continued on page (iv)

Continued from page (iii)

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 photoprinted 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-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 program seems prepared to continue looking indefinitely"

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.

The Key to Spectrum Machine Code Success.

Picturesque's MACHINE CODE SYSTEM is used and recommended by professional software writers, yet the excellent documentation and the friendly, easy-to-use programs have been highly recommended for beginners.

You will only buy one Machine Code System, so buy the best, the one the professionals use.

ASSEMBLER

Completely self-contained, with its own line editor, giving an easy-to-read 40 column tabulated listing. Auto line numbering, line renumbering and auto-tabulation make this the fastest and easiest Assembler to use. 5 character Label names. SAVE/LOAD/VERIFY both the listing and Machine Code. Accepts Decimal or Hex numbers and ALL Z80 mnemonics. Assembler Directives:— ORG, END, DEFB, DEFW, DEFS, DEFM, EQU, DEFL. FAST ASSEMBLY:— 1K of machine code in 7 seconds. Full error detection. 32 page Owner's Manual.

£8.50
INCL. VAT & P&P.

MONITOR

The ideal tool to help the beginner get started, yet it contains all the commands for the experienced programmer to run and de-bug machine code programs. Inspect and alter memory contents in Hex or ASCII characters. Breakpoints and full Register display. Disassemble any part of memory, ROM or RAM. Dec-Hex-Dec number conversion, plus Block Move, Insert and Delete commands for general memory management. 32 page Owner's Manual. Can reside in memory with the Assembler (48K machines only) to give a complete system.

£7.50
INCL. VAT & P&P.

The most valuable software purchase you will ever make.

Available from the "SPECTRUM" chain of stores, branches of John Menzies and all good computer shops, or by mail order by sending cheque/PO to:
PICTURESQUE, 6 Corkscrew Hill, West Wickham, Kent, BR4 9BB. Send SAE for details.

PICTURESQUE