

MicroPen

Database filing system for the CPC464 **Soft 1011**

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SOFT 1011

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1.0 Using This Manual

MICROPEN is a powerful method for retrieving data with applications ranging from data storage to locating individual records.

This manual has been designed with all of these applications in mind. The first part takes you step by step through the system up to the point where you will be able to control all but the most sophisticated routines.

In the later sections, there is a summary of every routine that can be called up on MICROPEN, arranged to provide the most rapid access to this information.

Section headings throughout the manual are set out as complete English sentences and extend over several sections in some cases, to help improve the logical flow of information.

On the first few occasions that the system is used, you should read both the headings and the text.

As you become more familiar with the system, only the headings will be read; moving into the text only where the continuous headlines do not provide sufficient reminder of the subject matter.

The headings, which are such an important element of this manual, are reproduced as a Contents section, where they provide a compact guide to the operating instructions.

1.1 Throughout this Manual, Command Sequences...

Inputting commands will involve pressing two different types of key.

Several of the keytops are marked with complete words or abbreviations (**[ESC]**, **[CTRL]** or **[TAB]**, for example).

Some commands may require these 'dedicated' keys to be used with the standard alphanumeric keys (**R**, **F**, **?**, *****, for example). In this situation, there is no difference between upper and lower case letters.

If a command involves the use of figures, there is the choice between entering through the main keyboard, or using the numeric keypad.

...are shown in bold type

When a key is to be struck as part of a command sequence, it is shown in bold type:

[ESC] means press the key marked **[ESC]**
[ENTER] means press the key with **[ENTER]** marked on it.

2.0 What is MICROPEN?

MICROPEN is an information entry and retrieval system for use on small computers. It is easy to operate, enabling a user to create a variety of information stores within the computer with a minimum complication.

A separate word-processing system - MICROSCRIPT, for example - will be needed to set up the layout of the files. These files can be printed out using the print output system contained in MICROPEN. The layout of the output format can be stored on MICROPEN and used with one or more databases to prepare reports, lists and mail-shots.

Once a database has been set up, the user may extract information either by selecting individual records or by performing selective searches for records which match a particular description.

2.1 MICROPEN contains three programs...

Three programs are supplied with the MICROPEN disc:

- The main MICROPEN system program, which is used to create and maintain the databases;

- A utility program called REPAIR, which is used to alter system characteristics and deal with faulty database files.

- A wordprocessor program PENFORM, for creation of database input and output forms.

...a sample database...

A sample database is included on the disc supplied by your dealer to make MICROPEN easier to learn. Since a safety copy of MICROPEN should have been taken when you received the disc, this database may be experimented upon at will.

The database has three components:

- an input form 'COMPUTER . INP';

- a data-file 'COMPUTER (A)';

- an index-file 'COMPUTER . IDX'.

This group of three files constitutes the entire database, on which some of the operations described later, may be tried.

...and a sample output form

MICROPEN is also supplied with a sample output form, 'COMPUTER . OUT'.

3.0 Starting up the System

3.1 Switch on the mains supply...

Having checked that the mains lead is plugged in correctly, turn the power switch ON. So long as power is entering the machine, an indicator light will be illuminated.

...before loading the system disc...

Even with the power switched on, the computer is merely a collection of independent units. It needs to be programmed with the instructions which make it function as a data retrieval system.

3.2 Load MICROPEN...

When you receive your copy of MICROPEN, you should make two copies of it. For further details, refer to the operator's manual for the computer and its operating system. The original master disc should not be used again, unless the other copy is damaged or erased.

Insert the working copy of MICROPEN into the drive. (If you are operating two disk drives always insert the disk into Drive A).

Type in:

```
l cpm
```

After a few seconds you will see the following message on the screen:

```
CP/M 2.2 - Amstrad Consumer Electronics plc  
A>
```

At the prompt sign type `PEN` in either upper or lower case and press **[ENTER]**.

...to display the list of databases

When MICROPEN is run, a list of databases held on disc will appear. A typical screen is as follows:

```

                                List of Databases
Database.Inp      Features.Inp      Staff.Inp
Customer.Inp

Type RESET to load new disc or press [ENTER] to
leave system.
-----
Enter name of database :

```

If this screen is not displayed in the same manner but is jumbled, this means that the system has not been configured for the terminal you are using. At this stage contact your dealer who will correct the system characteristics. Alternatively, use the REPAIR facility. See section 12 for further details.

3.3 Leave the MICROPEN program at the end of a session

At the end of a session, you will wish to exit from MICROPEN. With the main menu displayed, select option 0, Exit. When the list of databases appears on the screen, press [ENTER] to leave the system.

4.0 Creating a database

Setting up a database is a procedure which involves using a word processing package. PENFORM is ideally suited to this task: this section of the manual will deal with setting up a database using this particular system.

4.1 Load PENFORM...

With MICROPEN loaded and the prompt displayed on the screen,

Type `PENFORM` and press `[ENTER]`.

When the main menu appears, select the `CREATE` option.

...to set up a database

Having selected the `CREATE` option a valid filename must be entered (see section 4.2). You may now set up a database. The layout of the database can be designed to meet your requirements, subject only to a few basic rules:

Brackets must be used to mark the areas ('FIELDS') to be filled with information.

The maximum number of fields allowed in a layout is 100.

No more than 1024 characters may be stored in each layout.

Fields may be put anywhere in the work area of the screen, as may labels, titles and display lines.

Fields must be identified so that each one can be called up individually during report preparation and printing. The identifying character may be any printable character, except the bracket symbols already used to specify fields.

When MICROPEN is run, the first three lines of the 24 line screen are used for instructions and commands. The first three lines of the Input form file must therefore be left free: there are 21 lines left for the form layout.

When setting up the fields, each line must end with a carriage return. No format characters, `TAB` or `LINE FEED` for example, must be included in the layout of the forms. MICROPEN does not recognise these as valid commands. Make sure therefore that all spaces, such as those between field markers are true spaces and not tabs.

The following keys and key sequences will be necessary when you are creating an input form.

Move cursor left	Left arrow
Move cursor right	Right arrow
Move cursor up	Up arrow
Move cursor down	Down arrow
Delete character behind cursor	[DEL]
Pull text to cursor	[CLR]
Push text from cursor, leaving spaces	[CTRL] N
Delete line which contains cursor	[CTRL] Y
Create an open line above cursor	[ESC] O
Move cursor to top left of screen	[CTRL] Up arrow
Move cursor to end of text on screen	[CTRL] Down arrow
Move cursor to left end of line	[CTRL] Left arrow
Move cursor to right end of line	[CTRL] Right arrow
Exit, saving the file to disk	[ESC] E
Exit, without saving file	[ESC] Q.

The maximum number of records allowed on one database is 32750.

When you have set up the database, save the document to disc using [ESC] E

A typical layout, including field markers, could be as follows:

Company name:	[A]
Address 1:	[B]
2:	[C]
3:	[D]
City:	[E]
Post Code:	[F]

4.2 Name the database

Each filename consists of three parts:

a disc identifier (of the form A: or B:) - if this is omitted, Microscript will assume that the document is to be created on the current disc drive;

a name allocated by the user, containing up to eight characters (including spaces);

an 'extension' of up to three characters, used to indicate the file type (DOC for document, for example). An extension must be shown as part of the filename.

Filenames may not include any of the following characters:

, < > ; : = ? * } {

Full stops can only be used to separate the filename and the extension. If a full stop is used as part of the filename, MICROSCRIPT accepts any characters after the full stop as the extension.

In order that MICROPEN knows where to find the input form for the database required, all input forms must be given the extension '.INP'.

With option C selected from the main menu a prompt will appear on the screen:

Which Filename:

Enter a valid filename and **[ENTER]**. To create files on the Micropen disc, name the file in the following manner:

B:Filename.Ext

5.0 Using MICROPEN

When MICROPEN is run, a list of the databases held on disc is automatically displayed. Because MICROPEN looks for all the input forms already created, these filenames are given in full, COMPANY . INP, for example.

5.1 Select the required database from the list...

Choose the database required and enter the filename. However, only the first part of the filename is required. If you wish to select a database named 'COMPANY . INP', enter the first part - 'COMPANY' - and press [ENTER].

If an incorrect database name is entered, or the database does not exist, the keyboard will bleep and the screen prompts another database name:

```
Type RESET to load new disc or press [ENTER]to leave system.  
Enter name of database: [      ]
```

With a database selected, MICROPEN will display a wait message in the top left hand corner:

```
Please Wait...
```

...to display the main menu

If a database has been successfully accessed, a list of options is displayed at the top of the screen. This is known as the MAIN MENU.

```
[#] Database: COMPANY,per record 328, recordson file 6.
```

```
Ø=Exit, 1=Enter, 2=Recall, 3=Recall&Print,4=Index, 5=Organise File
```

In this example the cursor position is denoted by the # sign. As information is entered, the top line - the statistics line, shows the user whether the databases are working.

The size of the database record is shown on this line. In the example above, there are 6 records held on file, each record consisting of 328 characters.

Each option is dealt with in greater detail in the section indicated:

Exit	Section 3.3
Enter	Section 6.0
Recall	Section 7.0
Recall & Print	Section 8.0
Index	Section 10.0
Organize file	Section 11.0

5.2 The system may indicate that a database is in use

In order to protect the database, a system busy message will occasionally be displayed during the operation of MICROPEN:

```
***Update prohibited, database in use elsewhere***
```

This message will appear when MICROPEN is being used in a multi-use system. Although any number of people can recall or print out data from the database, only one person is permitted to have write privilege at any one time.

Once a user has logged on and write privilege has been allocated, all other users will receive this system busy message and are prevented from performing any task which writes information to the database. Access is only gained to the database once the user has logged out of the database.

Under certain conditions, such as a power failure, MICROPEN will lock out the database preventing any user from changing information stored on the disc. However MICROPEN will allow access to the files for recall and print out purposes.

6.0 Loading new records into a database

With the main menu displayed on the screen, select option 1 to enter new records into a database. MICROPEN will display the input form on the screen together with an instruction prompt, for example:

```
Press [ESC] when data entry completed for record 1
Press ↑C to clear field

Name

Address      1
              2
              3

Code

Notes
```

6.1 Enter the information required into each field...

Enter the information required into each field. When a line is complete, press **[ENTER]** to move the cursor to the next line. Alternatively, press the relevant cursor position key (situated above the numeric keypad) to move the cursor to the next field.

...correcting errors where necessary...

If an error is made use the **[DEL]** key to erase the error. However, deletions are only possible when the cursor is in that field. Attempts to erase an error located in another field will cause the keyboard to bleep.

...before storing the record on disc

When all the required information has been entered, press **[ESC]**.

When **[ESC]** is pressed, a sub-menu is displayed on screen:

0=Exit, 1=Continue, 2=Write Record to File

Press **2** to store the information entered in the record on disc. When the data is stored on disc, the input form is displayed on the screen ready for additional data entry.

6.2 Set up additional records...

Having set up a record and stored it on disc, you may wish to set up additional records.

...by selecting option 1 from the Sub Menu

From the sub-menu, select option 1:

0=Exit, 1=Continue, 2=Write Record to File

This option causes the input form to be displayed on the screen with the cursor positioned at the start of the first field.

Write the records to disc by following the instructions in section 6.1.

6.3 Having set up the records, EXIT to the Main Menu

When all the records have been set up and you want to exit from the input form to the main menu, select option **0**. This option erases all the information which has not been written to disc.

7.0 Recalling Records to the screen

MICROPEN contains a recall option to retrieve information from the databases stored on disc. There are three separate recall modes:

Recall by record mode	Section 7.2
Recall by a sequential search	Section 7.3
List all records on file sequentially...	Section 7.4

7.1 Select the RECALL option from the Main Menu

To call the `Recall` option select option 2 from the main menu.

With `Recall` selected, a sub-menu is displayed on the screen:

```
[ ] Recall by: 0=Exit, 1=Record number, 2=Search, 3=List all on file
```

Select the required mode by pressing the corresponding key.

To exit from recall mode press `0`.

7.2 Recall a record by number

This mode allows access to one particular record on a database. With option 1 selected from the main menu, the screen prompts:

```
Enter record number to recall (*-*)[#]
```

The asterisks (*) denote the number of existing records on the database.

Enter the record number and press **[ENTER]**. If the record number does not exist, the keyboard will beep.

MICROPEN searches for the record and displays it on the screen together with the prompt:

Press Escape when data entry completed for record:

Press ↑C to clear field

```
Name      [Jonathan Smith]
Address 1 [12 Winscombe Way  ]
         2 [                  ]
         3 [                  ]

Code      [001      ]
Notes    [          ]
```

7.3 Alternatively, search for a record...

The search recall mode within MICROPEN allows you to enter a profile of the record to be found. When this profile is entered, MICROPEN searches through the database and displays all those records which match the profile.

With the recall sub-menu selected, press option **2** (search). The screen will display the following list of options:

```
Press Escape when search profile complete. To set search mode: ↑C=Clear,
↑Q=Contains, ↑W=Not contains, ↑E=Equals, ↑R=Not equals, ↑T=Greater, ↑Y=Less
```

The cursor will rest at the start of the first field indicated in the following example by #.

```
Company name:  [#          ]
Address:      [          ]
              [          ]
              [          ]
City:         [          ]
Post Code:   [          ]
```

...by defining the record profile

Decide on the search profile which corresponds to your requirements, for example to find a record which has a post code, SW1, use the search profile 'Q=C o n t a i n s'.

Move the cursor to the field 'Post Code'. Enter the postcode 'SW1'. then select the search profile required. When the data has been entered, press **[ESC]**. The screen prompts:

```
Enter record number to begin recall: [# ]
```

Enter the number and press **[ENTER]**. The screen will then prompt:

```
[ ] After recall: 0=Exit, 1=Pause, 2=Continue
```

Other options given in the sub-menu perform the following operations:

[CTRL]C	To clear a record.
[CTRL]Q	To find a record which contains the data entered on the search profile.
[CTRL]W	To find a record which does not contain the data entered on the search profile.
[CTRL]E	To find a record whose fields match the data entered on the search profile.
[CTRL]R	To find a record whose field does not match the data entered on the search profile.
[CTRL]T	To find a record whose field value is greater than that held in the search profile.
[CTRL]Y	To find a record whose field value is less than that held in the search profile.

7.4 List all the records on file...

This option permits you to browse through the database. With the recall menu displayed, select option **3**. The screen will display the following prompt:

```
Enter record number to begin recall: [ ]
```

Enter the record number and press **[ENTER]**. The screen will then prompt:

```
[ ] After recall: 0=Exit, 1=Pause, 2=Continue,
```

...pausing if required after each record is displayed

Selecting option **1** causes MICROPEN to recall each record in turn, halting after each record is displayed on the screen. The screen prompts:

```
Press Space-bar to continue, Escape to exit or Enter to exit and update
```

Pressing **[SPACE]** causes MICROPEN to continue recalling records from the database.

Pressing the **[ESC]** key returns MICROPEN to the Recall sub-menu.

Alternatively, press **[ENTER]** to display another list of options, allowing a record to be amended or updated before it is stored on the database:

```
0=Exit, 1=Continue Edit,2=Write record to file, 3=Delete
```

The 'Continue Edit' and 'Write record to file' options both operate in the same manner as described in section 6.1. But option **3, Delete**, allows the user to delete a record temporarily.

7.5 Deleting a record

MICROPEN will allow a marker or 'flag' to be placed in a record which is to be deleted. This causes MICROPEN to bypass any record marked in this way during a search using the index system.

Although a deleted record cannot be recalled directly, all the information, except the first character, is still held on the database. This feature allows MICROPEN to 'un-delete' a record by recalling the record number and pressing the specified key when prompted.

8.0 Recall and Print a record

The `Recall` and `Print` option contained within `MICROPEN` allows the user to print out information contained in the database in any required format. A range of outputs can therefore be generated - from mail-shots and sales labels to sales analyses and customer details.

The output format is set up using a word processing package such as `MICROSCRIPT` in much the same way as the input database file was created. The preparation of an output file format is described elsewhere in this manual (section 9).

8.1 Select the Recall and Print option

With the main menu displayed, select option **3**, the recall and print option. `MICROPEN` will display a list of the output format files contained on the disc, for example:

```
Enter name of output format or Return[#    ]
_____
COMPUTER.OUT
```

The cursor position is denoted by the sign, `#`. Pressing `[ENTER]` at this point causes `MICROPEN` to return to the main menu.

8.2 Call up the output format file...

From the list of output format files displayed on the screen, select the format file required.

Enter the first part of file name and press `[ENTER]`: the extension name is unnecessary. For a format file named `'COMPUTER.OUT'`, only the first part, `'COMPUTER'`, would be entered in the space provided.

`MICROPEN` will load the format file before displaying a list of further options.

...before directing the output to the printer

Many large computer systems do not allow you to access the printer directly: all information to be printed is held on disc files and printed out in turn by the computer. This is known as spooling.

With the output file loaded, MICROPEN displays the list of printing options:

```
Enter name for spool-file or Return for hard-copy print:[#]
```

At this point you must enter either the name of the disc (spool) file and press **[ENTER]** or just press **[ENTER]**.

Having directed the output files to the printer, MICROPEN will require you to recall the record to be printed.

This process is explained in detail in section 7.

9.0 Formatting the Output File

MICROPEN does not include any pre-defined printing formats. All output formats must therefore be designed by the user using a word processing package such as PENFORM.

A number of these output format files can be kept on the system for a range of applications, from reports and mail shots to letters and envelope labels.

9.1 Create output files...

An output file must be created using a word processing package, such as PENFORM, which is capable of producing standard character text files without control characters embedded in them.

Although the format of these files depends on your requirements, the first line of the file must be an instruction line containing six print parameters, which MICROPEN uses to instruct the printer.

...using PENFORM

Insert the MICROPEN system disc. At the prompt `A> type PENFORM` and press **[ENTER]**.

When the main menu appears on the screen, select the `Create` option, a valid filename must be entered (see section 4.2). As soon as the screen clears, you can insert the print parameters on the first line of file.

9.2 Install the print parameter line...

The print parameter line must be the first line of the output format file. Without it MICROPEN will not accept the output format specification.

These parameters are:

- | | |
|------------------------|---|
| <code>Pagesize</code> | to tell MICROPEN how many lines there are on each sheet of paper. This information causes automatic page-feeds at the end of each record, to ensure that each record is printed at the top of a page. |
| <code>Startline</code> | instructs MICROPEN to allow enough space for a heading on a piece of paper. |
| <code>Endline</code> | instructs MICROPEN to force a footing on each sheet of paper. |

- M a r g i n** instructs MICROPEN to offset the start of each line.
- P a g e w i d t h** indicates to MICROPEN the number of characters required across each page. MICROPEN includes a microspace justification system to produce correct word wrapping after field insertion.
- A c r o s s** this parameter is usually set to 1 for ordinary reports and letters, as these applications only require one record to be printed out on each sheet of paper.
- Envelope label sheet formats and some reports will require more than one record to be printed out horizontally, so this parameter should be set for the required number.

In addition MICROPEN can be instructed to pause at certain points on each output document - to allow a fresh sheet of paper to be inserted, for example.

This is done by placing a minus sign in front of the appropriate parameter.

For example, if you wished the printer to pause at the end of some text, you would place a minus sign in front of the parameter 'ENDLINE'.

The screen display would be:

-ENDLINE

When you install the parameter line, insert a space at the start of the line and before each parameter, for example:

PAGESIZE STARTLINE ENDLINE MARGINPAGEWIDTH ACROSS

All entries must in the form of 'PARAMETER NAME=value', for example:

PAGESIZE=70 STARTLINE=4 ENDLINE=66 MARGIN=5 ACROSS=1

These parameters may be inserted in any order but make sure that you have entered the parameters correctly. MICROPEN will assign 0 to any invalid parameter.

...before inserting the fields

You may call up any field from a record into an output file by placing a bracket followed by the appropriate field marker at the point where it is to appear.

If, for example, you wanted to insert the names of customers into a mail shot letter, and the names were stored in field B in a record, the screen would appear:

```
Dear [B,  
Have you heard about our new range of products?
```

The name of the client is printed where the bracket appears but before the comma. More than one field may be called onto a line: MICROPEN adjusts the spacing automatically to produce the output required.

9.3 Alternatively record numbers can be recalled

Some reports may benefit from the inclusion of a record number, providing a reference number for rapid search in the database.

MICROPEN will include the record number whenever it finds the symbol, ↑, in the output format file, for example:

```
For the attention of [G  
[A  
[B  
[C  
[D  
[E  
  
29 February 1984  
  
Please quote MSHOT/↑ in any correspondence.  
  
Dear [H,
```

Always leave 5 spaces after the sign.

9.4 Preparing the file to print out labels

If you wish to set up the output file to print out labels, you should set up the parameters to apply to each individual label.

Firstly set the **ACROSS** parameter to the number of labels which will fit across the sheet being used. Then set the **PAGEWIDTH** parameter to the number of characters between the start of the label and the next label.

The **PAGESIZE** parameter should be set to the number of line-feeds required to feed from the start of one label, to the start of the next label below.

Set the **STARTLINE** parameter to 1 to enable printing to begin at the current position of the print head and set the **ENDLINE** parameter so that it equals the number of lines in the current output format file (excluding the status line).

A typical status line could include:

```
PAGEWIDTH=35 PAGESIZE=15 STARTLINE=1 ENDLINE=6
```

9.5 Justifying text

MICROPEN includes an in-built justification system, which works in conjunction with automatic word-wrap to correct text appearance after the insertion of text of variable lengths.

You can set up the justification system to produce the type of printed text required: there is a choice between either right-hand justified text or ragged right-hand edged text.

The instruction which tells the justification system how you want it to operate is referred to as the 'justification trigger point'. MICROPEN will only justify text lines which are longer than that specified by the trigger point setting.

The setting is entered as a percentage of total line length and can be varied at will using the **REPAIR** program. On delivery MICROPEN is set to a value Of 100%. (See section 12 for details of how **REPAIR** works).

10.0 Indexing

When creating a new database, MICROPEN can be instructed to build an index of all entries. This index is designed so that all entries can be scanned quickly. A database can be searched to find a particular company or address, for example.

10.1 Create an index...

When establishing the format of a database record, The first two lines must be kept free for messages and programs. Instructions to MICROPEN are inserted at this point and the first line is used to control the index system.

If no entry is made on the first line of the input form, then no index system is created. However, an index system can be created at a later stage using the ORGANISE option. (See section 11 for further details).

...by entering information on the first line of the form

If you want to create an index, information must be entered on the first line of the input form. The information required by the index is:

FIELD TO INDEX and MAXIMUM EXPECTED RECORDS

A typical entry could be as follows:

A = # 100, where field A is the company name, for example with a maximum of 100 records in the index.

The index can grow in size by increasing the number of expected records.

10.2 Search for data using the index

Occasionally, you may wish to search for some information but not know the record number. The `i n d e x` option will allow you to find this information.

Select option 4, `I n d e x`, from the main menu. The screen prompts:

`Enter index to search for or Return only to exit`

The input form is displayed on screen and the cursor will rest at the start of the field designated for index generation, the name, in the following example:

Name	[#]
Address	[]
	[]
	[]
Code	[]

Enter the information and press **[ENTER]**. Enter sufficient information in order to narrow the search to the stated requirements, as MICROPEN matches all the information entered exactly.

An entry of: The Comp
would find: The Computer Showroom
and also: The Complaints Office

But an entry: The Compu
would find: The Computer Showroom

With the information entered, MICROPEN will display the following prompt:

```
Enter reference number or Return to exit, all entries now listed: [        ]  
Total entries found for: =
```

Index entries are displayed in groups of twenty: each one shows the record number and the complete database entry for the index field.

From the list displayed you can call up the appropriate record by inserting the record number. Alternatively, you can exit from the index option and return to the menu by pressing **[ENTER]**.

11.0 Reorganising a database

MICROPEN includes the facility to delete records temporarily using an option within the `Recall` option. The `Organise` option, however, removes these deleted records permanently from the database. This can be quite a lengthy procedure depending on the number of records stored in the database.

Although this option is referred to as the `Organise` option on the screen, its function is to `Reorganise`.

11.1 Select the reorganise option from the Main Menu

With the main menu displayed on the screen, select option 5, `Organise File`.

```
[#] Database: COMPANY, per record 328, records on file 6.  
0=Exit, 1=Enter, 2=Recall, 3=Recall&Print, 4=Index, 5=Organise File
```

The screen will display the prompt:

```
Please Wait...
```

The following prompt then appears:

```
Lengthy procedure! Press * to confirm or any  
other key to abandon
```

Pressing `*` at this point causes MICROPEN to reorganise the database. When this process has finished, the main menu is displayed.

If any other key is pressed, MICROPEN automatically returns to the main menu.

11.2 Rebuild an index system...

If it becomes necessary to change the size of an index, you must use the `organise` option.

Using PENFORM, edit the input form. When menu appears, select option E and type in the form name.

With the form displayed on the screen, change the index call on the first line as appropriate. Then save the document using **[ESC]E**.

...using the reorganise option

With MICROPEN in drive A and the main menu displayed, select option **5**, Organise File. MICROPEN will rebuild the files automatically.

12.0 Using MICROPEN's repair facility

MICROPEN relies on a file within the system for information about the hardware being used. This file is known as the System File. It contains a number of system characteristics, which can be changed by the user if necessary.

Although this file can be changed using a word processing package such as MICROSCRIPT, MICROPEN contains a utility program called REPAIR, which can make these changes. Using the REPAIR facility, MICROPEN can be installed for different types of terminals and printers.

But the REPAIR facility does have another use: it can correct defects in a database file. However, this facility should only be carried out, if the user is certain that data will not be lost. It is advisable to contact your dealer rather than risk losing any data.

12.1 Installing repair

With the MICROPEN disc inserted in the machine, enter REPAIR at the system prompt:

```
A>REPAIR
```

and press the [ENTER] key.

The REPAIR program will be loaded and the following menu displayed:

```
Micropen Repair Kit Vs 2.0  
  
1 Database Repair  
2 System File Repair  
  
[ENTER] - Exit
```

If you wish to alter the system file, select option 2. Otherwise select option 1 to repair a database.

12.2 Call up the system file...

Select option **2** from the **REPAIR** menu. A list of the command files held on disc will be displayed:

MICROPEN.SIF

Enter name of System File or **[ENTER]** to exit.

Enter the command file name (**MICROPEN.SIF**) and press **[ENTER]**.

...to install a terminal...

Once the system file has been loaded, a list of terminals, whose details are contained in the **REPAIR** library, is displayed.

Enter the number of the terminal to be installed and press the **[ENTER]** key.

If the terminal required is not held on the list, press **[ENTER]** to skip to by-pass the list.

...or a printer

Once the **REPAIR** program has passed the list of terminals, it will display a list of printers which can be installed with **MICROPEN**.

In order to install one of these printers, enter the number which corresponds with the printer type option and then press **[ENTER]**.

To by-pass this list press the **[ENTER]** key.

12.3 Alter the system characteristics...

After leaving printer installation mode, **REPAIR** displays all the characteristics set within the file on the screen.

These characteristics are:

- Cursor lead-in string (line 43)
- X and Y offset (lines 44 and 45)
- Attribute table (line 46)
- Strings between and after last co-ordinate (lines 47 and 48)
- Clear from cursor to end of screen (line 49)
- Clear from cursor to end of line (line 50)
- Screen width (line 51)

Cursor control table (line 52)
Search mode table (line 53)
Remote character pitch control lead-in (line55)
Minimum pitch in units (line 56)
Maximum pitch in units (line 57)
Ascii offset required (line 58)
Delay insertion
Bell character (line 62)

...by entering the option number when prompted

Any of the characteristics may be altered at this stage by entering the number which corresponds with the characteristic option and pressing **[ENTER]**.

12.4 Update the file once changes have been made

Once the alterations to the system characteristics have been made, the file must be updated. The screen prompts:

```
Press * to update, [ENTER] to exit
```

Update the file to record the changes to disc. Pressing **[ENTER]** at this stage will result in you leaving the system file without changing it.

12.5 Repairing a database

The REPAIR facility can also be used to 'unlock' a database and examine its contents.

With the REPAIR menu displayed on the screen, select option 1.

The screen displays the following options:

```
Database: 'Database.(A)', total records 3, file is (locked)

Press   1 Toggle Lockout
        2 Read Statistics
        3 Adjust Total

[ENTER] - Exit
```


It is important that you do not undertake the repair of a database file unless you are confident that your actions will not result in the loss of data. Before repairing a database, make sure that you have taken a back-up copy of the primary database file.

If you are unsure of the procedure, contact your dealer.

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