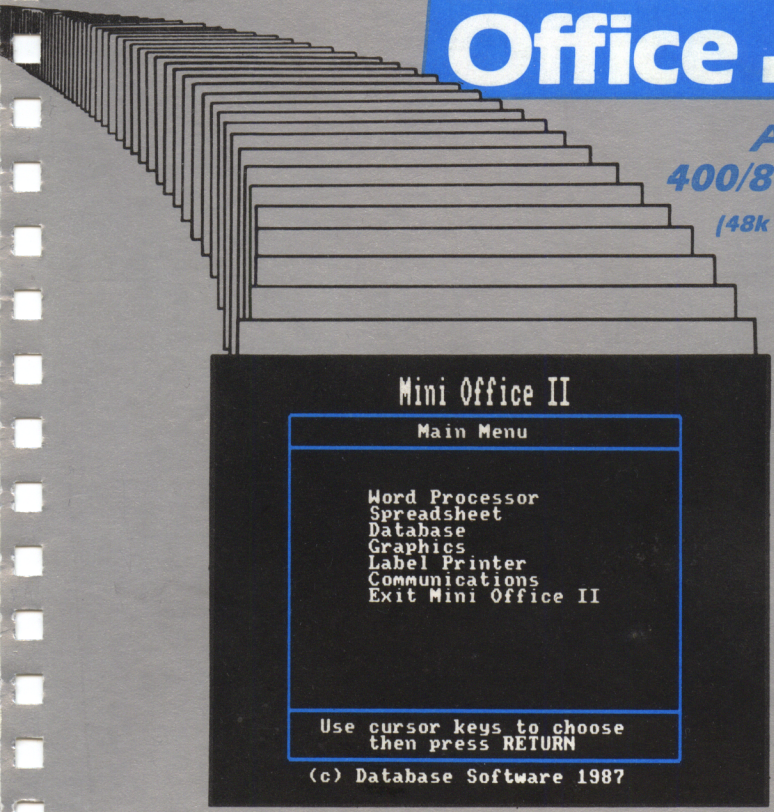
DATABASE SOFTWARE

Mini Office II

Atari 400/800/XL/XE

(48k required)



WELCOME TO MINI OFFICE II

MINI OFFICE II provides the six most essential pieces of business software in a single, user-friendly, integrated package.

These elements are:

- A powerful Word Processor.
- A comprehensive Database.
- A sophisticated Spreadsheet.
- An effective Graphics system.
- An easy-to-use Communications system.
- A useful Label printer program.

Each of the six modules performs a series of specific tasks. What follows in these pages is advice on how to choose the module that is most suitable for the task you need to carry out, how to use the chosen module so that it gives you the greatest long-term benefit, and how to use the data entered in one of the modules of Mini Office II from within another of the modules in the package.

WHAT DOES EACH MODULE OF MINI OFFICE II DO?

AN office is required to carry out a wide number of tasks if it is to handle efficiently all the administrative tasks that are demanded of it. The remainder of this opening section describes the basic function of each module of Mini Office II in order to help you determine which is best suited to the task you wish to perform.

WORD PROCESSING

PERHAPS the most common administrative task, and almost certainly the most time-consuming, is that of producing correspondence, memos, reports, exercises, texts and so on. These may be short or long, simple or complex, "one-offs" or repetitive. It is really unimportant which of these classifications your writing falls into. What is essential is that it expresses your thoughts precisely and briefly, is grammatically correct, has no spelling errors, and is clearly and attractively laid out.

No-one, no matter how talented, will produce even a short piece of writing which completely fulfils all four requirements at the first attempt. A Word Processor is the only tool available at present which allows a writer to modify his text without

constantly copying, erasing and/or redrafting his words. Using the power of the computer to store, manipulate and display data, the author can modify or correct his initial creation until he is completely satisfied it fulfils his needs.

All you require to transform a dull, error-ridden piece of prose into an attractive, concise, expressive document is to learn the Word Processor's few, simple commands.

DATABASE

THE next task an office needs to perform at regular intervals is filing. The use of steel cabinets or box files can never be completely satisfactory, because the item filed can only be retrieved from a single place.

Imagine you receive an order for 10 of your products from ABC Ltd on January 12, 1987. Using an ordinary filing cabinet does the order get filed under Customer, Product, Date of Order, or all three? Whatever you file it under there will be frequent occasions when people will look under the wrong heading to find it, like looking under Product when the order was in the Customer folder. The simple act of removing the order to look at it will increase the risk of mislaying it, or returning it to the wrong place, such as into a Date folder. You could of course file multiple copies but it will cost a fortune in copying costs, prove increasingly bulky as time passes and also treble the risk of misplacing the documents on return to the filing cabinet.

The benefits of a Database are legion. The most important are:

- A single record – the computer equivalent of a single document in the steel cabinet – may be found by reference to any or all of the categories above: Customer, Product or Date of Order.
- Studying the contents of any part of the file does not require removal of any record from the file, thus ensuring that data cannot be "lost".
- There is no reason why retrieval of the records need not be achieved using further classifications at no extra cost, such as Sales Representative responsible for the Order, Value of Order, Required Delivery Date and so on.
- Records in the file can be sorted in a wide variety of different orders, prior to listing on the printer or presenting on the screen.
- Information from database files can be merged into the word processor making multiple mailings more personal.

SPREADSHEET

OFFICES need to carry out a large number of calculations. Most of these are highly repetitive and yet subject to frequent and random changes. This is particularly true

when planning for the future, as in setting targets or organising budgets. Suppliers' prices, interest rates, discounts, sales volumes and so on are all unpredictable, which means that every permutation of possible events must be considered in order that a profit will be produced at the end of the year. Even in simpler circumstances calculations can be vital, such as: *How much can a cricket club afford to spend on new equipment if the membership rises to 35 and the fees are . . . "*

The Spreadsheet can be used in every case where tabular information needs computing. The format is a table of figures – called a matrix – and it can be as large or as small as your requirement demands. It may contain any number of rows, identified by numbers, and any number of columns, identified by letters. Once the overall size has been determined, each cell of the matrix – a cell is where a row and column intersect – can have entered into it a number (such as 3.47), text (such as PRICE/ITEM), or formula (such as A3 + A5).

When you have created your matrix the Spreadsheet is commanded to calculate the figures and the formulae will produce the required results. Recalculation with a completely different set of numbers in any cell takes just a matter of moments, since all that is needed is to change the numbers and request a recalculation. Even people with no programming experience and only the most elementary mathematical ability can quickly and easily set up sophisticated calculations.

GRAPHICS

WHILE the Spreadsheet is an exceptionally efficient way of handling large volumes of repetitive calculations, it does have one serious drawback. This is that the average person can suffer arithmetic indigestion when confronted by a large table of numbers. Individual figures are never a problem, and only very rarely does a list of figures present any difficulty. It is when trying to detect relationships and trends in the table that the interpretation of the results becomes at best a chore and at worst problematic.

It is for this reason that Mini Office II features a powerful Graphics module. It takes figures that have been typed in directly or which have been previously saved using the Spreadsheet, and redisplays them as a series of graphs or diagrams, in order that the situation demonstrated by the many calculations can be better understood.

COMMUNICATIONS

MORE and more companies are now realising the benefits of electronic mail and going "online" – linking their micro to the telephone and communicating directly

with other offices, not only in Britain but all round the world.

In the past, most computer communications packages were a jungle of mumbo-jumbo and barely understandable jargon. The Mini Office II Communications module gets rid of all that and, via a few simple keystroke commands, gets you online to the database of your choice – quickly, and with the minimum of fuss.

Electronic mail (Email) is one of the main reasons why most computer owners purchase a modem. The MicroLink Email system allows you, along with thousands of other modem-owners wherever they are in the UK, to dial up to the MicroLink mainframe computer by making a local telephone call. This flexibility, combined with low telephone costs, means that you can send an Email letter for less than the cost of a first class stamp.

By simply plugging your computer into a modem, and your modem into the telephone socket, the exciting world of online living opens up, and at a surprisingly low price. (There are more details of the types of modem and necessary interfaces in the Communication section of this manual.)

As well as the ability to send electronic mail to the thousands of other modem owners on Telecom Gold, MicroLink has several other features that place it ahead of other Email systems in the UK, such as the ability to send and receive telexes, telemessages and even send flowers using FloraLink. In addition to this, MicroLink also offers low-cost gateways into other networks, including one American database that allows you to chat, via your keyboard, with other computer owners all across America.

LABEL PRINTING

LABEL printing is ideally suited for computerisation, either the printing of individual text from database files, or multiple printing of labels bearing the same information. Both these can be performed simply and speedily by Mini Office II.

You can print as many labels as you require in one operation, and they can be of any shape or size.

RUNNING MINI OFFICE II

NOW that the six elements of Mini Office II have been introduced and you are familiar with the use you will be able to put them to, this handbook will explain each of them in detail.

The first stage is obviously getting Mini Office II up and running. This could not be easier.

● *Place the Mini Office II disc in the disc drive.*

- *Remove any cartridges (including Basic).*
- *Switch on the computer and the disc will load automatically.*
- *Select the required program from the menu. (On some of the packages you will then be asked to turn the disc over and press Return before the computer can load the next stage.)*

ABOUT THE MENUS

MINI OFFICE II is operated through the use of menus – lists of options from which you choose as follows:

- *Move the highlight to the option you wish to select by means of the cursor keys (you do not need to use the Control key).*
- *Make your selection by pressing the Return key.*

In some cases another menu will be presented before the action you requested is carried out. This menu selection procedure allows you to perform complex activities without needing to know anything about the internal workings of the computer. The options presented will be expressed in terms you are familiar with, such as PRINT TEXT or SAVE TEXT. Having made your choice, you will be informed on the screen when the task has been completed. If the option you require is irreversible, you will be asked to confirm your choice by pressing Y for YES or N for NO.

Menu selection is an extremely simple and safe way of performing your tasks. Therefore feel free to experiment. This is the quickest way to learn about the large number of facilities contained in the Mini Office II package. Rest assured that there is nothing you can do to harm the software. If you make an impossible request of Mini Office II, you will be told and no action will take place – other than a menu being presented to allow you to choose again.

At most times while you're using Mini Office II, pressing Escape will abort the current operation or take you back to the previous menu.

DISCS

WHEN using any of the six Mini Office II modules you will often want to perform various tasks upon files stored on a floppy disc. Each module has a menu option entitled DIRECTORY which allows you to view the contents of your discs and then perform such functions as Lock, Unlock, Rename and Erase. You may also Format a blank disc ready to store new data.

When you choose the DIRECTORY option you will see the prompt:

File spec? D1:* *

If you want a directory of all the files on the disc in drive one just press Return. Otherwise, use the backspace key to go back and alter **D1:*.*** accordingly. All of the usual drive specifiers and wildcard options are available.

Once you have done this, the directory display will appear showing you each filename and its length, plus an asterisk if the file is Locked (or write protected). If there are more files than will fit onto the screen, a prompt will ask you if you wish to continue viewing (Y or N). When all the files have been displayed (or if you type N at the More? prompt) you will see the disc utilities menu at the bottom of the screen:

Lock, Unlock, Erase, Drive #1
Format, Rename, DIR, ESCape

These operate as follows:

L Lock file. You will be prompted to enter a filename to lock, or hit Return to lock all files (via the wildcard given).

U Unlock file. You will be prompted to enter a filename to unlock, or hit Return to unlock all files (via the wildcard given).

E Erase file. You will be prompted to enter a filename to erase. There is no wildcard provided, so if you DO want to use a wildcard here, be very sure that you really do want to erase all of the files which will be effected.

D Change drive number. Pressing D cycles through the currently available drives (on a twin drive 130XE this would mean drives 1, 2 and 8). All other options will now default to the new drive.

F Format disc. This will format the disc in the current drive. Due to the potentially destructive nature of this command, you will be prompted:

Are you Sure? (Y/N)

R Rename file. You should enter the old name first, followed by a comma and the new name. Thus, to change TEMP.DOC to MYFILE.TXT you would enter:

D1:TEMP.DOC,MYFILE.TXT

I Re-display the directory. Use this after changing the drive number to display the new directory. You may also provide wildcards if you wish.

Esc Quit the directory option and return to the calling menu.

When you boot Mini Office II on an Atari 130XE a ram disc is automatically set up, and you can access this *disc* using **D8:**. This allows much quicker saving of data and can be used, for example, to pass information between the Spreadsheet and Graphics modules.

Remember that discs can become corrupted. If that happens you run the risk of losing all your data. There is a simple way of avoiding such disaster – *make back-up copies of your data discs regularly.* This excellent advice is often given, and rarely followed by those who have not yet suffered . . .

So for safety's sake, save your files at least twice and store the copies in separate places. Also note that when you save data it is a file and not a program that you have saved. Therefore it has to be loaded via the appropriate LOAD option from a Mini Office II menu. It will NOT work if you attempt to LOAD then RUN it.

PRINTERS

THE ATARI 1029 and Epson compatible printers are fully supported by Mini Office II except where stated. However most parallel printers should work adequately with the package except where special printer features are utilised, such as when printing screen dumps from the Graphics program.

It is assumed that any printer you wish to use will be connected onto the peripheral port on the side of the computer. RS232 printers are not acceptable, so if using a non-Atari printer, make sure it is of the Centronics type.

None of the programs send line feeds to the printer. This is of no importance for Atari printers, but you need to set the switches inside Epson and compatible printers to provide auto line feed. Refer to your printer manual for information on how to do this.

SPECIAL PRINTER FEATURES

THE various features that are supported by your printer, such as italic, enhanced or underlined characters, can be selected by sending the correct sequence of control codes to the printer. Unfortunately these codes are not standardised and vary between different makes of printer. The styles available on your printer will be listed in your printer manual along with the control codes required to select them. The Wordprocessor, Database, Spreadsheet and Label Printer modules allow you to send the codes directly to the printer giving easy access to the various features available.

Details of where and how to enter the codes are in individual instructions for each program, but it is sometimes difficult to work out the actual codes that select the particular feature you require. The following is a short explanation of the way codes are usually presented.

In Atari printer manuals the control codes are shown as CHR$(n). When you specify the code from within a Mini Office II module you must only enter the number – n – shown in the brackets.

For example, the code for enhanced printing is shown as CHR$(14). You would therefore enter 14 to select enhanced printing from a Mini Office II module.

For Epson and compatible printers the required codes are usually shown as a sequence of symbols rather than actual numbers. This means that you will need to look up the corresponding numeric code for each symbol by using an Ascii table usually included in your printer manual.

For example ESC 4 will select italic printing. By looking up the Ascii codes for the symbols ESC and 4 you will find that the numbers you will need to enter are 27 and 52.

While every effort is made to ensure the accuracy of the programs and manual, Database Software cannot accept responsibility for any imperfections in the programs or manual. Our policy is one of continuous improvement and we reserve the right to change any part of Mini Office II.

The communications program was written using ACTION!
ACTION! is a trademark of Action Computer Services. Portions of this program are ©1984, A.C.S.

MINI OFFICE II WORD PROCESSOR

INTRODUCTION

AFTER selecting the Word Processor you will be presented with the options shown below. These will allow you to choose the type of activity you wish the Word Processor to perform. Many of these options have supplementary menus within them to enable more detailed selections to be made.

EDIT TEXT: While using the Word Processor you will spend most time within this option, since this is where you type in or modify the text. When you wish to commence work on a completely new piece of text, whether a letter, article or other document, this is the option you will select first. You may also return to EDIT TEXT after completing another activity within the Word Processor, such as setting Tabs or merging together different pieces of text.

PREVIEW TEXT: You will be using a variety of word processing functions that will affect the final appearance of your document and you may have difficulty visualising what it will look like when you are ready to print it out. This option re-displays your document on the screen and allows you to see it as it will be printed. You can also enter a sub-menu where you can make changes that affect the final look of the document.

PRINT TEXT: Once you have finished writing your text, this option will allow you to either print it out directly, or go on to a lengthy sub-menu where you can decide on the exact layout of the final document, such as how many lines on a page, the numbering of pages, and so on. If you are not satisfied with the way it is printed you will find it is very easy to make whatever changes you require.

SEARCH & REPLACE: Anyone who has ever done any writing will recall the horror of finding a consistent spelling error throughout a long piece of text, such as writing McKay instead of MacKay in the minutes of a meeting. This option lets you make repeated corrections, without having to hunt for every single occurrence of the incorrect word. Alternatively you may merely wish to find every occurrence of a certain word. This is particularly useful when compiling an index and is achieved by pressing Return when you are prompted for the replace item.

All searching is done from the present cursor position to the end of the text.

DIRECTORY: Displays a list of the files, both text and programs and gives the other disc options described in the introduction.

SAVE TEXT: This stores text on disc without destroying the text in memory. It is strongly recommended that you save your text at regular intervals. This will ensure that if by an unfortunate circumstance you lose text from memory – such as if there is a power cut – there will always be a relatively recent version available for recovery. At worst only a few minutes work will have been lost.

When you select the Save Text option either from the menu or by just pressing Shift+Ctrl+W when you are in Edit mode you'll be given a choice as to how you save files: in Mini Office II format, as an Ascii file or the marked section only. The one you'll use almost always is the Mini Office II format. It simply saves text in a way that lets it be read back into Mini Office II with the LOAD TEXT option. When you reload files this way they appear exactly as you've typed them – with all your embedded commands and so on. This should suffice for most of your needs. The second option – saving it as a formatted Ascii file – has a rather more specialist use. This saves the file, but only the actual alphanumeric characters – the letters and numbers formatted as they would be printed – and not embedded commands. You would use an Ascii file for sending your text to another computer via a modem. Most communications packages, including Mini Office II, prefer straightforward Ascii files.

If you select to save the marked section only, only that part will be saved in the Mini Office II format, but if you save all the text in Mini Office II format all the values set on the menus will be saved.

Whichever option you choose you will be prompted for the filename. The prefix **D1:** is put on screen, but you can edit this for drive 2 or cassette if you need to.

LOAD TEXT: You use this option to load text that has been previously stored on disc into your micro's memory. This operation will overwrite any text already in memory. Before using it you should ensure you have finished all your current work and either printed it out or used the SAVE TEXT option.

MERGE TEXT: Text from the disc is put into the computer's memory alongside the text already there, to form a single piece. This can be particularly useful when working on long documents. A series of MERGE TEXT operations, plus some deletions and insertions, can produce lengthy texts very quickly, merely by patching together previously stored material. However the total length of the text you wish to merge must not be greater than the free memory available.

CLEAR TEXT: This option should only be used when you have completely finished working on your text and have either printed it out or saved it for future use. It

wipes the computer's memory clean, leaving the text space completely empty, ready for a new document. Use it with care.

40 CHARACTER MODE: This option determines the maximum number of characters that can appear on one line of your screen: 20 or 40. When in 40 character mode letters appear normal size but in 20 character mode they appear double size. The latter is very helpful for people whose sight is impaired. Unfortunately, the Atari cannot display upper and lower case letters in this mode so all characters are shown in upper case with lower case represented by characters in a different selected colour. Changing between modes is simple: You cycle round the different screen widths by repeatedly pressing Return.

MINI OFFICE II MENU: This is the only route out of the Word Processor and it returns you to the Mini Office II menu. It is used when you have completed all your letters or documents and wish to leave the program.

This section has been intended to give you a brief indication of the purpose of the various options available to you in the Mini Office II Word Processor. In the next section you will be given more detailed advice on how they can be used.

EDITING TEXT

IMMEDIATELY after you select EDIT TEXT the top of the screen will display the following header:

```
Time 00:02:40        0 Words   19284 Free
 Insert        Lower Case      Characters
```

This screen header, as it is known, is shown constantly while you're editing text.

TIME Shows the hours, minutes and seconds that have elapsed since entering the Edit mode.

nnnn Words Shows the number of words in the text so far entered.

nnnnn Free Characters Shows how much space is still available in the computer's memory for further text insertion. If EDIT TEXT is the first option chosen after entering the Word Processor this shows the maximum possible number of characters available in your computer. After LOAD TEXT, this figure will be reduced by the amount of text transferred from cassette or disc. As you type in your text you will see this value steadily decreasing.

Insert Text can be entered in two ways, or modes – Insert or Overwrite. We'll go into what this means later. Suffice it to say that this part of the header shows which mode we're in. On selecting EDIT TEXT for the first time you'll be in Insert mode.

Lower Case Shows whether text will appear in upper or lower case if it is typed without Shift being pressed. Upper case is selected by pressing Shift+Caps and you return to lower case by just pressing Caps. If the word Upper or lower is in Inverse Video, then your typing will appear in Inverse Video. This is toggled on and off using the usual Inverse Video key.

Below the header is a row of dots and one flashing dot. This is flashing directly above the cursor and helps you keep text aligned.

The start and end of the text are marked appropriately with the words start and end. Of course, if your text is of any significant length either or both of these may not be on screen at a particular time.

Once in EDIT MODE you can treat the micro as an electric typewriter: Any letter you press will appear at the cursor, which then moves on to the column to the right (or, if necessary, onto a new line) ready for the next letter.

You can move the cursor around the screen with the aid of the cursor keys. When you now type a letter it will appear at the new position of the cursor or at the end of the line if the cursor is beyond there – not at the end of the text, or where you left off typing.

There are also several other powerful features available from the keyboard. Every one of these will be explained in detail over the next few pages. The EMBEDDED COMMANDS will however be left until PRINT TEXT is described, since this group controls the printer operations.

The majority of these features are implemented with one of the following:

- Pressing Control and a specified key simultaneously.
- Pressing Shift and a specified key simultaneously.
- Pressing Shift, Control and a specified key simultaneously.

We'd better discuss some terminology. Words such as ***Control*** and ***Delete*** are shortened to ***Ctrl*** and ***Del*** and ***Inv*** is the ***Inverse Video*** key. Combinations of keys to be pressed simultaneously are joined with +. The appropriate arrows label the cursor keys and these are obtained by pressing control at the same time as the keys with the arrows marked on them.

So Shift+> means press the Shift and > keys together while Ctrl+[means press Control together with the [key.

For convenience, a help screen showing the most important keys can be called up while you are in edit mode by pressing Break (or Help on an XL or XE), but we'll now take a look at the features in detail. They fall naturally into groups so that's the way we'll consider them.

CHANGING SCREEN COLOURS: You can change the colour combination of the 40 column edit screen as follows:

Start	Steps through the character luminance.
Option	Steps through the background colours.
Select	Steps through the background luminance.

In 20 column mode you change the colours using:

Start	Steps through the lower case luminance.
Select	Steps through the Inverse video upper case luminance.
Option	Steps through the Inverse video upper case colour.
Start+Select	Steps through the background luminance.
Option+Start	Steps through the upper case luminance.
Start+Option+Select	Steps through the background colour.

Take care that any colours you select are not the same as the background colour or something may not show.

MODES: As we've mentioned, we can edit our text in either Insert or Overwrite mode. Insert mode causes the micro to automatically insert characters into the text as you type, making space for each new character by moving the characters at and after the cursor (if any) over to the right.

This is useful for entering a missing word into the middle of text: You move the cursor to the position where you want the word then type away. As you type, any following text moves over to accommodate it.

Overwrite mode is far more destructive. Except for Returns, whatever character is at the cursor gets written over or replaced by the new character. Unlike Insert Mode, the text already there does not conveniently shuffle out of the way. Once a Return is met, Overwrite mode operates in the same way as Insert would.

You are in either Insert or Overwrite mode. You alternate, or toggle, between them by pressing Shift+Ctrl+Insert. The mode you're currently in is displayed in the screen header.

MOVING WITHIN THE TEXT: As you type, you will need to move the cursor round the screen, in order to make the insertions, deletions and so on. When you wish to move over only a few lines or columns through the text, you can continue to use the cursor keys.

However there are ways of passing "long distances" through lengthy text by pressing Shift or Control in conjunction with other keys:

Shift+Ctrl+E Positions the cursor at the end of the text, no matter how long it is.

Shift+Ctrl+T Positions the cursor at the first line or beginning of the text. This position is sometimes called the top of the text.

Shift+Ctrl+ ↓ Shows the section of text immediately after that which is currently visible.

Shift+Ctrl+ ↑ Displays a section text that immediately precedes that currently being shown.

Shift+> Positions the cursor at the right hand edge – that is, the last column – of the line which the cursor is on or the end of the next line if the cursor is already at the end of the present one.

Shift+< Positions the cursor at the left hand edge – or first column – of the line which the cursor is on or the start of the previous one if the cursor is already at the start of the present one.

Shift+Ctrl+[Moves the cursor to the beginning of the previous word in the text.

Shift+Ctrl+] Moves the cursor to the start of the next word in the text.

Tab Moves the cursor five characters along the present line, or to the next line if it reaches the end of a line.

DELETING TEXT: Sometimes you will want to erase, or delete, characters, words or even whole lines from your text. The following should prove useful:

Del Deletes the character to the left of the cursor.

Ctrl+Del Deletes the character directly at the cursor.

Shift+Del Deletes the line of text at the cursor. To prevent text being accidentally deleted, the keys have to be pressed twice before text is lost.

Shift+Ctrl+Del Deletes the word at the cursor, removing the gaps this would produce in the text. If the cursor is on a carriage return the command is ignored.

REORGANISING TEXT: The following features will assist you in carrying out major re-structuring. They enable whole sections, or blocks of text to be re-organised:

Shift+Ctrl+D Deletes the marked block.

Shift+Ctrl+I Moves an exact copy of the marked block of text to where the cursor is positioned. The only caution needed is to ensure that the passage to be copied is not too large to fit in the free memory.

Shift+Ctrl+M Transfers or moves the marked block inserting it where the cursor

is positioned. The markers are removed.

Shift+Ctrl+N Counts the number of words in the marked block and displays the result in the status window.

Shift+Ctrl+O Changes all characters in a block to lower case.

Shift+Ctrl+U Changes all characters in a block to upper case.

Ctrl+[Places a block start symbol or marker ([) into the text. Before you can begin to manipulate a block, it has to be defined or marked by surrounding it with block start and end markers.

Ctrl+] Places a block end marker (]) into the text.

ADDITIONAL FEATURES: These either make life easier when spending lengthy periods at the micro, provided information or further develop the layout of the text:

Shift+8 Places a page number character ⟨α⟩ into the heading or footing. During printing each time the character is encountered it will be replaced by the current page number.

Shift+Ctrl+W Takes you directly to the save text option. Use this feature regularly to prevent accidental loss of your text in the case of a power cut or other mishap.

Shift+Ctrl+S Displays the typing speed in words per minute on the status line.

Shift+Inv Causes typed spaces to be displayed on the screen as "–" and carriage returns as "↵". Pressing Shift + Inv again returns them to normal.

Shift+Ctrl+Inv Causes carriage returns to be displayed as "↵". Pressing the same combination of keys again returns them to normal.

Shift+Tab Places the tab characters into the text. When previewing text or printing it out this character is converted into the appropriate number of spaces so that the following text appears at the column of the next tab setting.

Ctrl+Caps Converts the character beneath the cursor from lower to upper case, or vice versa, then moves the cursor one column to the right.

Inverse Space Places a hard space into the text. Inserting this character between words will result in the words being tied together and so preventing them being split over two lines. The hard spaces will appear as a normal space during printing.

Shift+Return Gives an automatic paragraph. It inserts two returns, a CP5 embedded command (to start a new page if less than five lines are

left) and five spaces into the text.

Shift+Ctrl+ Return Gives an automatic paragraph but only inserts two returns and five spaces into the text.

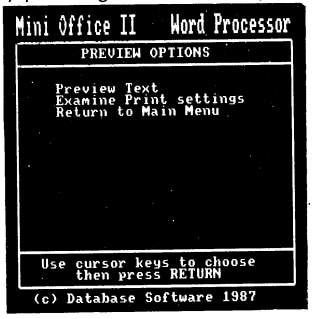
Escape Pressing this key when in Edit Text will return you to the Word Processor menu. The text you've entered won't be lost. You can return to it by choosing EDIT TEXT once more.

PREVIEWING TEXT

AS YOU prepare your text you may want to see how it will look when you print it. Selecting PREVIEW TEXT from the word processor menu will present you with a menu which will give you three further options:

PREVIEW TEXT: This allows you to select the speed that you will view your text (1 is slow up to 9, fast) and then scrolls the text on the screen formatted as it would print out. You may alter the speed at any time by pressing a number, stop and start the scrolling with space and return to the preview menu by pressing Escape.

You should note that Preview text requires 4096 bytes of memory, so if the number of free characters is below this, the option is not available.



EXAMINE PRINT SETTINGS: As preview displays the text in the way it would be printed, the print setting can be altered by using this option as you are previewing your work. The settings are fully described in the PRINTING TEXT section that follows.

RETURN TO MAIN MENU: This takes you back to the Word Processor menu.

PRINTING TEXT

ONCE the text has been prepared you will want to print it out. Selecting PRINT TEXT from the Word Processor menu will present you with a menu which will give you three further options:

PRINT TEXT: This sends the text to the printer while retaining it in memory. You will be asked how many copies you require. Press Return and the computer will

assume you only require one copy. If you want more than one enter the number you require. Any FL embedded commands will cause fields from the database to be printed.

EXAMINE PRINT SETTINGS: Before you start printing out the text you may need to change some of the instructions you have given the computer, such as the number of lines on a page, the positioning of the titles, the numbering of the pages and so on. This option allows you to examine and change these by using the cursor keys to work through this three-page menu until you find the one you wish to alter. To make a change you either key in the relevant number or press Return in order to alternate, or toggle, between YES and NO. If you are using single sheet stationery, set the INSERT PAPER message to YES at the Command Settings menu. Between sheets, printing will stop, waiting for you to press Return after you have inserted more paper.

These display options are presented in a sequence of three pages:

● The first page of options allows you to decide how your printer will output your text. Some of the instructions that follow may not work on certain printers. Your printer manual should tell you which are possible.

More options: Takes you to the next page of the Display Options menu.

Insert Paper prompt: When using single sheet stationery, toggling YES will instruct your computer to display an INSERT PAPER message on the screen and stop the printer at the end of each page.

Justification: This instructs the formatter to justify the printed text along both the left-hand and right-hand edges of the paper. Choosing NO will give the text a ragged right edge, while YES will give an appearance similar to a page of this manual.

Double height print: Only works on Epson compatible printers. Remember to adjust the number of lines per page, otherwise your printed text will probably extend across the perforations on the paper.

Double width print: Only works on the Epson compatible printers. Remember to adjust the number of characters per line otherwise your lines of text will probably extend onto a second print line.

Set print code strings: Allows you to set up lists of numbers that can be sent to

your printer by entering one character codes into your text. For example, if on your printer italic is selected by sending the sequence 27,52 move the cursor on the print code strings screen to, say, the third line and enter the sequence. Then, all you have to do to start italic printing is press Ctrl+3 when you are in Edit mode. Note that at the top of this screen is a string labelled I. This is the initialisation code that is sent to your printer before printing commences. You may tailor it to suit your own needs such as reset the printer, select fonts, define the pound sign and so on.

Return to previous menu: Takes you back to the last menu you used.

● The second page of options allows you to determine the general layout of the printed document. In every case the value shown in the last column is the one that will be obeyed by your printer. What you see when you first look at this screen are the default values – the ones that will be used if you do not change anything. The numbers in brackets show the possible range.

More options: Takes you to the next page of the Display Options menu.

First page number: Shows the number that will appear on the first page of your document as you print it out. It can be any figure between **1** and **250**.

Lines per page Shows the number of actual text lines that will be printed on each page. It does not include the number of blank lines that will be left at the top and bottom of each page. It can be any figure between ***10*** and ***99***.

Characters/line: Shows the maximum number of characters – including spaces between words – that will be printed on a line. Note that while you may request a number greater than 80 you must not use one that is wider than your printer can handle, otherwise the end of each line will be placed on the following line of the document. It can be any figure between ***10*** and ***99***.

Line spacing: Shows the number of feeds that will be issued from the computer to the printer at the end of each line. The effect of a line feed is to start printing on the line below. So for double spacing simply change 1 to 2. You can choose any figure between ***1*** and ***10***.

Left Margin: Shows the number of spaces in from the left hand edge of the paper you wish the printing to start – useful, for instance, if you intend to punch

holes in the document for placing in a ring binder. It can be any figure between ***0*** and ***150***.

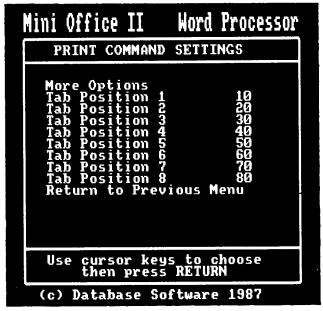
Top margin: Shows the number of blank lines that will be left between the first line of text and the top of the sheet of paper – or its perforations if it is fan-fold paper. It can be any figure between ***0*** and ***50***.

Bottom margin: Shows the number of blank lines to be left between the last line of the text and the bottom of the sheet of paper. It can be any figure between ***0*** and ***50***.

Heading offset: Shows the line number from the top of the page on which the text heading will appear. It can be any figure between ***0*** and ***50***.

Footing offset: Shows the line number within the bottom space on which the page number will appear. It can be any figure between ***0*** and ***50***.

Return to previous menu: Takes you back to the last menu you used.



●The final page of options defines the Tab settings. You put tabs in the text by pressing **Shift+Tab** and there are eight in all. You can change them to any figure you like up to a maximum equal to the number of characters per line providing those you choose increase in value as you progress from position 1 to 8.

EPSON COMPATIBLE PRINTERS

THE EPSON standard is about the nearest the computer industry has come to devising a common standard for printers. If your printer is an Epson or Epson compatible then all the functions listed in the last section, as well as the embedded commands that follow, should function satisfactorily. If you have a different printer you should still be able to perform most functions by using the embedded commands or by sending the correct printer codes using code strings set in the Print command settings menu. During the printing operation, the text you have produced, together with the instructions given by the Print settings or by embedded commands are sent to the printer via the built-in formatter. While printing is under way, if you notice that for any reason the format is not as you intended you can press Escape and the printing will stop, returning you to the Print Text menu.

EMBEDDED COMMANDS AND CONTROLS

EMBEDDED commands are instructions to the printer that you type in along with your ordinary text in order, for instance, to start a new page. So that the Word Processor does not confuse these instructions with the text itself they are highlighted in Inverse Video. These embedded commands won't appear in the final printing – but they will have a marked effect on it.

Embedded commands are entered by pressing the Inverse Video key to start and the same key again to end the command. The command should then be followed by a space to mark the end of the command. Note that text entered in Inverse Video and not recognised as an embedded command will be treated as usual.

All embedded commands consist of two-letter codes, which may be followed by a number ***(n)*** to indicate their value. Where a default value exists, this is the number that will be shown. The controls are single Inverse Video characters within the text obtained by pressing Ctrl+ a key. They do a similar task to embedded commands and are described with them.

● *In the following descriptions of embedded commands and controls* ***MO*** *indicates that a Menu Option also exists for this function.*

LINE COMMANDS: These determine the positioning of the characters on the line, such as how many to a line, the setting of margins, indentation and so on. If a value is needed by a command and this is omitted, then the value is taken to be the menu setting. For example **LM** will set the left margin to position five if the setting on the menu is 5.

LM*n* Sets the position of the Left Margin. It can be any figure between **0** and **150**. Text can also be indented by increasing the size of the left margin. *MO*

CJ Forces text to be **C**entre **J**ustified, that is printed in the centre of the page. It remains active until another justification command is encountered. To centre one line of the text press **Ctrl+C** anywhere on the line to put the centre control code on the line.

LJ Gives a Ragged Right margin – the normal typewriter style – where the text up to the next justification command is **L**eft **J**ustified. One line can be left justified by pressing **Ctrl+L** anywhere on the line to insert the left control code.

FJ **F**ully **J**ustifies the text. Spaces are inserted between words

where necessary to align both the left and right hand margins. *MO*

RJ Indents the text lines so it aligns along the Right hand margin. This is the equivalent of a **R**ight **J**ustification of the text and remains active until the next justification command. One line of text can be right justified by pressing **Ctrl+R** anywhere on the line.

PAPER HANDLING COMMANDS: These give the formatter instructions on matters such as length, width, line spacing and so on. They are particularly useful where instructions that have been set in the menu have to be temporarily overridden for a short portion of text.

LL*n* Defines the **L**ine **L**ength – the maximum number of characters allowed on a line. It can be any figure between **10** and **200**. *MO*

CP*n* Tells the computer to **C**ommence a new **P**age only if fewer than **n** lines of text remain. A new page can be forced by putting the page symbol in your text. To do this press **Ctrl+P**.

LS*n* Stands for **L**ine **S**pacing. Tells the printer how many spaces to leave between the lines. Can be any figure between **1** and **10**. *MO*

PL*n* Sets the **P**age **L**ength. Can be any figure between **10** and **200**. The default of **56** assumes standard sized stationery. *MO*

PAGING COMMANDS: These govern the layout of each page, including instructions like headings and page numbering.

TM*n* Sets the **T**op **M**argin – defines the number of blank lines to be left at the top of the page before the first printed line. It can be any figure between **0** and **50**. This area may contain a header. *MO*

BM*n* Sets the **B**ottom **M**argin – defines the number of blank lines to be left at the foot of the page after the last printed line. It can be any figure between **0** and **50**. This area may contain a footer. *MO*

DH **D**efines the **H**eading, which will go at the top of every page and will consist of up to one line of characters in Inverse Video following the command. **DH** must be at the start of the text if the heading is to appear on the first page of the document.

DF **D**efines the **F**ooting, which will go at the foot of every page and will consist of up to one line of characters in Inverse Video following the command.

HO*n* Sets the **H**eading **O**ffset – the number of the line within the top space on which the heading will be placed. If the value is outside the range of the top space the heading will not be printed. *MO*

FO*n* Sets the **F**ooting **O**ffset – the number of the line within the bottom space on which the footing will be located. If the value is outside the range of the bottom space the footing will not be printed. *MO*

PN*n* Sets the current **P**age **N**umber to the figure ***n***. It can be any figure between ***0*** and ***250***. The page number is printed out each time and @ is encountered in the footing and heading.

NCc Sets the page **N**umber **C**haracter. If you want to use @ in your text, you can select another character to be used to indicate page number. For example, after the command **NC#**, the page number will be printed each time # is encountered.

To give an example of how some of these embedded commands are used, a typical page format could be as follows:

TM2 BM2 LM5 HO5 DHCHAPTER ONE

OTHER FORMATTING COMMANDS: These permit further "fine tuning" of the document's final appearance and generally make life easier while printing is taking place.

GFD:*AAAA* **G**ets the **F**ile named ***AAAA*** from drive 1. The complete file will be printed and all the embedded commands it contains will be handled as normal. When that file has been output printing returns to the text in the computer's memory. This is useful in the production of extremely long documents, such as complete books. You can create master text which is little more than a series of **GF** commands. When this passes through the formatter a lengthy stream of pre-created files will be called and printed, with page numbering running in sequence throughout, irrespective of the number of pages this eventually produces. **GF** will not work with a file already containing a

GF command.

TFD:*AAAA* Transfers the **F**ile ***AAAA*** from disc to your printer. It works the same as **GF** except that embedded commands are ignored. This command can be used for any file that is on disc and is particularly useful for graphic dumps saved as described in the Graphics instructions.

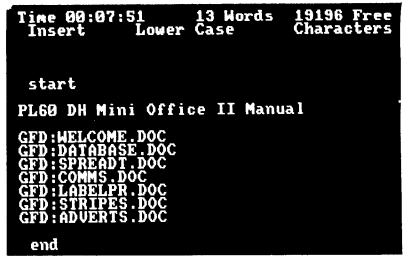
FLn When printing out, this inserts in the text the contents of **F**ie**L**d **n** from the current record of a Database file. If there is an FL in your file you will be prompted for the name of the Database file. If you give a name that does not exist any FLs in your text will be ignored, but if a Database file is loaded each record is accessed in turn and the relevant fields printed.

USING THE GET FILE COMMANDS

SOMETIMES you may wish to create a document that is longer than the available memory. Obviously, you can spread it over several files but printing would involve a lot of file loading and any embedded formatting commands would not be passed between files. The **GF** and **TF** commands solve this problem.

If you have two files, *file1* and *file2*, on drive 1 then all you have to do is end the first file with the command **GFD1:file2**. When this command is encountered during printing or previewing, *file2* will be treated as if it were part of *file1*. Any embedded commands issued remain in force ensuring that page breaks, numbering and so on are correct. If *file2* is not in Mini Office II format, the procedure is the same but use **TF**.

If you want to link more than two files, you must note that you cannot put a **GF** command in a file that is called by a **GF** command. In practice, this means that all **GF** commands will appear in the first file. If you are preparing a long document, such as a manual, the first file may contain only embedded commands with no actual text. An example of such a file is shown, and the result of printing this file would be that a manual would be printed out with the parameters as defined in this first file, and each file would follow from the last. Multiple copies are automatically handled if you request them.



MAIL MERGING

MAIL merging is the general name given to the technique of using information from a database to personalise repeated printings of a word processor file. It's used most often to include individual names and addresses in a standard letter, hence the name. You're merging information from a database into your mail.

To use database files from the Word Processor, you need to use the embedded command **FL**. If your text contains an **FL**, as you print or preview it, you will be asked for the name of the database file that you wish to use. **FL** is an abbreviation of **FieLd** and is followed by the number of the field whose contents you want printing at that point. The terms field and record are explained in the Database instructions.

So, to do a mail merge, you use **FL** several times throughout the text to get individual items of data. There will be pauses as the database file is accessed.

You then ask for several copies of the letter. As the first is printed, the first record of the database you specified is used. **FL1** will print the first field of the first record, **FL2** the second field and so on. When the letter has printed, provided you've remembered to ask for more than one copy of it, a second will be printed. This time the **FL** commands will print the appropriate information from the second record.

The best way to learn about the mail merge feature is to try it. First, you must create a file using the Database. The following instructions assume that you have read the Database instructions and created the example file MEMBERS described.

Let's start by printing a list of the surnames and initials. Just enter the Edit mode of the Word Processor and type the following in Inverse Video (ending with Return):

FL1 FL2

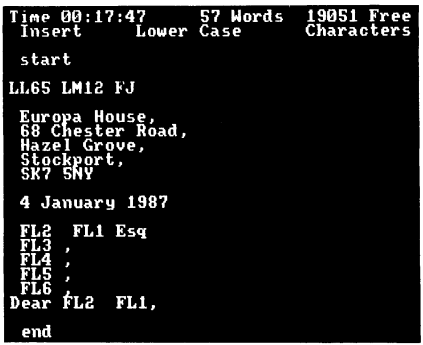
Press Escape to return to the Word Processor menu. Make sure you're now using the disc containing the file of names, then select PRINT TEXT.

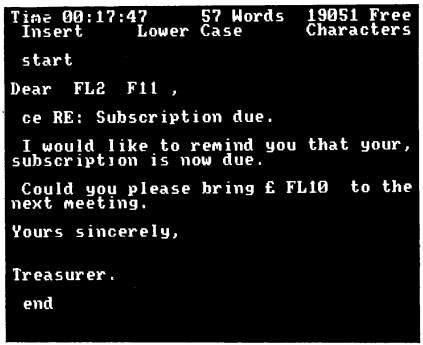
This takes you to the Print Options menu. Press Return to select PRINT TEXT. You will then be asked how many copies you require. Suppose you have 30 names in your list. Answer 30 to this question to print all the records. Printing will stop when the number requested is reached, or the database file is exhausted. If you are unsure how many records are in your file and want them all printing, just enter any large number such as 500.

Now that you have discovered how easy it is to print a list of names from Database files using the Word Processor, going on to printing letters to all the people in your file is a very small step.

Type in the letter as shown on the two screens on the following page. Remember that LL65 and the like are embedded commands which we are using to produce a

tidy letter. To get these you have to press Inv before and after the command. It will appear highlighted on your screen.





Once you have typed in your letter, save it, and preview it to check that the layout is correct. You should note that the Database file is only fully read during printing, so as you preview you will see only the first record. You are now ready to print out several copies by following the same steps as you did to print out the list of names.

Don't let the fact that this feature of the Word Processor is called mail merge fool you into thinking that just because you have no letters to send you can't use it. It is a far more powerful printout option for the Database than the in-built one, allowing neat printouts even on pre-printed forms such as invoices. Teachers can use it to produce personalised worksheets for their pupils and hotels can use it to print out several different standard menus. The various print size options of Mini Office II are also useful for these applications.

Mini Office II Database

INTRODUCTION

THE Mini Office II Database is designed to create and manage databases, which are simply collections of information (data) about a subject. Examples are mailing lists, inventories and library catalogues.

Cards in a box-file constitute a simple database. They are often arranged in some kind of order – for instance cards containing names and addresses might be arranged alphabetically by surname.

A databse *file* is the equivalent of the box-file holding the cards, and it has a name – whatever you want to call it – like MEMBERS or PRODUCTS.

Each "card" in the file is called a *record,* and each record is further divided into *fields.* A field is a slot reserved in the record for a particular item of information, just as it might be on a card. For example, the first line of each card might be reserved for a surname – the Surname field.

In the Database you can gave up to twenty fields, and they are numbered to indicate their position in the record. So the Surname field might be field 1.

Fields also have a *title* (the title of the Surname field could be SURNAME, NAME, or whatever) and a *size.* The size is the maximum number of characters you think might be written into the field, and it sets aside a certain amount of the computer's memory.

Finally, fields have a type, which tells the Database how the field is to be used:

Alpha fields are suitable for names, addresses, telephone numbers, product descriptions and so forth. They can contain any of the alphabetic characters (A to Z in upper or lower case), spaces and punctuation marks. They can also contain the numbers 0 to 9, but alpha fields cannot be used for calculations.

Decimal fields contain only numbers and the decimal point. Up to seven decimal places are allowed. Decimal fields can be used for calculations, and are useful for pounds and pence, dollars and cents, and so on.

Integer fields contain whole numbers with no decimal places, and can be used for calculations. So NUMBER OF PRODUCTS would be a suitable integer field. Because they can be used for calculations, decimal and integer fields are known as *numeric* fields.

Date fields contain six digits – two for the day, two for the month and two for the year, in that order, separated by a / sign. So 6th December 1987 would be 06/12/87. A convenient way of referring to this format is DD/MM/YY (Day, Month, Year).

Formula fields are a special type of field. They allow all numeric fields to be linked

by a formula. For example, **1.15*(F3+(F4*SIN(F5)))** in a formula field will make it display the result of this calculation. (Formula fields are discussed in more detail later.)

Designing a record gives the file its *structure,* and the process involves some planning. Once you have put information into a file, you will not be able to alter its basic structure.

You may think this makes a database less flexible than real cards in a box, but once the structure has been set up satisfactorily, electronic wizardry takes over. An ordinary telephone directory is supremely effective if you know the name of the person whose phone number you want to find. But try searching for a name if you only know the phone number! A database will handle things like that with ease.

GETTING STARTED

THE best way to get a feel for the Database is to work your way step by step through a simple example.

First a note about terminology: The word **select** throughout the Database documentation means select with the cursor keys and press Return to confirm your choice.

To start, load Mini Office II's Database. Note that you can use Escape at any time to move back through the Database menus. Put a blank formated disc in the disc drive. This will be used for storing your file.

Creating and using a Database file is a three-step process:

- First, you define the structure and create the database file.
- Next you enter data.
- Then you can retrieve and manipulate the data in a variety of ways. Let's look at each of these stages in detail . . .

DEFINING THE FILE STRUCTURE

IT IS extremely important to plan out in advance the layout of your records. When doing this yourself there is no substitute for old-fashioned pen and paper. In this step-by-step guide, however, it will be done for you.

EDIT STRUCTURE on the main menu means start a new database or amend the

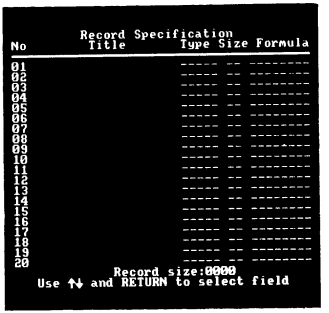
structure of an existing one (but only by giving fields new titles or altering the formulae). It is the first step in creating a Database file. Select it now.

The screen displays a template headed **Record Specification** with various columns and some other information. The far-left column shows the field numbers. Use the cursor keys to move between fields.

Press Return to select a field. A new cursor will appear in the **Title** column, and the message on the last line of the screen will read:

Enter field title

Type in the word **SURNAME** (in upper or lower case or a mixture of the two) and press Return. If you make a mistake, use the left and right cursor keys and the Delete key for editing. Pressing Ctrl+Insert will open up space for extra letters.



Once you have pressed Return the heading of the **Type** column is highlighted. Use the up and down cursor keys and watch the field type change. When the cursor enters the **Type** column the ----- (undefined) changes to Alpha and you can cycle through the various types available. Select field 1 as **Alpha**.

The cursor now moves to the **Size** column. If you simply press Return, the size of the field will be 10 characters, but you can enter any size upto a maximum of 60. Fifteen characters is a suitable size for a surname, so enter 15. If you make a mistake, edit it as before.

Next press Return. Note that the **Formula** column has been skipped because form was not selected as the field type. The highlight cursor has now moved to 02. If you are not happy with field 1, you can re-select it. (Remember, select means choose an option via the cursor keys and Return.) The last-but-one line of the screen shows the record size so far.

Field 2 will be for the initials associated with the surname – another alpha field. Make its title INITIALS, its type alpha with a size of 3 (enter 03).

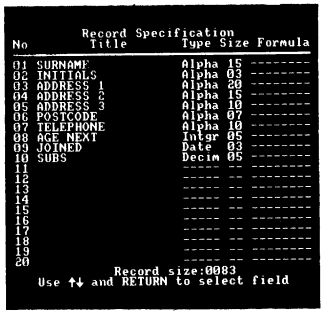
Define field 3 as ADDRESS 1 (the first line of the address), field 4 as ADDRESS 2 and field 5 as ADDRESS 3. All are alpha fields with sizes of 20, 15 and 10 respectively.

Field 6 is POSTCODE with a size of 7; and field 7 is TELEPHONE, with a size of 10. Again, both are alpha fields. Field 8 will be "Age Next Birthday" – call it AGE NEXT

for short. Although field titles can be up to nineteen characters long, only the first 11 will be shown on the screen when you display a record in Edit Data.

AGE NEXT will be an integer field, so select **Intgr.** The size will automatically be set to 5, but you can actually use more digits when you enter data. The 5 refers to the space allocated to store the number in the computer's memory. Note: You can't use an integer field to enter telephone numbers because any leading zeros will be lost. Use an alpha field as above.

Field 9 will be "Date Joined". Call it JOINED and select **Date** as the type. It will automatically be set to a size of 3. Field 10 will be the "Subscription" field. Call it SUBS and select **Decim** (for Decimal) as the type. It will be set to a size of 5, but again the limit is not five digits. This completes the definition of the file structure.



If you have been experimenting a little on your own, you may have some unwanted fields. The best way to get rid of them is to move the cursor to the type column on the field you want to remove and press Escape.

Ensure you have a formatted disc ready in the disc drive to receive the newly created structure. Press Escape to return to the Database menu and select Disc File menu.

Then select Create Database and reply **Y** to the *Are you sure?* prompt. Then enter the drive number where your data disc is situated.

The maximum number of records will be displayed and you will be invited to choose the number that you wish to allocate to this particular database. For now, enter 100. You can, if necessary, extend the number of records later. You will then be asked to *Input database name:* So type **MEMBERS** then Return. The file will be saved and you will return to the Disc File menu. Selecting DIRECTORY allows you to check that the file has been created. Notice that the file will have a **.DAT** extender. All Database files created have this extender and this must be remembered when using database files within other modules.

If you wish, you can stop at this point, close MEMBERS, turn off the machine and re-open MEMBERS later. Alternatively, you can enter data right away.

ENTERING DATA

IF YOU have turned off the machine since creating the database select Open

Database on the Disc File menu. Answer the *Are you sure?* prompt with **Y** and then enter the drive number where your data disc is resident. (If you are using a single drive system, replace the Mini Office II disc with your data disc BEFORE entering Y).

A list of database files resident on that disc will be displayed on your screen. You can move between them by using the cursor keys and pressing Return when the required file is highlighted. As we only have one file at present, press Return to select it.

Rejoin the main menu via Escape and select EDIT DATA. The top line of the new screen will then be shown.

Used is the number of records used so far, **Free** the number unused and **Record** shows the currently displayed record number.

Below the top line, the screen is divided into two, with the field titles on the left, and space for entering data on the right (at present showing **No records defined** – that is, none entered).

At the bottom of the screen are two lines of command prompts. The first command to use is **N**ew – create a new record. Press **N** now. Opposite AGE NEXT will appear a 0, DATE JOINED will show 01/01/00 and SUBS will have 0.0 as its data entry. These pre-defined entries reflect the field type – Integer for AGE, Date for Date Joined and Decim for SUBS.

The first field (SURNAME) will be highlighted. Type in a surname. The cursor will stop moving if you try to enter more characters than the length of the field allows. If you make a mistake, edit the text as before and finally press Return.

The Initials field will now be highlighted. Enter a couple of initials and continue entering data up to and including TELEPHONE.

AGE NEXT is an integer field. Enter a number, editing it in the usual way if you make a mistake. Try entering a letter instead of a number – it will not be accepted.

Next is JOINED. Enter a date as DD/MM/YY (no need to type in the / signs). Only valid dates will be accepted – try entering a nonsensical one and you'll find that the cursor will be repositioned at the section of the date that is wrong.

In the final field, SUBS, enter an amount in pounds and pence separated by a dot, say 3.55. Do not use a pound sign – it will not be accepted. If no decimal point or pence are entered, 0 will appear in the decimal places.

If you want to change something in any field, highlight it with the cursor keys and edit the data. When you are happy with the record, press Escape and all highlighting will disappear. Then press **N** again for a new record, Record 2, and enter data in

the same way. Complete about half a dozen records.

Now let's look at how to end a session of entering data. Press Escape when nothing is highlighted, and at the main menu select Disc File menu then Close Database. Answer **Y** to the Are You Sure prompt.

That completes data entry: As you've just tried closing the file, re-open it so you can carry straight on.

HANDLING THE RECORDS.

SELECT EDIT DATA on the main menu (after re-opening the file) and look at the bottom line of the screen. You have already used Escape and **N**ew. Now for the other options.

Moving through the file: To browse through the records, use the left and right cursor keys. Quick movement through the records can be obtained by using the four cursor keys in conjunction with Shift and Control as follows:

←	View previous record.
→	View next record.
↑	View last record.
↓	View first record.
Shift+→	Moves up 10 records.
Shift+←	Moves down 10 records.
Shift+ ↑	Moves up 100 records.
Shift+ ↓	Moves down 100 records.
Ctrl+→	Moves up to the next marked record.
Ctrl+←	Moves down to the next marked record.

The **G**oto command allows you to jump to a record. Press **G** and enter (say) **3** followed by Return. You will go straight to Record 3.

Amending records: The **E**dit option allows you to modify data. Choose a record, press **E**, then use the cursor keys to move between fields and change some of the data using the same editing procedures as before. Then press Escape.

Deleting records: To try out this function, go to Record 1 and press **D**. After the *Are you sure?* message answer **Y**. You will see that Record 1 has disappeared, and Record 2 has become Record 1. Try deleting Record 4 – subsequent record numbers will drop by one.

Marking records: An important feature of the Database is that it allows you to select records and then create a sub-database out of them. This can be saved as a separate file with its own filename.

To try this, go to any record and press **M** for **M**arker. An asterisk will appear to the right of the record number. To unmark the record, press **M** again. Mark a few records in this way. To jump between marked records, use Control with the left and right arrow keys (if no records are marked you will go to the first or the last record in the file).

To save the marked records, go back to the main menu by pressing Escape. Close the database by selecting Close Database from the Disc File menu. Once the file has closed, select Load Disc Utilities from the same menu and Insert your Mini Office II disc when prompted. When the utilities have loaded, replace the Mini Office II disc with the disc containing your **MEMBERS** file. Select Copy Marked Records and answer the prompts. When asked to *Input new file name,* enter **MEMSUB,** press Return and answer the destination drive prompt. If you are using a single drive system, you will be asked if you want to save the new file to the same disc. Answer **Y**.

It is important to realise that you have not split the main database into two – you have *copied* the marked records to a new file, and they are still there in the main database. However they have not been saved as marked records in the sub-database.

Now re-load the Database, then use the Open Database option to prepare the sub-database for use. Examine the records, which will now have a new set of numbers.

Printing records: Try printing a record displayed on the screen with the **P**rint option. The record number and its data will be sent to the printer. If a printer is not attached, or not working, nothing will happen. Pressing Escape will abandon the print command.

This option of EDIT DATA is a quick way of sending a single record to the printer. A more powerful print feature is explained in the PRINT section, and further ways of printing from the Database will also be found in the documentation for Mail Merging and the Label Printer.

That completes the tutorial introduction to the Database. Hopefully you will have found it straight forward However it has taught you only a part of what the Database will do. The next section describes its many other features. Work your way through them, applying them to the membership database and any other practice databases you create.

DATABASE FEATURES

HAVING mastered the basics of creating a Database file, we'll take a look at the options on the main menu in more detail and at some we haven't yet met.

EDIT DATA

YOU USE this option to scan through records, change them and add more. A full explanation of the features and keys to use has been given in the tutorial introduction.

DISC FILES

SELECTING this option takes you to a menu that allows you to create and organise your disc files. There are six options:

CREATE DATABASE: Writes out your newly defined database structure to disc. Before using this option you must define the structure of your database. If a file is already open, it will be closed and its record structure preserved for your new database.

OPEN DATABASE: Reads in a previously created database structure allowing you to access the records in that file.

CLOSE DATABASE: Saves all the changes that you have made to your database. You must do this as a last operation before leaving the program and will be prompted to do so if you forget. The structure will also be cleared.

DIRECTORY: Displays a list of the files, both text and programs, and allows access to the other disc utilities described in the introduction.

LOAD DISC UTILITIES: Loads a program that will allow you to copy, merge and extend your database files. You will then be presented with seven options:

Copy database. This option allows you to make a copy of your database. Select the option and a directory listing of files on your selected drive will appear.

The required file can be selected by using the cursor keys and Return. You can copy to the same disc, (with a different filename), or to a different disc. (with either the same filename or with a different one). Just follow the on screen prompts.

Copy marked records. Using this option you can copy just the marked records

rather than the whole database. The result is that you will have created a sub-file.

Extend database. When we created our new database, we gave it a maximum of 100 records. This option allows you to create a new file with added records and the information from the old one copied to it. The maximum number of records is governed only by the available space on your disc. When you select this option the number of extra records available is shown and you just follow on screen prompts.

Merge databases. With this utility, you can merge two databases into one. You must ensure that you have enough space on the destination disc (the one you are putting the two databases together on) to take the merged file.

Directory. This gives you exactly the same options as if you select it from the Database menu.

Load database. Loads the Database program back into memory.

Mini Office II menu. Takes you back to the main Mini Office II menu.

DATABASE MENU: Takes you back to the main Database menu.

PRINT

To print out your database, select PRINT MENU from the Database menu. The selections available allow you to configure your printouts to your own requirements.

PRINT ALL RECORDS: This option prints the records in the form you have defined using the other options on this menu. If you get a *Device Timeout* error, check your printer is correctly connected and switched on, press any key and try again.

PRINT MARKED RECORDS: Again prints the records, but this time only the marked ones.

SELECT FIELDS: This allows you to select which fields and parts of fields that will be printed. Use the cursor keys to select the field and press Return so that the cursor moves to the right hand column. The number in that column can then be adjusted to the maximum length of the part of the field you want printing (enter 0 if you don't want the field printing at all).

HORIZONTAL/VERTICAL: Use Return to toggle between **H**orizontal and **V**ertical. **H**

will print the records across the page and **V** will print them one underneath each other.

TITLES: Use Return to toggle between **Yes** and **No**. **Yes** will print the field title followed by the data. **No** will print just the record data.

PAUSE BETWEEN RECORDS: **Yes** (toggled using Return) will cause the printer to wait until Return is pressed before printing the next record.

FORM FEED AFTER RECORD: This applies only to the Vertical option. A Yes (toggled using Return) will advance the paper to a new page after each record.

PRINTER TYPE: If you want to view your database on the screen, use this option to toggle between printer and screen.

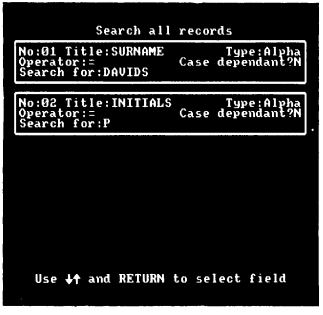
LINES PER PAGE: When you use paper with a different number of lines per page to the 66 that is set, you can use this option to change the number.

PRINTER CODES: This option allows you to set up to four sets of five codes that will be sent to your printer as you start printing.

DATABASE MENU: When you have printed your database, use this option to return to the Database menu.

SEARCH DATA

THIS option allows you to search for a particular record set from your database. You will first be presented with the Search menu where you must select the operations to be performed on all matched records. Apart from the search options, the selections are YES/NO and you are presented with the following options which give the described result with the toggle set to YES:



SEARCH ALL RECORDS: Selecting this option takes you to the search selection screen where **No, Title** and **Type** are highlighted in a *Field search box*. By using the up and down cursor keys, select the field that you wish to search. Press Return to accept the displayed field.

Operator is the next option to be highlighted. By pressing ↑ and ↓ you cycle

through the type of search that you will do and the options are:

= means Equal to. A numeric field can be searched for all records EQUAL TO, say, 5.0 in that field, or a date of birth field for people born on a given date. A case-dependant search in an alpha string for "Jo" will only score a "hit" if the field contains "Jo" and nothing else.

<> means Does Not Equal. A Surname field could be searched for records in which the surname is not Jones, or an Expenditure field for records in which the expenditure is not 5.0.

> means Greater Than. An Expenditure field could be searched for expenditure greater than 5.0 or a Date of Birth field for dates later than 31/12/70. Greater Than in an alpha field means higher up the alphabet – B is greater than A. Lower case letter are greater than upper case letters, and most punctuation marks and the numerals 0 to 9 are not as great as the letter of the alphabet.

< means Less Than.

>= means Greater Than Or Equal To.

<= means Less Than or Equal To.

When you have selected the operator you require press Return. If the field is Alpha the message *Case Dependent?* will appear on your screen. If you answer **N** to this prompt, any distinction between upper and lower case letters will be ignored. So, in a search for Jones if you answered **N** you would find Jones, JONES and jones. Answering **Y** will only find Jones.

Finally you enter the search criteria which may include *wild cards*. These are useful if you are uncertain about an exact spelling, or you want to search for a set of characters that is common to a number of records, for example telephone numbers beginning with the same code. A question mark matches any character and an asterisk matches a group of characters.

So, a search for **M?N** will score a hit with **MAN** or **MEN**. One for **J????** will find all occurrences of **J** plus four characters, such as **Jones** or **Janet.**

A single asterisk represents an unspecified number of characters in a field. For example a search for **J*** will find the first **J** and everything following it, such as **Jones, James,** or **Jacobs & Shufflebotham Ltd.**

Once you have entered the search criteria you will be presented with another search box. You can enter another search condition in this box, or press Escape and the search will start after you have answered two verification prompts. For instance, you could search for **Smith** in a Surname field and **London** in an Address field, and so locate all the Smiths from London in the file. You can use up to four fields so it would be feasible to search for all the Smiths under 40 year of

age living in London and who had not paid a subscription.

One final point about the SEARCH DATA option. Remember to clear markers if necessary before carrying out another search. You can either do this individually (you may wish to keep some records marked) or by using the Clear All Markers option on the main menu.

SEARCH MARKED RECORDS: Works in a similar way to Search All Records, but only operates on marked records.

MARK: Causes records that are matched to be marked.

UNMARK: Unmarks any previously marked records if they are matched.

PRINT: Sends any matched records to the printer.

VIEW: Brings records that are matched onto the screen.

DELETE: Removes any matched records from the database. Use with care!

SELECTIVE MATCHING: Allows you to decide whether you want records found to be matched. As the database is searched and records are found you can decide whether you want them to be matched by answering the prompt *Match this record Y/N?* appropriately.

DATABASE MENU Takes you back to the Database menu.

SORT DATA

This option allows you to re-order records, which will be automatically re-numbered. The Sort Data screen is divided into three parts – field numbers, field titles, and order.

The **Order** column determines the order in which the files are sorted. This is best explained by example: Suppose you are sorting records by a surname. You may well wish two or more identical surnames to be further sorted by first name. In that case, the Surname field would be chosen first (01 will appear in the Order column for that field), followed by the First Name field (02 will appear for that field). So **Jones, David** will end up before **Jones Elizabeth,** and both of them will end up before **Jones, Sarah.** You can give an order number to any or all of the fields in the record, but 01 in the Order column is sufficient for the sort to begin.

At the bottom of the screen are command prompts. **ESC**ape will take you back to the main menu. **A**scending means sort in the order A to Z,. and numbers in

increasing value. **D**escending means Z to A, and numbers in decreasing value.

A sort can be carried out on any type of field. Alpha fields are sorted alphabetically (upper case before lower case and so on – see Greater Than in the SEARCH DATA option). Date fields are sorted by year, month and day.

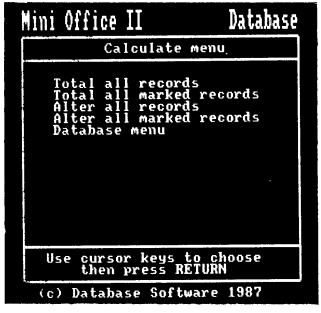
To sort data, use the cursor keys to choose a field, and then press **A** or **D**. 01 will appear in the Order column, highlighted if descending order has been chosen. If you suspect that some records may contain identical data in the field chosen, select a second field (and a third, or more, if necessary). You can freely mix ascending and descending ordered fields. If you accidentally enter a field into the sort pressing **C**lear will take it out of the sort list.

Pressing **S** will perform the sort, and when it is complete you will be returned to the main menu. If you have a lot of records within the database the sort may take a while to finish so be patient. A two stage countdown gives an indication of how much longer it has to run.

If you use the ram disc on an Atari 130XE the sort speed is increased and most other functions of the Database speed up..

CALCULATE

THIS option allows you to perform calculations on integer or decimal fields. There are two pairs of calculation types:



TOTAL ALL RECORDS

or

TOTAL MARKED RECORDS: These options give the total of values in a given field throughout the (marked) records. So, by selecting the field in the usual way, you could for instance, use an Income field to find out how much money has been earned in total.

ALTER ALL RECORDS

or

ALTER MARKED RECORDS: These allow you to change the values in a field throughout the (marked) records. After selecting the option, select the required field using ↑, ↓ and confirm with Return.

The field number will then be shown on the screen followed by an equals sign. Complete the formula using the same rules as in Edit Structure that follows. Note that if you want the field itself to be in the formula it must be entered (for example, to increase field 3 by 15% the formula is F3=F3*1.15).

EDIT STRUCTURE

WE HAVE already covered the basic ideas here. However more needs to be said about form fields. A formula in a form field represents the realtionship between numeric fields. The operators that can be used are:

+	Add
-	Subtract
*	Multiply
/	Divide
COS(n)	Gives the cosine of n where n is measured in radians.
DEG(n)	Converts from radians to degrees.
LN(n)	Natural logarithm of n.
LOG(n)	Logarithm of n to the base 10.
PI	Returns the value of PI.
RAD(n)	Converts from degrees to radians.
SIN(n)	Gives the sine of n where n is measured in radians.
SQR(n)	Returns the square root of n.
TAN(n)	Gives the tangent of n where n is measured in radians.

When editing a file structure, choose **Form** as the field type and enter the formula required. Use Fn for referencing Field n together with numbers and the operaters described. You are then prompted for whether you want the result to be **I**nteger or **D**ecimal. A valid example of a formula is:

(F4+SIN(F5))*1.78+LN(F3)

Note that although only the first six characters of a formula appear on the screen, the formula can be 39 characters long.

CLEAR ALL MARKERS

THIS unmarks all marked records. It is important to use this option in conjunction with the search facility, particularly if you are performing a series of searches. Clear all the markers between each search unless you want to add new "hits" to the previous ones.

TOGGLE MARKERS

TOGGLE means to switch or alternate between two states. This option marks the records which are unmarked, and unmarks the records which are marked. It is a very useful facility if you wish to divide your database into two.

Suppose a membership database contains records of only the people living in London or Manchester, and you wish to create separate London and Manchester sub-files. Using the search facility, first mark all London records and copy the London sub-file. Now toggle the markers and copy the newly marked records to a Manchester sub-file.

FINAL POINTS

THE following points apply generally throughout Mini Office II Database:

In all sub-menus pressing Escape instead of the exit option offered will return you to the menu level that precedes the menu you are currently reading.

You must Close the database file that you are working on before leaving the database. If you leave by the correct method you will always be prompted to close the database, so never switch off as a means of exit.

Never press Reset during sorting or your file will be corrupted. Also, avoid deleting, renaming or locking an open database file.

Mini Office II Spreadsheet

INTRODUCTION

THERE are four stages involved in using the spreadsheet option of Mini Office II: Planning the layout, entering the labels and formulae, entering the data and producing the output.

Of these, planning the layout is probably the most vital aspect of using a spreadsheet. Time spent here will be time saved later. Once the spreadsheet is planned, it is comparatively easy to enter all the necessary facts and figures into the computer and even easier to alter them as circumstances change. However although changing the actual structure of the spreadsheet is possible – as we will see later – it's better to get it right first time. A little thought at the design stage saves a lot of tears later.

PLANNING THE SPREADSHEET

YOU'LL find designing the spreadsheet is made easier if you use a squared grid or matrix on a piece of paper. It doesn't have to be identical to the finished computer-generated spreadsheet – it's more of a model which helps avoid silly mistakes, such as having columns that are too narrow for your labels. For instance, if the column is only 6 characters wide and you try to enter the label DEPRECIATION you will have problems! It's far better to come across them on paper rather than halfway through entering the spreadsheet structure into your micro.

At the risk of stating the obvious, use a pencil and make sure that you have an eraser to hand as it is virtually certain that you will make several alterations before you are satisfied with the final layout.

The size of the spreadsheet depends on the amount of data it's going to be working on. Since the matrix is two-dimensional – rows and columns, or across and down – you have to organise the data into this form. For instance, you could have the months of the year going across the spreadsheet, one column for January, one for February and so on. The rows could then be given over to prices, costs and profits or other such data. Don't forget to include gaps in the layout by leaving blank columns and rows. And use as many labels as possible to identify the figures. This all helps to make the spreadsheet easier to understand.

A point to bear in mind is that the Mini Office II Spreadsheet carries out its calculations starting at the top left corner and finishing in the bottom right corner of the matrix, so make sure that your spreadsheet structure reflects this. For instance,

totals must come after the components which make up those totals, and averages must come after the totals have been calculated.

This is simply commonsense: After all, you can't know the sum of a set of numbers until you've been given all the figures. It's the same with the spreadsheet. So, if you get weird results, check the layout and make sure that you've followed the spreadsheet's method of working.

The final step in determining the layout is to decide which list will form the horizontal (across) axis and which the vertical (up/down). If possible make the shorter list the horizontal axis, as this makes it easier to print out the spreadsheet.

Once you've got the basic table ready you can start to fill it in. First of all you will need to enter the cell references or coordinates. This could not be easier. *The spreadsheet identifies columns with letters and rows with numbers.* All you need to do is to string the letters in alphabetical order across the top of the grid, and number the rows down the side. If you have more than 26 columns then start again in column 27 using lower case letters.

Each intersection of row and column defines what is known as a "cell" of the spreadsheet and is referred to by a combination of column letter and row number. For example, if column G were given the label MARCH and row 17 were labelled RENT, then the cell which contains the figure for the MARCH RENT is identified as G17.

The spreadsheet is made up of these cells, identified by column letter and row number and they are filled with one of three things: Labels, data and formulae. Labels are just the names used to keep track of the figures such as MARCH and RENT. The data consists of the figures that the spreadsheet will use to do its calculations. Suppose that the March rent was £150, then the data in cell G17 will be 150. Formulae, as will be seen in more detail later, are just ways of telling the spreadsheet what to do with the data in order to calculate a required result.

Where calculations are necessary in the layout of the spreadsheet, enter a reference number in that cell and use it to keep track of all the formulae on another piece of paper. Suppose you want to calculate the average mark a student obtained in a series of tests and place this in cell L12. This cell must obviously contain the total marks gained divided by the number of tests that have been taken. If the sum of all the marks is held in cell K12 and nine tests were taken, then the formula is:

L12 = K12 divided by 9

Using the language of the spreadsheet this is written as:

L12=K12/9

When it finds this formula, the spreadsheet will look at cell K12, take the value it finds there, divide this by nine and place the result in cell L12.

When keeping track of the formulae in your paper model, the easiest reference numbers to use are the cell identifiers themselves. Also remember that there is no need to copy identical formulae across on to the sheet of paper. Where many cells require the same basic calculation, the spreadsheet can copy formulae for you. All you need to do is repeat a common reference number on your grid to indicate that the formula is to be used in more than one cell.

Once you're satisfied with the model, you're now ready to transfer your spreadsheet from paper into the computer.

THE SPREADSHEET MENU

ON entry to the spreadsheet a menu presents you with the following options:

EDIT SPREADSHEET: Allows you to enter data, labels and formulae into the spreadsheet, or alter an existing spreadsheet.

LOAD SPREADSHEET: Reads a previously saved spreadsheet from disc into the computer's memory.

SAVE SPREADSHEET: Transfers a complete or partially complete spreadsheet on to disc. Do this every few minutes to prevent accidental loss of data.

SAVE GRAPHICS DATA: Saves data to disc, in a form suitable for accessing by Mini Office II Graphics.

PRINT SPREADSHEET: Sends the spreadsheet to the printer, either in full or in part.

LIST FORMULAE: Provides a list of all the formulae contained in the spreadsheet. You can choose between screen and printer.

NEW SPREADSHEET: Allows you to define the parameters for a new spreadsheet.

ALTER SCREEN DISPLAY: Selects how your spreadsheet is displayed.

DIRECTORY: Displays a list of all the files, both text and programs and gives the other disc options described in the introduction.

MINI OFFICE II MENU:This is the only route out of the spreadsheet, returning you to the main menu of Mini Office II.

EDITING THE SPREADSHEET

WHEN you select EDIT SPREADSHEET from the main menu you can immediately start entering information into cells or editing their contents. One of the cells on the screen will be clearly highlighted with a reverse video cursor. This is the "active" cell, waiting to receive data, labels or formulae. Only one cell is active at any time, its contents being shown in the top few lines of the screen, the status area. The cursor can be moved from cell to cell by means of the cursor control keys (Press Control together with the keys with the arrows on them). The cell the cursor is currently on is called the active cell and is shown in the status area.

One point to bear in mind is that the screen only shows part of the spreadsheet: It's a window showing a portion of a much larger grid. At the start of a new spreadsheet it shows only the top left corner. If you move the cursor to a cell which is off the edge of the screen, there may be a very brief delay while the spreadsheet "shuffles" the new row or column into view. The column or row that disappears isn't lost, it remains in the micro's memory even though it isn't in sight.

At any time you can enter numbers or letters into the active cell just by typing them in and pressing Return. Things are slightly more complicated when it comes to formulae. They can be entered into the cells and amended and copied by using a key in conjunction with the Shift or Ctrl keys. You can also use them to change the layout and appearance of the spreadsheet and protect cells from inadvertantly having new information entered into them. Pressing Escape returns you to the spreadsheet menu.

The full list of commands can be viewed at any time if you press **Ctrl+H** or the **HELP** key while you are in Edit mode but here is a full list with details:

Shift+A Results in an automatic cursor movement. On entry to the spreadsheet this function is OFF. When you press **Ctrl+A** one of the words Right, Left, Up or Down will appear in the window at the top of the screen. A further press will show another direction. Now, after making an entry into a cell, pressing Return will automatically move the cursor to the next cell in the direction selected. This makes entry of values into rows or columns much faster.

Ctrl+A Toggles the automatic calculation feature. This means that each time the contents of a cell are changed the computer recalculates the figure in all the other cells that are affected by this change and displays the updated figures.

Ctrl+C Allows the result of a calculation to be entered directly into the active

cell, saving working it out in your head. If, for example, you wish to put the total of 32, 26 and 15 into cell C3 press ***Ctrl+C***, key in 32+26+15 and then press Return. The total (73) is then placed automatically in cell C3.

Ctrl+D Deletes the row or column containing the active cell from the spreadsheet.

Ctrl+E On answering Y to the prompt, this wipes out the contents of the active cell – provided it isn't locked.

Ctrl+F Allows formulae to be placed in the active cell. Formulae can be made up of a combination of cell references (such as B9), figures and arithmetic operators (such as + or –). The formula is transferred to the cell when Return is pressed.

For instance, the formula **B9=B3+B4** adds the contents of cells B3 and B4 and displays the result of this in cell B9. Notice that it's the *result* of the formula that appears in the cell. The formula itself appears at the top of the screen as does the word Formula. Operators that can be used are:

- **()** Brackets
- **+** Add
- **–** Subtract
- ***** Multiply
- **/** Divide
- **#** Total: G16=G7#G13 puts the sum of all the cells between G7 and G13 inclusive into G16.
- **>[]** Largest in range. G16=>[G7G13] puts the largest number in the cells between G7 and G13 inclusive into cell G16.
- **<[]** Smallest in range.
- **COS(n)** Gives the cosine of n where n is measured in radians.
- **DEG(n)** Converts from radians to degrees.
- **LN(n)** Natural logarithm of n.
- **LOG(n)** Logarithm of n to the base 10.
- **PI** Returns the value of PI.
- **RAD(n)** Converts from degrees to radians.
- **SIN(n)** Gives the sine of n where n is measured in radians.
- **SQR(n)** Returns the square root of n.
- **TAN(n)** Gives the tangent of n where n is measured in radians.

Ctrl+G Enables you to go directly to any cell in the spreadsheet, without needing to use the cursor keys. After answering the prompt with the name of the required cell and pressing Return, the screen may briefly

clear and then display the appropriate section of the spreadsheet.

Ctrl+H Displays the help screen. All the function keys are listed on the screen with a short description of their use. On XL and XE machines this feature can also be obtained by pressing the **HELP** key.

Ctrl+I Inserts a new row or column into the spreadsheet. You will be prompted as to whether you wish to add a row or column. The new row or column will be inserted at the point of the active cell. If a column is added, then the column containing the active cell is moved one column to the right to make room. If you pick a row, the active cell's row is moved down one.

Ctrl+J Alters the justification of the active cell. You will be prompted whether you want left or right justification.

Shift+J Changes justification of the column containing the active cell.

Ctrl+K Brings the cell's contents onto the edit line. This allows for far more sophisticated editing than that available within the cell. Use the Shift key together with the + and * keys to move within the formula, number or text, typing in new data or using the Delete key as required. Pressing Return enters the amended contents into the active cell.

Ctrl+L Locks the active cell so that no accidental changes can be made to it from the keyboard.

Shift+L Unlocks a previously locked cell, allowing you to enter new data or formulae.

Ctrl+P Changes the number of decimal places in the active cell.

Shift+P Allows you to change the number of decimal places in the column containing the active cell.

Ctrl+R Enables you to replace the last value if you've accidentally overwritten it providing nothing else has been entered since and the cursor is at the cell where the mistake occured.

Shift+R Permits a cell to be duplicated, saving a lot of typing. With text and numbers the process is quite simple. Make the cell which is to be copied the active cell by moving the cursor to it. Then press ***Shift+R*** and move the cursor to the cell that is to receive the copy, making that active. Pressing either the Atari Inverse key or Return now results in the text or data in the first cell being copied into the second.

Formulae can be duplicated in three ways, relatively, absolutely or a mixture of both.

Absolute duplication is fairly straightforward. The formula you want is

copied *exactly* into the required cell, with no changes. For example, suppose cell C1 contained the formula **A1+B1**. If this formula were copied absolutely to cell C2, then the value in C2 would be the result of **A1+B1**.

Relative duplication occurs when you want the new formula to behave like the copied formula but using different cells to supply the figures used in the calculation. As in our previous example suppose C1 held the formula **A1+B1**. One way of looking at this is that C1 contains the sum of the two cells on its left. Relative duplication preserves this relationship. This means that relative copying of the formula in cell C1 into C2 would result in the formula **A2+B2** determining the value in cell C2. The cells used in the formula are different, the relationship of the the cells is the same.

The third way of duplicating formula occurs when absolute and relative copying are mixed to produce a new formula. These three methods of copying formulae are achieved as follows:

Relative duplication: Suppose you want to copy the formula in G8 to H8. Put the cursor on G8, press **Shift+R**, move the cursor to H8 and then press the Inverse Video key. You will find that the formula has changed relatively like this:

G8=G6/1000

becomes

H8=H6/1000

This illustrates movement along a row. You can also move down a column, like this:

G8=G6*G7/1000

becomes

G14=G12*G13/1000

Mixed and Absolute duplication: As above, move the cursor to the cell to be copied, press **Shift+R** and then move it to the receiving cell. Now press Return (not Reverse Video as previously). You will now be prompted for the letters A (for Absolute) or R (for Relative) for each cell reference in the formula. Using the same example as above, pressing A

at every prompt would result in:

G8=G6*G7/1000

becoming

H8=G6*G7/1000

Ctrl+T Allows you to enter more text than will fit in the width of a cell. This enables explanations, notes or even whole sentences to be included in the spreadsheet. The additional text will automatically spread over as many cells to the right as required, overwriting any information already there. It should therefore be used with caution, preferably before other cells are set up.

Ctrl+U Updates the spreadsheet by recalculating the formulae in the cells and displaying the result. This may take several seconds depending on both the size of the spreadsheet and the complexity of the formulae.

Ctrl+W Changes the width of the column containing the active cell.

Ctrl+X Locks a whole row.

Shift+X Unlocks a whole row.

Ctrl+Y Locks the whole column containing the active cell.

Shift+Y Unlocks a whole column.

Ctrl+Z Clears all the numbers from the entire spreadsheet, retaining the basic structure (labels and formulae) for the creation of another spreadsheet. Use with care!

Start Changes the text luminance.

Select Alters the background colour of the spreadsheet.

Option Alters the background colour at the top of the display.

Escape Escapes from EDIT SPREADSHEET and returns you to the main menu. Everything you have entered or calculated remains in memory. It also allows you to return to edit mode from the spreadsheet memory.

NEW SPREADSHEET

THE NEW SPREADSHEET menu can be called at any time from the main menu. This destroys any spreadsheet currently in the computer's memory, allowing you to start from scratch. Be wary of using it until you have saved your old spreadsheet. Of course at the beginning of a session, with no spreadsheet in memory, you can go straight into EDIT SPREADSHEET, unless you want to change the default layout of the grid.

Once NEW SPREADSHEET has been chosen and the cautionary prompt answered with a Y, yet another menu appears on the screen. This allows you to determine the basic parameters which will control the spreadsheet. The values shown to the right of the options are the opening, or default, values.

You choose the required values for the spreadsheet by moving through the menu using the cursor up and down keys. When the particular option you want is highlighted just start inputing your new value and press Return.

Harking back to our paper model of the spreadsheet, you'll set the number of columns and rows to match the width and height of the paper. You can also determine the width of each column, measured in character spaces, and the number of decimal places to be used for the figures. Remember that the decimal point takes up one character, as does a minus sign.

ALTERING THE DISPLAY

THE ALTER SCREEN DISPLAY menu may be called at any time from the spreadsheet menu. It allows you to make changes to the format of the spreadsheet – the way that it is displayed on the screen – without losing any data. These alterations take effect on the whole of the spreadsheet, overriding any previous "tailoring" you may have done, so beware. You will be given the following options, chosen using the up and down cursor keys and Return.

COLUMN WIDTH: Allows you to define the width of the columns, between 1 and 18 characters across. Reducing the width does not lose data, although the contents of some cells may not be shown in full if they do not fit within the width you've specified.

DECIMAL PLACES: Selects the number of decimal places shown in each cell. This affects the display only, the full value of each figure still being used in calcu-

lations. Hence even though you may have opted for integers to be displayed, the decimal places entered are taken into account when any sums are done.

LEFT JUSTIFY: Determines whether data is aligned to the right or left hand side of the column. This is normally set to NO for right-hand justification, ensuring that all the decimal points (if any) are in line under each other. Pressing Return will toggle the setting to YES and data will be left justified.

SINGLE SPACING: Determines whether or not a space is left between the rows of data. This is normally set to YES when there is no gap between the lines. Pressing Return toggles it to NO, resulting in a blank row between each row of data.

MINUS SIGN: Toggles between – and (). Yes gives you –, No gives you brackets. Round brackets are often used to represent the minus sign in financial matters.

FIXED TITLES: Locks all entries placed in any cell in Column A or in Row 1 so that they are always in view however far the spreadsheet is scrolled. This means that labels can be put in the top row and leftmost column and they will still be seen no matter what the active cell is.

PRINTING THE SPREADSHEET

WHEN you select PRINT SPREADSHEET you will be presented with the following options:

SPREADSHEET MENU: Returns you to the Spreadsheet menu.

HEADINGS: Chooses whether or not to include the row (A-z) and column (1-99) headings in the printout. It toggles between YES and NO.

WIDTH OF PAPER: Sets the maximum length of line, measured in characters, sent to the printer. This is necessary as printers vary in the number of characters they can fit across a sheet of paper. The default value is 80.

PRINTER CODES: Allows you to send control, or "special effect", codes to the printer at the start of each printout.

PRINT WHOLE SPREADSHEET: Prints the entire spreadsheet. If it's too wide to fit across a single sheet, it's printed in sections, each section containing as many columns as your printer allows.

PRINT PART SPREADSHEET: Lets you print out selected rows and columns from the spreadsheet. When prompted for the rows you want to be included on the

printout, the numbers you enter should be separated by + ("and") or # ("to"). For example, 1+6#8 would print row 1 and all the rows from 6 to 8 inclusive. Columns are selected in a similar manner, with letters used instead of numbers.

SAVING GRAPHICS DATA

THE SAVE GRAPHICS DATA option allows you to save data from the spreadsheet in a form that enables it to be loaded into the Mini Office II Graphics program. A set of up to 20 cells from any row or column can be saved, the Graphics program being able to handle three such sets of data at a time. Make a note of which columns or rows you wish to display graphically.

On choosing the option you are prompted to pick between R for rows or C for columns. Then you're asked where the titles for the cells are located, and where the data cells themselves are to be found. All the elements of the selected row or column are then displayed one by one, allowing you to choose those you want to save. Pressing Return saves the data, prompting you to give it a filename.

You'll find further details of how this feature works in the Graphics Tutorial at the end of the Graphics section of this manual.

INTRODUCTION

THE Graphics module of Mini Office II provides a flexible, powerful yet simple way to get your computer to display numeric data in an easy-to-understand form. Figures that would look meaningless in themselves can be illustrated and brought to life, quickly and easily.

The Graphics module can be used in two ways – by entering data directly from the keyboard or by loading Spreadsheet data that has been previously stored on disc. Whichever method of entry is used, the Graphics module has to be given the figures it is to illustrate in the form of a **data set**. A data set is just a list of associated values, such as the monthly sales for the year or a person's exam marks. Each set may hold up to 20 values and the module can display up to three of these data sets at any one time.

MAIN MENU

ON entry to the graphics module, you'll be faced with the main menu which lists the various options. As is usual in Mini Office II, the major functions are selected by using the cursor up and down keys and pressing Return when the option you want is highlighted.

When you come to choosing the final appearance of the graph, things are slightly different. Instead of yet another menu, a group of pictures or symbols termed **icons** appears to the right of the screen. Each icon represents a different option. As with the menu, you pick the icon of your choice using the cursor keys and Return, as we'll see later.

For the moment let's consider the options available on the main menu.

BAR GRAPH: This displays numerical data in the form of columns of varying length, proportional to the value of the data entered. The longer the column – or bar – the greater the value of the number represented. Negative numbers are shown by a bar of the appropriate length descending below the "zero" base line.

LINE GRAPH: Instead of bars this graph plots shapes at each point. The shapes are all joined up by lines to give a linear graph.

PIE CHART: This is a circular representation of the data. The complete circle – the "pie" – represents the total of all the values in the data set. Each individual value in the data set is then drawn as an appropriately sized sector – or slice of the pie.
EDIT DATA: Permits data to be entered and changed directly from the keyboard.
LOAD DATA: Allows you to load in previously saved data from either the Spreadsheet or Graphics module.
SAVE DATA: Saves data sets in memory out to disc.
DIRECTORY: Displays a list of the files, both text and programs and gives the other disc options described in the introduction.
MINI OFFICE II MENU: Returns you to the Mini Office II main menu.

EDITING DATA

IMMEDIATELY after you select EDIT DATA the following will appear across the top of the screen:

Number of items: 20 **Dataset #01**

Number of items can be between 2 and 20 and this number determines the number of data items that you are working with. When you change it, the amount of data on the edit screen will alter and when you plot a graph only that number of items will be plotted. Any data you have already set below that shown on the screen will remain intact but will not be used in any of the output. If you wish to use the extra data, just reset the number of items back to its previous value. Ensure that the number of items does not exceed the number of points you want to plot as all items, including zeros, are plotted.
Dataset #01 Indicates which of the three data sets you are editing.

At the foot of the screen you will see the following:

Edit, Print, Copy labels, No of items,
1, 2, 3, Zero data, ESCape to Quit

The control keys work as follows:
1 to **3** Display the appropriate data set ready for editing.
E: Allows you to edit the data set. The first column to edit is the *label* column where you can enter up to 5 characters to identify the row of data.

When you press Return the cursor moves on to the next column headed *Grp* which stands for Group and any data with the same group number will be treated

together. This only affects Pie charts and you will see later how it alters the output. The setting of groups applies to all three data sets and so you cannot have individual settings for each one.

Once you have set the group press Return and again the cursor will move right, this time into the *DATA* column. Here you input the actual number.Try to ensure that the range of values you enter are not too extreme, like 12000, 17.5, –3400, 0.75. If you enter figures as extreme as these the program will still attempt to fit everything on the screen, but several values will be indistinguishable from each other, either because the segment will be unreadably narrow, or the column will not rise above the base line.

After inputing the value press Return and the cursor will move down to the next item in the label column. Once you have finished entering data press Escape to return to the options at the base of the screen.

You can also move the cursor up and down the columns when in Edit mode, but you must press Return to move across the columns.

P: Prints out the data set currently displayed to the printer.

C: Copies the labels from the present data set to one that you select. This saves time inputting duplicate labels.

N: Allows you to change the number of items that are used and visible on screen. If you have already entered data, it will remain intact if you reduce this number but it will not be used in any graphs.

Z: Zeros all labels and numeric data within the data set displayed.

When you have finished using this option, press Escape to return to the Graphics menu

LOADING and SAVING DATA

THE Load and Save options allow you to store the data sets for future use:

LOAD DATA: Loads data that you have previously saved either from the Spreadsheet Save Graphics Data option or from the Graphics package itself. The way data is loaded is different from other modules of Mini Office II because the Graphics program can cope with three different separate sets of data. The data set into which the data must be placed is identified by replying to the question:

Data Set 1, 2 or 3?

You are then asked:

Filename? D1:

Make sure you give the name of a graphics file that is on your disc and the data

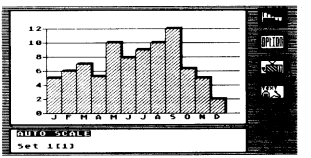
will be taken from the disc and placed into the data set requested. When the transfer into memory is complete you will be returned to the Graphics menu. There is no reason why data sets to be used in one particular graph should all come from the same source. For instance, sets 1 and 3 can be entered from the keyboard, and set 2 loaded from disc. The three sets can then be analysed together by the graph routines.

SAVE DATA: Allows you to save data ready for future use. The prompts are the same as the LOAD option.

DISPLAYING DATA

THERE are three ways of displaying the data: the BAR GRAPH, LINE GRAPH and PIE CHART options.

BAR GRAPH: When you select this option the screen changes to the graph display screen and you will see four icons on the right of the display. Use the up and down cursor keys to select the icon whose function you require and then press Return. The four icons represent:



A bar graph. Choose this and a bar graph will be displayed. It's appearance will depend upon the options that are set in the bar graph options menu.

Option. This takes you to the bar graph options sub-menu where you are given five further options that help tailor the final look to your bar graph:

Data. Allows you to set the number of sets of data used and the order for plotting. If a bar chart is drawn with more than one set selected a side-by-side chart will be drawn. The first question that appears is:

How many data sets to use?

Input the number of data sets you wish to use and then you will be asked in what order they are to be plotted. So, for example, if you state three data sets the next query that will appear will be:

Enter the primary set:

You can input 1, 2 or 3 here. You will then be asked for the secondary set and finally then the tertiary set. The order input will be displayed in the base window to remind you of your choice.

A grid. Selecting this option toggles the background grid between on and off.

When it is on, any chart created will be drawn against a backgroung grid.

A ruler. This is the range toggle and will switch between AUTO scaling and allowing you to set the range. If it is set to auto scaling the program will scale the graph according to the data being drawn. Otherwise you will be asked to input the maximum and minimum values of Y. The maximum value must be greater than or equal to zero, and the minimum value must be less than or equal to zero.

Bar graph. The bar graph on this menu allows you to toggle between a side-by-side and a stacked bar graph and the setting is copied onto the Bar graph icon menu. If only one data set is used the columns will all have the same pattern design, but if you use more sets of data columns corresponding to the same item they will be shaded differently. Negative values are ignored when drawing a stacked bar graph.

3D. This option allows you to toggle between a two dimensional bar chart and one that is drawn to look as if it is in three dimensions.

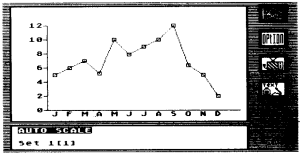
When you've finished with the option, pressing Escape returns you to the Bar graph icon menu.

A television set. This option takes you to the screen options sub-menu that we'll discuss later.

Text. Using this option you can put text anywhere on the screen. Once you have selected the option, enter your text into the small base window. Once you are satisfied with your text you press Return and the text will be copied to the base of the graph window. The text can then be moved around the screen using the cursor keys or by pressing Shift with cursor keys to get fine movement of the text. When the text is in the required position press Return and it will be printed onto the graph.

When you've finished with the bar graph press the Escape key to return to the Graphics menu.

LINE GRAPH: If you select this option you'll again be presented with a four icon menu. They represent:



A line graph. This option plots the line graph of the type determined by the line graph options.

Option. Takes you to the line graph options where you can select from five icons which give you the same choices as the Bar Chart Options except for:

Line with points. This again is a toggle. When it is ON the line has shapes

indicating the plotted points and when it is OFF the shapes disappear. Graphs will be drawn with or without shapes depending on the setting of this option.

A line graph. This option allows you to switch between a line and a cumulative graph. The cumulative graph is an accumulated sum of the individual values in the data set. So if the data set comprises of the three values 3, 6 and 8, the values represented on the graph are 3, 9 (3+6) and 17 (3+6+8).

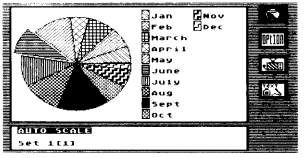
When you've finished with the option, pressing Escape returns you to the Line graph icon menu.

A television set. This takes you to the screen options sub-menu discussed later.

Text. Allows you the to add text to your graph as with the bar chart.

When you've finished with the option, pressing Escape returns you to the Graphics menu.

PIE CHART: Again you are presented with four icons and this time they depict:



A Pie chart. This option draws up the pie chart and follows the settings of the pie chart options menu. You will be asked which data set to plot, 1, 2 or 3? The computer will then start to draw the pie chart with the output depending on the settings in the Pie chart options sub-menu.

Option. Takes you to the pie chart options sub-menu where the various choices are cycled through by pressing Return and their functions are as follows:

A pie chart. This allows you to cycle between four different pictures of pie charts, Each one representing a different type of pie. The default pie is the normal pie which creates a whole pie with no exploded segments. The second pie shows the segments all exploded out from the centre. When you select this every segment will be pulled out from the centre. The third icon is the segmented pie and if this is chosen you will be given the choice to either explode each segment or have them drawn in to the usual position as you draw the chart. The final icon depicts the group pie. This draws the segments exploded but in groups that you defined as you entered the data in the Edit Data mode. This gives clarity and offers a flexible way of displaying sub-groups from a data set.

Fill type. This is the shading option that allows you to change the way the pie is patterned. as you press Return the icon will rotate around three settings – Normal, Select and Define. The Normal setting will set the pie shadings to

their default, and won't give you any control of the output. The Select option allows you to choose which patterns are to be used for the segments. In this case when you come to plot the pie, a table will be drawn up in the base window. When the program prompts you to select your pattern use the left and right cursor keys to move over the various patterns. Once you are satisfied press Return and the segment will be filled with your selection and a black marker will be set over the top of the selected pattern. This is only a record of which patterns you have used, and does not stop you from using the same pattern more than once. The final selection is the Define option which will cause your pre-selected fill patterns to be used when the pie chart is drawn. This saves you the time of inputting the same patterns again.

A plus or minus sign. This lets you select either positive or negative numbers to be used from the data set. Negative values cannot be plotted on a pie chart, so they are converted to positive values so a chart can be drawn.

Key. This causes the pie chart key to be printed if it is set to ON or prints the pie chart centred with no key if it is OFF.

When you've finished using this option, press Escape to return to the Graphics menu.

A television set. This takes you to the screen options sub-menu discussed later.

Text. Allows you to add text to your graph as with the bar chart.

When you have finished using this option, press Escape to return to the Graphics menu.

SCREEN OPTIONS

THERE are four options on this menu and they control the screen display:

Disc load. Allows you to load a graphics screen from a disc file.

Disc save. Allows you to save individual screens for use in other programs – such as a "slide show" type of presentation – or for reloading into the graphics module at another time. This option also allows you to save the screen and then print it out on a non-standard printer by using a commercial screen dump.

A printer. Prints the screen. There are two printer dumps available – Epson or Atari 1029. Select the one for your printer and the dump will begin. This option also allows you to send the dump out to a disc file which can be used as a TRANSFER file in the Word Processor, allowing screen dumps to be printed between your text.

A paint roller and brush. Allows you to alter the screen colours. Press the Start key

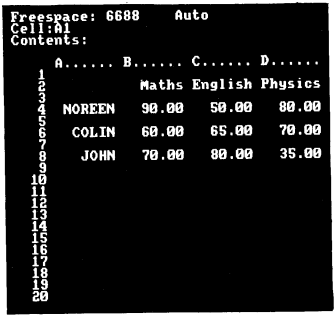
to increase the background colour. Pressing Shift+Start will decrease the background colour. The same applies to the Select key which alters the luminance setting.
When you've finished with this option, pressing Escape will return you to the previous icon menu.

GRAPHICS TUTORIAL

NOW that we've had a look at the Graphics module's commands, let's have a go at using them in practice.
Suppose that three friends of yours, Noreen, Colin and John took some exams and their marks were:

	Maths	English	Physics
Noreen	90	50	80
Colin	60	65	70
John	70	80	35

It wouldn't be hard to enter their results into a very simple spreadsheet like that illustrated. However, while all the figures are there, it's hardly all that visually compelling. Unless you're into raw statistics, you'll probably agree that the figures would make more sense if they were represented graphically. And it's not hard to achieve this, as we'll see.



The first thing to do is to take the data from the Spreadsheet (it's assumed you have the spreadsheet in memory). This is done by going to the Spreadsheet menu and selecting the SAVE GRAPHICS DATA option. You simply move through the menu using the cursor up and down keys until that option is highlighted. Pressing Return results in the question:

Select from Row/Col?

In this case we'll be saving the data values from along the rows, so we reply **R**. If we were taking figures from down a column we would reply **C**. As soon as we reply

with **R** the computer asks:

Row for labels:

As the labels – Maths, English, Physics are all on row 2 of the Spreadsheet we enter **2** and press Return. The computer will then ask:

Row for data:

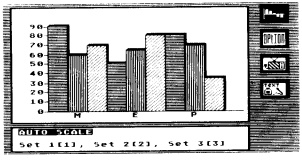
We will be saving three data sets in all, the first of which will be Noreen's. So at this prompt we reply with 4 because Noreen's data lies in this row. The screen will be cleared and the first column of cell data from rows 2 and 4, will be displayed at the top of the screen. The prompt at the bottom asks whether we want to use the label, since this cell is empty press N. Now at the top of the screen the next column number is shown together with its label and data contents. Since we want all three – Maths, English and Physics – pressing Y three times will result in selecting all these labels and Noreen's data. Answer N for the remaining empty cells that follow.

You will be then asked for a filename so that you can save Noreen's data. This file then is the data for Noreen only so you just repeat the process for both Colin and John.

The result of all this is that we now have three files containing the marks of Noreen, Colin and John. And we can now use the Graphics module to create an illustration of the Spreadsheet from these files.

Let's make a bar graph that shows three sets of marks side-by-side. Use the appropriate menu choices to leave the Spreadsheet and enter the Graphics module. When you're faced with the Graphics menu, select the LOAD DATA option. This tells the computer that you want to take data from the disc and put it in to data sets in memory. You are then prompted for which data set to load. Enter **1** here as we want Noreen's data in the first data set.

The program will than ask for a filename, so you enter the name of Noreen's data file and press Return. The data will be loaded into data set one. Repeat the process for the other two data sets taking care that you don't load over a previously loaded data set.



We now have three data sets in memory and are faced with the main Graphics menu again. To start to draw a bar graph using the data from our simple Spreadsheet all we have to do is select the BAR GRAPH option in the usual

manner and press Return.

The screen will clear and four icons will appear on its right. Select the second one down. You are then presented with a sub-menu where you must select the first icon called DATA. This lets us tell the computer which data set(s) to plot and in what order and the following prompt appears:

How many data sets to use?

Enter **3** and three more prompts will appear to let you set the order in which the three data sets are to be plotted – in our case Noreen, Colin, and John. So assuming that you loaded them into the respective data sets answer the prompts as follows:

Enter the primary set:

Reply 1 here for data set 1.

Enter the secondary set:

Reply 2

Enter the tertiary set:

Reply 3

Now that you have set up the number of sets and the order in which they are to be plotted, we can return to the main icon menu by pressing Escape. Select the first icon and the graph will be drawn.

And, if you've followed all that, you're well on your way to mastering the graphics module. Try changing the toggles within the sub-menus. You could maybe use only 2 data sets, draw a stacked bar graph or move on to pie charts and line graphs. By the time you've finished you'll appreciate how simple-to-use yet powerful the Graphics module is.

Mini Office II Communications

INTRODUCTION

COMMUNICATION between two computers is only possible if they share a common protocol. A protocol is simply a way of interpreting the electronic signals passing between the two machines. If they both share the same protocols then they are able to talk to each other in a common language. However, the continuing rapid growth of communications networks has resulted in an ever growing number of different protocols, each involving different characteristics.

Fortunately, the Mini Office II Communications module takes all the chore out of linking your computer to another by offering the most commonly used protocols on a menu. All that is needed is to select the link required: Mini Office II will organise the rest. You do not need to know anything about what the software is doing, or the characteristics of the link itself.

For those who wish to link systems which use non-standard protocols there is an option which enables individual characteristics to be entered. Consequently Mini Office II can be used to connect your computer to virtually any other computer which is capable of communications.

The most common method of connecting two computers is by means of the telephone. To do this you will also need a modem, a device which converts signals from a computer into a form which can be carried over the telephone system. Mini Office II should normally be used with any serial modem connected to port one of an Atari 850 interface unit. Alternatively, the package has been designed to allow the use of Miracle Technology's DataTari RS232 interface cable and modem.

If you have any other type of interface that is capable of installing itself into the Operating System then you should set it up before loading Mini Office II. The software will check which of the three types of interface is connected and act accordingly.

Using an RS232 interface such as the Atari 850, your computer can also be connected directly to another computer via a wire link. Such a cable system will work best over short distances, and you should avoid runs of more than about 15 metres.

GOING ONLINE

WHEN you select the Communications package you will be given another menu

offering five choices. These are:

MICROLINK/TELECOM GOLD (300/300)
MICROLINK/TELECOM GOLD (1200/1200)
CUSTOMISED PROTOCOLS
EDIT MACRO KEYS
MINI OFFICE II MENU

Each of the first three options will each take you to the next menu giving you the choice of:

- **COMMUNICATE** – Taking you straight to the online communications screen, or chat mode as it's known.
- **BUFFER OPTIONS** – Deciding how to store the data communicated.
- **PROTOCOL OPTIONS** – Selecting a common "language" to talk in, if you want a non-standard protocol.
- **DISPLAY OPTIONS** – Choosing how the data is presented.
- **COMMUNICATIONS MENU** – Returning you to the previous menu.

As you can see, the Main Communications Menu provides the two most common protocols – those of MicroLink/Telecom Gold – already set up. In addition there's also a Customised Protocols option for "Do It Yourself" communications. It's initially configured in the same way as the MicroLink/Telecom Gold (300/300) option, but you may like to re-define it to your own requirements and then save your new configuration onto the disc for later use as we'll see later.

The final option, **MINI OFFICE II MENU**, is the only way to exit from the Communications module. It will return you to the main menu and allow you to select one of the six other packages – such as the Spreadsheet or Word Processor.

One powerful feature of the communications module of Mini Office II is the macro keys. These allow you to use a single keypress to send quite long and complicated messages to the remote computer. They can be used to automate your log-on sequences and check your mailbox, or just to take the chore out of typing often used phrases such as your name, address or system ID number.

EDIT MACRO KEYS

THERE are ten macro keys, each of which can be accessed from the online screen by using Ctrl+Shift plus a number key from 0 to 9. When a macro is running, Start, Select and Option are ignored, but pressing any other key will abort the macro.

When you enter the EDIT MACRO KEYS option you will be asked:

Which Macro to Define/Edit? (0–9)

You will see that some of the keys have been pre-defined for use with MicroLink/ Telecom Gold. Macro Key 1 will log you on to MicroLink via PSS and Key 2 will do the same for direct dial users. Both of these then access Key 0, which you should edit to contain your own ID number and password as indicated.

Each macro may be up to 240 characters long, but you'll only be able to see the first 38 characters on the selection menu. When editing, the whole macro is visible in the lower text window and you can now use all of the normal screen editing functions.

In addition to text, there are a series of special commands which are enclosed within square brackets, '[' and ']'. The commands available are:

[R] Send a carriage return character (don't forget to add a [R] to the end of each line you want to send)

[] Send the special '[' character. (The close ']' character can be used on its own anyway)

[Pnn] Pause for a given number of seconds. Up to two digits are allowed, making pauses of between one and 99 seconds available. For example, [P15] would pause for 15 seconds.

[Wabcde] Wait for a string of characters 'abcde'. The string may be any length, and all characters are checked. The search is not case-sensitive, but the string must not contain the de-limiter character ']'. For example, [WPassword:] would wait for the string "Password:" to be sent by the remote computer. Note that "PASSWORD:" or even "pASSword:" would be detected since upper and lower case are treated identically.

[H] Halt the macro until the remote computer has stopped sending text. The macro will continue 15 seconds after the host has stopped transmitting.

[Gn] Goto another macro key. Any text following this command will be ignored. If the character after the G is not a number then macro will abort. For example, [G3] would run macro key 3.

[B+] Open Memory buffer and store all following text until:
[B−] Close Memory buffer.

Note that these two buffer commands will not work if the Memory buffer is already assigned for Transmit or Receive use, or is in Auto-Print mode. Note that other than with the [Wstring] command, you should not use spaces within the square brackets

When you have finished entering the macro text press Return. You may now choose another key to edit or press Return again to go back to the main menu.

Macros are saved when you do a SAVE CONFIGURATION so you could easily build up a library of useful routines for each online system you regularly use.

COMMUNICATE

THIS opens the link and waits for you to make connection with the remote computer. The communications screen has two extra lines of text above and below the normal display.

The top information line reminds you of the baud rate currently in use while the lower line contains three boxes which provide information about the buffer. This line will tell you how much space is left in the Memory buffer, plus give you the status of the Receive or Transmit mode currently selected and the filename being used.

While you are in communications mode there are a number of functions you can carry out without losing the line. A summary of the keys is given at the back of this manual, but their details are as follows:

Option **RETURN TO MENU SCREEN**: Takes you back to the selection menu.

Select **OPEN/CLOSE MEMORY CAPTURE BUFFER**: Toggles the Memory buffer ON or OFF. While the capture buffer is in use the border colour will change to bright green as a reminder. You can't use the memory buffer if Transmit, Receive or Auto-Print are currently operating.

Start **START CURRENT TRANSMIT/RECEIVE**: When you have requested a Transmit or Receive operation, pressing Start will begin the function. Press it again to finish.

Ctrl+Shift+T **TRANSMIT A FILE**: This option will allow you to transmit a disc file, or the contents of the current capture buffer, to the remote system.

If there is already text in the buffer you will be asked

whether you wish to transmit it or load a new disc file. Press Y to wipe the buffer and send a new file or N to send the current buffer contents. If you select Y you will now be prompted to enter a filename.

Next you must select the Filter Mode:

1. Atari (ATASCII)
2. Standard ASCII
3. Expanded ASCII

Press 1 if you want to send data to another Atari 8 bit computer, or press 2 for normal communications purposes. If you want to send non-Ascii characters – such as a program written in machine code or a SAVEd Basic program – you must use option 3, the Expanded Ascii mode (assuming that the system you're communicating with is capable of handling Expanded Ascii).

The file data will now load into the buffer. Transmission will commence when you press the Start key, and continue until the whole file has been sent. With especially long files, more data may need to be read from the disc during the transmission. To abort the operation, press Escape during the selection screens or Start during actual transmission.

Ctrl+Shift+R **RECEIVE A FILE**: This works in exactly the same way as the Transmit option, except that there is no provision to select a memory buffer rather than a filename. After selecting the filename and filter mode, press Start to begin the capture, and Start again to complete the file.

Ctrl+Shift+W **OPEN/CLOSE TEXT WINDOW**: This will set up a six line area at the bottom of the screen in which you can prepare your text using full screen editing whilst still receiving messages from the remote computer. Press Return when you are ready to send the window contents. If you want a carriage return sent as part of your text, simply use Ctrl+Return instead.

Ctrl+Shift+E **CHANGE LOCAL ECHO**: Toggles between ON and OFF.

Ctrl+Shift+P **START/STOP AUTO-PRINT MODE**: When the Auto-Print mode is enabled, all text received will also be sent directly to the printer. To make this operation faster, text is stored in the

buffer before being sent to the printer and thus the option can't be used while Transmit or Receive are operational. If the buffer already contains text then this will be dumped to the printer before being overwritten.

Ctrl+Shift+D **DELETE BUFFER CONTENTS**: After replying Y to the *Are you Sure* prompt the contents of the buffer are lost.

Ctrl+Shift+F **SELECT FILTER MODE**. You may choose between:

1. Atari (ATASCII)
2. Standard ASCII
3. Text-only ASCII

The uses of these options were described in the Transmit a File section.

Ctrl+Shift+N **AUTOMATIC LINE-FEED**: Toggles between ON and OFF.

Ctrl+Shift+? **CHANGE XON/XOFF**: Toggles between ON and OFF.

Ctrl+Shift+Space **CHANGE 'SPACE-BEFORE-RETURN' MODE**: This option toggles between sending a space before each carriage return and sending just the carriage return.

Ctrl+Shift+Escape **SEND "BREAK" SIGNAL**

Ctrl+Shift+0 to **9** **SEND PRE-DEFINED MACRO 0–9**: This activates one of the ten pre-defined single-key macros. These allow you to send a whole block of text with a single keypress.

Inv **DEFINE TEXT AND SCREEN COLOURS**: This option will display this message:

START = Change Text Intensity,
SELECT/Shift-SELECT = Screen Colour,
OPTION/Shift-OPTION = Background Colour.
(Press RETURN to go back on-line)

You may alter the colours of any portion of the screen with this option. Pressing Start cycles through the text brightness levels. Select and Option change the screen and background (border) colours respectively. If you also hold down Shift you can change the brightness levels instead. Press Return when you're happy with your choice.

BUFFER OPTIONS

THESE options enable you to make far more efficient use of your communications link. They will help you save time when transmitting lengthy files, and so save you a considerable amount in telephone charges. At the bottom of the screen are two extra lines of text telling you the current size of your buffer and the amount of space remaining.

DIRECTORY: This option will provide you with a list of the files on your disc and give you the other options described in the introduction.

LOAD BUFFER: Loads a file into memory for subsequent uploading to the distant computer via the modem.

When selected, this option will request you to:

Enter Filename:

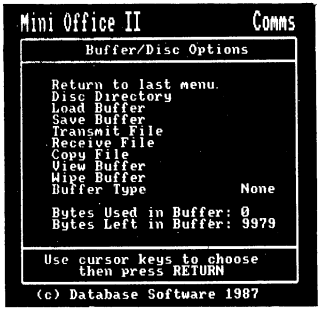
Entering the name of the file and pressing Return will cause that file (if available) to be loaded into the Memory buffer. If the buffer already contains text you will be asked if you want to erase it first (Y or N). If you decide not to erase the previous contents, the new text will be added to the end of the existing buffer.

SAVE BUFFER: The reverse of LOAD BUFFER, this saves the entire contents of the Memory buffer to disc. The buffer contents are not erased by using this function.

TRANSMIT FILE: This option is probably the quickest way to upload a file. It will go straight to the communications screen, with a window open ready to accept a filename. Next you select the Filter Mode you require. Press Start to begin transmitting. *(This is the same as pressing **Ctrl+Shift+T** while you are in communicate mode.)*

RECEIVE FILE: This will take you straight into the communications screen, with a window open ready to accept a filename to store the received text under. You may then select the Filter Mode you require. *(This is the same as pressing **Ctrl+Shift+R** while you are in communicate mode.)*

COPY FILE: Because the Dos 2.5 ramdisc can be used by this package you need some way to transfer data files back to an ordinary floppy disc. This option prompts you for a filename to copy FROM, and then the filename to copy TO. This option may be used to copy files on differ-



ent floppy discs with a twin drive system only.

VIEW BUFFER: Allows you to examine the contents of the Memory buffer on the screen. Press Space to pause, and again to re-start. Pressing Escape will quit back to the menu.

WIPE BUFFER: Completely clears the contents of the Memory buffer. Because of the destructive nature of this option, a confirmation (Y or N) is required. *(This is the same as pressing **Ctrl+Shift+D** while you are in communicate mode.)*

BUFFER TYPE: This toggles between no buffer and a memory buffer. If the buffer is already being used for the Auto-Print Mode you can't change its function. See DISPLAY OPTIONS for more information. *(This is the same as using the **Select** key on the communications screen)*

PROTOCOL OPTIONS

FOR systems other than MicroLink/Telecom Gold, the various protocol used by the modem link may have to be altered. You can adjust the following:

BAUD RATE: You may select from three different speeds of transmission, according to your modem and the facilities of the remote computer you are accessing. The standard Atari interface does not allow for split baud rates so there is no 1200/75 mode. You may step through 300, 600 and 1200 baud by using the Return key.

XON/XOFF: The speed which your printer or disc drive can handle data is often very much slower than the rate that the remote computer can send at. To prevent any characters being lost, a convention known as Xon/Xoff is used. Put simply, whenever Mini Office II needs to access the disc or printer it sends a special command (Xoff) to the remote computer to tell it to stop transmitting for a moment. Once your Atari system has caught up it sends a further command (Xon) to tell the remote system to begin sending data again.

The default condition is ON. In the rare circumstances when this facility is not required, the menu option toggles between ON and OFF. *(Using **Ctrl+Shift+?** on the communications screen performs the same function)*

PARITY: Some computers use an error checking system known as a 'parity bit' to check that there is no corruption of data. Unless you KNOW that the remote

computer you are trying to access uses this type of system it is best to leave it on the default setting of NONE. You may use the Return key to skip through ODD, EVEN and CLEAR parity settings.

FILTER: Most computers use a special text system known as Ascii, in which each character is represented by a numeric code. The Atari uses a variation of this system known as AtAscii. When communicating with another Atari, set this option to ATARI ATASCII. Most other computers, including MicroLink/Telecom Gold, use STANDARD ASCII. The Ascii character set also includes 26 special control characters – Ctrl-A to Ctrl-Z. These show up as ^A to ^Z in inverse video. Sometimes, often because of a noisy telephone line, these can become intrusive and you may eliminate them by selecting FILTERED ASCII. *(The Filter mode can also be changed from the communications screen by using **Ctrl+Shift+F**)*

SAVE CONFIGURATION: This will save all of the control options, including the screen colours and any macros you have defined, as a disc file. You will be prompted for a filename to store the configuration under. If you just press Return, the filename COMMDEFS.DAT will be used. The contents of this file are automatically loaded when you boot up the program disc next time. This enables you to have your most commonly used macros and protocols available whenever you want them.

LOAD CONFIGURATION: This will restore a previously saved protocol file. You will be prompted to enter the filename.

DISPLAY OPTIONS: Takes you to the DISPLAY OPTIONS menu.

DISPLAY OPTIONS

THIS final menu controls the way in which data is handled on screen and by the printer. You step through the selections for each option by pressing Return.

AUTO-PRINT MODE: When this mode is ON, all text shown on the screen will also be sent to the printer, giving you a hard copy of your on-line session. An error will be generated if the computer can't get any response from the printer. This facility works via the Memory buffer, and when Auto-Print is ON you can't access such functions as LOAD or SAVE BUFFER, TRANSMIT FILE and RECEIVE FILE. If

the buffer already contains text when you turn this mode on, the current contents will be dumped to the printer before any new text is sent. *(From the communications screen, this option is toggled with **Ctrl+Shift+P**)*

PRINT AFTER: Some printers are faster than others and it may be desireable to restrict the size of the buffer used in Auto-Print Mode. The default is 500 characters, which takes about five seconds on an average dot matrix printer. A slow daisywheel printer would take far too long to print 500 characters, so it is worthwhile altering this setting to 125. Similarly, a printer with a large buffer could accept more characters in the same time. Pressing Return will step you through from 125 to 8000 characters.

AUTO LINE-FEED: Some online systems require that a Line Feed character is sent after each carriage return. This is normally only found on US databases, so the default mode is OFF. Mini Office II intelligently checks the incoming data and so does not care whether or not the remote system sends Line Feeds back to it. *(This is the same as pressing **Ctrl+Shift+N** while you are in communicate mode.)*

ECHO: A useful feature of many online systems is that they are able to repeat every character sent to them. This means that you actually see the text coming back (hopefully) as you typed it. If the remote system is not capable of this you should turn your local echo ON to allow you to see your text as you type it. If everything you type comes out twice then you should turn this option OFF, and if you can't see your typing at all, turn it back ON. The default mode is OFF. *(You can also toggle this mode with **Ctrl+Shift+E** while you are in communicate mode.)*

WINDOW: When communicating directly with another person via the CHAT mode on MicroLink/Telecom Gold or other online systems, it is often desirable to start to prepare a reply while the other person is still sending his message. With window mode ON, a six line text window is opened at the bottom of the online screen in which you may use all of the usual screen editing keys to prepare your text. Pressing Return will send the prepared lines to the remote computer. If you want to send a carriage return as part of your text, simply use Ctrl+Return instead. *(The window can also be toggled by using **Ctrl+Shift+W** while you are in communicate mode.)*

SPACE BEFORE RETURN: Some bulletin board systems use a single carriage return with no other text on the line to terminate their input mode. This means that transmitting files containing blank lines might confuse the remote system. To avoid this, switch this mode ON and a space will be transmitted before each Carrige Return is sent from the buffer or window. *(This option can also be toggled with **Ctrl+Shift+Space** while you are in communicate mode.)*

PROTOCOL OPTIONS: Takes you to the Protocol Options menu.

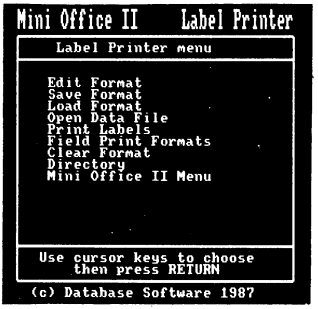
COMMUNICATIONS KEY SUMMARY

Ctrl+Shift+T	Transmit File
Ctrl+Shift+R	Receive File
Ctrl+Shift+N	Toggle Auto Line-Feed
Ctrl+Shift+?	Toggle Xon/Xoff Mode
Ctrl+Shift+Space	Toggle 'Space Before Return' Mode
Ctrl+Shift+P	Toggle Auto-Print Mode
Ctrl+Shift+F	Set Filter Mode
Ctrl+Shift+W	Open/Close Window
Ctrl+Shift+Escape	Send BREAK signal
Ctrl+Shift+D	Delete Buffer Contents
Ctrl+Shift+0 to 9	Execute Macro Key
Inverse Video Key	Select Screen Colours
Select	Open/Close Memory Buffer
Start	Begin Transmit/Receive Operation
Option	Return to menu

Mini Office II Label Printer

INTRODUCTION

THE label printer allows you to print sheets of labels. These sheets can consist of identical labels (for example to label products) or a set of individual labels, each taken from successive records of a database file (for example addresses). Either way, the labels will be printed to a fixed template or format that you have designed.



If you are going to use a database file, your first task is to create the file, each record of which will give rise to a separate label. If you haven't already done this, turn to the Database section on creating files and follow the instructions there.

Selecting LABEL PRINTER from the Main Menu will present you with the menu described below. Some of the options have supplementary menus within them to enable more detailed selections to be made.

EDIT FORMAT: This has two functions. Firstly it allows you to define what appears on your label, either directly by typing in text, indirectly by fetching text from a database file by specifying field numbers, or by combining both methods. Of course, if you were printing a set of identical labels, you'd simply enter straight text. Specifying field numbers gives you the chance to make each label different.

Secondly, this option allows you to tailor the printout to the size of stationery you're using. We'll consider this option in more detail later.

SAVE FORMAT: Saves the current label design and the figures that define its size to disc for future use.

LOAD FORMAT: Loads into your micro a label design and size that has been previously stored on disc. The operation will overwrite any format that has already been set up, but any file in memory will be unaffected.

OPEN DATA FILE: Prepares a Database file from disc ready to use in your labels. This, of course, is your first operation on entering the label printer if you intend to print labels from a Database file. It will not affect any format already designed or loaded.

PRINT LABELS: Takes you to the Print Labels menu, where you can set the number

of labels to print, do test prints to align your printer and send any necessary codes to configure your printer.

FIELD PRINT FORMATS: Allows you to define how fields taken from a database file will be printed. We'll consider this option in more detail later.

CLEAR FORMAT: Clears the present label format ready for you to define another and closes any open database file.

DIRECTORY: Displays a list of files, both data and programs and gives the other disc options described in the introduction.

MINI OFFICE II MENU: The only route out of the Label Printer. You will be presented with the Mini Office II menu, where you can select one of the other modules, or exit the package. Make sure you have saved any format you wish to keep before choosing either option.

FORMATTING LABELS

WHEN you select EDIT FORMAT you will be presented with the following options to allow you to design your labels and set the various sizes required for the printout. You should note that any change to the label size will cause your present design to be cleared, so the first thing to change on this menu are the variables that affect the size of label. These are the number of labels across the page, the page width and the label depth.

EDIT LABEL: Takes you into Edit mode, where you design your label. You should select this option after you have set the values that determine the size of the labels. Provided that your label is not too large for the screen, a box will be displayed for you to enter the details of your label into. This is known as the edit screen.

If your label is too large for a suitable box to be displayed on the screen, you will be presented with the largest edit screen that will fit onto the full screen.

Text can be entered anywhere on the edit screen. Move the cursor around it using the arrow keys until you reach the required position, then simply type your text in. If you want to include a field from the database – as you will if each label is to be different – just enter the field number in Inverse Video. Each time a label is printed, the contents of that field will appear there, taken from successive data-

base records.

You leave Edit mode using Escape, and will usually at this stage be ready to print the labels. You can re-enter Edit mode and alter your design at any time, but not, of course, figures such as page width or else you lose your design.

NUMBER OF LABELS ACROSS THE PAGE: Enter a number between 1 and 7 and press Return. This number, together with the page width is used to calculate the width of the labels.

PAGE WIDTH: Enter the width of your page in characters. This will vary between printers, and also depend on the style of type that you intend to use.

LABEL DEPTH: Enter the maximum number of lines that can be printed on your labels. Remember that a change in this value, or the width or number of labels across the page could cause characters to be lost if the label is made smaller.

TAB: Tab refers to the number of character positions from the left of the sheet that the label will start printing at. The Tab values are automatically calculated, depending on the number of labels across the page and the width of paper. If, after a test print, you find that the edge of any label is not exactly in the required position, it can be changed by entering a new value.

PRINTING LABELS

WHEN you select PRINT LABELS you will be presented with the following options:

PRINT LABELS: Prints labels according to the format you have defined or loaded. After printing the first row of labels, the number of labels left to print will be displayed.

NUMBER OF LABELS: Shows the number of labels to be printed. If no file is open – that is, you are printing the same label repeatedly – you must set this value yourself. If there is a file open the value will be automatically set to the number of records in the file. If you want more than one label for each record, it can be adjusted accordingly. For instance, if you want two of each, enter twice the number of labels shown.

TEST PRINT: Allows you to check that the chosen format is correct and that the labels are correctly aligned in the printer. Two rows of labels are printed, with text

as you defined it and strings of characters to represent the maximum length of any fields that you are using from a database file. The strings of characters used are 9s to represent numeric fields, Xs to represent alpha fields and 99/99/99 to represent dates.

SET PRINTER CODES: Allows access to the special features of any printer by sending the appropriate control codes. After you select this option, you will be presented with a list of codes that you can edit in exactly the same way as in the Word Processor. They are entered onto the labels using Shift+Ctrl+number, again exactly as you did in the Word Processor.

FIELD PRINT FORMATS

THIS OPTION allows you to define the way that the Database fields are to be printed. Before selecting Field Print Formats you should open a file and when you select it you will be presented with a screen showing several details about the file.

There are two things that you can change to alter the appearance of your label by moving around the screen using the cursor keys – the field length and format. The field length can be set to any length between 1 and the length that you set up in the database.

If you press Return with the cursor over something in the format column, it will cycle between Left justify, Right justify, Centre Justify and No space. The first three justify the text accordingly and the last prevents spaces that are present in the database file from being printed.

Pressing Escape will return you to the Label Printer Menu.

EXAMPLES

NOW that you have read the theory of each option of the label printer, let's try printing some labels. First we will print 100 identical disc labels and then a set of address labels (each different) using the file created using the example in the database section of this manual.

EXAMPLE 1: From the Label Printer Menu, select EDIT FORMAT. We want four labels across the page, so move the highlighted section to NO. LABELS ACROSS PAGE and press the 4 key followed by Return. In the same way, change the label depth to 6 lines.

You will now notice that you have four tabs set at 0,20,40,60. Leave these at present, and come back to this menu to change them if your test print shows slight mis-alignment. You are now ready to type in your label, so select the top

option from the menu (EDIT LABEL).

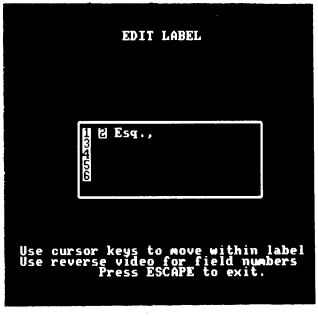
You should now have a framework on the screen, and you can enter any text you like by typing it and using the cursor keys to move around the label. The accompanying screen shows an example of how your label should look. Once you are satisfied with it press Escape twice to return to the Label Printer Menu.

To start printing, select PRINT LABELS and then change the number of labels to 100. Ensure your printer is connected and do a test print to ensure everything is correctly aligned. If any adjustment is needed to the tabs, press Escape to return to the Label Printer Menu, Select EDIT FORMAT, adjust the tabs, press Escape and select PRINT LABELS ready to do another test print.

Once you are satisfied with the position of the printing, select PRINT LABELS, and your 100 labels will be printed.

The computer displays the labels remaining to be printed so as to give you some idea of how much longer it will take to print.

EXAMPLE 2: As you were experimenting with the database, you created a file containing names, addresses and some information about products. This has been saved with the filename MEMBERS and we will now use this file to print address labels (which also contain the product code).



After loading the label printer, select OPEN DATA FILE, and enter the filename MEMBERS when prompted.

We will assume that the default sizes of label and paper are correct, so select EDIT FORMAT, and press Return twice to go straight to the label editing screen.

The first 5 lines are to contain the name and address, as read from the file, so in Inverse Video just enter 2 1 on the first line, 3 on the second and so on up to 6. Put the word Esq and punctuation in the framework, so your screen looks like the illustration.

Press Escape twice to return to the Label Printer Menu. You can then select Field Print Formats if you wish to change the way in which the data will be printed. So, for example, you could centre justify all fields to give it a neat appearance.

Press Escape to return to the Label Printer Menu, select PRINT LABELS and follow the same procedure as you did with Example 1. This time you will notice that the number of labels has been automatically set to the number of records in your file. If you want, for example, two of each label just double this number.

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