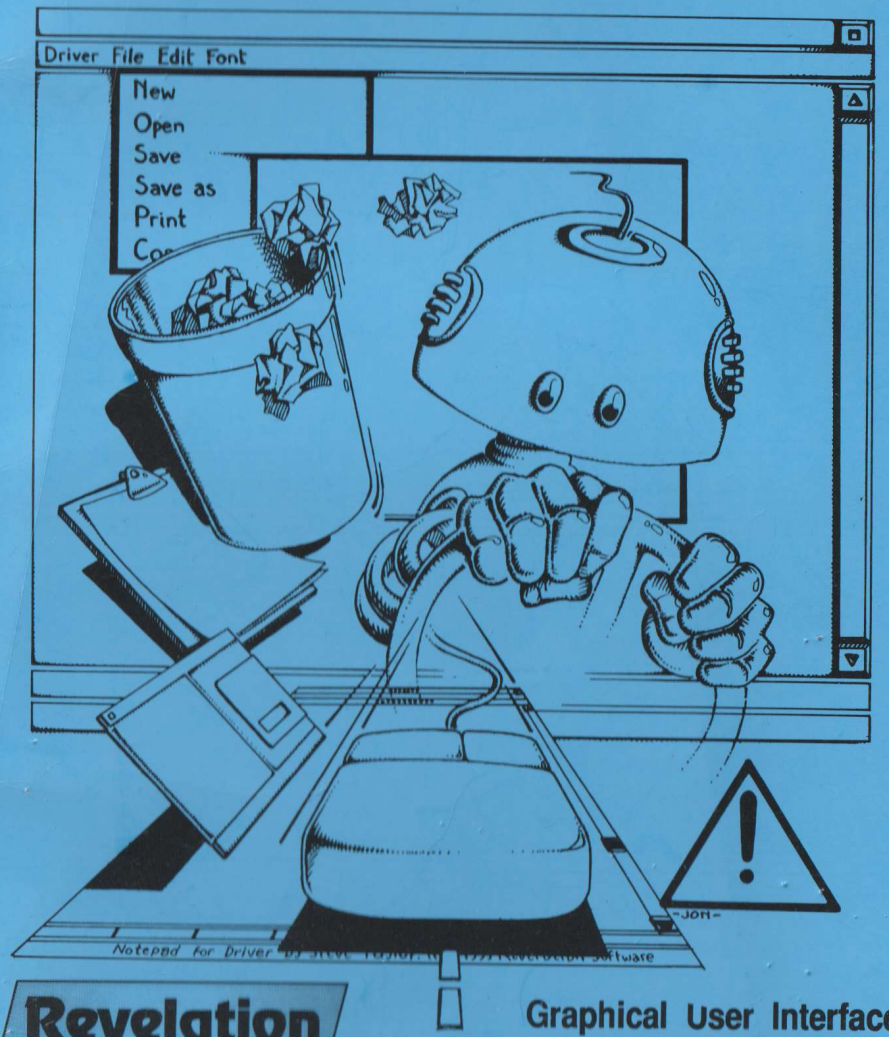
Product Code:- RS1016 **UK R.R.P. £29-95**

DRIVER

User's Guide



Revelation Software

Graphical User Interface Software For *SAM*

(Requires MasterDOS)

DRiVER

User's Guide

DRiVER - User's Guide.
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This User Guide was written by Steve Taylor.
Typesetting and origination by Format Publications.
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Development and programming by Steve Taylor.

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1: INTRODUCTION

WHAT IS *DRIVER*?

Driver is an extension to the operating system of the SAM Coupé, and provides a Graphic User Interface (GUI, pronounced "gooey") for running application programs, in the standard WIMP environment used on many other computers.

It also provides facilities for installing more than one application program, switching control between them and easily transferring data.

Driver is written completely in machine code and is fully compatible with MasterDOS, MasterBASIC and any other software which follows established protocol on memory management, including BASIC programs with which it can co-exist.

The Package.

This package contains the ***Driver*** disc itself, with ***Driver***, an installation program, seven ***Driver*** applications and a selection of icons and preference settings to get you started.

Obviously this manual is also provided, which should guide you through ***Driver***. You will also find two disc labels to put on your working copies of ***Driver***.

I hope you enjoy using ***Driver***. It took me a lot of time to write, and is well worth the price, so please let other users buy their own copies. Remember - other developers will only produce more ***Driver*** software if a substantial number of copies are sold.

GETTING STARTED

Note: To run ***Driver***, you will require MasterDOS (with or without MasterBASIC).

Making A Working Copy.

Before doing anything, it is important that you make a working copy. As well as MasterDOS, you'll need the installation program on your master disc and a blank floppy. First BOOT MasterDOS by pressing [F9].

Next, insert the ***Driver*** disc into drive 1 (making sure it is write-protected - the tab on the bottom left should show a hole) and type:-

```
LOAD "INSTAL.BAS"
```

Follow the on-screen instructions which will copy everything to your blank disc and then add on a DOS file. When the program is finished, put your master disc away and only use the working copy from now on.

2: THE WIMP ENVIRONMENT

WHY WIMP?

In the early days of home computing, machine power was the top priority for manufacturers. It was accepted that customers would be happy with black and white text displays, and command-driven application programs, provided that their computer could run fast enough, and store enough information.

After a few years, however, a new breed of user developed who wanted aesthetically-pleasing displays and straight forward, easily used software. The age of user-friendliness was born, and out of it emerged the WIMP environment.

WIMP stands for Windows, Icons, Menus, Pointer. (There are variations on this explanation, but they all stem from the same idea.) The screen display is divided into rectangular "windows", each of which can hold a program, a task or a bit of information.

These windows can be reduced to small "icons" - symbols or pictures representing the contents of the window. For example, a word processor could be given a pencil as an icon. Icons can also be used to represent options within an application program, a system which avoids the use of any complex computerese jargon.

Other options can be put on "menus" and rolled away at the top of the screen, to be "pulled down" when required. This leaves the screen free for more important things.

Finally, the whole environment is controlled by the user with a "pointer" - usually an arrow - which can be moved around the screen by a mouse. Windows, menus and icons can be selected by pointing at them and pressing a button on the mouse.

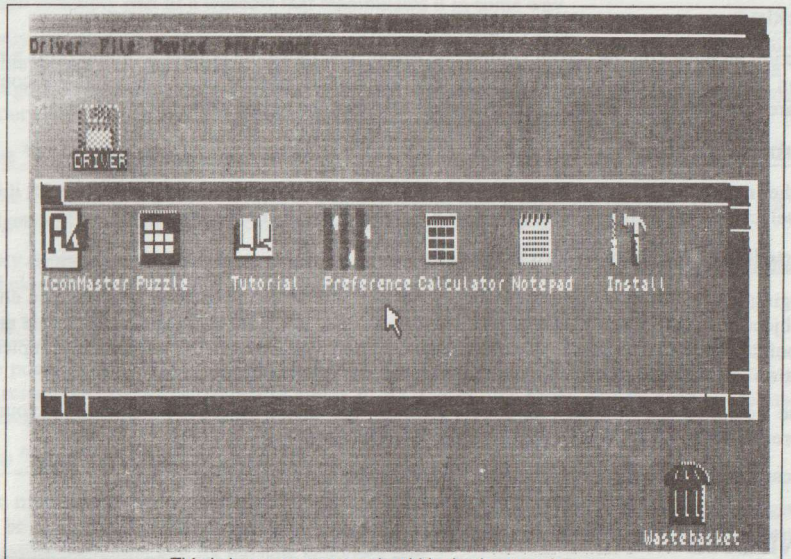
Once you are familiar with the WIMP environment, you will find it much easier to use than any command-driven programs.

The different aspects of the ***Driver*** WIMP environment are described in detail on the following pages.

THE POINTER

Insert your working copy of ***Driver*** and press [F9] to boot it. After it starts you will notice an arrow in the centre of the screen. This is the pointer.

As the disc is read it will change to an hourglass symbol. The hourglass indicates that your SAM is busy doing something and you will have to wait until it has finished. The pointer will then return to its arrow incarnation.



This is how your screen should look when you boot up.
Drive 1 has been opened and the applications on it are displayed.

Mouse Control.

If you have a SAM mouse attached this automatically controls the pointer, and any movements you make with the mouse will be mirrored by the pointer on the screen. The left and right mouse buttons activate whatever is pointed at.

Running out of space when moving the mouse isn't a problem. Just lift it up and replace it where there is room. The pointer only follows the mouse when it is it contact with a surface.

Try this, and watch the pointer move around the screen. You will find that rolling the mouse over a "mouse mat" improves performance and is more pleasant than running it around a slick desktop.

Keyboard Control.

If you do not possess a mouse yet, and I strongly suggest that you consider getting one, the pointer accepts directions from the cursor keys at the bottom right of your keyboard. The [,] and [.] keys emulate the left and right mouse buttons respectively. For ease of use, the [RETURN] and [SPACE BAR] keys also emulate the right button. Holding down combinations of the cursor keys allows diagonal movement.

Keyboard users should note that sometimes the keyboard is used to enter text into an application. In this case it has two roles to play - controlling the pointer, and entering text or moving the flashing cursor. You can switch between the two "modes" by pressing [SYMBOL] and [EDIT] together.

Whichever control method you are using, get used to moving the pointer before going any further. Note that the actual part of the screen pointed to is at the tip of the arrow, or the middle of the hourglass. Other pointers will have different "tips".

Clicking.

Selecting an object on the screen couldn't be easier. Just move the pointer to it and press a mouse button. (For most situations either button will do.) This is referred to as "clicking". Of course, if you are using keyboard control, you should press one of the button keys.

Double-Clicking.

Another method of selection is the "double-click". This usually implies opening whatever it is that you select, and is simply a matter of clicking the object twice in rapid succession.

Dragging (or clicking-and-dragging).

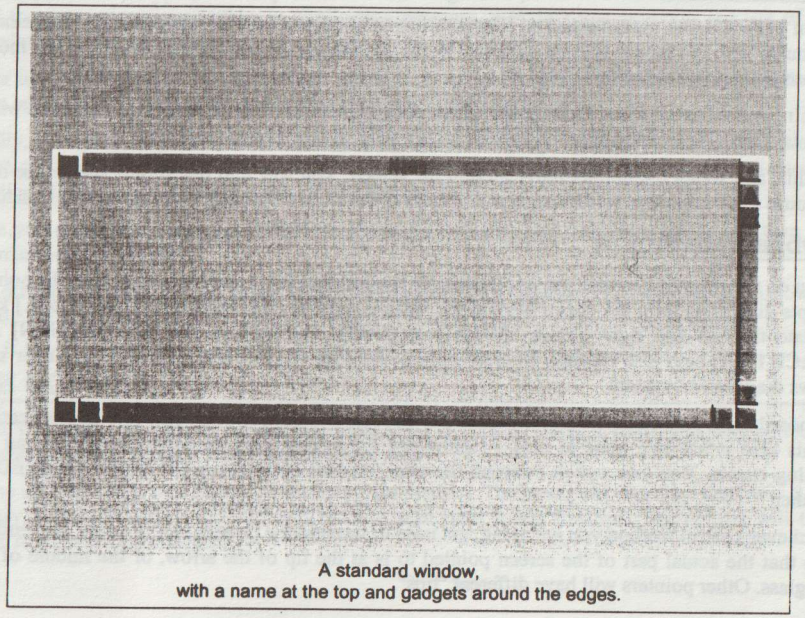
Dragging is used for moving objects, drawing graphics or selecting sections of files. You click on the object, the starting point for the graphics, or whatever, and hold down the button while moving the pointer to the new position. Releasing the button will deposit the object, or complete the selection etc. Again, keyboard users should hold down a button key.

Please note that the "timing" of double-clicking and dragging can be adjusted to your own preference using the Preferences application described later.

You can try out these different techniques after reading the next section.

WINDOWS

A window is an area of the screen which holds a program, task or a piece of data. It consists of a frame (which marks the outline of the window), a name and a variety of different "gadgets". A



A standard window,
with a name at the top and gadgets around the edges.

gadget is simply part of a window that manipulates it in some way.

Firstly, you should be aware that windows can overlap. Clicking an obscured window will bring it to the front, and the current "active" window is indicated with a black name on a yellow backgound. Inactive windows have a different background under the name. (All colours and colour combinations can be edited using the Preferences application)

The "close" gadget.

In the top right of the window there is a square button with a small dot inside it. This is the "close" gadget, and when clicked will close the window, removing it from the screen.

Every application program has a screen-wide window in the background. The close gadget on this will close the whole application, removing it from memory.

The "move" gadget.

The position of a window can be changed by clicking this gadget, dragging the window around the screen, and releasing the mouse button to fix it in its new home. The "move" gadget itself can be found in the top left of a window - it's the square button with a little rectangle inside it.

The "size" gadget.

Like moving a window, changing its size involves clicking and dragging the "size" gadget. This can be found in the bottom right of a window, and can be recognised by its two little rectangles. Releasing the button will fix the new window's size.

The scroll bars.

A word processor that can only display a screenful of text, or a graphics package that can only show half a picture is about as useful as a garden hose in the Outer Hebrides. To accomodate the possibility that a window might not be big enough for all the information in it, ***Driver*** supplies vertical and horizontal "scroll bars" at the right and bottom edges of such windows.

A scroll bar consists of four parts. In the middle there is an empty strip representing the range of information available. Sitting somewhere on this there's a small square which indicates where in all this information the window is currently focussed. An indicator at the top (or left) of a strip means that you're at the start of the data in that particular direction. If it's at the bottom (or right), you're at the end. You can change the view through the window by clicking and dragging the indicator to a new position, and releasing the mouse button.

You can skip a whole window-length along the information by clicking on the strip, on either side of the indicator. For example, to move a window-height upwards, you would click on the strip above the indicator. Don't worry! This sounds more complicated than it actually is.

Finally, you'll notice, stuck on to the ends of the strip, two arrows. These point either up/ down or left/ right, depending the direction of the scroll bar. Clicking one of these arrows scrolls the view half a window-length in that direction.

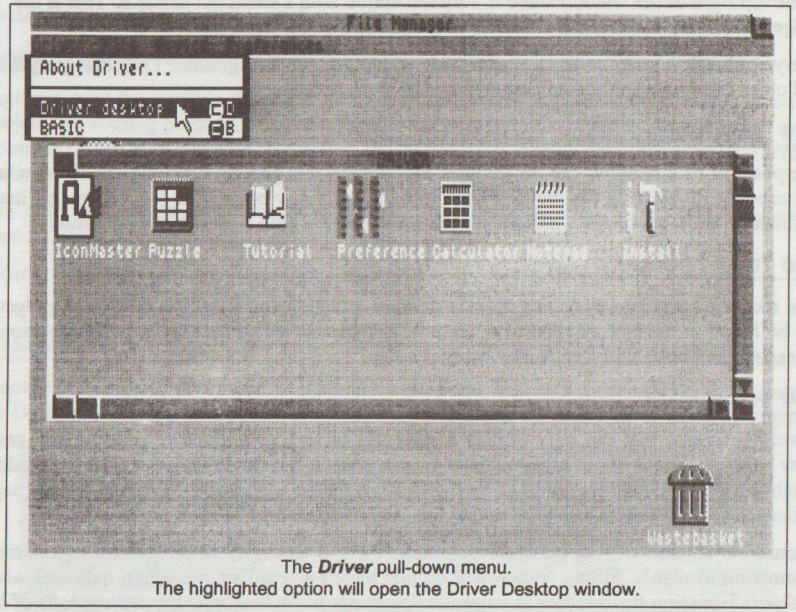
Please note: these descriptions of the distances scrolled by the various scroll-bar gadgets are only general. Individual applications might assign different lengths. For example, "Notepad"'s scroll-bar arrows move the display up or down a line at a time.

MENUS

Applications tend to have options. Lots of them. Some programs can have hundreds of the things.

In the past, such applications tended to employ command-driven user interfaces as a result: listing all the options on the screen uses up too much room.

And so was born the pull-down menu. All the options are rolled up and tucked away at the top of the screen, ready to be called upon when required.



The ***Driver*** pull-down menu.
The highlighted option will open the Driver Desktop window.

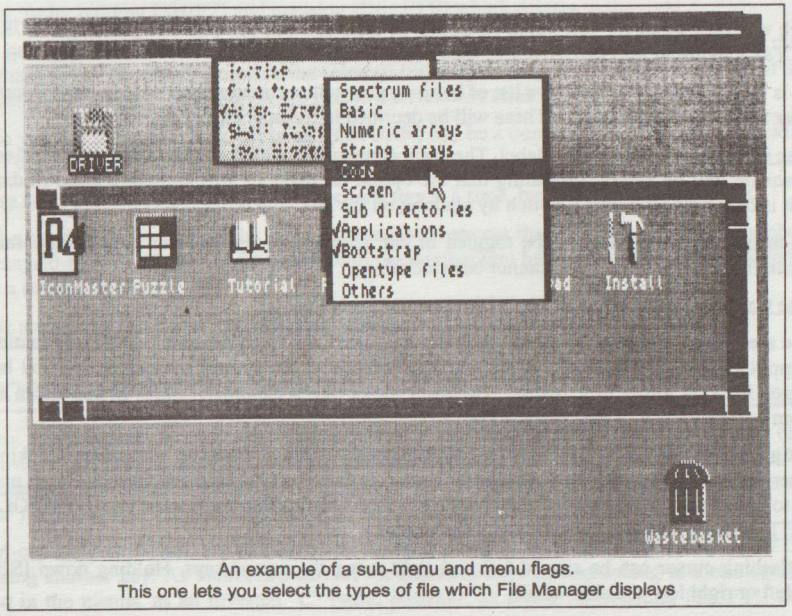
To pull down a menu, simply click on its name. By holding down the mouse button you can drag a highlighted "bar" to the option you want. Releasing the button selects the option.

Some options may not be available at the time you look. If this is the case, they will be faded in yellow on white, and the highlighted bar will not respond to them. Similarly, menus may be split up by horizontal lines, and you can't select these either!

There are three types of option:-

1. The command. This will perform some action, such as saving a file, or will open up a dialogue box to converse with you. More of dialogue boxes later.
2. Sub-menus. Upon selection, another menu will appear with options that you can select as before.
3. Flags. These options may or may not be accompanied by a tick, dependent on whether or not they are "on". You can adjust the status of a flag by selecting the option; some will toggle on and off, others choose the option at the expense of others in a list.

Finally, next to some options you will notice an inverted "C" together with another letter or number. This corresponds to the option's short-cut key, a subject which is detailed later on.



An example of a sub-menu and menu flags.
This one lets you select the types of file which File Manager displays

DIALOGUE BOXES

When an application program wants to converse with you, it opens up a special kind of window called a dialogue box. You'll notice the differences between the two: dialogue boxes have white backgrounds, no name and no window-gadgets.

However, it does have gadgets of its own, and these are described below. Some dialogue boxes simply notify you of a mistake you have made (you should expect to meet these quite frequently until you get to grips with ***Driver***!), or some other information. You'll recognise such boxes by a large octangonal "i" sign.

If the information is more urgent, or you're being asked to do something important, the sign is more likely to be an exclamation "!" in a triangle, and boxes which ask for information might have an octagonal question mark "?" sign.

Of course, there are other signs which could be used. For example, a disc icon for filing operations.

Aside from such graphical icons and text (neither of which you can select or manipulate), there are the more interactive (and, perhaps, more interesting) gadgets:-

1. The button:- A large box with curved edges and a word or two inside. You can highlight a button by clicking it - clicking one which is already highlighted selects it. You can't select a button which is inactive. (Inactive buttons are faded).

Examples of buttons include "CONTINUE" which will let you carry on from whatever the box was doing, "OK" which you can use to confirm choices you might have made, and "CANCEL"

which will quit whatever you might be doing. In fact, you can use [CNTRL] with [RETURN] or [ESC] as a short-cut for OK/CANCEL. (See SHORT-CUT keys later).

This is by no means an exhaustive list of buttons; you will encounter more as you experiment with ***Driver*** and ***Driver*** applications. These will be decribed in the application instructions.

2. The switch:- A square with a label. These are comparable with the menu flags described earlier. The square will be empty (indicating that the option is "off"), or will contain a cross (indicating that it is on). You can select a switch by clicking on the box.

Line menu flags, switches can be toggled or can choose one option from a selection. Inactive switches have faded labels, and cannot be selected.

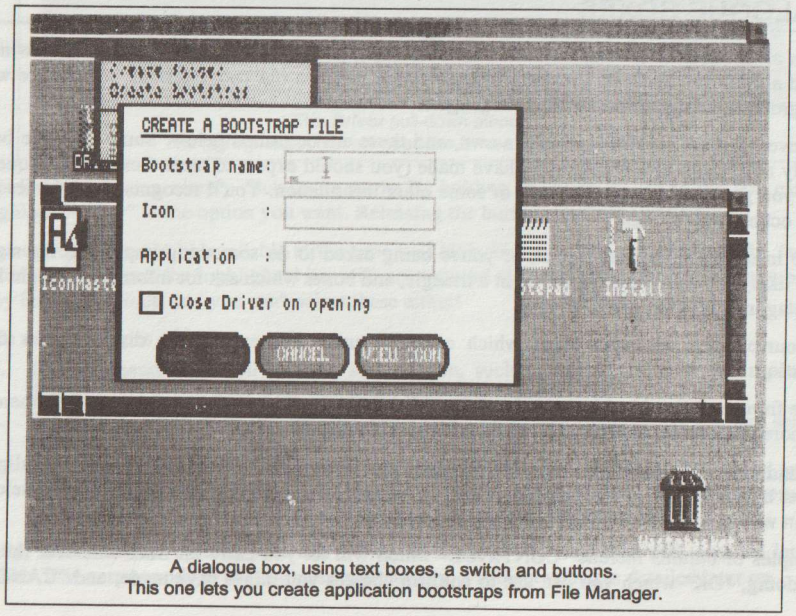
3. The text box:- A rectangular box with some text inside it.

These are the most flexible of all the gadgets, and allow you to enter some text as information for the application. (For example, a file name). As you move the pointer over an active text box, it changes from an arrow to a "caret". The caret looks like a capital "I", with a wee notch at the bottom corresponding to the pointer's tip.

Caret pointer = text input. A simple equation, but one which is useful to remember. Clicking the pointer in the box will position a flashing cursor at that position, and the keyboard can now be used to enter text. (As mentioned previously, keyboard-controlling users must use [SYMBOL] and [EDIT] to toggle between cursor and pointer modes.)

The flashing cursor can be moved left and right using the cursor keys. Holding down [SHIFT] with left or right lets you skip words.

Characters can be erased by pressing [DELETE], which removes the character to the left of the



A dialogue box, using text boxes, a switch and buttons.
This one lets you create application bootstraps from File Manager.

cursor, or by holding [SHIFT] and pressing [DELETE] which deletes to the right.

You can select a section of text by clicking and dragging from the first character to the last. Anything you type will now replace the selected text, or pressing [DELETE] will get rid of it. You can deselect the text and reposition the cursor with another click.

When you are finished typing, pressing [RETURN] can be a convenient alternative to clicking the "OK" button.

Please note: The box can only display 16 characters at a time, but you can type up to 250.

4. The number box:- Exactly the same as a text box, except that you can only enter numbers (in the range 0-65535). If there is a problem with the number you have entered ***Driver*** will inform you with a suitable message.

There are other more exotic and specialised gadgets, but these will be detailed later.

SHORT-CUT KEYS

When you become familiar with an application package, pulling down menus or clicking scroll-bars can appear more and more time-consuming. To provide for such experienced users, frequently used options can be activated with a "short-cut key." (You might know them as "hot keys.")

Short-cut keys on ***Driver*** are employed by holding down [CNTRL], and possibly [SHIFT], and pressing another key. As mentioned earlier, the short-cut keys corresponding to menu options are listed in the menus, as an inverted "C" (with, possibly, an arrow representing [SHIFT]) together with the other letter or number.

Some of the more commonly used short-cut keys are listed below. (Although there is nothing to say that applications have to use these ones in particular.)

CNTRL-D	Return to ***Driver*** Desktop.
CNTRL-B	Return to BASIC.
CNTRL-O	Open a file.
CNTRL-S	Save a file.
CNTRL-P	Print a file.
CNTRL-X	Cut an item out and put in on the clipboard.
CNTRL-C	Put a copy of the selected item on the clipboard.
CNTRL-V	Paste an item from the clipboard into a document.

Short-cut keys are probably of more use to keyboard users, or in applications where the keyboard is in frequent use. (For example, a word processor like Notepad.)

3: THE *DRIVER* DESKTOP

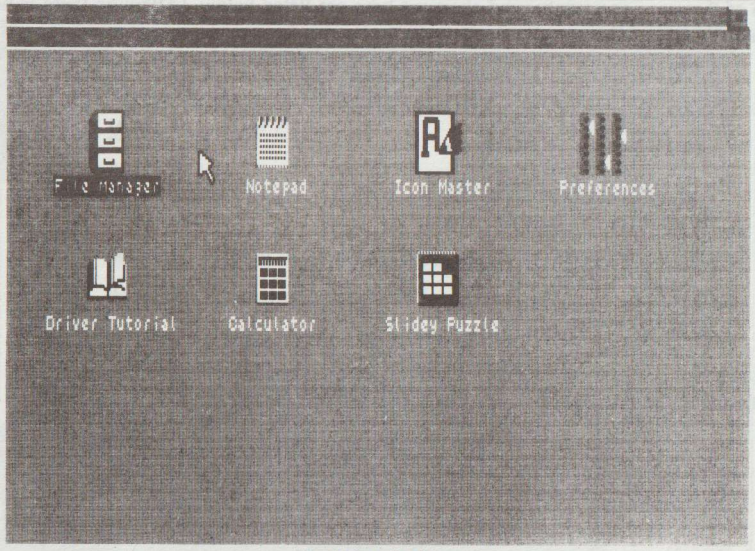
Driver can "host" up to twelve different application programs, depending on available memory. In order to switch between them, it is necessary to open a window known as the "***Driver*** Desktop." This is where the icons representing the resident applications are laid out.

You will always have one application resident - the File Manager. This is built into ***Driver*** itself, so you can never remove it from memory, unlike other programs which you can open from disc to load them into the computer, and then close to get rid of them.

You can re-open an application by double-clicking the appropriate icon. There is a short-cut for opening the File Manager; CNTRL-F.

Closing an application is achieved by clicking on the top-right close gadget. If you close the ***Driver*** Desktop you are actually closing ***Driver*** itself, the File Manager and all other resident applications. Because this could inevitably lead to the extraction of large clumps of hair from accident-prone users, you will be presented with a dialogue box telling you what is about to happen, and asking you to confirm ***Driver***'s closure.

Please note: It is VERY IMPORTANT that you close ***Driver*** before switching off your computer.



The ***Driver*** Desktop.
All the resident applications are displayed and File Manager is currently selected.

Every application program has at least one menu, the "***Driver***" menu. This contains three options:-

"About xxxx..." which tells you about the application.

"***Driver*** Desktop" (or CNTRL-D) which will open up the ***Driver*** Desktop.

"BASIC" (or CNTRL-B) which will return you to SAM Basic without closing anything. This is another great feature of ***Driver*** - you can go backwards and forwards to Basic without worrying about your application programs and documents. Returning to ***Driver*** requires the use of a new Basic command:- **DRIVER**

Which will get you back to wherever you left from. You can use this as part of Basic programs which will run with ***Driver*** in memory. The command stops being recognised by SAM Basic as soon as you close ***Driver***.

The same menu is present on the ***Driver*** Desktop, minus the Desktop option, of course.

One final point concerning the closure of applications: Whenever you close one (either directly, or by closing ***Driver***), you will be informed of any outstanding business that needs attention, such as saving changes made to a document, or emptying the Wastebasket in the File Manager. This is a safe-guard against the kind of iritation caused by switching of your computer and realising you forgot to save that 240 page project you were supposed to have done for tomorrow...

4: THE CLIPBOARD

Once you have a few applications it can be useful to be able to transfer information between them. For example; taking a picture from a drawing program and including it in a word-processed document. You can do just that with ***Driver***.

When it is needed, ***Driver*** allocates memory to the "clipboard." The analogy goes along the following lines: You've got your document in front of you. Taking a pair of scissors, you can cut out a piece of text, or a bit of a picture or whatever, and place it on your clipboard. This can then be taken to another document where the contents on the clipboard are pasted in using glue.

This is essentially what happens with ***Driver***. Depending on the specific application, you can "cut" pieces of documents to the clipboard and "paste" them back in somewhere else (even in the same document, of course). If you want, you can make a copy of whatever it is and put that on the clipboard, to avoid disturbing the original. Or you can paste a copy of whatever is on the clipboard into a document, so that you can use it more than once.

What all this amounts to is easy data manipulation. Since there is nothing to stop you opening up an application more than once (so that you have two or more copies of it running in memory), you can cut and paste bits from file to file, all without having to load and save.

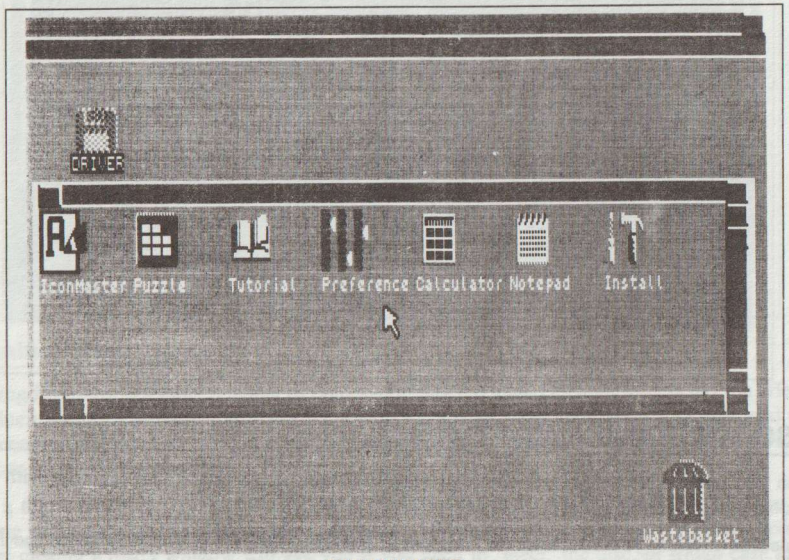
The selection techniques, too, make moving blocks of text (or whatever) around in documents much easier. For example, clicking and dragging is employed in Notepad to select some text, which you can then cut and paste to a new position, all without touching the keyboard. More information about Notepad, and other applications, is given later on.

5: THE FILE MANAGER

If you've been following this manual page by page, you should have ***Driver*** opened up in front of you, with a window in the middle and a bunch of strange icons. (If not, insert your working copy and press [F9] to boot it.) In fact, this is the File Manager; ***Driver*** has been set to automatically open up both this application and the disc in drive 1. You can adjust this, and other settings as we shall see later on.

Firstly, what is the File Manager? Well, the simplest way to look at it is as a graphical representation of DOS, the Disc Operating System. It lets you organize and manipulate all your programs and documents like the DOS, but instead of typing in commands and seeing things in lists of text, the ***Driver*** WIMP environment is fully utilised to make things simple, straight forward and faster.

It is also the "door" through which you can open other ***Driver*** applications.



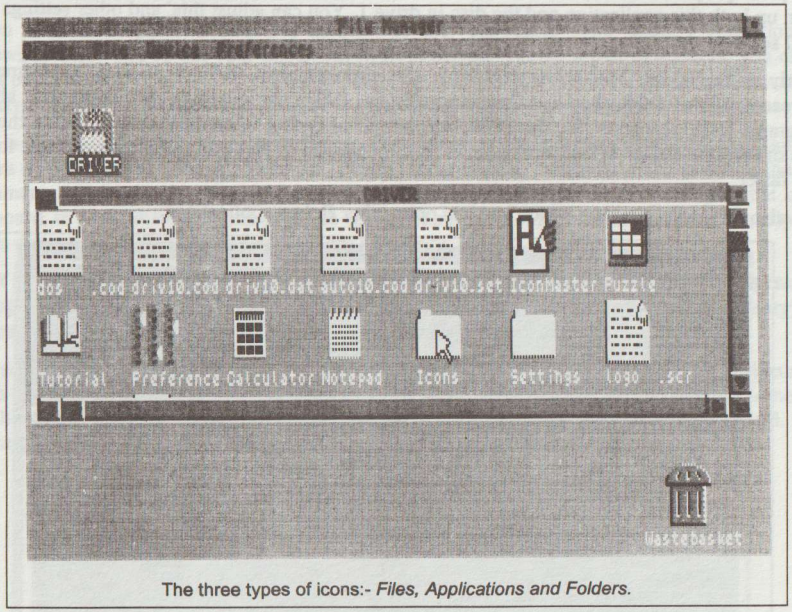
FILE MANAGER
Drive 1 is open with its applications displayed and the wastebasket is ready.

THE SCREEN SET-UP

The screen is arranged in the same manner as most ***Driver*** applications. The title is at the top, with the program's close gadget. There are four menus underneath, including the ***Driver*** menu described earlier. In the middle of the application window there are disc icons representing the various drives to have attached to your SAM, including ramdiscs, and a wastebasket where you can dispose of anything you don't need any more.

Underneath each icon is its name; this is highlighted if the device (disc or bin) is selected. You can select a device by clicking it.

A double click will open the device, provided it isn't already open and you can move it by clicking and dragging. The icons of open devices are faded.



The three types of icons:- *Files, Applications and Folders.*

DISC WINDOWS AND FOLDERS

Once you open a disc, a window appears with the disc's name at the top, together with all the window gadgets: move, close, size and scroll bars.

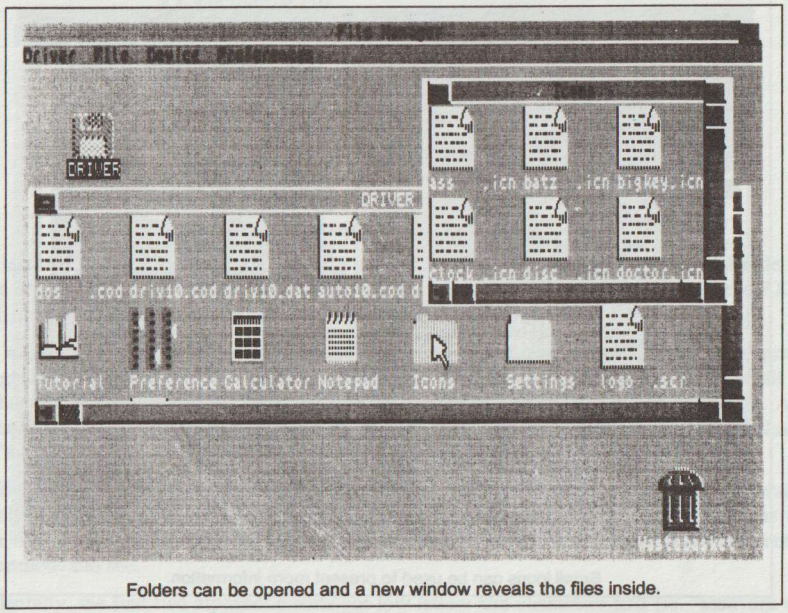
Inside this window you will find the contents of the disc. These will normally be in the form of large icons, but there is an option to use DOS-style text directories. (See later.)

There are three kinds of icon:-

1. Folders. These are equivalent to the subdirectories used in MasterDOS, and may contain more files and folders.

2. Files. These are the normal SAMDOS and MasterDOS files: Code, BASIC, Screen$ and so on. The icon for these files is a dog-eared sheet of text.
3. Applications. These are either ***Driver*** applications or application bootstraps (see later), and their icons depend on the nature of the application program. Notepad, for example, uses a picture of a pad of paper, and Tutorial uses a picture of a book. These items do not have an equivalent in DOS, but you can still perform normal file operations on them.

As with the devices, each file's name lies under the icon. (From now on, I will refer to all three types listed above as "files", unless otherwise stated). If the file is selected the name is highlighted; like the devices you can select a file by clicking it. However, more than one file can be selected if you hold down [SHIFT] while you click.



Folders can be opened and a new window reveals the files inside.

Opening Files.

Opening files, too, is simply a matter of double-clicking the icon. Opening folders has the effect of introducing another window to display the folders's contents. Opening applications will load them into memory and run them. Of the other files, only BASIC programs, SCREEN$ and SNAPSHOT files can be opened in this way.

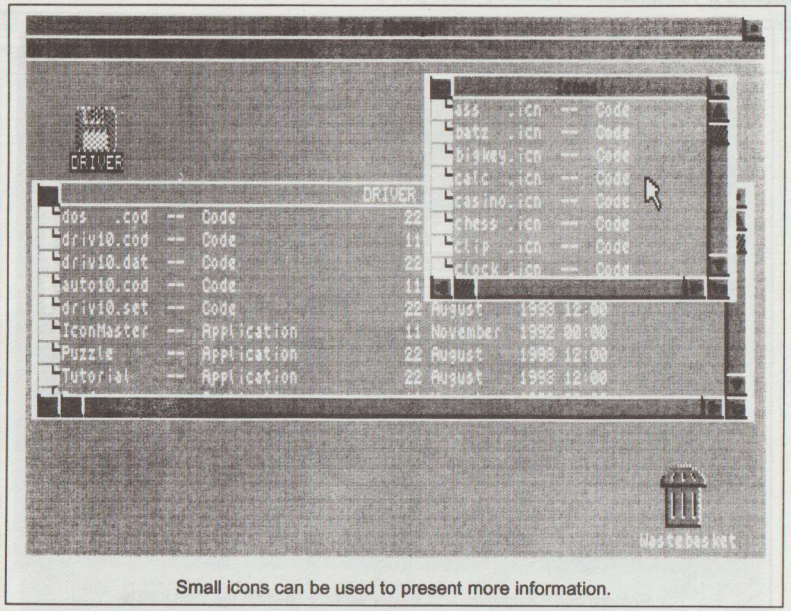
Once a folder has been opened, its icon fades, and it cannot be opened again. You can close it by clicking the close gadget on its window, an action which will also remove the window from the screen: closing a disc's window will ask you if you want to "eject" the disc, in which case all the windows stemming from that disc will be closed. (See "EJECTING DISCS")

You can open up as many discs and folders as you like, although you might have problems fitting them all on the screen! To make room, you can move windows around by clicking, dragging and releasing the move gadget on the top left. Similarly you can change their size by dragging the size gadget in the bottom right. It is worth noting that, unless the disc is write-protected, any changes

made to a folder's window are saved on the disc, ready for the next time you use it.

If windows obscure each other, you can bring one to the front simply by clicking it. The currently "active" window is denoted by having a yellow background behind its name. Inactive windows use a different colour.

If there are more files in a particular disc/folder, you can use the scroll bars at the left and right to move the view of the window. The manipulation of scroll bars is described elsewhere, but I will repeat here that the arrows move half a window's length/height and clicking on the bar itself moves a full window length.



Small icons can be used to present more information.

If you hold down [SHIFT] while you click, it has the effect of scrolling either four or eight pixels respectively. The scroll bars will not respond when the whole view is fitted in the window.

As mentioned previously, you can move a device/ file by clicking, dragging (the pointer changes to a four-way arrow) and releasing. This can have one of a number of effects, most of which are detailed later on, although moving devices around the desktop (a term for the area on which they are placed, not to be confused with the ***Driver*** Desktop) simply alters their position to make space for windows, and so on. You should also be aware that any movements you make with one file are also made by all the other selected files.

DISPLAYING THE FILES

There are two modes of file display. You can either use big or small icons, with more information being presented alongside the latter: the selection can be toggled by the "Small Icons" option in the "Preferences" menu. (The short-cut key for this option is CNTRL-I).

The information consists of the file's name, its "attributes", what type of file it is, and the date/ time it was last changed. File attributes are printed as "H" for hidden, "P" for protected (locked) or "-" for not hidden/protected.

The file can be one of the following types:-

ZX BASIC
ZX Numeric Array
ZX String Array
ZX CODE
ZX SNP 48K
ZX Microdrive File
ZX SCREEN$
SPECIAL
OPENTYPE
ZX EXECUTE
SAM BASIC
SAM Numeric Array
SAM String Array
SAM CODE
SAM SCREEN$
Driver Application
Application Bootstrap

The last two are new kinds of files and are only relevant to ***Driver***. In fact, you can decide which kinds of files you want displayed by having a look at the "File types" sub menu. All the ZX types listed above come under the umbrella term "Spectrum files".

You might have noticed that one of the attributes mentioned above was "hidden", and probably thought to yourself, "How can I see a file that's been hidden?" Well, in addition to big/small icons, another setting forces File Manager to show those hidden files. (Short-cut: CNTRL-H). A third display option aligns the file name extensions, like MasterDOS directories. (Short-cut: CNTRL-A).

Finally, you can arrange the files in windows by sorting them. There are three methods available: alphabetically, by file name extension, and chronologically. You can have combinations of the three, knowing that the sort methods are given priorities high, medium and low respectively. Experiment and see.

Incidentally, the first two alphabetic sorts put low letters and characters first (ie. "aardvark comes before "babble"), and the chronological sort puts the most recent files first.

All the display options mentioned are available from the "Preferences" menu.

RENAMING, HIDING AND PROTECTING FILES

You can change a file's name by selecting the file and clicking on the highlighted name. (To remind you, the pointer changes to a caret.) This opens a dialogue box with the existing name in a text box and OK and CANCEL buttons. To change the name, simply edit the text and click OK or press [RETURN]. The disc must be write-enabled.

To retain the existing name, click CANCEL.

If you wish, you can type a full pathname for the file, using "/" and "\" characters to seperate the names of sub directories, just as in MasterDOS. The characters "*" and "?" (known as "wildcards") must be avoided in the new name for the file.