

A year after its initial 'launch' the Enterprise micro is at last ready to hit the streets. Stuart Cooke finds out how ready it is to face the final frontier.

LATE STARTER

A company called Elan originally launched the Enterprise in 1983. At the time it was thought to be the greatest thing to happen to home computing since the invention of the microchip. Unfortunately, the machine didn't materialise when promised and only now, after the company has changed its name three times and the projected price of the computer been increased, is it set to materialise in high street shops.

At the original price of £199 the Enterprise completely wiped the opposition away. However, now that most other manufacturers have lowered their prices, the shouts of joy from eager customers and praise from the computer press have been replaced by a sullen silence and the odd comment of 'Why are we still waiting?'

First impressions

Well, it's certainly different. With its black case, red, green and blue keys and

extremely futuristic styling the Enterprise looks as though it ought to be under the control of a Wookiee on the flight deck of the Millennium Falcon rather than on the dining table of a computer buff.

One of the first things you notice about this machine is the built-in joystick that is situated at the right-hand side of the keyboard. It's a pity that more machines don't have this feature as it certainly is a great plus. Games programs can make use of it without having to give a keyboard option, business and professional programs can use it to move the cursor around the screen. It simply makes life much easier.

Eight function keys are situated at the top of the keyboard. This may not seem to be many but when you realise that they can be used together with the Shift, Control and Alt keys, there are actually 32 available. The only problem with this is remembering which key is assigned to which function.

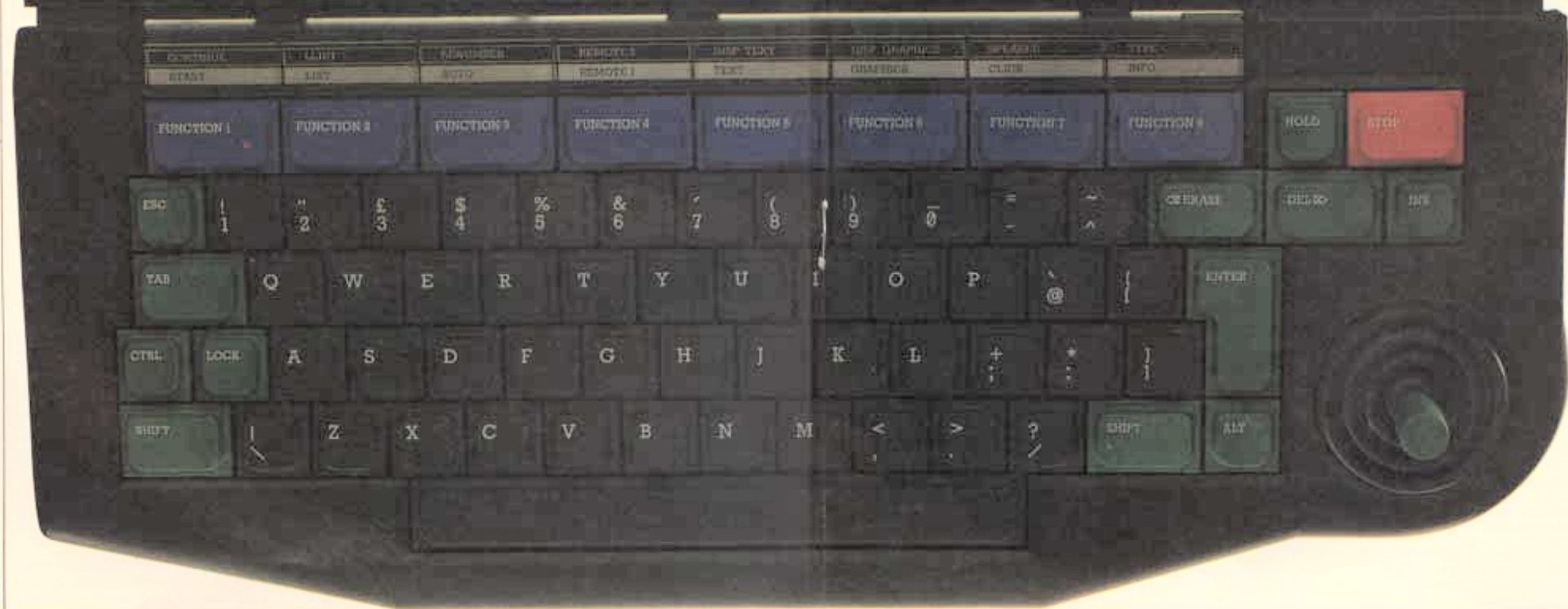
To make life a little easier there is an

area above the keys for an overlay. Unfortunately, the overlay supplied with the machine only has two of the functions on each key marked as there simply isn't enough room for the others.

Moving around the rear of the machine reveals the sockets that connect to the outside world and none of them are standard. Obviously, if you want to cut down the cost of a product you cut down on the number of sockets on the rear. Sinclair did this by making the Spectrum's connector the edge of the circuit board — Enterprise has adopted the same method. Numerous sockets are available at the rear but these are all edge connectors.

Sockets are provided for two controllers (joysticks?), printer and video. The cassette sockets are of the 3.5mm type found on personal stereos. If you connect

ENTERPRISE
SIXTY FOUR



your headphones or hi-fi to the one marked 'out' the sound from the Enterprise will be replayed in glorious stereo. Both the left and right-hand sides of the machine have connectors. On the right is the expansion bus which will be used to connect the Enterprise to disk drives, etc when they appear. Judging by the amount of time it took for the machine to make an appearance we could be waiting a very long time. Around the left-hand side of the machine is the cartridge slot. The machine has no Basic built in and a cartridge is supplied for insertion into this socket. When (or if) any other languages become available you will be able to insert them instead of the Basic, thereby saving valuable RAM. Examining the keyboard more closely shows it is exactly the same type as the

Commodore and BBC whose Basics aren't anywhere near as long-winded allow abbreviations of the keywords to be entered, so why not the Enterprise?

Documentation

This certainly falls a long way short of perfection. A quick glance through the 229 pages is enough to put even the most hardened computer buff off using it. My feeling is that it is written for people with a master's degree in astro physics rather than a computer novice. Yes, the manual does attempt to teach you how to use the machine, it just doesn't do it very well. The information is in there somewhere but finding it is another matter. For example, the section that deals with graphics could do with a table that tells you the number of colours and the resolution of each mode.

are you going to use the word processor for?

In use

For a start, the power supply produces a very loud buzzing sound. I can only hope that this was the transformer supplied with my machine and is not going to be a common problem. Power up greets you with the name Enterprise flashing in multi-colour characters on the screen. Unfortunately, on my Fidelity portable TV which works perfectly well with every other computer the colour promptly disappeared never to return. The TV still works with other computers in colour. A second TV proved to work perfectly with the computer and the picture and colours are extremely clear. Enterprise boasts 256 different col-



The Basic plugs in to the cartridge slot. The second connector is the expansion bus where the peripherals plug in.

much criticised keyboard on the Sinclair QL. Unlike the QL keyboard, this one is actually quite good to use, even if the first touch does make you cringe. Though the keys have a spongy feel, there is an option to have a click sound emanate from the built-in loud speaker (and headphones if connected) so that you can tell when you have pressed a key. This facility makes it much easier to touch type. The joystick to the right of the keyboard works on the same membrane principle as the keyboard. When you move the joystick to the left it pushes down on the rubber mat. However, the joystick has no feel to it and is rather reminiscent of the old Atari type, the ones you couldn't tell if you had made a contact with. But with this model, whenever you move the joystick a click emanates from the speaker. First impression of the Basic is that it is extremely long-winded. Most versions of Basic now use abbreviations for their command words. Enterprise, however, has gone back a few years and just as with Cobol, everything has to be typed out in full — CLAs has been replaced with CLEAR SCREEN. This does have one good thing going for it — programs are extremely readable. There is no mention of abbreviations in the manual. Even the

Instead this information is buried within the text. Anyone who wishes to use the Enterprise with machine code can simply forget it. A grand total of three pages is given over to this subject and all this does is explain how to reserve memory for your program and how to call your routine. No doubt some bright spark will make quite a bit of money by producing a beginner's guide to machine code on the Enterprise. To be a little fairer to Enterprise, there is a section at the back of the book that lists all the available commands and their functions. If you can already program on another computer it is probably advisable to read this section rather than the front of the manual, only moving further back if something is not clear. For a machine that has a large array of connectors there is one great omission — a description of the connectors. Nowhere in the manual could I find how to connect a printer, external joystick or monitor. Nice one Enterprise, everyone will have to buy their leads from you. A word processor is supplied on ROM and a chapter is included which explains its functions. The following chapter describes the function keys that can be used with it. But if you aren't given the pin out for the printer connector, what

ours on the machine. Obviously it is not possible to get every colour totally different and most of them are simply different shades of blue, red etc. This is extremely useful when producing games and pictures because by using the shading carefully you can create the illusion of depth. A demonstration cassette is supplied with the machine and this will probably be the first thing that new owners look at. According to the description there should have been numerous sound, graphic and program examples on it. In fact I could only load a couple of the programs and the only way I could hear anything on the second side of the cassette was to replace the cassette in my hi-fi and then turn the volume up full. Somewhere along the line something went wrong with the duplication. How many people are going to get duff tapes this year? My first reaction to the non-functioning cassette was to assume that it was caused by a bad cassette interface. Saving and loading my own programs on to cassette soon proved this to be untrue as it worked very well. One extremely nice touch is the level meter which appears at the top of the screen when loading. This consists of a green and red block. When the green block is lit the



All of the sockets have more standard connectors and no pin out is given in the manual.

load is going okay, if the red block is lit your cassette volume needs to be adjusted. The manual says that an occasional flash of the red bar is all right; in fact I found this to be the best level for loading programs. One feature that has been hyped up about the Enterprise is the provision of no fewer than four sound voices and a stereo sound facility. I was surprised to find that no sound is output through the TV speaker, instead a speaker is built into the machine. This gives a sound quality more reminiscent of the beeper on the Spectrum than a four channel synthesizer. The only way to get decent sound out of it is to plug the output into your hi-fi. Here, again, I got into problems. The stereo sound output is present on the cassette output socket. This means that if you wish to save programs and listen to the sound you will have to keep swapping the plugs at the rear of the machine. Unlike some other versions of Basic the one on the Enterprise does have commands to control sound output from the machine. As previously mentioned, the Basic is long-winded and the sound statement takes the form: SOUND FITCH NO., LEFT leftvol,RIGHT rightvol,DURATION length, ENVELOPE number, SOURCE voice0, SYNC voice. Though it would have made more sense if it could be abbreviated, it does make a change to have a Basic that gives a statement for all available functions without having to rely on pokes. Commands to control the graphics are also in abundance. There are separate commands for setting the graphics mode, choosing the colours you wish to use and plotting a range of different shapes. Logo style commands are present for those wanting to draw lines. These are PLOT ANGLE, PLOT FORWARD, PLOT BACK, PLOT RIGHT and PLOT LEFT. These are extremely useful for drawing axes and graphs. PLOT PAINT is used to fill in areas of the screen while the RGB commands allow you to select which quantities of red, green and blue a specific colour number is going to be made of. This command has strange parameters as full red, green and blue is RGB (1,1,1) and if you want to use any less the numbers should be less than one. Surely it would have been easier to work in hundreds so that you could build up a colour of say 30 per cent red, 30 per cent

green and 40 per cent blue. Probably the greatest omission on the graphics side of the machine is sprites. A machine with such stunning graphic facilities should have come with at least eight sprites to make games programming much easier. The Enterprise is actually a nice machine for programming on. Line syntax is checked whenever a key is pressed so you don't have to wait until a program is run before you find you've made an error. Correction of a line is made very simple by the inclusion of a full screen editor under control of the joystick. If an error is present on a line you simply zip the cursor up to the offending error, insert or delete using the keys to the top right of the keyboard and then hit Return. Unfortunately, you have to press Return to correct the line and if you don't the changes will not be made. If the corrections were made to the line stored in memory while you were editing, it would be a lot easier to use. It is quite easy to forget to press the Return key if you are correcting a number of lines. The joystick is also used for editing a document when you enter the word processor. Entry to this is made by typing the word TEXT, but this erases any programs that are held in memory. On entry the word processor is in 40-column mode. This is easy to read and is probably the only way to use the program on a TV set. One of the function keys will switch the program into 80-column mode. This isn't very clear on a TV but no doubt will be readable on a monitor. Most of the functions that you would expect from a basic word processor are there. Nearly all of the commands are available from the function keys. To make life easier for you the names of the commands given to each key are at the top and bottom of the screen. Once you

get used to using the word processor you can remove these so that you can see more text. There are a couple of major grips about the program. The first may seem a little trivial but is actually most important when producing documents — there is no provision for putting headers and footers on each page of printed text. The second problem concerns switching between 40 and 80 columns of text. Since it is hard to read 40 columns on a TV set it would make sense to input the text in 40 columns and then switch to 80 columns so that you could see what your document would look like on paper. Unfortunately switching between display modes erases all of the stored text. One area where the Enterprise wins over some of its competitors is its structured programming statements. These include procedures, IF... THEN... ELSE loops, etc. They are a great plus for anyone who would like to move up to a higher level language at a later date and, together with the very long Basic statements, should make a program as easy to understand and follow.

Verdict

A year ago the Enterprise would have stood out as a market leader. Today, with Sinclair, Acorn and Commodore and perhaps MSX all becoming household names, it will probably have a much harder time making an impact. Even so it's not a bad machine. The Basic, for all its length, is extremely good and should prove easy to use especially for the beginner. However, if the Enterprise is going to be a first computer I would wait until someone produced a beginner's introduction, which no doubt they will. I don't think I'd save up to treat myself to an Enterprise, but if I had the spare cash it would be well worth considering.

SPECIFICATIONS

Price	£249.95
Processor	Z80
RAM	64K
ROM	32K
Storage	Cassette
Display	Max text 84x56, max graphics 672x512, number of colours 256
Interfaces	2 controllers, printer, video, cassette, cartridge
Keyboard	69 keys plus joystick
Distributors	Retail