



Amstrad CPC 464

Amstrad is a company with a wealth of experience in the budget hi-fi market, and this is reflected in the compact design of its first home micro (see page 429). The fact that the machine is supplied with both a monitor and a built-in cassette recorder should make it attractive to the novice user, and the Amstrad features both joystick and Centronics interfaces. There is also a disk drive, which is sold together with the LOGO language and CP/M operating system for £200. The Amstrad is a good, all-round machine, with a maximum graphics resolution of 640 by 200 pixels in two colours, with a 'palette' of 27 shades, and stereo sound facilities. **Price:** £239 (monochrome monitor), £349 (colour monitor)



Sinclair QL

The QL is sold complete with 128 Kbytes of memory, twin built-in Microdrives and four bundled business programs (see page 501). As such, it seems to offer outstanding value — but there are snags. The keyboard is disappointing, being merely a more sophisticated version of the membrane-type keyboard used on the Spectrum; the BASIC is structured but contains a few bugs and is surprisingly slow; long-term reliability of Microdrive storage is also dubious. Editing facilities are also disappointing. The QL supports graphics resolution of 512 by 256 pixels in four colours, or 256 by 256 in eight. Each pixel may be individually coloured, so 32 Kbytes of memory are used just to handle the screen. No disk or cassette interface is supplied, but the QL does have joystick, monitor, networking and two RS232 interfaces. A major selling point is likely to be the bundled software, written by Psion. These four programs — word processor, database, spreadsheet and business graphics program — are extremely sophisticated when compared with other home machine software. However, they are let down by the QL's hardware limitations, in particular the slow speed of the Microdrives. **Price:** £399



Sinclair Spectrum

The Spectrum has become successful despite its limitations (see page 50). The keyboard is very poor, and the Spectrum uses a 'keyword' system of program entry, which makes programming easier for the beginner but causes problems to the more experienced user. Screen resolution is 256 by 176 pixels with eight colours, two of which may be displayed in any character square. The sound facility is almost non-existent, with a single 'voice' and a volume level that is virtually inaudible. The BASIC is acceptable, although a trifle slow, but the manual serves as a good BASIC tutorial. The Spectrum is entirely lacking in standard interfaces, although many independent firms have produced peripheral equipment that is simply 'hooked on' to the machine's user port. Sinclair recently produced, after a delay of well over a year, its own Interface 1, which supports Microdrives, networking, and an RS232 link. This was quickly followed by the Interface 2, which gave the machine the ability to use cartridge software. Although somewhat outdated, the Spectrum's software base makes it an attractive proposition — especially as six programs, worth over £50, are supplied free with the 48 Kbytes version. **Price:** £100 (16 Kbytes), £130 (48 Kbytes)



Acorn Electron

The Electron is a scaled-down version of the BBC Micro, possessing the same excellent structured BASIC, but lacking the wide range of interfaces supplied with the BBC (see page 449). Electron BASIC runs at a slower speed than the BBC version, and the Electron does not support the BBC's Mode 7 teletext graphics. Some BBC software is Electron-compatible, while other programs have been written especially for it. The Electron can produce impressive displays, with a maximum graphics resolution of 640 by 256 pixels, and a maximum text resolution of 32 lines of 80 characters. Unfortunately, this reduces the amount of memory available to the programmer — of the maximum 32 Kbytes, as little as nine Kbytes remains to the user if the highest resolution is selected. The Plus 1 peripheral adds printer, joystick and cartridge interfaces that are not supplied with the basic machine, but as yet no disk drive is available. **Price:** £200

BBC Model B

As a result of government recommendation, this machine is widely used in schools and hence should be familiar to younger users; a good range of educational software is available (see page 449). Made by Acorn, the BBC Micro has an excellent specification, with a very fast 'structured' BASIC, excellent graphics resolution, good sound, and an outstanding range of interfaces, including Centronics, RS423, RGB, composite video, four A-to-D channels, a user port, 1 MHz bus for add-ons, and the 'tube', which enables a second processor to be linked to the machine. Disk drives and networking are also supported. However, the relatively small user RAM is rapidly eaten up by the graphics, with between nine and 28 Kbytes left for the user, depending on the mode selected. Use of a second processor alleviates this problem, and selection of the Z80 second processor option enables CP/M software to be run, making the BBC suitable for business use. **Price:** £399



How To Buy A Micro

Buying a new micro can be dreadfully confusing. Our chart isolates the most important features of a micro, and produces comparable profiles for the machines illustrated in this article. All you have to do is match your needs to these profiles

Amstrad CPC 464

Poor	Good
	Price
	Memory
	Backup Store
	Keyboard Quality
	BASIC Graphics
	BASIC Sound
	BASIC Editor
	BASIC Facilities
	Software — Quality
	Software — Quantity
	Interfaces
	Monitor Output

Sinclair QL

Poor	Good
	Price
	Memory
	Backup Store
	Keyboard Quality
	BASIC Graphics
	BASIC Sound
	BASIC Editor
	BASIC Facilities
	Software — Quality
	Software — Quantity
	Interfaces
	Monitor Output

Sinclair Spectrum

Poor	Good
	Price
	Memory
	Backup Store
	Keyboard Quality
	BASIC Graphics
	BASIC Sound
	BASIC Editor
	BASIC Facilities
	Software — Quality
	Software — Quantity
	Interfaces
	Monitor Output

BBC Model B

Poor	Good
	Price
	Memory
	Backup Store
	Keyboard Quality
	BASIC Graphics
	BASIC Sound
	BASIC Editor
	BASIC Facilities
	Software — Quality
	Software — Quantity
	Interfaces
	Monitor Output

Acorn Electron

Poor	Good
	Price
	Memory
	Backup Store
	Keyboard Quality
	BASIC Graphics
	BASIC Sound
	BASIC Editor
	BASIC Facilities
	Software — Quality
	Software — Quantity
	Interfaces
	Monitor Output