



# Acorn Electron

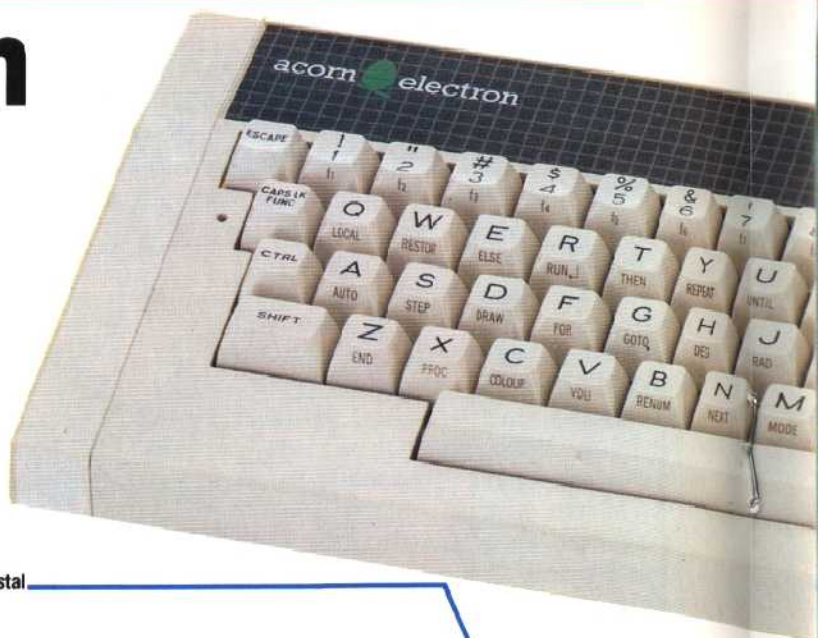
In the two years that elapsed between Acorn's BBC Model B and Electron, microcomputer technology has developed dramatically

The Acorn Electron is an elegant computer that lives up to its initial impression of being a robust and well designed machine. As a scaled down version of the BBC Micro, it isn't quite as impressive in performance, but feels more comfortable to use. Most of the features of the BBC Micro have been incorporated into the Electron. For example, the SOUND command is used in conjunction with the ENVELOPE command to synthesise different types of musical instruments on both machines.

All of the BBC Micro's graphics modes are available on the Electron, with the exception of Teletext (MODE 7), which is generated in the BBC machine by a special chip. This chip is not available on the Electron's circuit board, and so Teletext-like displays can only be produced by redefining most of the characters and imitating Teletext using MODE 6 (which is, however, restricted to two colours). This is a pity, because the Teletext mode on the BBC Micro is a very economical way of producing quite complex displays without using a lot of memory.

Input and output facilities are also less impressive than on the BBC Micro. Visual output is via TV channel 36, as well as through composite video and RGB sockets to monochrome or colour monitors. But apart from the cassette port there is no immediately usable interface.

Expansion is clearly possible through a large edge connector at the back of the machine. Unfortunately, this protrudes from beneath a



Master Clock Crystal

TV Signal Control Crystal

A major reason for the stability of the image generated by the Electron is the fact that it has a special separate crystal, which is used to time the display

ROM

TV Modulator And Output Socket

Composite Video Socket

RGB Socket

Cassette Socket

Cassette Motor Relay

The voltage used in the motor of a cassette deck is higher than the computer can handle, so it is isolated from the computer's electronics by this miniature relay

Speaker

Keyboard Connector

The number of pins (22) reveals that the keyboard's output is not decoded into ASCII. If it were decoded, there would be only 10 pins at most (eight for the data, plus the 5v and the ground). This is probably a function of the ULA



### Dynamic Duo

The brains behind the Electron were Chris Curry (left) and Herman Hauser (right), who were also largely responsible for the design of the BBC Micro. Curry was a development engineer working for Clive Sinclair, when he employed Hauser. The two men subsequently founded Acorn

ledge in the casing, and on an unexpanded machine the only protection provided for it is a plastic cover. No details are given in the manual about what signals it produces, nor any suggestion as to what may be connected to it. But it is clearly intended that some kind of expansion box will plug into it because there are threaded brass sockets moulded into the casing nearby, which are used to provide a mechanical link between the computer and the add-on.

The built-in BASIC is the now well-known BBC dialect; but this has been considerably expanded and here has many features that make the machine

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