



Keyboard

The keyboard is among the best of any home computer, with real typewriter-style keys of very high quality. In practice the keyboard is very similar to that on the BBC Micro. There are no separate function keys, but the same facilities are provided by the Caps Lock key, which if pressed in tandem with a number key, converts it into a function key.

This is extended to the letter keys and three of the punctuation keys, which produce BASIC keywords if they are pressed while the Caps Lock is held down.

Expansion Connector

No details of pin values or signal timings are given, but it is obvious that most of the system bus will be available through this connector, as well as TTL and power lines. Therefore, considerable expansion should be possible.

CPU

Controlling the machine is a standard 6502A processor, clocked at 1.79 MHz. This actually makes the decisions, something which the ULA cannot do by itself.

Uncommitted Logic Array

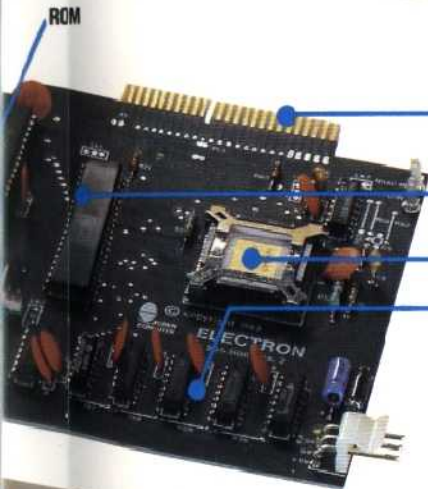
This is the biggest ULA ever manufactured. Apart from the ULA, the 6502 CPU, the ROM and the RAM, there are only nine other chips on the board, all of which are standard TTL logic, each providing just a handful of logic gates.

RAM

Bytes are loaded from RAM into the CPU in two halves. First, the lower four bits are accessed (one bit coming from each of the four chips), followed by the upper four. In most machines all eight bits of each byte would be stored in the same chip.

Power Conditioning Circuitry

The Acorn Electron is unusual in requiring a 19v AC supply. This has the advantage of being more stable, but needs a more complex circuit to modify it for computer usage.



ROM



Blank 28-Pin Area

This 28-pin area, marked out for a chip and with an unfilled link nearby, would suggest that either additional bank switched ROM may be added, or that a different type of chip may be used.

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a pleasure to use. Particularly useful is the OSCI routine, which allows a BASIC program to send commands directly to the operating system, and this permits experienced users to remove some of the constraints of BASIC. The assembler package, which is a feature unique to BBC BASIC, has also been expanded. It has additional keywords for defining variable storage and string printing, both of which are a chore in Assembly language.

In performance the Acorn Electron is better than average. The picture is very steady and sharp, with good clear colour and definition. When some serious expansion facilities, such as disk drives, are available, the Electron will certainly become a justifiably popular machine.

Acorn Electron

PRICE

£199

SIZE

340×160×65mm

CPU

6502

CLOCK SPEED

1.79MHz

MEMORY

64 Kbytes of ROM
32 Kbytes of RAM (with no on-board expansion)

VIDEO DISPLAY

Up to 32 lines of 80 characters. Eight colours with background and foreground independently settable. 127 pre-defined characters and 255 user-definable characters.

INTERFACES

Channel 36 TV, composite video, TTL RGB, cassette, system bus (undocumented)

LANGUAGES SUPPLIED

BBC BASIC with in-line assembler

OTHER LANGUAGES AVAILABLE

Should run some other AcornSoft languages such as FORTH and LISP, provided that they are RAM-based. ROM-based languages such as BCPL and PASCAL are incompatible with the unexpanded machine.

COMES WITH

Installation and BASIC manual, TV lead, power transformer, introductory cassette

KEYBOARD

56 typewriter-style keys. Single key BASIC keyword entry. 10 user-definable function keys.

DOCUMENTATION

Simply excellent. There is plenty of real detail available for the experimenter or the serious programmer. Every BASIC keyword is separately explained; and there is a good section on the Assembly language, which is very important considering the in-line assembler. The functions of the operation system are also well described. Thanks to this wealth of information, most tasks should be relatively easy to accomplish with the machine.