



Commodore PET 4032

The Commodore PET was the first personal computer. Since its introduction, however, the machine's hardware has advanced considerably

In many ways the Commodore PET (an acronym of Personal Electronic Transactor) was the machine that started the whole microcomputer boom. When it was released in 1977, it set such a high standard that it's possible to regard some more recent machines as retrograde steps in comparison. The original machine's metal casing serves as an excellent example of its superiority. Apart from the Memotech and the more expensive business machines, the cases of most recent computers are moulded from plastic, and these range in quality from the barely adequate to the shoddy. The PET's built-in power supply is another detail that separates it from many of its competitors in the home market.



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PET Keyboard And Monitor

The first PETs had a non-standard keyboard, the later ones more closely approximate the style of a typewriter and feature the graphic symbols on the front of the keys (except the business models). All PETs feature built-in monitors: the later ones have 12" (30 cm) screens, with green on black displays and a choice of 40 or 80 character columns

Although eight-bit, as well as 16-bit, machines had been available for at least two years before the PET was released, these were either kits or simple 'minimal systems' consisting only of chips on a PCB. The PET was the first readily available microcomputer that could truly be described as 'plug-in-and-go'. The very early versions of the PET had a built-in tape recorder with motor control, a built-in monitor, and ROM BASIC. All that a new user had to do to start work was to plug it in and turn it on, and almost immediately a reassuring message:

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COMMODORE BASIC VER. 1.0
7167 BYTES FREE
READY
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Timer Chip

When a computer is switched on, the circuits take a while to stabilise. This timer waits for a fraction of a second, after which it resets the microprocessor to the start of the BASIC interpreter

User Port

This interface contains a number of useful lines, including an eight-bit parallel port, and connections for interfacing an external monitor. It is particularly suitable for interfacing home-designed electronics projects

IEEE488 Port

The PET was the only one of the early microcomputers to include this parallel interface. Because it could address up to 15 peripherals, it was used to drive both disks and printers. The IEEE488 is also the standard used for interfacing scientific laboratory equipment

6522

This Versatile Interface Adaptor is similar to the 6520, but contains a shift register for converting between serial and parallel data, as well as two programmable timers that can be used to control external equipment

6520

These PIAs (Peripheral Interface Adaptors) take care of most of the interfacing, including the cassettes and keyboard

6502

The PET was designed by Commodore's Chuck Peddle, so it is hardly surprising that it is based on a 6502 microprocessor, which he also designed. Though business computers have opted for other processors, the 6502 still remains popular amongst home computers

would appear. The user could then start typing, and this work could be safely stored on cassette, without the need to plug various components together or load system programs from tape (or worse, to have to enter them on a HEX keypad, which wasn't uncommon in those days).

Commodore BASIC has been through several revisions during its lifetime, and the latest version (4), though based on the original, has been so extended as to make it into a new dialect.

Another major and unique feature of the PET is the character set. Containing both the complete ASCII set and a large variety of block graphics, this has been put to some remarkably creative uses by PET owners, despite the relatively low resolution of the characters. However, a major problem of the machine was that the codes generated by the keyboard don't match the ASCII set, nor are they arranged in any standard order.

The heavy use of these block graphics has been reinforced by the availability of a range of printers