

**Quartz Crystals**

Quartz crystals provide timing signals so that all parts of the computer operate in synchronisation. One controls the speed of the microprocessor, the other primarily the video circuitry

RAM

The Dragon 32's standard 32K of RAM comes in 16 2K chips

ROM

The two ROM chips contain the sophisticated Microsoft BASIC interpreter and the operating system that governs all the internal functions of the computer, such as transferring information from the keyboard to the screen

Microprocessor

The Motorola 6809E is faster than the more popular 6502, though there is less software written for it. The same chip is used in the Tandy Color Computer — one reason why both machines are so compatible

Main Expansion Port

The pins on this interface connect to the microprocessor, so it is used mainly for plug-in software cartridges

Voltage Regulators

An external transformer reduces the mains voltage to the appropriate voltage used inside the computer. These regulators, with the cylindrical capacitors in an adjacent position, are needed to smooth out any variations or fluctuations. They are mounted on a large metal heat sink to avoid overheating

Power Socket

This is where the mains transformer plugs in

**The 6809E Chip**

The Dragon 32 uses the 6809E eight-bit microprocessor rather than the more popular 6502 or Z80 chips used in most computers. The 6809E is highly regarded by many programmers. It is easy to write programs for the 6809E using its own machine language

DRAGON 32**PRICE**

£175

SIZE

380 × 325 × 97mm

WEIGHT

2.1 kg

CLOCK SPEED

1 MHz

MEMORY

The 32K of RAM in the Dragon 32 represents quite a substantial amount of memory power, complemented by 16K of ROM containing the Microsoft BASIC interpreter and operating system

VIDEO DISPLAY

The screen can hold 16 lines of 32 character positions. A total of eight colours is available, reducing to two colours at the maximum graphics resolution of 256 × 192 dots

INTERFACES

Cassette, joysticks (two ports), television monitor, cartridge slot, parallel interface for printer, etc.

LANGUAGE SUPPLIED

BASIC

OTHER LANGUAGES AVAILABLE

None

COMES WITH

Power supply unit, aerial lead, instruction manual

KEYBOARD

Typewriter-style layout with 53 moving keys

DOCUMENTATION

The user's manual, written by the computer's designer, Richard Wadman, has been produced to a high standard.

All responses from the computer are printed in a different colour, and there are plenty of helpful hints and tips.

Dragon 32 BASIC is taught from an elementary level to the level of comprehensive graphics and sound. This is followed by a set of appendices including helpful screen layout grids. These are used to create graphic designs before programming.

There is a good choice of books available about the Dragon 32, both instructional courses on programming and listings of programs