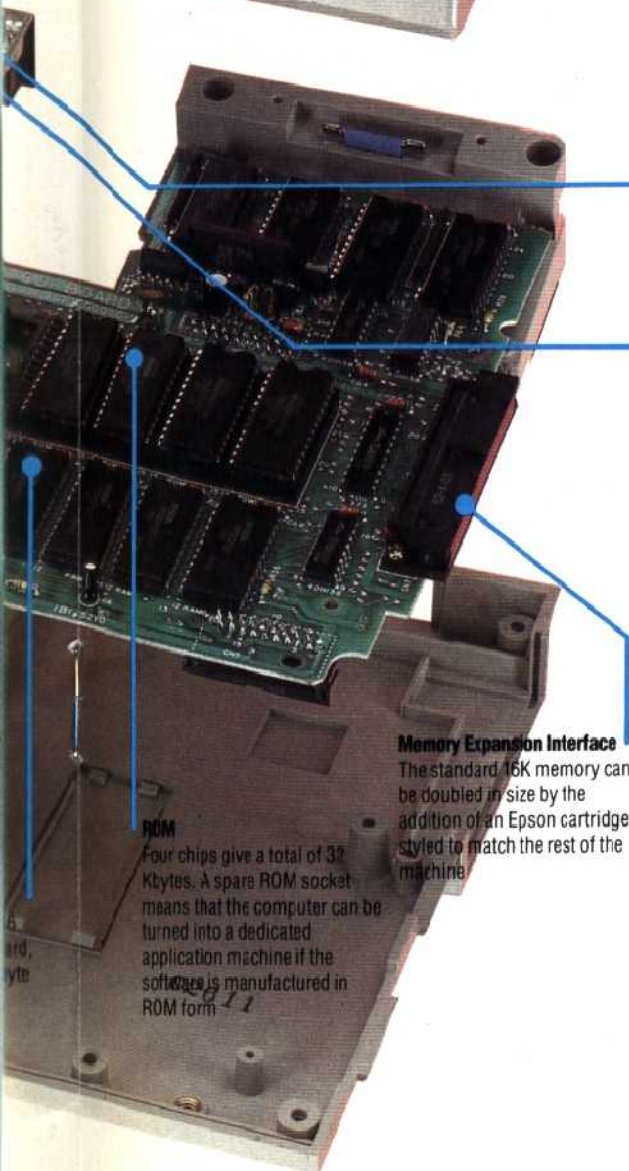


**Cartridge Release**

This knob allows the complete microcassette to be removed. In theory this module can be replaced with a solid-state cartridge, if you wish to use the machine for just one purpose

Viewing Angle Adjuster

Liquid crystal displays normally have to be viewed from the correct angle to be legible. Rotating this knob lets the user view from any desired angle

On/Off Power Switch**Serial interface**

Though the RS232 port is also a serial interface, this port is intended to drive various peripherals which Epson will introduce for the HX-20

RS232 Port

This is the accepted standard for serial interfaces and is used to connect to a printer, or to a modem for communicating with another computer over the telephone

Memory Expansion Interface

The standard 16K memory can be doubled in size by the addition of an Epson cartridge, styled to match the rest of the machine

ROM

Four chips give a total of 32 Kbytes. A spare ROM socket means that the computer can be turned into a dedicated application machine if the software is manufactured in ROM form

**A New Slant**

Much of the physical space taken up in a microcomputer is devoted to the cathode ray tube that forms the heart of the monitor. Epson overcame this problem in the HX-20 by substituting a liquid crystal display for the conventional VDU.

Displays of this type have long been used in calculators, but this application takes a quantum leap in terms of quality as the 4 by 20 matrix is adjustable for viewing angle

EPSON HX-20**PRICE**

£411 or
£486 including microcassette

SIZE

290 × 210 × 45mm

WEIGHT

1.7Kg

CPU

6301 Hitachi

CLOCK SPEED

2.45 MHz

MEMORY

16K of RAM, expandable to 32K using a bolt-on pack. 32K of ROM, which can be expanded to 64K by the same means

VIDEO DISPLAY

Liquid crystal display (adjustable for viewing angle) with 4 rows of 20 characters acting as a window onto an area of up to 255 × 255 characters. Every pixel on the display can be addressed, giving a maximum graphics resolution of 120 × 32

INTERFACES

Memory expansion port, cassette, RS232 (for external printer), serial (for future disk), bar code reader pen

LANGUAGE SUPPLIED

BASIC

OTHER LANGUAGES AVAILABLE

FORTH interpreter

COMES WITH

Moulded plastic carrying case, power supply unit, instruction manual

KEYBOARD

60 typewriter-style keys, five programmable function keys, and four dedicated function buttons

DOCUMENTATION

The computer comes with two manuals: an operations manual, and a BASIC reference manual. Both are very comprehensive indeed, but they do suffer from the lack of an index. Epson chose to implement Microsoft BASIC, an industry standard, and the manual for the language is probably good enough to act as a general tutor, as well as a reference guide.

The operations manual includes such specialist information as a complete list of I/O connections for the RS232 and serial interfaces; acceptable signal strength levels; and comprehensive memory mapping tables