Taking the computer a step further.

A computer small enough to fit into a briefcase yet with full size typewriter keyboard, LCD Virtual Screen, printer and microcassette facility actually built in.

Improbable. Until today.

Functions fantastic.

The HX-20 is a real computer, not a gimmicky toy. Or an extension of your calculator. Or just another desk top computer. It is a precision machine with 16k RAM which is optionally expandable to 32k and 32k ROM expandable to 64k, RS-232C and serial interfaces.

The full size ASCII typewriter keyboard and five programmable keys brings ten separate program functions to your fingertips.

The HX-20 can run on its own power supply for over 50 hours which can be easily recharged overnight, and has the ability to retain its memory in RAM even when switched off.

Virtual Screen keeps you in the picture.

The HX-20's LCD Screen is unique, keeping you in the picture by showing any 20 characters by 4 lines at a time. You can, therefore, carry out word processing or data entry as if you are using a large screen.

Upper and lower case letters, numerals, punctuation marks and graphics are easily read by simply adjusting the viewing angle.

Print out. Built in.

A built-in 24 column dot matrix impact microprinter offers 42 LPM in a crisp, precise 5 x 7 matrix for perfect hard copies on plain paper. Every time.

And there's more. . .Bit addressable graphics allow you to design your own characters for full graphic capability, a cartridge ribbon, full ASCII character set including £ sign and enough international symbols for reproducing most Western languages.

Add-on capability.

Choose from a wide range of peripherals. Barcode readers, audio cassette for loading and saving programs, microcassette and ROM cartridges, and the world famous Epson dot matrix computer printers for quality output . . .to name just a few.

Via acoustic couplers this superb machine can also be linked through the telephone to other computers.

Software and the hard facts.

The HX-20 uses a full extended version of Microsoft BASIC, with a 24 hour clock, date and alarm, string functions, and music generation. The interface options (with RS-232C and serial interfaces as standard) include a standard cassette, a ROM cartridge, plus a system bus that allows you to expand the RAM and ROM capabilities.

The HX-20.
The most complete portable computer available today.

Portability for Programability. Anywhere.

The HX-20 is light and totally portable for writing programs and manipulating data – virtually anywhere. (Just four nickel-cadmium batteries and a low power all-CMOS memory gives you a reliable power source during your travels.)

Back at the office you can dump your data or programs onto a cassette or into your main computer system.

Reliability through Research.

A computer coming from Epson has got to be good. After all we have been responsible for high quality precision manufacture since 1961. Just take a look at our impressive track record with the hugely successful Epson dot matrix printers.

So it follows that you can expect the same quality, the same reliability through our extensive research program prior to launching

any revolutionary new product. Now that product has arrived. The HX-20 is here today. From Epson. But it's got to be seen to be believed.

If you would also like further details of how the HX-20 can be suited to your particular requirements simply include your area of business and any other relevant details separately.

Specifications of HX-20

Dimensions and Ambient Conditions

Dimensions and Weight

1. Dimensions: 290mm wide
215.5mm deep
44mm high

2. Weight: Approx. 1.7 kg

Ambient Conditions

1. Temperature: 5°C to 35°C (operating)
5°C to 35°C (charging)
–5°C to 40°C (data storage) (RAM battery backup)
–20°C to 60°C (non-operating)
2. Relative humidity: 10% to 80% (operating, no condensation)
10% to 80% (non-operating, no condensation)
3. Shock resistance: 1 G for 1 ms maximum (operating)
4. Vibration resistance: 0.25G 55 Hz maximum (operating)

Power Supply (Nicd batteries)

1. Voltage: 4.5V to 6.0V (operating)
4.0V to 6.0V (data storage)
4.5V (low voltage detection)
2. Battery capacity: Approx. 1100 mAH

AC Adaptor

1. Input voltage: AC 220V/240V ± 10%
2. Power consumption: 8W
3. Insulation resistance: 10megohms between AC power supply and case
4. Insulation strength: Can withstand 1 kV applied between AC power supply and case for 1 minute or more

Microprinter (M-160)

1. Printing system: Dot impact (4 printing solenoids)
2. Printing format
   a. Total number of dots: 144 dots maximum/dot line
   b. Number of characters per line: 24 maximum
(5 x 7 dots; character-to-character space 1 dot)
(6 characters/printing solenoid)
3. Printing speed
   a. 1 dot line: Approx. 150 ms (continuous printing)
   b. 5 x 7 dot matrix (interline space 3 dots): Approx. 0.7 line/s (continuous printing)
42 lines per minute
4. Character size
   a. Dot spacing: 0.33mm horizontal
0.33mm vertical
   b. 5 x 7 dot matrix: 1.7mm wide, 2.4mm high
5. Recording paper
   a. Kind: Plain paper
   b. Paper width: 57.5 ± 0.5mm
   c. Outside diameter: 50mm or less
   d. Thickness: 0.07mm
   e. Weight: 52.3 g/m² (45 kg/1000 sheets/1091 sheets x 788mm)
6. Paper feed: Automatic feed every dot line; with paper release
7. Inking
Ribbon cartridge type
Automatic continuous feed during motor operation
   a. Colour: Purple/Black
   b. Dimensions: Approx. 91mm wide, 25mm deep, 7mm high
   c. Life: Approx. 10,000 lines
   d. Standard: ERC-09

Liquid Crystal Display

1. Text: Upper and lower case, numerals, symbols, graphic characters and more; 20 characters per line; 4 lines in total (20 x 4 = 80 characters)
2. Graphic: 120 dots (horizontal) x 32 dots (vertical) = 3840 dots
3. View angle adjustment: Adjustable with VIEW ANGLE density control

Keyboard

1. Key switches: Typewriter layout, full size. 68 keys (including 5 function keys and 13 special keys)
2. Others: Power on switch, VIEW ANGLE density control for LCD, and adjusting circuit built in

RS-232C Interface

1. Connector: DIN (8-pin) TCS 4480
2. Input and output levels: RS-232C standard
3. Transfer speed: 110, 150, 300, 600, 1200, 2400, 4800 bps (selectable by operator)

Serial Interface

1. Connector: DIN (5-pin) TCS 4450
2. Input and output levels: RS-232C standard
3. Transfer speed: 38, 150, 400, 600, 4800 bps (selectable by operator).

HX-20
PORTABLE COMPUTER

EPSON