

# HX-20™

## Specifications

### CPU AND MEMORY

<b>Main CPU:</b>	CMOS 8-bit microprocessor 6301, 614 KHz clockrate
<b>Slave CPU:</b>	CMOS 8-bit microprocessor 6301, 614 MHz clockrate
<b>RAM:</b>	16KB (standard) expandable to 32KB with expansion unit
<b>ROM:</b>	32KB (standard) expandable to 40KB internally to 72KB with expansion unit

### BUILT-IN PERIPHERALS

<b>Display:</b>	Liquid crystal screen: 120 x 32 dot-matrix; 20 x 4 character display: 5 x 7 font; virtual addressable area 255 columns by 255 lines (if sufficient memory is available)
<b>Printer:</b>	24-column dot-matrix impact microprinter; print rate 42 lines per minute; bit addressable graphics: full ASCII upper and lower case character set; cartridge ribbon
<b>Microcassette:</b>	Uses standard microcassette tapes
<b>Clock/Calendar:</b>	Time and calendar, built in CMOS battery backup
<b>Music:</b>	Programmable pulse drive, four octaves
<b>Generator:</b>	with half tones

### COMMUNICATIONS

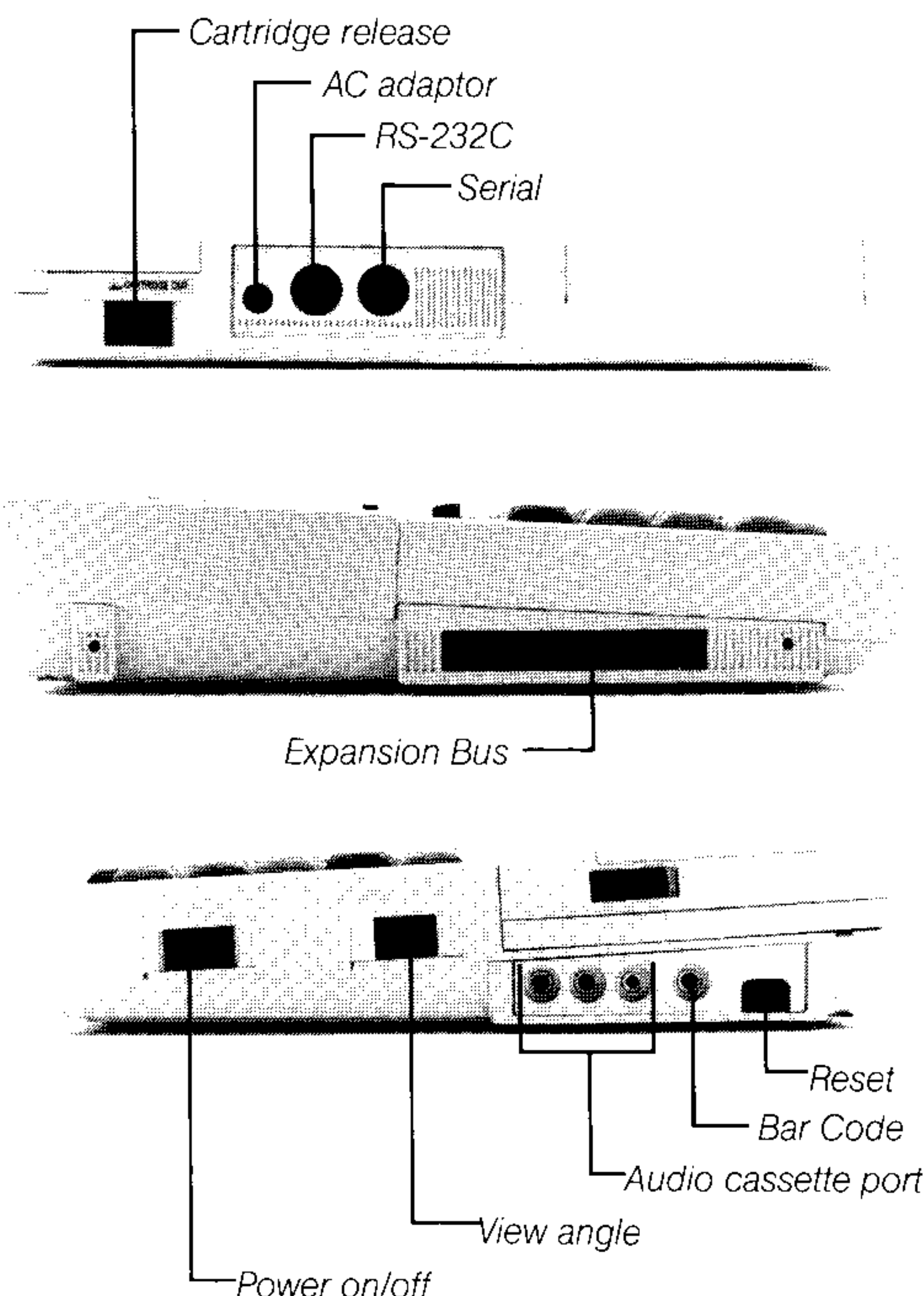
<b>RS-232C:</b>	Full/half duplex, 110 to 4800 BPS, 8-pin connector
<b>Serial:</b>	Full/half duplex 38.4K BPS RS-232C level, 5-pin DIN connector

### PERIPHERAL INTERFACES

<b>Bar Code Reader:</b>	Special connector, requires optional software
<b>External cassette:</b>	Standard audio cassette interface
<b>System Bus:</b>	16-bit address bus; 8-bit data bus and control lines, 40 pin connector

### ROM

<b>Cartridge/Microcassette Interface:</b>	I/O port with 3 input, 6 output lines
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### SWITCHES, INTERNAL

<b>4-bit DIP:</b>	3 bits for international character set selection; 1 bit for disk option
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### SWITCHES, EXTERNAL

<b>Main Power:</b>	On/off
<b>Printer:</b>	On/off, paper feed
<b>Reset</b>	

### POWER SUPPLY

Ni-Cad batteries, internal; Sub C type, 1100 mA/H capacity; 40-hour capacity running BASIC (less depending on use of RS-232C port, printer or optional microcassette)

### RECHARGE

AC adaptor 120V

### KEYBOARD AND CHARACTER SET

<b>Type:</b>	Standard typewriter style
<b>Total Number of Keys:</b>	68
<b>Function Keys:</b>	5
<b>Special Keys:</b>	13
<b>Ten-key Pad:</b>	Function locked in by (NUM) key
<b>Graphic Shift:</b>	32 special graphic characters
<b>International Character Set:</b>	Selectable by DIP switch

### ENVIRONMENTAL REQUIREMENTS

<b>Temperatures</b>	
<b>Operating:</b>	+5° to 35°C (41 to 95°F)
<b>Charge:</b>	+5° to 35°C (41 to 95°F)
<b>Storage:</b>	-20 to 60°C (-5 to 140°F)
<b>Data Storage:</b>	-5 to 40°C (22 to 104°F)
<b>Humidity</b>	
<b>Operating/Non-operating:</b>	10-80% non-condensing

### PHYSICAL CHARACTERISTICS

<b>Size:</b>	29.0 x 21.5 x 4.4 cm (11.4" x 8.5" x 1.7")
<b>Weight:</b>	Approx. 1.7 kg (3 lbs. 13 oz.)

### OPTIONS

<b>Expansion Unit:</b>	8KB RAM plus 24KB ROM or 16KB RAM plus 16KB ROM. Total expansion is 32KB
<b>ROM Cartridge:</b>	Uses 8, 16 or 32KB ROM to load program into RAM

### CX-20 ACOUSTIC COUPLER

<b>Communications Mode:</b>	Full/half duplex selectable
<b>Operating Mode:</b>	ORIG/ANS mode, selectable
<b>Signaling Speed:</b>	Up to 300 BPS
<b>Interface:</b>	Standard RS-232C
<b>Power Supply:</b>	Ni-Cad batteries, AC adaptor (120V + 10%, 60 KHz); charge with AC adaptor

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WHEN YOU'VE GOT AN EPSON,  
YOU'VE GOT A LOT OF COMPANY.™ **EPSON®**

# EPSON®

The Epson HX-20 is the world's first "notebook size" portable computer. The battery powered HX-20 measures 8½" x 11", weighs less than four pounds and fits easily into a briefcase. It features a full-size keyboard, a built-in 24-column dot-matrix micro-printer that produces both text and graphics and for loading programs and storing data, a built-in microcassette tape drive. An easy-to-read LCD screen provides a 20-character by 4-line text display with a 120 x 32 dot graphics resolution. The unit comes standard with 16K bytes of RAM and 32K bytes of ROM. It can be expanded with an expansion unit to 32K bytes of RAM. Built-in rechargeable nickel-cadmium batteries provide up to 40 hours of continuous operation and maintains the data in memory even when power is turned off. The HX-20 is also equipped with a clock/calendar, speaker, audio cassette interface, RS-232C port, high speed serial interface and a bar code reader port for greater versatility in special applications.

**The HX-20 offers a low-cost solution to specialized applications requiring a compact, lightweight battery-powered microcomputer.**

**The applications specialist:**

- Ideal for dedicated vertical applications.
- Compact and lightweight for easy portability.
- Weighs less than four pounds and notebook sized.

**Postal metering device:**

- For metering outgoing mail.
- Imprinting company or individual identification on envelopes.

**Inventory control:**

- As a source for monitoring incoming and outgoing stock.
- Assess sales trends based on inventory flow.

**Medical data base:**

- Use to determine a patient's most effective treatment in hospitals.
- Use to collect and store medical information.

**Hotel key programming:**

- Tracks room keys to specific guests.
- Determine the status of each room during the course of a guest's stay.

**Bar code reader:**

- Using the optional bar code reader, an ideal way to speed inventory control.
- Its portability frees the user from workstation or desktop use.

**Data collector:**

- An excellent choice for insurance, accounting or special applications where field work is necessary.
- The 40 hour battery life replaces conventional power sources.

**Expand HX-20's capabilities with easy-to-use peripherals:**

- CX-20™ Acoustic Coupler: provides 300 baud communications with phone handset; access remote data bases or office computer
- TF-20 external floppy disk drive: boosts storage for data intensive applications
- RAM/ROM expansion unit: expand the memory capacity for programs and data
- ROM cartridge unit: develop custom applications

**One year warranty**

As part of our confidence in product reliability and continuing commitment to total value and customer satisfaction, a one-year warranty comes with the HX-20 and every Epson product.

# HX-20

## PORTABLE COMPUTER

