



# Tech Info Library

## Apple III: Specifications (Discontinued 9/85)

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Security: Everyone

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### Video Display

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Text and graphics may be displayed simultaneously. Using graphics commands you can display either of two screen buffers.

#### Graphics modes:

- 280 x 192, 16 colors (with some limitations)
- 280 x 192, monochromatic; -140 x 192, 16 colors
- 560 x 192, monochromatic
- All Apple II modes (in emulation)

#### Text modes:

- 80-column, 24-line monochromatic
- 40-column, 24-line, 16-color foreground and background
- 40-column, 24-line monochromatic

All text modes have a software-definable 128-character set (uppercase and lowercase) with normal or inverse display.

### Central Processing Unit (CPU)

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The custom-designed microprocessor circuitry of the Apple III uses the 6502B as its major component. Other circuitry provides extended addressing capability, relocatable stack, zero page, and memory mapping.

- Type: 6502B
- Clock Speed: 1.4 MHz average; 1.8 MHz max
- Operations per Second (8-bit): up to 750,000
- Data Bus: two 8-bit formats, combined for extended addressing
- Address Bus: 19 bits
- Address Range: 262,144 bytes (256K)
- Registers:
  - Accumulator (A); Index Registers (X,Y); Stack Pointer (S); Program Counter (PC); Environmental Register (E); Bank (B); Zero Page (Z); Processor Status (P)

## Memory

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- 256K dynamic RAM
- 4K ROM (initialization and self-test diagnostics)

## SOS (Sophisticated Operating System)

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SOS handles all system I/O and can be configured to handle standard or custom I/O devices and peripherals by adding or deleting "device drivers." All languages and application programs access data through the SOS file system.

## Keyboard

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- 61 keys on main keyboard
- 13 keys on numeric keypad
- Full 128-Character, ASCII encoded
- All keys have automatic repeat
- Four directional-arrow keys with two-speed repeat
- Two user-definable Apple keys
- Seven other special keys: Shift, Control, Alpha Lock, Tab, Escape, Return, Enter.

## Storage Devices

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- One built-in 5.25-inch, floppy-disk drive, 140K (143,360 bytes) per diskette
- You can connect three additional drives by daisy-chain cable (total: 560K on-line storage)
- You can add up to four ProFile hard-disk drives (5MB each) with plug-in interface cards

## Video Output

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- RCA phono connector for NTSC monochromatic composite video
- DB-15 connector for:
  - NTSC-color composite video
  - NTSC monochromatic composite video
  - RGB color video
  - Composite sync signal
  - Power-supply voltages
- Color signals appear as 16-level grey scale on monochromatic displays

## Audio Output

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- Built-in two-inch speaker, miniature phono jack on back panel
- Driven by 6-bit D/A converter or fixed frequency "beep" generator

## Serial (Printer/Modem) Port

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- RS-232C compatible, DB-25 female connector
- Software-selectable baud rate and duplex mode

- You can use one port for the Silentype printer.

#### Expansion Ports

- Four 50-pin expansion slots (fully buffered, with interrupt and DMA priority structure)
- Joystick/Silentype Ports: Two DB-9 connectors

#### Languages Available

- Apple Business BASIC
- Apple II Pascal
- Apple III COBOL

#### Emulation Mode

This mode provides hardware emulation of 48K Apple II Plus. It can run most Apple II programs, with the exception of Pascal and FORTRAN, without modification.

#### Electrical Specifications

Plug the Apple III's power cord into a three-wire 110-120 VAC outlet. The Apple III meets the following agency regulations:

- UL 114, Office Appliances and Business Equipment
- CSA 22.2, No. 154-Data Processing Equipment

#### Physical Specifications

- Height: 4.8 in. (12.20 cm)
- Depth: 18.2 in. (46.22 cm)
- Width: 17.5 in. (44.45 cm)
- Weight: 26 lb. (11.8 kg)

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