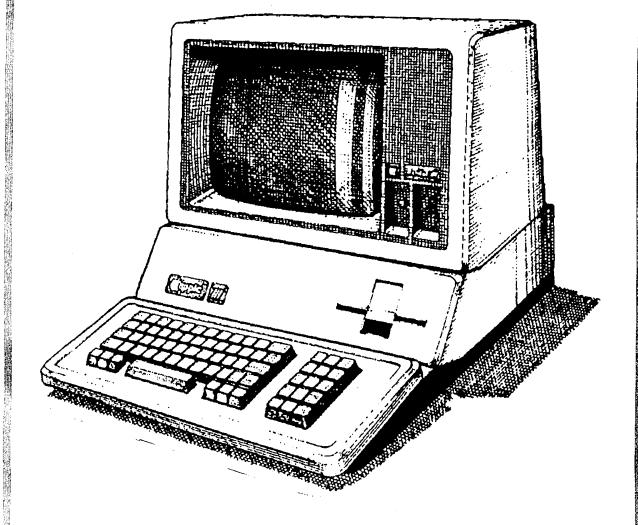
Apple III Computer Information •

Doc # 044 •

Specification: Apple /// Computer



Apple /// Computer Information



- DOCUMENT NAME -SPECIFICATION: APPLE III PERSONAL March
COMPUTER SYSTEM 1982

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The Apple III Personal Computer System The Most Powerful Professional Computer System in Its Class

The Apple III is a powerful desktop computer system designed to meet the complex application needs of managers, financial planners, analysts, software developers, writers, and others.

A wide variety of Apple III system configurations can be tailored to meet your specific needs. Consult your dealer for information.

Powerful Solutions for Complex Applications

The Apple III Computer System has been designed to tackle the tasks that keep you from being as productive as you'd like to be. With an Apple III, you can...

- plan budgets, compare actuals with forecasts, and modify projections...
- calculate rate-of-return, pro formas, and financial statements...
- develop highly accurate forecasting models and pricing strategies...
- create scientific and engineering models, and study causes, effects, and trade-offs...
- compose, revise, and print all kinds of documents—from memos and brochures to form letters and booklength manuscripts—quickly and easily...



- maintain and update comprehensive mailing lists, sort them by name, ZIP code, or special key, and selectively print mailing labels and phone lists...
- write complex computer programs in a variety of languages, including Apple Business BASIC, and Pascal.

Professional Features for Professional Needs

In addition to its outstanding applications software, the Apple III offers a powerful operating system and all the hardware features professionals look for.

Apple III's Sophisticated Operating System (SOS)

Designed to control all of the Apple III's hardware for you, SOS handles interrupts, manages the system's memory and peripherals, provides the foundation for graphics, and performs comprehensive file management.

Apple III's Keyboard

The typewriter-style Apple III keyboard has been sculptured for maximum typing speed and accuracy. It contains 61 alpha keys and a separate 13-key numeric pad.

Four dedicated cursor control keys provide single-keystroke cursor movement; each key also fast repeats when held down, so that you can move quickly from point to point in the text. The alpha-lock key shifts only the alphabetic keys into upper case, leaving the number row unaltered. To speed numeric data entry, the layout of the numeric keypad is identical to that of a standard calculator.

Apple III's Disk Drive

A built-in, 140K-byte, flexible disk drive makes the Apple III a compact, space-saving unit. System expansion is cost-effective, too, because you can add up to three external disk drives without the need for additional control hardware or software.

For professionals with large-scale storage and programming needs, the optional ProFile Personal Mass Storage System provides 5 million bytes of hard-disk memory, equivalent to 35 floppy disks

Apple III's Back Panel

The system's back panel (as well as most of its case) is formed of diecast aluminum. The aluminum fins on the back of the unit keep the system cool and eliminate the need for a fan.

Most peripheral devices plug directly into the Apple III's back panel connectors. Additionally, there are four large slots in the back panel for input/output connectors mounted on optional peripheral cards.

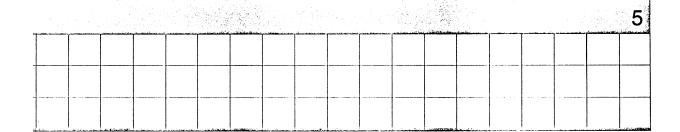
As many as three expansion floppy disk drives can be used with the Apple III. The first additional drive plugs into the "floppy disk" connector on the system's back panel; then, in "daisy chain" fashion, the second drive plugs into the first, and the third plugs into the second.

Back panel connectors are also provided for two joysticks. Application programs can be designed to take advantage of a joystick (for example, to move the cursor around the screen, or to point to displayed items). Also, one of the joystick connectors can alternately be used to connect a Silentype thermal printer to the Apple III.

The Apple III allows you to use a wide variety of video display devices. The high-resolution Monitor III connects to the system by a shielded cable, which plugs into a jack on the Apple III's back panel. Color video monitors—including NTSC (standard) color, and RGB (for exceptional color purity and resolution)—require commercially available video adaptors, which attach to the Apple III by means of a 15-pin connector that provides all the power and signals necessary.

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Built into the Apple III is a two-inch speaker, which produces sound of such high quality that it can even be used to generate voice. An audio output jack located on the back panel of the Apple III also allows for connection of a separate earphone or external speaker (plugging into this jack silences the Apple III's built-in speaker).

An RS-232C connector, also located on the Apple III's back panel, provides for direct attachment of many types of "serial" input/output devices. Using a modem, for example, your Apple III can connect to other computers and data banks by phone line. Or you can quickly add a variety of high-speed or letter-quality printers—even other terminals or computers—to your system, simply by plugging them into the RS-232C connector.

Inside the Apple III

Removing the top cover reveals the peripheral card expansion section of the Apple III. Up to four different peripheral cards can be used at one time to supplement the Apple III's built-in peripheral interfaces.

For optimal computing speed, the Apple III's CPU can be "interrupted" by your system's peripheral devices whenever they require CPU control. Alternately, the CPU can also poll the devices to determine which need attention—thereby minimizing the software required for peripheral control.

The Apple III also contains many features that enhance its utility, including a number of powerful text, graphics, and color capabilities. In all text modes, for instance, the character set that appears on your monitor can be chosen from several available fonts. Special characters, graphics symbols, and even foreign language character sets can be selected quickly and easily from a diskette, and used by any program on the computer.

Through the Apple III's professional display, you view 80 characters by 24 lines of easy-to-read characters. The system can also display 40 characters by 24 lines of color text on color background to add dramatic emphasis to programs.

Along with various text modes, several graphic modes are also available with the Apple III, including an ultra-high-resolution, monochromatic mode. Up to 16 different colors are available in the high-resolution color mode, and even higher resolution color can be generated by restricting color changes slightly. On a monochromatic monitor, color is displayed as 16 different shades, making it easy for you to use shading and highlighting to enhance and emphasize your displays.

The Apple III also has an Apple II emulation mode for those users who already have an investment in Apple II software. This mode enables you to run

most Integer BASIC and Applesoft programs on your Apple III. (Minor modifications may be required for Apple II programs which use the game paddles or other peripherals, however.) Because the Apple III in emulation mode behaves exactly like an Apple II Plus, the screen will display 40-character by 24-line text.

Technical Specifications

Physical Dimensions:

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.)

Cast aluminum base with molded

plastic.
Processor:

Apple-designed processor utilizes 6502A as one of its major components. Other circuitry provides extended addressing capability, relocatable stack, zero page, and memory mapping.

Emulation Mode:

Provides hardware emulation of 48Kbyte Apple II Plus. Allows Apple II programs, with the exception of Pascal and FORTRAN, to run without modification.





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Clock Speed:

1.8 MHz with video off, 1.4 MHz average;

1.0 MHz in emulation mode.

Main Memory:

128K (131,072) bytes of dynamic RAM memory.

ROM Memory:

4K (4096) bytes used for self-test diagnostics.

Power Supply:

High-voltage switching type +5, -5, +12, -12 volts.

Mass Storage:

One 5.25-inch floppy disk drive built-in:

140K (143,360) bytes per diskette. Up to three additional drives can be connected by daisy-chain cable (560K bytes on-line storage).

In addition, up to 4 ProFile hard-disk drives (5 megabytes each) may be added by means of plug-in cards.

Keyboard:

74 keys (61 on main keyboard, 13 on numeric pad);

Full 128-character, ASCII encoded; All keys have automatic repeat;

Three special keys: SHIFT, CONTROL, ALPHA LOCK;

Two user-definable "Apple" keys; Four directional arrow keys with twospeed repeat;

Four other special keys: TAB, ESCAPE, RETURN, ENTER.

Screen:

Three upper/lower case 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 softwaredefinable, 128-character set (includes upper and lower case) with normal or inverse display.

Three graphics modes:

280 x 192, 16 colors (with some limitations);

140 x 192, 16 colors;

560 x 192, monochromatic; plus Apple II modes.

Video Output:

RCA phono connector for NTSC monochromatic composite video; DB-15 type connector for:

NTSC monochromatic composite video:

NTSC color composite video; +5, -5, +12, -12 volt power supplies;

Four TTL outputs for generating RGB color:

Composite sync signal;

Color signals appear as 16-level grey scale on monochromatic outputs.

Audio Output:

Built-in two-inch speaker; Miniature phono jack on back panel; Driven by six-bit digital/analog converter or fixed-frequency "beep" generator.

Serial I/O:

RS-232C compatible, DB-25 female connector:

Software-selectable baud rate and duplex mode.

Joysticks:

Two DB-9 connectors for two joysticks with push-buttons and switches.

Printer:

One DB-9 connector (shared with second joystick) for Apple Silentype printer.

Expansion:

Four 50-pin expansion slots inside the cabinet.

SOS:

Sophisticated Operating System handles all system I/O;

SOS 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.

Languages:

Apple Business BASIC and Pascal.

The Apple III Package

Order Nos.

A3S0128 (128K Bytes RAM) A3S0256 (256K Bytes RAM)

With your order for any Apple III system, you will receive:

- Apple III, with memory as ordered,
- Apple III System Software package, with:
 - -Apple III Owner's Guide;
 - —Apple III Standard Device Drivers Manual;
 - —System Utilities diskettes;
 - -Apple II Emulation diskette;
 - —System Demonstration diskette;
 - —bĺank diskette.
- Apple *III* Confidence Program diskette.

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