

# Apple Macintosh



*Equipped with Motorola's 16-/32-bit MC68000 microprocessor chip, the Macintosh includes 128K bytes of main memory, 64K bytes of ROM (which contains the operating system), an integral 9-inch screen and 3½-inch microdiskette drive, detached keyboard, mouse, learning manuals, and audio cassette. With the addition of a keyboard, mouse, manuals, and carrying case, the Macintosh weighs in at 23 lb. but its footprint is smaller than an 8½-inch by 11-inch sheet of paper.*

## BACKGROUND INFORMATION

*Apple Computer, Inc., 20525 Mariani Avenue, Cupertino, California 95014. Telephone (408) 996-1010.*

*IN CANADA: Apple Canada, Inc., 875 Don Mills Road, Don Mills Ontario, M3C 1V9. Telephone (416) 444-2531.*

Apple Computer, Inc., founded in 1976, designs, manufactures, and markets personal computers for use in business, education, home, and scientific environments. The company's present product line consists of the Apple IIe, Apple III, Apple Lisa, Lisa 2, and Macintosh.

In January 1983, Apple introduced the Lisa, a 16-/32-bit personal computer. With the introduction of Macintosh one year later, Apple extended its family of 32-bit microcomputers. The Macintosh, aimed at business professionals and students, features Lisa's technology in a transportable, personal unit.

A \$20 million manufacturing facility located in Fremont, California has been built to handle the expected high demand for the Macintosh unit. Capable of producing one Macintosh every 27 seconds, the factory is shipping Macintosh computers for Apple's 3000 dealerships across the country.

## SYSTEM CHARACTERISTICS

The Macintosh is based on a 16-/32-bit Motorola MC68000 microprocessor chip operating at a speed of 8M Hz. The system unit weighs 17 pounds and contains a built-in carrying handle. With the addition of a keyboard,

**Current models:** Macintosh.

**Memory:** 128KB RAM.

**Storage capacity:** 400KB microdiskette drive.

**Workstations:** 1.

**Base list price:** \$2,495, includes 128KB RAM, 400KB microdiskette drive, keyboard, CRT, two serial I/O ports, mouse, manual, learning disk, audio cassette, blank disk, system disk, power cord.

**Typical list prices:** \$3,314, same as base configuration plus printer, 300 bps modem, carrying case.

**Popular options:** from Apple—printer, modems, carrying case, diskettes, external drives, software.

**Principal programming languages:** Pascal, Basic, Assembler.

**Principal applications software:** word processing, graphics.

**First shipment:** January 1984.

**Number installed to date:** information not available.

**Available through:** 3000 authorized Apple dealers worldwide.

mouse, manuals, and carrying case, the Macintosh weighs in at 23 pounds. Its footprint is smaller than an 8½-inch by 11-inch sheet of paper.

The Macintosh is similar to the Lisa system in that it shows desktop drawings called icons on its smaller 9-inch black and white screen. With the mouse/pointer device, users select the appropriate icon which represents the function to be performed. However, unlike Lisa, the Macintosh cannot run integrated applications software; instead it processes one application at a time and possesses a cut and paste option for multiple applications.

The unit is equipped with an integral 9-inch screen, a 3½-inch integral microdiskette drive—with a storage capacity of 400K bytes, 128K bytes of memory, 64K bytes of ROM which contains the operating system, detached keyboard, mouse, owner's manual, learning diskette and audio cassette, blank diskette, and a system diskette. The system also contains a clock/calendar on a CMOS custom chip with a 4.5 volt user-replaceable battery backup. In addition, the Macintosh has ports for a keyboard, mouse, external disk drive, Applebus serial output for a modem, Applebus serial output for a printer, and a four-channel sound connector. Two serial ports support RS-232-C/RS-422 Applebus connections at 230 bps.

The 9-inch screen displays upper-/lowercase characters in black and white with 512-by-342 bit-mapped dots. Screen attributes include: boldface, underline, and italics. The typewriter-style keyboard has 58 keys but does not include a numeric pad or cursor control keys; the mouse controls the cursor. A numeric pad is available as an option.

The Macintosh supports the Imagewriter printer, a dot matrix printer that operates at a speed of 120 characters per second (cps) and prints both text and graphics. Type styles range from standard business lettering to old English. Other equipment options include: a numeric keypad, 300 bps and 1200 bps modems, carrying case, and external drive. ➤

## Apple Macintosh

▷ Macintosh utilizes a proprietary operating system which resides in the system ROM. MacWrite for word processing and MacPaint for graphics are currently bundled with the system. Other software planned for use with the system includes: MacTerminal, for VT100, VT52, and Teletype emulation; Macintosh Pascal, language; MacAssembler/Debugger, utility; Macintosh Logo, programming language processor; MacProject, project management; and MacDraw, graphics. In addition, third party software is available for the Macintosh from Microsoft, Lotus, and Software Publications.

For further details on this system, see the Apple Macintosh report in Datapro Reports on Microcomputers. □

### HARDWARE

#### PROCESSOR/MEMORY

Model: Motorola MC68000 (16-/32-bit, 8M Hz)  
RAM: 128KB  
ROM: 64KB

#### DISPLAY

Model: Apple CRT  
Screen size: 9"  
Chars./screen: upper-/lowercase  
Char. type: 512 x 342 pixels, bit-mapped  
Attributes: underline, bold, italics  
Features: black & white screen, mouse cursor control device  
Graphics: integral  
Interface: integral  
Price: included w/system

#### KEYBOARD

Type: detachable, typewriter-style  
No. of keys: 58 total  
Interface: coiled cable

#### DIRECT ACCESS STORAGE

Model: Apple microdiskette  
Type: 3½" microdiskette  
Capacity/drive: 400KB  
Drives/system: 1  
Avg. access time: —  
Transfer rate: —  
Interface: integral  
Price: included w/system

#### PRINTER

Model: Apple Imagewriter  
Type: dot matrix  
Paper: single sheet, roll, fanfold  
Char. set: 96 ASCII, plus 25 European language characters  
Chars./line: 36-136  
Speed: 120 cps  
Interface: RS-232-C/RS-422  
Price: \$495 w/system; \$595 otherwise

### DATA COMMUNICATIONS

Model:	<u>Apple Modem 300</u>	<u>Apple Modem 1200</u>
Trans. mode:	half-duplex, async	full-duplex, async
Protocol:	Hayes compatible	Hayes compatible
Ports:	1	1
Speed:	300 bps	1200 bps
Line configuration:	—	—
Interface:	serial	serial
Price:	\$225	\$495

### OTHER I/O

Cassette: audio cassette, included w/system

### I/O ELECTRONICS

Structure: Applebus with I/O ports for modem, printer, & four-channel sound connector; I/O slots are not available

### SOFTWARE

#### LANGUAGES

Basic: \$99  
Pascal: \$99

#### OPERATING SYSTEM

Name: Macintosh proprietary operating system, included in ROM  
Functions: memory and file management

#### UTILITIES

Sort: none specified  
Text editor: none specified  
Other: MacAssembler/Debugger, \$99

#### DATA/DATABASE MANAGEMENT SYSTEMS

Name: none specified

#### COMMUNICATIONS SUPPORT

Name: MacTerminal, \$99  
Functions: VT100, VT52, & teletype emulation

#### APPLICATIONS PROGRAMS

Electronic Spreadsheet: Multiplan, \$199  
Graphics: MacPaint, \$99; MacDraw, \$125  
Word Processing: MacWrite, \$99  
Management Sciences: MacProject, \$125  
Utilities: MacAssembler/Debugger, \$99  
Programming Language Processors: Logo, \$99

### SUPPORT SERVICES

#### DOCUMENTATION

Range: user's manual, bundled

#### SUPPORT

Maintenance: serviced by any qualified Apple dealer

#### TERMS AND CONDITIONS

Lease: AppleCard purchase on credit plan  
Discounts: various quantity discounts  
Warranties: 90-day

Software terms: MacWrite and MacPaint are bundled with the system for the introductory offer period; the programs can also be purchased together for \$195 ■