



## Overview

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The Apple<sup>®</sup> Macintosh<sup>®</sup> Portable personal computer is the one Macintosh for the workplace, home, and any destination. With built-in networking and the ability to run virtually all current versions of Macintosh software twice as quickly as the Macintosh Classic<sup>®</sup>, the Macintosh Portable gives you all the capabilities you need for your primary computer.

You can also take the Macintosh Portable with you and use it at meetings, at a client's office, or at home, because everything you need—central processing unit (CPU), screen, standard-size keyboard, pointing device, battery, and disk storage—is integrated into a single, easy-to-carry package.

The Macintosh Portable delivers the superior graphics that people have come to associate with the Macintosh. Its backlit, active-matrix liquid crystal display (LCD) lets you see the full width of a page for easy editing of word-processing and other documents. This screen also has such a fast

response time that the Macintosh interface looks and feels just like that on any other Macintosh computer. And the display's backlighting can be adjusted for a wide range of lighting situations, so you can see the screen as easily in bright light as you can in a dimly lit room.

The Macintosh Portable has been designed to conserve power and extend battery life so you can use it for 3 to 6 hours before the battery needs recharging. A battery desk accessory monitors battery power levels and warns you when the battery is getting low.

Like other Macintosh computers, the Macintosh Portable comes with the 1.4-megabyte Apple SuperDrive<sup>™</sup> disk drive, which allows you to work easily in different computing environments because it can read from and write to 3.5-inch Macintosh disks as well as MS-DOS, OS/2, and ProDOS<sup>®</sup> disks. In addition, an internal 40-megabyte hard disk accommodates large files and applications.

You'll also find plenty of opportunities to extend the Macintosh Portable's capabilities. You can use eight built-in ports to expand the system with popular peripheral equipment such as scanners and printers.

And four expansion slots let you customize the Macintosh Portable to your specific needs. Your system can accommodate up to 9 megabytes of memory if you use Apple and third-party memory cards in the RAM expansion slot and processor-direct slot. Or you can use the processor-direct slot to add a high-performance expansion card for video, networking, and communications.

# Features

# Benefits

- Full Macintosh software and hardware compatibility

- Allows you to run virtually all current versions of Macintosh software.
- Lets you connect your computer to Macintosh-compatible peripherals and networks.

- All-in-one design with built-in display, trackball, disk drive, and keyboard

- Makes it easy for you to pack, carry, set up, and use the system quickly in any location.
- Eliminates the need for a mouse pad or flat surface, while keeping the utility of a mouse.

- 10-inch diagonal, backlit, active-matrix liquid crystal display, 640 horizontal pixels by 400 interface and graphics programs.

- Provides a fast response time that enables the Macintosh Portable to display the Macintosh graphics-based user vertical lines
- Lets you see the screen clearly from almost any viewing angle.
- Lets you work in a wide range of lighting conditions, from low to bright light.
- Allows you to view the full width of a letter-size page.

- Intelligent power management
  - Dedicated microprocessor for power management
  - Control Panel settings
- Replaceable lead-acid battery
- Battery desk accessory
- Automatic low-power warnings
- Power adapter for 85 to 270 volts AC, 48 to 62 hertz

- Allows you to work for 3 to 6 hours before recharging the battery.
- Lets you control power use by specifying how much time will elapse before the system and hard disk automatically go to sleep.
- Lets you recharge the battery at any time without requiring a deep discharge cycle.
- Allows you to replace the battery while the computer is in sleep mode.
- Lets you easily check the approximate battery charge and plan power use accordingly.
- Reduces the possibility of accidentally running out of power, by notifying you when power is low.
- Allows you to use the computer in almost any country without using transformers.

- 68000 CMOS processor, operating at 16 megahertz

- Conserves power and extends battery life.
- Provides rapid processing for spreadsheets, databases, and other applications.

- 1 megabyte of low-power RAM on logic board (expandable to 4 megabytes from Apple)

- Minimizes power consumption, allowing you to work for an extended period between battery charges.
- Retains the contents of memory while the system is in sleep mode.

# Features

# Benefits

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<ul style="list-style-type: none"><li>• Built-in Apple SuperDrive disk drive</li></ul>	<ul style="list-style-type: none"><li>• Enables you to transfer data files conveniently between Macintosh, OS/2, MS-DOS, and Apple II systems on the same 3.5-inch disk, using the Apple File Exchange utility.</li></ul>
<ul style="list-style-type: none"><li>• 40-megabyte internal hard disk</li></ul>	<ul style="list-style-type: none"><li>• Gives you fast and easy access to multiple applications and large data files.</li></ul>
<ul style="list-style-type: none"><li>• Standard Macintosh keyboard layout</li></ul>	<ul style="list-style-type: none"><li>• Eliminates the need to learn a new keyboard.</li></ul>
<ul style="list-style-type: none"><li>• Flexible keyboard configuration</li></ul>	<ul style="list-style-type: none"><li>• Lets you work the way you like, with the trackball or numeric keypad installed on either side of the keyboard, for left- or right-handed use.</li><li>• Allows replacement of the trackball with a keypad for number-intensive applications.</li></ul>
<ul style="list-style-type: none"><li>• Four expansion slots<ul style="list-style-type: none"><li>-RAM expansion slot</li><li>-Processor-direct slot</li><li>-Internal modem slot</li><li>-ROM expansion slot</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Allows you to customize the Macintosh Portable for your specific needs.</li><li>• Lets you create a system with up to 9 megabytes of memory (4 megabytes from Apple) to work with multiple applications and large files.</li><li>• Allows you to expand system capabilities with a high-performance expansion card in areas such as video, networking, and communications.</li><li>• Lets you install an internal modem for connection to numerous on-line databases and corporate computer systems.</li><li>• Lets you install up to 3 megabytes of ROM to store applications or data permanently.</li></ul>
<ul style="list-style-type: none"><li>• Eight built-in ports<ul style="list-style-type: none"><li>-One external disk drive port</li><li>-One SCSI port</li><li>-One Apple Desktop Bus® (ADB) port</li><li>-One printer port</li><li>-One external modem port</li><li>-One audio port</li><li>-One power adapter port</li><li>-One video port</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Lets you connect the Macintosh Portable with existing Macintosh peripherals.</li><li>• Supports up to seven high-speed SCSI peripherals.</li><li>• Provides connection for Apple Desktop Bus devices such as mouse, graphics tablet, or keyboard.</li><li>• Provides access to an AppleTalk™ network system for file sharing, data transfer, and peripherals sharing.</li></ul>
<ul style="list-style-type: none"><li>• Polycarbonate plastic housing with rugged hard disk design</li></ul>	<ul style="list-style-type: none"><li>• Reduces the need for special handling by protecting internal components.</li></ul>
<ul style="list-style-type: none"><li>• Carrying case with protective foam and pockets for items such as power adapter, an extra battery, disks, and papers</li></ul>	<ul style="list-style-type: none"><li>• Provides easy portability.</li><li>• Protects sensitive components and accessories.</li></ul>
<ul style="list-style-type: none"><li>• Apple stereo sound integrated circuit</li></ul>	<ul style="list-style-type: none"><li>• Provides high-quality digital sound.</li><li>• Offers compatibility with all applications that use Macintosh sound.</li></ul>

# Product Details

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## System configurations

- Two Macintosh Portable systems are available:
  - The Macintosh Portable 2/40 comes with 2 megabytes of RAM and includes the CPU, backlit, active-matrix liquid crystal display, keyboard, trackball, mouse, a built-in 1.4-megabyte floppy disk drive, and internal 40-megabyte hard disk.
  - The Macintosh Portable 4/40 comes with four megabytes of RAM and includes all the features of the Macintosh Portable 2/40.

## Backlit, active-matrix liquid crystal display

- The Macintosh Portable backlit, active-matrix liquid crystal display combines a very fast response time with high contrast to deliver superior graphics capabilities that support all Macintosh applications. Its fast response time, for example, lets you work with animated graphics applications to create sophisticated presentations and demonstrations. The response time of the screen makes using the computer more intuitive. For example, there is no delay between your movement of the mouse or trackball and the movement of the cursor; you can see the cursor move when you drag it across the screen.

The backlit, active-matrix LCD also offers very high contrast—up to five times that of standard LCD screens—to offer a wide viewing angle for small-group work sessions and presentations. And with adjustable backlighting, the screen can be viewed clearly in a wide variety of lighting conditions.

## Power management

- Most battery-powered computers provide only a few hours of usage before they need recharging and include no options for managing the computer's power consumption. The Macintosh Portable, however, uses low-power RAM, lead-acid batteries, and a dedicated microprocessor (that serves as a power manager) to provide better power management and operate longer between recharges.

The power manager monitors and controls power allocation and automatically puts the system into either a “rest” or “sleep” mode when it has been inactive for a preset period. During rest mode, the system idles at an effective rate of 1 megahertz to save power. During sleep mode, power is turned off but memory contents are retained. Simply press any key to instantly “wake up” the computer.

## Network support

- The Macintosh Portable printer port provides full support for LocalTalk<sup>™</sup> network connections.
- The Macintosh Portable provides full ROM support for all AppleTalk protocols.

## CMOS microprocessor

- The Macintosh Portable contains a special version of the Motorola 68000 microprocessor that conserves battery power and yet provides high-performance processing. The complementary metal oxide semiconductor (CMOS) 68000 microprocessor consumes less power than its non-CMOS counterpart and operates at 16-megahertz clock speed—twice that of the 68000 in the Macintosh Classic computer.

## Low-power RAM

- To maximize battery life, the Macintosh Portable contains special low-power RAM (random-access memory), which consumes less power than standard dynamic RAM (DRAM). The Macintosh Portable computer is capable of supporting up to 9 megabytes of memory.

## Processor-direct slot

- The processor-direct slot is a high-performance slot connected directly to the microprocessor that will support one expansion card. (Note: The processor-direct slot is not compatible with the Macintosh LC, SE/30, or NuBus<sup>®</sup> expansion slots.)

## SCSI

- SCSI (Small Computer System Interface) is a high-performance interface bus used to connect the computer to hard disks and other mass-storage peripherals. Up to seven SCSI peripherals (including an internal hard disk) can be connected to the Macintosh Portable.
- SCSI provides data transfer rates of up to 1 megabyte per second.

## Stereo sound

- The Apple Sound Chip (ASC) supports stereo sound at a sampling rate of up to 44.1 kilohertz.

## Lead-acid batteries

- The Macintosh Portable uses lead-acid batteries because they provide long operating life and can be recharged more fully and more often than nickel-cadmium batteries. And because the voltage of a lead-acid battery diminishes gradually as power is used up, the computer can keep you informed about the power level and warn you of low power.

## Operating system support

- Macintosh system software includes:
  - System software version 6.0.7 or later (the Macintosh Operating System) with System Startup disk.
  - System Additions disk (includes utilities such as the Apple File Exchange, HD SC Setup, CloseView, Disk First Aid<sup>™</sup>, and Font/DA Mover).
  - Macintosh Portable Update Disk (with Macintosh Portable Control Panel device).
- Macintosh system software version 6.0.7 is preinstalled on the Macintosh Portable.
- HyperCard<sup>™</sup> software and manual are included. HyperCard is preinstalled on the Macintosh Portable.

# Technical Specifications

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## Microprocessor

- CMOS68000
- 16-megahertz clock speed

## Memory

- 1 megabyte of low-power RAM on logic board and either 1 or 3 megabytes (depending on the configuration) on a memory card that is installed in the RAM expansion slot; system capacity of up to 9 megabytes of RAM

## Screen

- 10-inch diagonal
- Backlit, active-matrix liquid crystal display
- Full-page width
- 640 horizontal pixels by 400 vertical lines

## Disk storage

- One built-in double-sided disk drive that uses 1.4-megabyte high-density floppy disks, and a special, rugged internal 40-megabyte hard disk drive.

## Keyboard

- Built-in keyboard with standard Macintosh layout
- 63 keys

## Trackball

- 1.3-in.(3.3-cm) diameter trackball pointing device
- Left- or right-handed placement
- Replaceable with the numeric keypad

## Mouse

- Low-power Apple Desktop Bus

## Mouse

- Mechanical tracking; optical shaft encoding; 90 pulses per in. (3.54 pulses per mm) of travel

## Ports

- One external disk drive port
- One SCSI port
- One Apple Desktop Bus (ADB) port
- One audio port
- One power adapter port
- One printer port
- One external modem port
- One video port

## Expansion slots

- RAM expansion slot
- Internal modem slot
- Processor-direct slot
- ROM expansion slot

## Sound generator

- Four-voice wave-table synthesis with 8-bit stereo sampling at 22 kilohertz-- capable of driving stereo headphones or other stereo equipment through the sound jack

## Electrical requirements

- Line voltage: 85 to 270 volts AC
- Frequency: 48 to 62 hertz
- Power: 15 watts maximum

## Size and weight

- Height
  - Rear panel: 4.05 in. (10.29 cm)
  - Front panel: 2.1 in. (5.33 cm)
  - From base to highest point with display open: 11.0 in. (27.94 cm)
- Width: 15.25 in. (38.74 cm)
- Depth: 14.83 in. (36.53 cm)
- Weight (including battery): 15.75 lb. (7.16 kg)

## Operating environment

- Operating temperature: 50° F to 104° F (10° C to 40° C)
- Storage temperature: -40° F to 140° F (-25° C to 60° C) for a period not to exceed 3 days; storage for longer period must be within operating temperature range
- Relative humidity: 5% to 95%, noncondensing
- Operating altitude: 10,000 ft. (3,048 m)



# Macintosh Portable

## Ordering Information

Macintosh Portable 2/40  
Order No. M5381LL/A

With your order, you'll receive:

- Macintosh Portable personal computer with 2 megabytes of RAM, built-in backlit, active-matrix liquid crystal display, trackball, keyboard, 1.4-mega-byte Apple SuperDrive, and internal 40-megabyte hard disk
- Mouse
- Power adapter

- Carrying case
- Complete setup, learning, and reference documentation
- Macintosh reference package with system software and manuals
- HyperCard reference package
- Limited warranty statement
- Software license agreement

Macintosh Portable 4/40  
Order No. M5382LL/A

With your order, you'll receive:

- Macintosh Portable personal computer with 4 megabytes of RAM, built-in backlit, active-matrix liquid crystal display, trackball, keyboard, 1.4-mega-byte Apple SuperDrive, and internal 40-megabyte hard disk
- Mouse
- Power adapter

- Carrying case
- Complete setup, learning, and reference documentation
- Macintosh reference package with system software and manuals
- HyperCard reference package
- Limited warranty statement
- Software license agreement

## Peripherals Options

Macintosh Portable  
Numeric Keypad Module  
Order No. M0239  
Requires installation by an authorized Apple service provider.

Macintosh Portable  
Data Modem 2400  
Order No. M0250

Macintosh Portable  
Rechargeable Battery  
5.0 Ahr  
Order No. M0277

Macintosh Portable  
Battery Recharger  
Order No. M0275  
Includes power adapter.

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