

## Overview

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The Macintosh® SE/30 personal computer was designed for people who want maximum performance from a compact computer system. It provides up to four times the computational speed of the Macintosh Classic®, while continuing to offer the benefits that characterize all Macintosh computers: a consistent user interface and intuitive design that make Macintosh easy to learn and use. The Macintosh SE/30 runs virtually all current versions of Macintosh software. And, like the Macintosh Classic, it features a small footprint, easy setup, and transportability.

The performance increase of the Macintosh SE/30 derives from the full 32-bit 68030 microprocessor. The 68030 runs at twice the clock speed of the 68000 microprocessor used in the Macintosh Classic. And twice as much data can be moved at a time because its external data bus is twice as wide as that of the 68000. The Macintosh SE/30 also includes a 68882 floating-point coprocessor for faster processing of complex math functions—up to 100 times faster than the Macintosh Classic.

The Macintosh SE/30 uses the Apple® SuperDrive<sup>®</sup>, a high-capacity 3.5-inch floppy disk drive capable of reading 400K, 800K, and 1.4-megabyte Macintosh

disks. In addition, the Apple SuperDrive lets users read from and write to MS-DOS, OS/2, and ProDOS® formatted disks through the Apple File Exchange utility. This combination of capabilities makes the Macintosh SE/30 an excellent choice for use in multivendor environments.

Expansion options for the Macintosh SE/30 can be accommodated through the 030 Direct Slot. Via the 030 Direct Slot, the Macintosh SE/30 can accept communications cards, such as Ethernet and Token Ring cards, as well as high-performance video cards that support large gray-scale and color monitors.

# Features

# Benefits

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| <ul style="list-style-type: none"><li>• 32-bit 68030 microprocessor (operating at 16 megahertz) with instruction and data caches, and built-in Paged Memory Management Unit (PMMU)</li></ul> | <ul style="list-style-type: none"><li>• Executes applications at up to four times the speed of the 68000-based Macintosh Classic.</li><li>• Provides hardware support for advanced, multitasking operating systems.</li></ul>  |
| <ul style="list-style-type: none"><li>• 68882 floating-point coprocessor (operating at 16 megahertz)</li></ul>   | <ul style="list-style-type: none"><li>• Provides fast processing of complex mathematical functions (such as logarithmic or trigonometric calculations) often used in spreadsheets and high-end graphics and statistics applications.</li></ul>   |
| <ul style="list-style-type: none"><li>• Macintosh user interface: mouse, icons, windows, and pull-down menus</li></ul>   | <ul style="list-style-type: none"><li>• Makes most applications intuitive and easy to learn.</li><li>• Provides a consistent interface across applications.</li><li>• Reduces training and support costs.</li></ul>  |
| <ul style="list-style-type: none"><li>• Compact design with high-resolution 9-inch screen</li></ul>  | <ul style="list-style-type: none"><li>• Offers an affordable, compact system that requires little desk space and is easy to set up and transport.</li></ul>  |
| <ul style="list-style-type: none"><li>• Apple SuperDrive (1.4-megabyte floppy disk drive)</li></ul>  | <ul style="list-style-type: none"><li>• Provides almost twice the storage capacity of existing 800K disks.</li><li>• Allows you to conveniently transfer data files between Macintosh, MS-DOS, OS/2, and Apple II systems using the Apple File Exchange software.</li><li>• Offers compatibility with existing 800K and 400K Macintosh disks.</li></ul>  |
| <ul style="list-style-type: none"><li>• MultiFinder® operating system</li></ul>  | <ul style="list-style-type: none"><li>• Lets you easily integrate information from multiple applications by cutting and pasting.</li><li>• Lets you move quickly and easily between applications.</li><li>• Allows you to continue working with applications while performing some tasks in the background, such as print spooling to an Apple LaserWriter® printer or downloading remote files.</li></ul> |
| <ul style="list-style-type: none"><li>• Macintosh software compatibility</li></ul>   | <ul style="list-style-type: none"><li>• Runs virtually all current versions of Macintosh software, including applications designed to take advantage of the 68882 floating-point coprocessor.</li></ul>  |
| <ul style="list-style-type: none"><li>• 030 Direct Slot</li></ul>  | <ul style="list-style-type: none"><li>• Allows you to customize your system with high-performance expansion cards, including video cards for external color and gray-scale monitors, special memory cards, communications cards, and digital signal processing cards.</li></ul>  |

# Features

# Benefits

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- 030 Direct Slot access port
- .....
- 1 or 4 megabytes of RAM, expandable to 8 megabytes
- .....
- Apple Sound Chip
- .....
- 256K of ROM on a SIMM (Single In-line Memory Module), including:
    - Hierarchical File System
    - Drivers for Macintosh hard disks, Apple Desktop Bus<sup>s</sup>, 68882 floating-point coprocessor, SCSI, and AppleTalk<sup>®</sup> network
    - Macintosh Toolbox
    - QuickDraw<sup>s</sup> and Color QuickDraw
- .....
- Seven built-in ports (one SCSI, one disk drive, two serial, two Apple Desktop Bus, one stereo sound)
- .....
- Choice of keyboards (sold separately):
    - Apple Keyboard
    - Apple Extended Keyboard II
- Provides an easy way to connect external devices to 030 Direct Slot cards.
  - Lets you run multiple applications concurrently under Apple's MultiFinder operating system.
  - Lets you work with large amounts of data, such as large spreadsheets, scanned images, and sound files.
  - Provides the flexibility to grow as you need additional memory.
  - Provides high-quality, four-voice stereo sound.
  - Offers compatibility with all applications that use Macintosh sound.
  - The SIMM mounting makes it easy to remove and replace ROMs for more convenient servicing.
  - The Hierarchical File System organizes storage for documents and allows easy access to files.
  - The SCSI interface supports high-performance peripherals.
  - QuickDraw provides the consistent interface throughout the Macintosh family.
  - Color QuickDraw provides a consistent interface for both black-and-white and color applications.
  - Makes it easy to expand your system with additional peripherals.
  - Provides access to LocalTalk<sup>®</sup> cable-based networks, allowing you to connect the Macintosh SE/30 to other computers and to LaserWriter printers through the AppleTalk network system.
  - Supports up to seven high-speed SCSI peripherals.
  - Provides connections for Apple Desktop Bus devices, such as a keyboard, hand-controlled pointing device (such as a mouse or trackball), or graphic tablet.
  - Apple Keyboard includes a numeric keypad and cursor keys for efficient operation.
  - Apple Extended Keyboard II also includes 15 function keys, letting you work effectively with alternate operating systems, terminal-emulation programs, and other data communications applications.

# Product Details

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## System configurations

- Two configurations are available:
  - The Macintosh SE/30 Hard Disk 40 CPU includes the main unit, 1 megabyte of RAM, an internal 40-megabyte hard disk, one 1.4-megabyte Apple SuperDrive floppy disk drive, and mouse.
  - The Macintosh SE/30 Hard Disk 80 CPU includes the main unit, 4 megabytes of RAM, an internal 80-megabyte hard disk, one 1.4-megabyte Apple SuperDrive floppy disk drive, and mouse.
- The keyboard and other peripheral devices are packaged and sold separately.

## 030 Direct Slot

- The 030 Direct Slot provides a 32-bit slot directly connected to the microprocessor bus that will support one high-performance expansion card. (Note: The slot is not compatible with SE-Bus expansion cards or Macintosh II expansion cards.)

## RAM

- The Macintosh SE/30 Hard Disk 40 CPU with 1 megabyte of RAM can be upgraded to 2 megabytes of RAM with a 1-megabyte Memory Expansion Kit, 5 megabytes of RAM with two 2-megabyte Memory Expansion Kits, or 8 megabytes of RAM with four 2-megabyte Memory Expansion Kits.
- The Macintosh SE/30 Hard Disk 80 CPU with 4 megabytes of RAM can be upgraded to 5 megabytes of RAM with one 1-megabyte Memory Expansion Kit, or 8 megabytes of RAM with two 2-megabyte Memory Expansion Kits.

## Stereo sound

- The Apple Sound Chip provides four-voice, wave-table synthesis and stereo sampling generator capable of mixing left and right channels for the internal speaker or providing full stereo sound output through a miniature stereo phone plug.

## SCSI

- Up to seven SCSI (Small Computer System Interface) peripherals (including an internal hard disk) can be connected to the Macintosh SE/30.
- SCSI provides data transfer rates of up to 1 megabyte per second.

## Network support

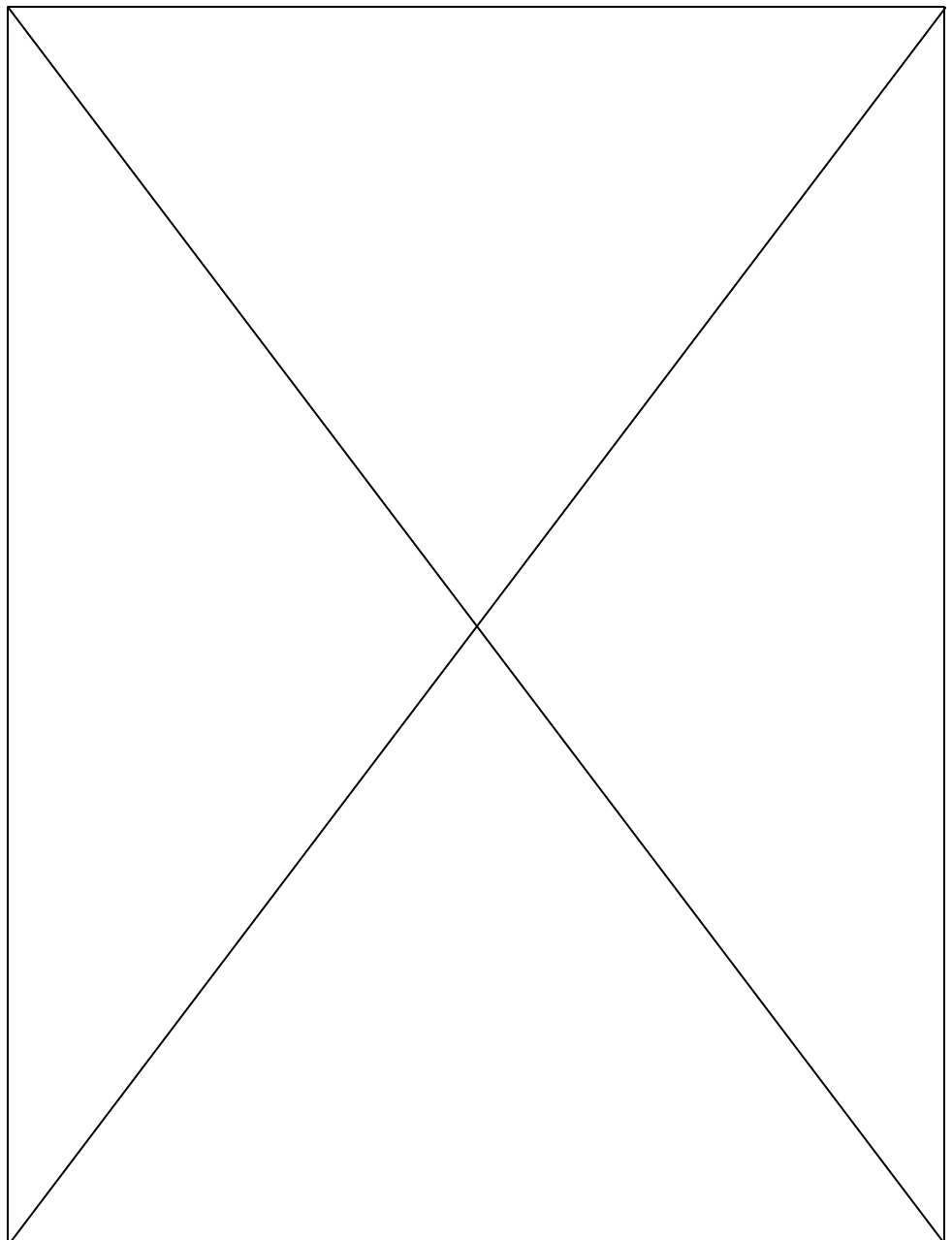
- The Macintosh SE/30 serial ports provide full support for LocalTalk network connections.
- The Macintosh SE/30 provides full ROM support for all AppleTalk protocols.

## 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, HDSC Setup, Disk First Aid<sup>®</sup>, and Font/DAMover).
- HyperCard<sup>®</sup> 2.0 Home, Addresses with Audio, Appointments with Audio, Audio Palette, and Audio Help stacks.

## Upgrade path for current Macintosh SE computer owners

- An upgrade is available for the standard 68000-based Macintosh SE.



# Technical Specifications

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## Processor

- MC68030 32-bit internal Harvard architecture
- 15.667-megahertz clock frequency
- Built-in Paged Memory Management Unit (PMMU)
- 256-byte instruction and data caches

## Coprocessor

MC68882 floating-point unit (follows IEEE standards)

## Memory

- 1 or 4 megabytes of RAM, expandable to 8 megabytes
- 256K of ROM
- 256 bytes of user-settable parameter memory

## Disk storage

- 1.4-megabyte high-density floppy disk drive (external floppy disk drive optional)
- Optional internal 40- or 80-megabyte Apple SCSI hard disk (external SCSI hard disks optional)

## Video display

- Built-in 9-inch diagonal, high-resolution, 512-by-342-pixel bit-mapped display
- Color QuickDraw in ROM provides support for gray-scale and color video cards installed in the 030 Direct Slot.

## Interfaces

- Two Apple Desktop Bus connectors for communication with keyboard, mouse, and other input devices over low-speed, synchronous serial bus
- 030 Direct Slot supporting full 32-bit address and data lines through 120-pin Euro-DIN connector
- Two RS-232/RS-422 serial ports, 230.4 kilobaud maximum (up to 0.920 megabit per second if docked externally)
- SCSI interface
- Stereo sound port for external audio amplifier

## Sound generator

- Apple Sound Chip (ASC) including four-voice, wave-table synthesis and stereo sampling generator capable of driving stereo mini-phone-jack headphones or other stereo equipment
- Mixed stereo monophonic sound output through internal speaker

## Clock/calendar

- CMOS custom chip with long-life lithium battery

## Keyboards (not included)

- Apple Keyboard
- Apple Extended Keyboard II

## Mouse

- Apple Desktop Bus mouse with mechanical tracking; optical shaft or contact encoding at  $3.94 \pm 0.39$  pulse per mm ( $100 \pm 10$  pulses per in.) of travel

## Fan

- 10 CFM radial

## Electrical requirements

- Line voltage: 120 to 240 volts AC, RMS automatically configured
- Frequency: 48 to 62 Hz, single phase
- Maximum power: 75 watts

## Size and weight

### Main Unit

- Height: 13.6 in. (34.5 cm)
- Width: 9.6 in. (24.4 cm)
- Depth: 10.9 in. (27.6 cm)
- Weight: 21.5 lb. (9.75 kg)

### Mouse

- Height: 1.1 in. (2.8 cm)
- Width: 2.1 in. (5.3 cm)
- Depth: 3.8 in. (9.7 cm)
- Weight: 6 oz. (.17 kg)



# MacintoshSE/30

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## Ordering Information

MacintoshSE/30  
Hard Disk 40 CPU  
(1 megabyte of RAM)  
Order No. M5390

With your order, you'll receive:

- MacintoshSE/30 personal computer with 1 megabyte of RAM, abuilt-in 1.4-megabyte Apple SuperDrive, and internal 40 megabyte SCSI hard disk

- Mouse
- Complete setup, learning, and reference documentation
- System software and HyperCard software
- Training disk
- Limited warranty statement

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MacintoshSE/30  
Hard Disk 80 CPU  
(4 megabytes of RAM)  
Order No. M5361

With your order, you'll receive:

- MacintoshSE/30 personal computer with 4 megabytes of RAM, abuilt-in 1.4-megabyte Apple SuperDrive, and internal 80-megabyte SCSI hard disk drive

- Mouse
- Complete setup, learning, and reference documentation
- System software and HyperCard software
- Training disk
- Limited warranty statement