

## Overview

The Apple® Macintosh® LC personal computer is Apple Computer's lowest-cost color-capable Macintosh. Combining the flexibility of a modular system with a sleek new design, the Macintosh LC gives you a range of options for larger screens, color displays, and system expansion, all at an even more affordable price.

The computer features a 16-megahertz 68020 microprocessor that increases system responsiveness more than 100 percent over the Macintosh SE and the Macintosh Classic®.

The Macintosh LC also offers built-in support for three Apple monitors—including the Macintosh 12" RGB Display, the Macintosh 12" Monochrome Display, and the AppleColor™ High-Resolution RGB Monitor. This means you can choose the monitor you want to work with—without having to add a separate video card.

Right from the start, with a Macintosh LC you can enhance graphics, presentation materials, and other documents with a range of shades and colors—256 colors on the Macintosh 12" RGB Display, 16 shades of gray on the Macintosh 12" Monochrome Display, and 16 colors on the AppleColor High-Resolution RGB Monitor.

With an optional Macintosh LC 512K VRAM (video random-access memory) SIMM (Single In-line Memory Module), the system is capable of generating even more colors or shades of gray on all three monitors.

The Macintosh LC also provides an important new Macintosh capability: sound input. Macintosh computers have always offered sound output, but the Macintosh LC has been designed so you can add sounds to documents created with the computer.

The system comes standard with the 1.4-megabyte Apple SuperDrive™ disk drive, which allows you to work more easily in different computing

environments because it can read from and write to 3.5-inch disks initialized for the Macintosh as well as MS-DOS, OS/2, and ProDOS®. In addition, a 40-megabyte internal hard disk drive accommodates large files and applications.

Seven built-in ports allow you to expand the system with popular peripheral equipment such as additional hard disks, scanners, and printers. Built-in networking makes it easy to connect to different networks for sharing information. And a processor-direct slot allows you to add a high-performance expansion card for additional graphics, communications, and other capabilities.

What's more, when equipped with the Apple IIe Card, the Macintosh LC can run virtually all applications developed for Apple IIe systems. And the Macintosh LC will be able to run the next generation of Macintosh applications—those supported by Macintosh system software version 7.0—when they become available.

## Features

## Benefits

► 68020 microprocessor, running at 16 megahertz

► Offers more than 100 percent faster performance and system responsiveness than Macintosh SE and Macintosh Classic systems.

► Built-in video support for three Apple monitors:  
—Macintosh 12" RGB Display  
—Macintosh 12" Monochrome Display  
—AppleColor High-Resolution RGB Monitor

► Lets you choose from the most popular Apple displays; both color and monochrome.  
► Lets you work with up to 256 colors simultaneously on the Macintosh 12" RGB Display, up to 16 shades of gray on the Macintosh 12" Monochrome Display, and up to 16 colors on the AppleColor High-Resolution RGB Monitor.  
► Allows you to change displays without adding a video card.

► Optional Macintosh LC 512K VRAM SIMM

► Boosts the color depth to 256 colors or shades of gray on the AppleColor High-Resolution RGB Monitor and Macintosh 12" Monochrome Display.  
► Provides 32,000 colors on the Macintosh 12" RGB Display.

► Sound input

► Allows you to add voice comments to voice-capable word processing, spreadsheet, and other documents; send spoken electronic mail messages; add voice excerpts to presentations; and create spoken password protection for sensitive files.

► Apple SuperDrive (1.4-megabyte floppy disk drive)

► Allows convenient transfer of data files between Macintosh, OS/2, MS-DOS, and Apple II systems.  
► Provides almost twice the storage capacity of 800K disk drives.

► Apple IIe Card

► Allows you to run virtually all applications that have been developed for Apple IIe computers.  
► Preserves your investment in Apple IIe software.

► 020 Direct Slot

► Allows you to expand system capabilities with a high-performance expansion card for communication, emulation, graphics and other options.

## Features

## Benefits

- ▶ Seven built-in ports:
  - One SCSI port
  - One Apple Desktop Bus™ (ADB) port
  - Two serial ports
  - One sound-in port
  - One sound-out port
  - One video output port

- ▶ Provide support for up to seven popular peripherals such as CD-ROM drives, scanners, and printers.
- ▶ Permit communication with the keyboard, mouse, and other input devices.
- ▶ Provide easy external access to optional expansion cards.
- ▶ Provide access to LocalTalk® cable-based networks, which allow you to connect Macintosh LC systems to other computers and to LaserWriter® printers through the AppleTalk® network system.
- ▶ Support sound input via microphone or phono jack adapter.
- ▶ Supply high-quality sound output that is compatible with all applications that use Macintosh sound.
- ▶ Provide connection to external video display devices.

- ▶ 40-megabyte internal hard disk drive

- ▶ Handles a broad range of computing needs by providing ample storage capacity for files and applications.

- ▶ 2 megabytes of on-board RAM, expandable to 10 megabytes

- ▶ Provides a simple growth path as you need additional memory.
- ▶ Lets you work with large amounts of data, such as spreadsheets, scanned images, and sound files.

- ▶ Macintosh user interface, including mouse, icons, windows, and pull-down menus

- ▶ Makes most applications intuitive and easy to learn.
- ▶ Reduces training and support costs.
- ▶ Provides a consistent user interface across applications.

- ▶ MultiFinder® operating system

- ▶ Allows multiple applications to be opened concurrently.
- ▶ Lets you easily cut and paste parts of documents from one application to another.
- ▶ Allows background tasks to be run while you interact with applications in the foreground.

- ▶ Software compatibility

- ▶ Lets you run virtually all Macintosh software.
- ▶ Allows you to run virtually all applications that have been developed for Apple IIe computers using the Apple IIe Card.

# Product Details

## System configuration

► The Macintosh LC comes with 2 megabytes of RAM (expandable to 10 megabytes), internal 1.4-megabyte Apple SuperDrive floppy disk drive, internal 40-megabyte hard disk drive, ADB keyboard and mouse, system software, and training disk.

## RAM configurations

► The Macintosh LC comes with 2 megabytes of RAM on the main logic board. Up to 8 megabytes of RAM can be added by installing a memory expansion card and then adding SIMMs. Some possible configurations include:

—4 megabytes (2 megabytes on main logic board; two 1-megabyte SIMMs)

—10 megabytes (2 megabytes on main logic board; two 4-megabyte SIMMs)

## SCSI

► SCSI (Small Computer System Interface) is a high-performance interface bus used to connect hard disks and other SCSI-based devices, such as the AppleCD SC® CD-ROM drive, the Apple Scanner, and the Apple Personal LaserWriter to the Macintosh LC. This single interface can support up to seven SCSI peripheral devices.

## Network support

► The Macintosh LC provides full ROM support for all AppleTalk protocols and includes built-in serial ports for LocalTalk network connections.

## Operating system support

► Macintosh system software includes:

—System software version 6.0.6 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™, and Font/DA Mover)

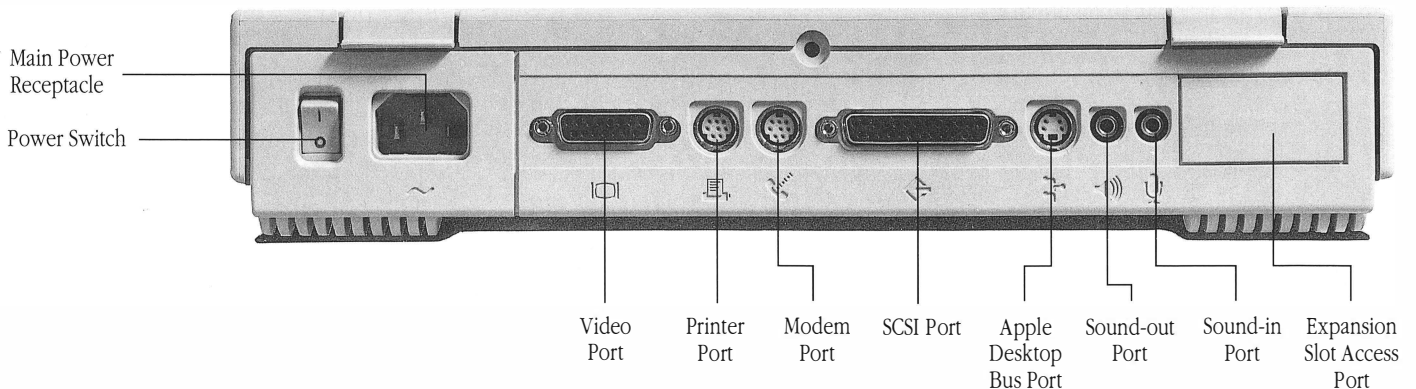
► HyperCard® 2.0 Home, Addresses with Audio, Appointments with Audio, Audio Palette, and Audio Help stacks.

## Sound input

► The Macintosh LC has been designed to accept and process sound as well as generate it. Using a microphone or phono jack adapter, and appropriate software, you can speak into the computer to create electronic voice messages and add voice comments to files. Sound entering the computer is filtered through a custom filter/preamplifier chip, converted to digital form, and stored in DRAM or directly on the hard disk.

## Sound generator

► The sound generator is a high-quality sampling generator that provides the sound signal to the internal speaker or to both channels of stereo mini-phone-jack headphones.



# Technical Specifications

## Microprocessor

- ▶ MC68020, 32-bit architecture
- ▶ 16-megahertz clock speed

## Memory

- ▶ 2 megabytes of RAM, expandable to 4 or 10 megabytes
- ▶ 512K of ROM, socketed for future ROM upgrades
- ▶ 256 bytes of parameter memory

## Disk drives

- ▶ Built-in Apple SuperDrive 1.4-megabyte floppy disk drive
- ▶ Internal 40-megabyte Apple SCSI hard disk drive
- ▶ Optional external Apple SCSI hard disk (many capacities available)

## Monitors

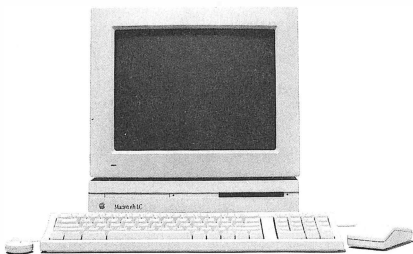
- ▶ Supports several color and monochrome monitors, including:
  - Macintosh 12" RGB Display
  - Macintosh 12" Monochrome Display
  - AppleColor High-Resolution RGB Monitor
- ▶ When equipped with a video expansion card, supports other Apple and non-Apple monitors; see your authorized Apple dealer for details.

## Interfaces

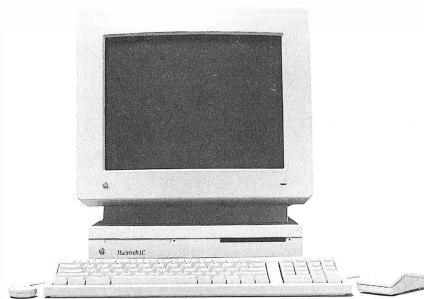
- ▶ One Apple Desktop Bus (ADB) port, supporting a keyboard, mouse, and other devices daisy-chained through a low-speed, synchronous serial bus (a maximum of three daisy-chained devices is recommended)

- ▶ Two serial (RS-232/RS-422) ports, 230 kilobits per second maximum (up to 0.920 megabits per second if clocked externally)
- ▶ Video port, supporting color and monochrome monitors of various sizes and resolutions
- ▶ SCSI interface, using a 50-pin internal connector and a DB-25 connector for the first external device; all subsequent SCSI-based peripheral devices use standard SCSI-to-SCSI interface cables.
- ▶ Internal expansion slot, supporting an 020 Direct Slot expansion card
- ▶ Monophonic sound output port for external audio devices
- ▶ Sound input port for monaural sound input

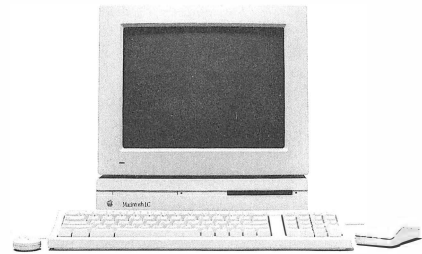
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*Macintosh LC with ADB keyboard, mouse, microphone, and Macintosh 12" RGB Display.*



*Macintosh LC with ADB keyboard, mouse, microphone, and 13-inch AppleColor High-Resolution RGB Monitor.*



*Macintosh LC with ADB keyboard, mouse, microphone, and Macintosh 12" Monochrome Display.*



# Macintosh LC

## Technical Specifications (continued)

### Sound input

- ▶ Monaural 8-bit sound
- ▶ Sound samples can be made at 22 or 11 kilohertz.
- ▶ Macintosh Audio Compression Expansion (MACE) sound utility, supporting 3:1 or 6:1 compression, which allows approximately half an hour of sound to be stored on a single 40-megabyte hard disk

### Sound generator

- ▶ Monophonic 8-bit digital-analog conversion using 22-kilohertz sample rate—capable of supplying the same signal to both channels of stereo headphones or other stereo equipment through the sound jack

### Microphone

- ▶ “Hands free” omnidirectional electret microphone

### Keyboard

- ▶ ADB keyboard with numeric keypad
- ▶ Two-level tilt adjustment

### Mouse

- ▶ Apple Desktop Bus Mouse; mechanical tracking: optical shaft or contact encoding; 100 ± 10 pulses per in. (3.9 ± 0.39 pulses per mm) of travel

### Electrical requirements

- ▶ Line voltage: 90 to 240 volts AC, RMS
- ▶ Frequency: 47 to 63 hertz, single phase
- ▶ Power: 50 watts maximum, not including monitor power

### ADB power requirements

- ▶ Maximum power draw for all ADB devices: 200 milliamps (a maximum of three ADB devices, daisy-chained to the port, is recommended)
- ▶ Mouse draws 80 milliamps.
- ▶ Keyboard draws 25 milliamps.

### Size and weight

#### Main unit:

- ▶ Height: 3.0 in. (7.7 cm)
- ▶ Width: 12.2 in. (31.0 cm)
- ▶ Depth: 15.0 in. (38.2 cm)
- ▶ Weight: 8.8 lb (4.0 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)

#### Keyboard:

- ▶ Height: 1.8 in. (4.4 cm)
- ▶ Width: 16.5 in. (41.8 cm)
- ▶ Depth: 5.6 in. (14.2 cm)
- ▶ Weight: 2 lb. (1 kg)

### Operating environment

- ▶ Operating temperature: 50° F to 104° F (10° C to 40° C)
- ▶ Storage temperature: -40° F to 116.6° F (-40° C to 47° C)
- ▶ Relative humidity: 20% to 80%, noncondensing
- ▶ Maximum altitude: 10,000 ft (3,048 m)

## Ordering Information

### Macintosh LC

Order No. M0442LL/A

With your order, you'll receive:

- ▶ Macintosh LC personal computer with 2 megabytes of RAM, built-in 1.4-megabyte Apple SuperDrive floppy disk drive, and internal 40-megabyte hard disk drive
- ▶ Keyboard
- ▶ Mouse
- ▶ Complete setup, learning, and reference documentation
- ▶ System software and HyperCard software
- ▶ Training disks
- ▶ Limited warranty statement

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