

# 1

## Installing Mac OS 7.6



With Mac OS 7.6, your computer will perform better and more reliably. You can also take advantage of new features that enhance your computer's networking, multimedia, printing, and other capabilities.

Follow the instructions in this chapter to install Mac OS 7.6.

### System requirements

The following computers can install Mac OS 7.6:

- computers with PowerPC™ microprocessors
- computers with 68040 microprocessors
- computers with “32-bit clean” 68030 microprocessors. All computers with 68030 microprocessors are 32-bit clean except the Macintosh SE/30, Macintosh IIfx, and the Macintosh IIfx.

In addition, to install Mac OS 7.6, a computer must have at least 8 MB of RAM (random-access memory). If your computer has less than 16 MB of built-in RAM, you must use virtual memory. (Mac OS 7.6 automatically turns on virtual memory when you install it.)

If you don't know how much RAM your computer has, choose About This Macintosh from the Apple (🍏) menu. Check the number next to Built-in Memory.

To install the recommended software, you need about 70 MB of free space on your hard disk. To install all the optional components, you may need up to 120 MB of disk space; if you install just the minimum set of system software, you may only need 40 MB. The exact amount of space needed varies for different computer models and hard disk sizes.

To check the amount of hard disk space you have, open your hard disk icon. Then choose By Icon or By Small Icon from the View menu and check the number in the far-right corner of the window's title bar. (The number has the words "MB available" after it.)

*By the way:* Many application programs use your hard disk to temporarily store information, so it's a good idea to keep at least 10 percent of your disk space free. For best performance, you should recheck the amount of available disk space after installing Mac OS 7.6.

## Before you begin

Before you begin the installation, do the following:

- Turn off any virus-protection software and disk-security software you may have.
- If At Ease software is installed on your computer, turn it off before you install Mac OS 7.6. For instructions, see the manual that came with your At Ease software.
- If you are installing on a PowerBook, make sure your PowerBook is plugged in and set not to go to sleep. For instructions, see the manual that came with your computer.

**WARNING** PowerTalk is not compatible with Mac OS 7.6. Installing Mac OS 7.6 disables PowerTalk. If you use PowerTalk, see "Installing Over PowerTalk" in Chapter 3 before continuing with the upgrade process.

## Start up from the Mac OS 7.6 disks

You should start up your computer using the system software on the CD-ROM disc or floppy disks you received in the Mac OS 7.6 package. That way, you can repair any problems on your hard disk and update the disk driver before you install the software.

To start up your computer with the provided disks, follow these steps:

- 1 Shut down your computer.**
- 2 Insert the *Mac OS 7.6* CD-ROM disc into the CD-ROM drive.**

*If you're installing from floppy disks:* Insert the *Mac OS 7.6 Install Me First* disk into your floppy disk drive.

- 3 Turn on your computer.**

*If you're installing from a CD-ROM disc:* Hold down the C key on your keyboard until you see the screen with the smiling face. If you have a PowerBook 1400, you'll need to hold down the ⌘ (Command), Option, Shift, and Delete keys instead of the C key.

You'll know you've started up with the CD-ROM disc if you see the CD-ROM disc icon at the top-right corner of the desktop, above your hard disk icon.

*If you have trouble starting up from the CD-ROM disc:* See “Problems During Installation” in Chapter 3.

**IMPORTANT** If you don't have an Apple CD-ROM drive, you won't be able to start up from the CD, but you can still install the software from it. To ensure a smooth installation, turn off all your non-Apple extensions and restart your computer before beginning.

- If you are using System 7.5 or later, you can open the Extensions Manager control panel and choose “System 7.5.x” in the Sets pop-up menu. Then restart the computer.

- If you are using an earlier version of system software, or don't have the Extensions Manager, drag any non-Apple extensions out of your Extensions folder in the System Folder, then restart the computer. (If you don't know where a particular extension came from, select its icon. Then choose Get Info from the File menu. Apple extensions all have "© Apple Computer, Inc" in the Version section of the Get Info box.)

## Installing the software

Use the Install Mac OS application program to make sure you follow all the necessary steps for installing the software.

- To open the Install Mac OS program, double-click its icon.

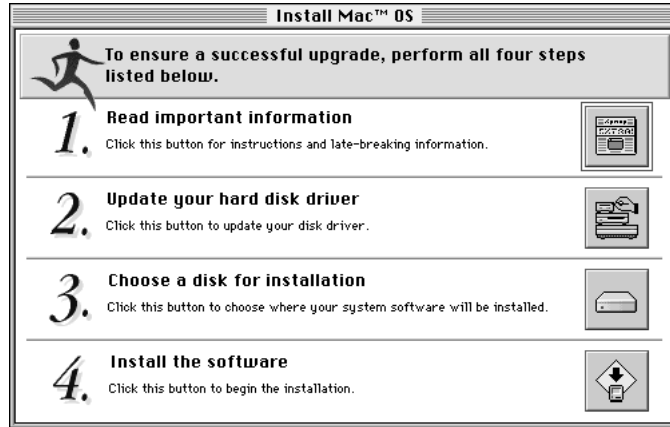


Install Mac™ OS

You see the following screen.

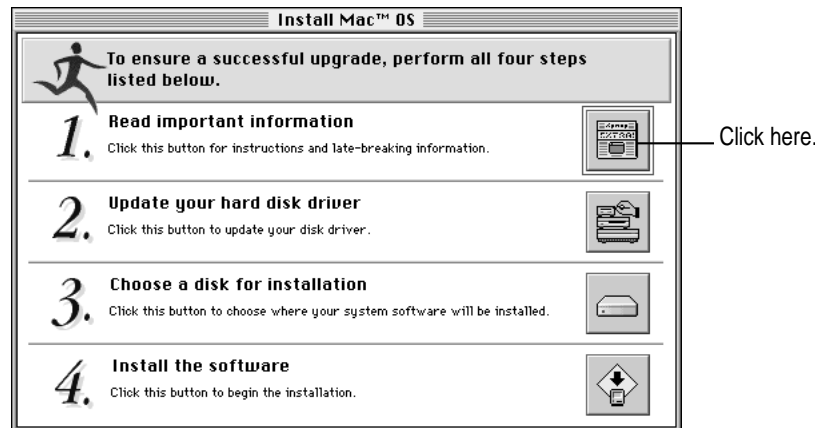


Next, a screen appears describing the four steps in the upgrade process.



### Step 1: Read important information

Click the first button to read about the upgrade process, as well as compatibility and troubleshooting information.



Read the onscreen document that appears. Since the onscreen document was written later than this book, it may contain additional information.

When you're finished reading the document, choose Quit from the File menu to return to the Install Mac OS screen.

## Step 2: Update your hard disk driver

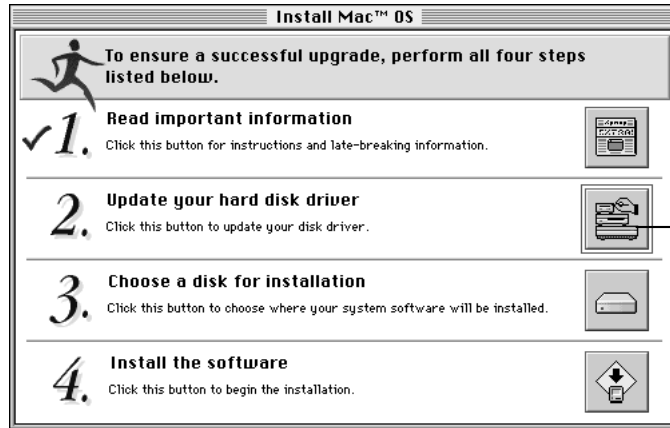
Hard disks with old drivers might cause problems after installing Mac OS 7.6. Your computer might not start up, or you might not see the hard disk icons on the desktop. To avoid these problems, it's a good idea to update your drivers.

The disk utilities that Apple provides won't update some disks. You can skip step 2 if one of the following is true:

- You don't have an Apple hard disk or you don't have an Apple computer. Check the instructions that came with your computer or hard disk to see if the manufacturer includes or recommends a disk utility, and use that utility to update the driver. Make sure to get the latest version of the utility from the manufacturer. An old utility will not be able to update your disk with the most current driver.
- You've previously used a non-Apple disk utility to format your disk or update the driver. You'll need to use that utility again to perform the update. Make sure to get the latest version of the utility from the manufacturer. An old utility will not be able to update your disk with the most current driver.
- You have a PowerBook 150 and no external Apple hard disks. PowerBook 150 internal disk drivers are built into the computer's read-only memory (ROM) and cannot be updated.

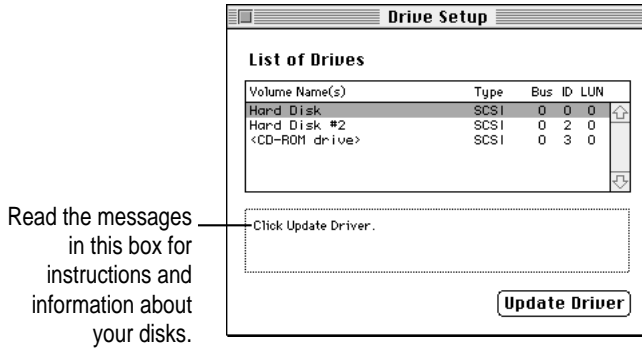


Click the second button in the main Install Mac OS screen to update your disk drivers.



After you click the second button, you first see a dialog box asking you to confirm that you can use the provided utilities. Click Continue. What you see next depends on the type of computer you have. If you're installing from floppy disks, you may be asked to insert other disks as needed.

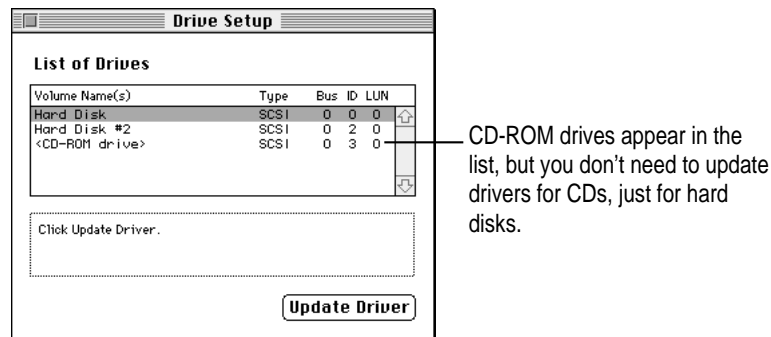
## If you see the Drive Setup window



Follow these instructions to update your disk drivers:

(If what you see on your screen doesn't match the preceding picture, skip ahead to the next section, "If You See the Apple HD SC Setup Window," and follow those instructions.)

- 1 **Select the name of a hard disk attached to your computer.**



- 2 **Click Update Driver.**

Repeat steps 1–2 to update the drivers on any additional hard disks you have.

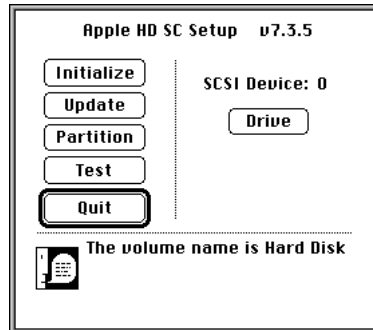
*If the Update Driver button is dimmed:* See "Problems During Installation" in Chapter 3.

- 3 **When you've finished updating the drivers on all your hard disks, close the window to quit the Drive Setup program.**

Skip the next section and go to "Step 3: Choose a Disk for Installation."

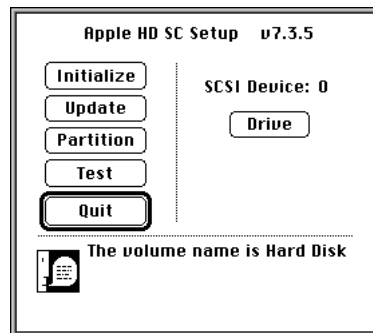


If you see the Apple HD SC Setup window



Follow these steps to update your disk drivers:

- 1 Click Drive until the “volume name” is the name of a hard disk attached to your computer.

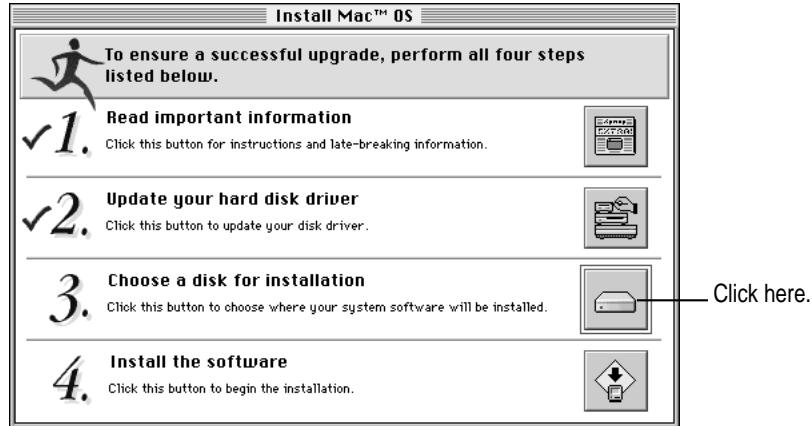


*If a disk name doesn't appear when you click Drive:* See “Problems During Installation” in Chapter 3.

- 2 Click Update and follow the instructions on the screen.  
Repeat steps 1–2 to update the drivers on any additional hard disks you have.
- 3 When you finish updating the drivers on all your hard disks, click Quit.

### Step 3: Choose a disk for installation

Click the third button to select the disk on which you want to install Mac OS 7.6.



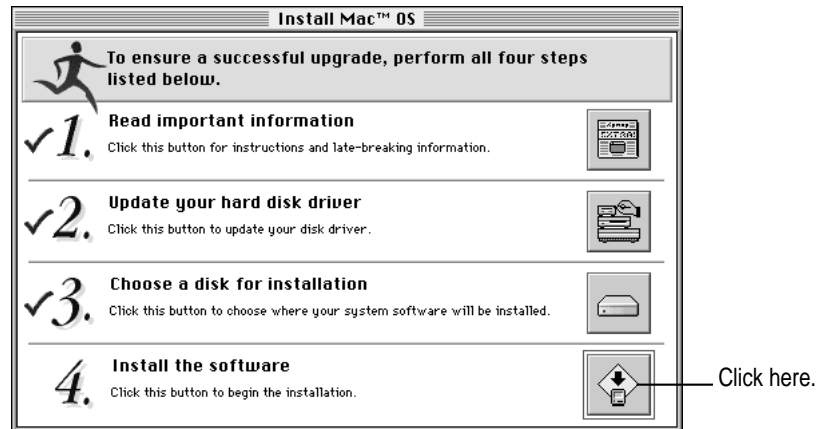
In the dialog box that appears, choose the disk on which you're going to install Mac OS 7.6. Then click Select.



You see a message if you don't have 70 MB (the amount necessary for the standard installation) of available space on the disk you choose. Depending on the installation options you select, you may need up to 120 MB. If there isn't enough space available, you need to remove files from the disk before installing the software.

## Step 4: Install the software

Click the fourth button to install Mac OS 7.6 and additional software.

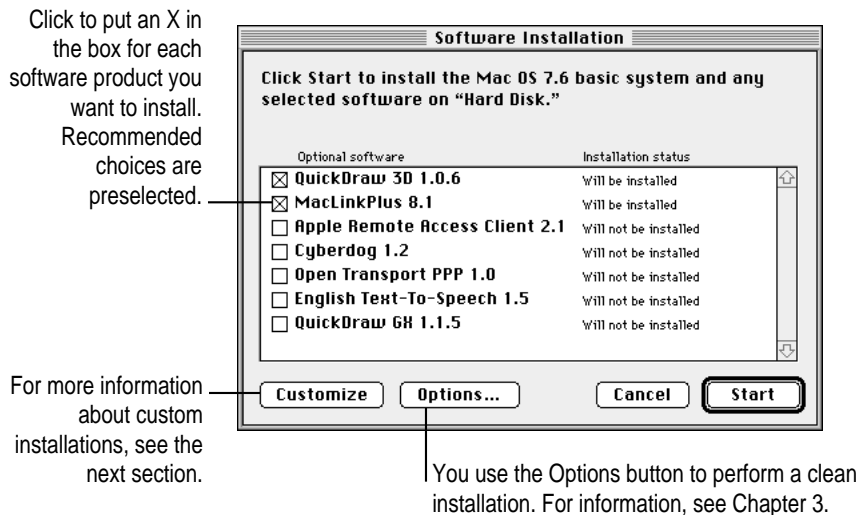


**WARNING** PowerTalk is not compatible with Mac OS 7.6. Installing Mac OS 7.6 disables PowerTalk. If you use PowerTalk, see “Installing Over PowerTalk” in Chapter 3 before continuing with the upgrade process.

**1 In the dialog box that appears, select the software you want to install.**

*Note:* Your screen may look slightly different from the picture below.

Remember to check the information presented in the first step on the main Install Mac OS screen for late-breaking information. If you're installing from floppy disks, you won't see all the choices available on the CD.



The basic system includes system software, OpenDoc, and OpenDoc Essentials. You can also choose to install the following optional software:

- QuickDraw 3D, to view and manipulate 3D images on your computer. Your computer must have a PowerPC microprocessor to use QuickDraw 3D.
- MacLinkPlus translators, to easily open documents created in applications you don't have, using appropriate applications you do have (including DOS and Windows documents). (These translators work with the Mac OS Easy Open control panel.)
- Apple Remote Access, to connect to a remote computer (such as your computer at work) using a modem
- Cyberdog, an application to access the Internet. Your computer must have a PowerPC microprocessor to use Cyberdog.
- Open Transport PPP software, to connect to the Internet using a modem
- English text-to-speech software, to have your computer read text aloud
- QuickDraw GX, for enhanced printing and typographical capabilities

For more information about any of these features, see Chapter 2, “What’s New in Mac OS 7.6.”

*Installing a customized system:* The Install Mac OS program installs the software recommended for your model of computer. You can use the Customize option to be more specific about which software to install. For instructions, see “Installing a Customized System,” below.

**2 Click Start to install the software you selected.**

The Install Mac OS program checks your destination disk for any problems and repairs them, if necessary.

*If your disk has problems that can’t be repaired:* See “Problems During Installation” in Chapter 3.

After your disk is tested, the software you selected is installed.

*If you have problems while installing:* See “Problems During Installation” in Chapter 3.

**3 When the installation is complete, restart your computer.**

*If the installation was not successful:* See “Problems During Installation” in Chapter 3.

*If you can’t restart the computer:* See “Problems Using Mac OS 7.6” in Chapter 3.

### **Installing a customized system**

For most computer users, the installation procedure described in the previous section is best, because it automatically installs everything you need for your model of computer. However, if you’d like to select only the software specific to your needs, you can customize your installation. You can install or update one or more specific files, or save space on your hard disk by installing only the files you want.

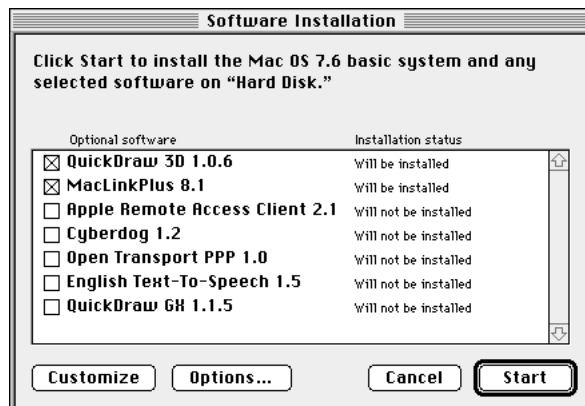
You can also use the Customize option to add additional software or to install a System Folder that can be used on any computer model.

- You can be more specific about what software packages you install. You can also specify which components to install from the packages you choose.
- After installing a product, you can add extra components. For example, you can install additional printer drivers.
- You can create a “universal” system that works on all computers that can use Mac OS 7.6.

To install customized system software, follow these steps:

- 1 Follow the steps in the previous sections through “Step 3: Choose a disk for the installation.”
- 2 Click the fourth button on the main Install Mac OS screen.

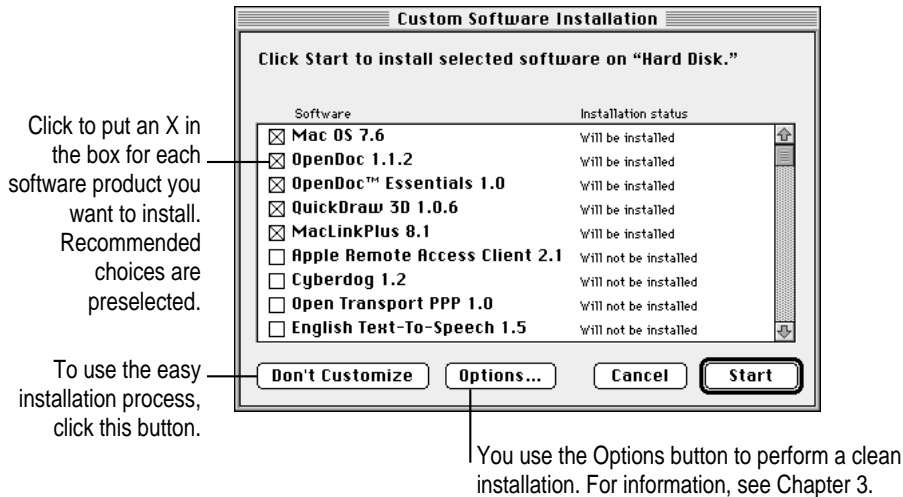
The following dialog box appears.



### 3 Click Customize.

The following screen appears.

*Note:* Your screen may look slightly different from the picture below. Remember to check the information presented in the first step on the main Install Mac OS screen for late-breaking information. If you're installing from floppy disks, you won't see all the choices available on the CD.



### 4 Select the software you want to install.

In addition to the optional software described in the preceding section, you can be more specific about which portions of the default system to install. You can choose from the following additional options:

- Mac OS 7.6, the basic system software.
- OpenDoc, to take advantage of a new kind of software technology. Only computers with PowerPC processors can use OpenDoc.
- OpenDoc Essentials, a set of software “parts” to get you started using OpenDoc technology. To use OpenDoc essentials, you also need to install OpenDoc.

*Note:* Cyberdog software also requires OpenDoc. To install Cyberdog, you need to install OpenDoc.

As you proceed in the custom installation process, you'll be able to determine exactly which components will be installed for the software you select.

The Install Mac OS program will automatically check your destination disk for any problems and repair it, if necessary. If you don't want your disk to be checked, click the Options button. In the dialog box that appears, click the Verify Destination Disk checkbox to remove the X.



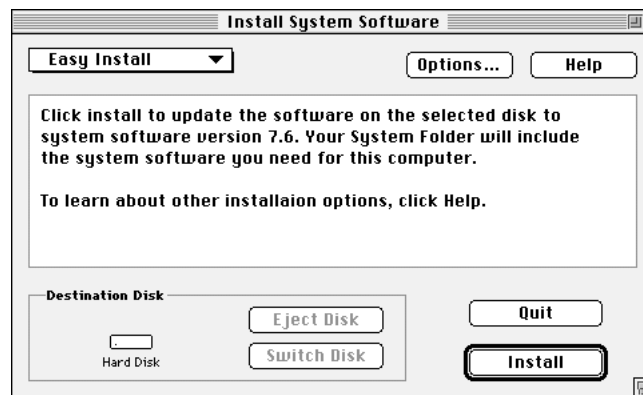
**5 Click Start.**

*If your disk has problems that can't be repaired:* See “Problems During Installation” in Chapter 3.

The Mac OS program opens the Installer for the first software product you selected. You'll use the Installer to specify which components you want to install.

**6 When you see the Installer's welcome screen, click Continue.**

The Easy Install dialog box appears.



If you want all the recommended components for this product, click Install.

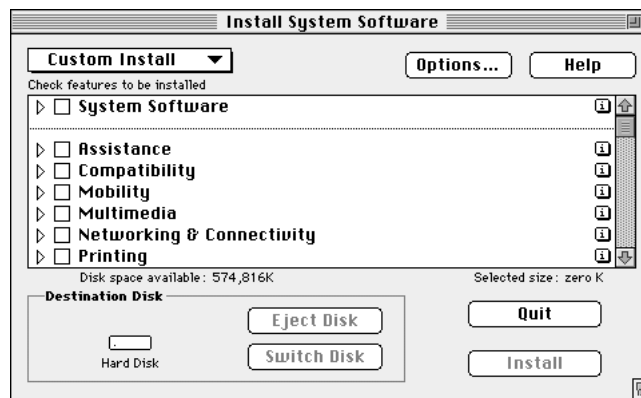


If you choose the Easy Install option, you can skip ahead to step 10. If you want to be more specific about which components to install, follow steps 7–10 below.

- 7 Open the pop-up menu and choose Custom Install.



The Custom Install dialog box appears, listing all available components for the first software product.



- 8 Scroll through the list of components and click the checkbox next to each component you want to install.

You can see and select individual items within each component by clicking the arrow to the left of the component, then clicking the item you want to install. To get additional information about each component listed, click the box with the letter *i* in it to the right of the component. Files that support the components you choose may also be installed.

**9 Click Install.**

*If you have problems while installing:* See “Problems During Installation” in Chapter 3.

**10 Follow the instructions that appear on the screen.**

**11 Repeat steps 6–10 for all the software you selected.**

The Install Mac OS application automatically opens the Installer for the next selected software package on the list.

**12 After all the installations are completed, restart your computer to use your new software.**

*If you can't restart the computer:* See “Problems Using Mac OS 7.6” in Chapter 3.

# 2

## What's New in Mac OS 7.6



In addition to greater stability and performance, Mac OS 7.6 includes new features that make it easier to connect to the Internet, enhance multimedia capabilities, increase your productivity, and more.

Read this chapter to get an overview of the new features.

### OpenDoc

Mac OS 7.6 includes OpenDoc, a new way to use software. You can add new features to your applications with OpenDoc software “parts.” When you drag a part into an OpenDoc-aware application (also called a “container application”), you add that object’s features to the application. For example, you could drag a chart-making object into a word-processing application. You can also create documents entirely out of OpenDoc parts, simply by combining the parts you need. Some sample parts are included with OpenDoc Essentials, available with Mac OS 7.6. Others will be available from third-party developers. Only computers with PowerPC microprocessors can use OpenDoc.

To get started with OpenDoc, see the printed booklet *Getting Started With OpenDoc*. When you’re working in an OpenDoc document, you can find help for that document in the Guide menu. Choose the Guide named after your document to see help for general OpenDoc concepts and for the various parts contained in the document.

## Networking software

Mac OS 7.6 includes new networking software to stabilize and improve performance, as well as software to connect to remote networks and the Internet using a modem.

### Open Transport

Open Transport is the modern, industry-standard networking and communications software for the Mac OS. With Open Transport software installed on your computer, you can

- use more than one networking system at once (for example, AppleTalk to communicate with network printers and TCP/IP to connect to the Internet)
- save and modify different networking configurations
- switch among networking configurations quickly and easily

Open Transport includes the AppleTalk and TCP/IP control panels. These replace the Network and MacTCP control panels used in previous versions of the Mac OS. You use the AppleTalk control panel to set up your connection to a network using the AppleTalk protocol. Your local area network, if you're connected to one, is probably an AppleTalk network. You use the TCP/IP control panel to set up a network connection to a local TCP/IP network or to the Internet.

For more help setting up your network connection with Open Transport, see the networking topics in Mac OS Guide, available in the Guide menu when the Finder is active.

### Open Transport PPP

You use PPP (Point-to-Point Protocol) software to connect to the Internet (or to a single TCP/IP network) using a modem. Mac OS 7.6 includes a version of PPP software that is integrated with Open Transport.

You set up your Open Transport PPP connection in the TCP/IP control panel. After you set up TCP/IP for PPP, you initiate a connection in the PPP control panel. For help using Open Transport PPP, see the telecommunications topics in Mac OS Guide, available in the Guide menu when the Finder is active.

If you use the Apple Internet Connection Kit, it will install a different version of PPP from the one included with Mac OS 7.6. The version included in the Connection Kit has a control panel called “MacPPP.” The version included with Mac OS 7.6 has a control panel called “PPP.” The Apple Internet Connection Kit Dialer program enters network-setting information for you in the MacPPP control panel.

You can use either version of PPP at any time. To use Open Transport PPP with the Apple Internet Connection Kit, however, you need to copy your settings from the MacPPP control panel to the PPP control panel.

### Apple Remote Access

You use Apple Remote Access to connect to another computer using a modem. Once you’ve connected to that computer, you can use any network devices connected to it as well. For example, you could connect to your computer at work, copy a file from it to your computer at home, make changes to it, and then print the file on your LaserWriter at work. If your office network is connected to the Internet, you can connect to the Internet from home by connecting to your office network with ARA.

The Apple Remote Access software included with Mac OS 7.6 is the ARA *client* software. You use the client software to connect to other computers. However, the computer you’re connecting to needs to have ARA *server* software installed. Once you’re connected, you then have access to any computer on the server’s network. You can obtain the server software from any Apple-authorized dealer.

For help setting up and using ARA software, see the ARA Client Guide, available in the Guide menu when the Apple Remote Access Client software is active.

## Internet software

The Internet is a global network of interconnected computer networks. When you connect to the Internet, you have access to a wide variety of services and information. Some of the most widely used Internet services include electronic mail (e-mail), which you use to send messages to other Internet users, and the World Wide Web, which you use to browse text and pictures from all over the world.

To connect to the Internet from home, you need a modem and an Internet service provider. You pay the Internet provider to use the provider's access to the Internet, much as you pay the phone company for access to the telephone network. If your office network is connected to the Internet, you can use Apple Remote Access software to connect to the Internet from home without a service provider. If you have Internet access, be sure to try out the Cyberdog program included with Mac OS 7.6. Cyberdog provides a unified means of using many Internet services. (For more information, see the "Cyberdog" section, later in this chapter.)

An easy way of obtaining Internet access is to use the Apple Internet Connection Kit. The Connection Kit includes software to help you set up your computer to use the Internet, and to help you choose an Internet service provider. It also includes application programs for using the most popular Internet services, such as the World Wide Web, e-mail, and global newsgroups.

You can also sign up with an online service, such as America Online. Providers like America Online typically include Internet access, as well as additional services, such as discussion forums for their members. America Online software is included with Mac OS 7.6. (For more information, see the "America Online" section later in this chapter.)

## Cyberdog

Once you've obtained access through an Internet service provider, Cyberdog provides a simple, unified way to use the most popular Internet services. With Cyberdog, you can

- send and receive electronic mail
- browse text and graphics using the World Wide Web
- discuss diverse topics in global newsgroups
- use the FTP and Gopher protocols to transfer files from computers all over the world
- connect to remote computers with Telnet software
- store Internet addresses as icons. When you click an address icon, you are immediately connected to that address. You can create address icons for Web pages, Gopher or FTP sites, newsgroups, e-mail addresses, or Telnet connections.
- store and organize your address icons in notebooks
- add buttons to OpenDoc documents that automatically connect you to Internet locations. You can use this feature to create your own custom Internet starting point.

Only computers with PowerPC microprocessors can use Cyberdog.

Cyberdog also includes extensive Apple Guide online help. To access the Cyberdog Guide, open the Cyberdog application, located in the Cyberdog folder on your hard disk. Then choose Cyberdog Guide from the Guide (🔍) menu.

## America Online

To increase your options for getting online, Mac OS 7.6 includes the popular America Online service. With America Online, you can send e-mail, obtain access to a broad range of information, use online discussion groups, and connect to the Internet.

To get started with America Online, see the documentation in the America Online folder.

## Multimedia software

Mac OS 7.6 includes several features to enhance both multimedia viewing and authoring.

### New version of QuickTime

QuickTime is a system extension that gives your computer the ability to work with video and animation. You don't interact with QuickTime directly; it works behind the scenes to provide multimedia functionality to your application programs. With QuickTime 2.5, you might notice these enhancements in applications that use them:

- You can import a wider variety of file formats.
- On computers with PowerPC microprocessors, you can play back MIDI files with CD-quality sound (44.1 kHz, 16-bit, stereo).
- You can play back the karaoke files commonly found on the Internet.

Additionally, you can automatically start playing a CD-ROM disc or audio CD when you insert it or when your computer starts up. You can also play MIDI files on external devices, using Apple's MIDI Manager. You use the QuickTime Settings control panel to control these features.



QuickTime™ Settings

SimpleText, a word-processing application program installed with Mac OS 7.6, can play multimedia “movies” saved in the QuickTime format. For help playing movies in SimpleText, see the SimpleText Guide, available in the Guide menu when SimpleText is active.

### QuickDraw 3D

The QuickDraw 3D extension gives computers with PowerPC microprocessors the ability to work with 3D images. As with QuickTime, you don't interact with QuickDraw 3D directly. Instead, the extension provides capabilities your application programs can use for displaying and manipulating 3D pictures.



3D capability has been integrated into the Scrapbook and SimpleText applications included in Mac OS 7.6. You can view and manipulate 3D images by opening them in either application.

To get help manipulating 3D images in SimpleText, see the SimpleText Guide, available in the Guide menu when SimpleText is active. The 3D viewing controls you see in SimpleText and the Scrapbook also have Balloon Help. To see descriptions of the controls, choose Show Balloons from the Guide menu and point to the controls.

### New version of PlainTalk

You use PlainTalk to have your computer read documents to you. Computers with a 68030 or higher processor and a clock speed of 33 MHz or greater can use text-to-speech, the technology that enables your computer to read documents aloud. Check the technical information that came with your computer to see if your model can use text-to-speech.

With PlainTalk 1.5, your computer can speak the contents of system alert messages. (System alert messages are displayed when a system error occurs, or when certain actions can't be performed, such as when you try to copy a file onto a locked disk.) You can have the computer speak the whole message, or just an introductory phrase, such as "Blast!" or "Rats!" If your computer can use text-to-speech, it can say the alert messages. You turn on this feature in the Speech control panel.



Speech

To learn more about using text-to-speech, see the speech topics in Mac OS Guide, available in the Guide menu when the Finder is active.

### Acrobat Reader

You use the Acrobat™ Reader, from Adobe™ Systems, Inc., to read documents without having the application or fonts that created the file. Some onscreen manuals included with your software are in the Adobe Acrobat format.

You can find the Acrobat Reader software in the Utilities folder on the *Mac OS 7.6* CD-ROM disc.

## Printing software

Mac OS 7.6 includes enhancements that make it easier to print and improve print quality.

### Desktop printing

When you install Mac OS 7.6, a desktop printer icon is created for the printer selected in the Chooser. Desktop printer icons look like this:



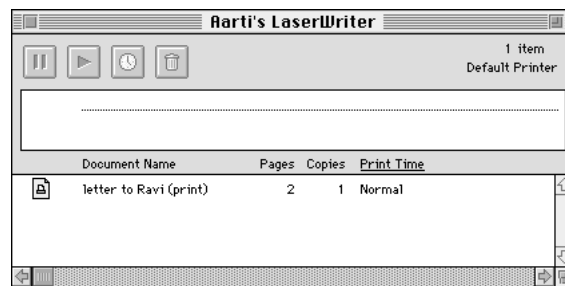
Aarti's LaserWriter

Whenever you select a different printer in the Chooser, another desktop printer icon is created for that printer.

You can quickly print documents from the Finder by dragging the document icon to a desktop printer icon. (You can still print documents from within applications by choosing the Print command.)

When you drag a document to a desktop printer, all subsequent documents are printed on that printer, just as if you'd selected it in the Chooser. You can also select a printer in the Printing module of the Control Strip.

To check the status of a document that's printing or waiting to print, open the icon for the printer the document is being printed on. (Previously, you used the PrintMonitor application to check printing status.)

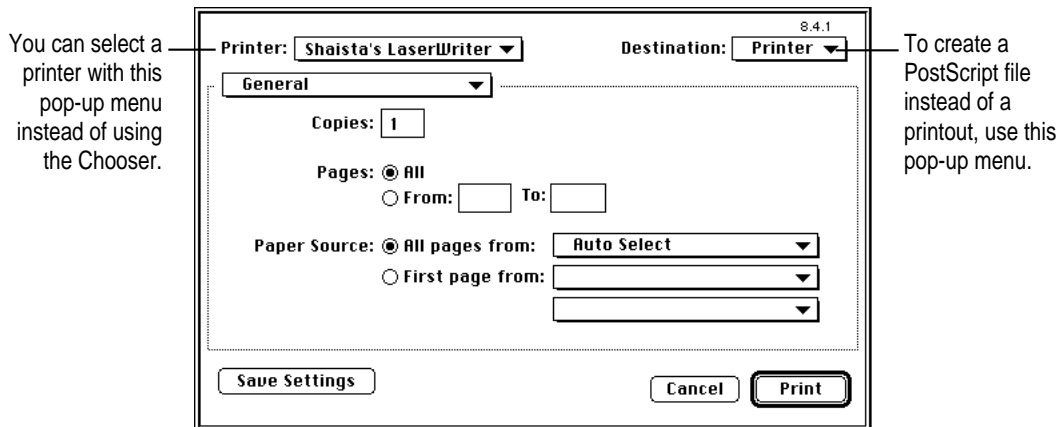


Desktop printer icons behave like other types of icons: you can move them off the desktop, put them in folders, make aliases of them, and throw them away.

To learn more about desktop printing, see the document called About Desktop Printing, in the Mac OS 7.6 Information folder on the *Mac OS 7.6* CD-ROM disc.

## New printing dialog box

The new LaserWriter 8.4 driver offers a streamlined interface when you use a LaserWriter printer. If you've selected the LaserWriter 8 driver in the Chooser, you see the following dialog box when you choose the Print command:



Only the most basic, commonly used printing features are presented. To use advanced options, make a choice from the pop-up menu. You can

- print two, four, or eight reduced-size pages per sheet of paper
- set options for color or grayscale printing
- print a cover page
- set options for printing as a PostScript™ file
- set error-reporting options
- choose what types of image processing to use

To save the settings you choose so that they appear when you next print, click Save Settings.

The new LaserWriter driver and Print dialog box are only available for computers with PowerPC microprocessors. Computers with 68030 and 68040 microprocessors use an older version of printing software.

## Color-matching software

Your computer uses ColorSync software to ensure that the colors in a document remain consistent across a wide variety of color monitors, scanners, and color printers. That way, the colors you see on your screen more closely match the colors you see in your printed documents.

To reproduce colors accurately, your computer must know the type of monitor you use to view documents. You use the ColorSync System Profile control panel to indicate the monitor you're using.



ColorSync™ System Profile

If the monitor shown in the control panel is incorrect, open the pop-up menu and choose Set System Profile. Then choose the correct monitor from the list. For help setting up your software to take advantage of ColorSync, see Mac OS Guide, available in the Guide menu when the Finder is active.

## QuickDraw GX

QuickDraw GX software provides simpler, more powerful printing and font handling and improves your computer's color publishing capabilities. You can also create documents that other QuickDraw GX users can view and print, even when they don't have the application program or fonts used to create the document. These documents are called PDDs, or Portable Digital Documents. Additionally, QuickDraw GX is extensible, so you can use third-party software to extend your printing capabilities even further.

You can add additional capabilities by installing the QuickDraw GX utilities.

- **LaserWriter Utility** is used for downloading fonts to a LaserWriter printer, resetting a printer, printing PostScript files, and setting other printer options.
- **Paper Type Editor** allows you to create and edit the paper type for Apple printers.
- **QuickDraw GX Helper** is a system extension that allows you to temporarily turn off QuickDraw GX printing for an application program.

To turn off QuickDraw GX printing, launch the application program. Then open the Apple (🍏) menu and choose “Turn desktop printing off.” You can still use the desktop printer icons to print, but documents print without QuickDraw GX. To turn QuickDraw GX printing back on, choose “Turn desktop printing on.”

- **Type 1 Enabler** makes your Type 1 PostScript fonts work with QuickDraw GX. For instructions, see “Using Type 1 Fonts With QuickDraw GX,” next.

You use the custom installation process to install the QuickDraw GX utilities. Follow the instructions in “Installing a Customized System” in “Step 4: Install the Software” in Chapter 1 to install just the QuickDraw GX Utilities package.

### Using Type 1 fonts with QuickDraw GX

Type 1 PostScript fonts must be enabled in order to work with QuickDraw GX. “Enabling” makes your fonts work with QuickDraw GX. It does not affect the font outlines, design, or metrics. All your enabled fonts can still be used without QuickDraw GX.

Any Type 1 fonts already installed in your System Folder are automatically enabled when you install QuickDraw GX. If you install additional Type 1 fonts, you need to enable them with the Type 1 Enabler, one of the utilities in the QuickDraw GX Utilities package. Follow the instructions in “Installing a Customized System” in “Step 4: Install the Software” in Chapter 1 to install the QuickDraw GX Utilities package and the Type 1 Enabler.

### Enabling Type 1 PostScript fonts

To enable Type 1 PostScript fonts for use with QuickDraw GX, follow the steps below.

- 1 Open the Type 1 Enabler utility by double-clicking its icon.**

A window appears in which you locate the fonts you want to modify.

- 2 Choose a font or a folder containing the fonts you want to enable.**

- 3 Click Select.**

A message tells you when the fonts have been enabled.

- 4 Choose Quit from the File menu.**

You can now use your Type 1 fonts with QuickDraw GX.

Your original Type 1 fonts are moved to the folder called •Archived Type 1 Fonts• inside the System Folder on your hard disk.

## Utility and desktop management software

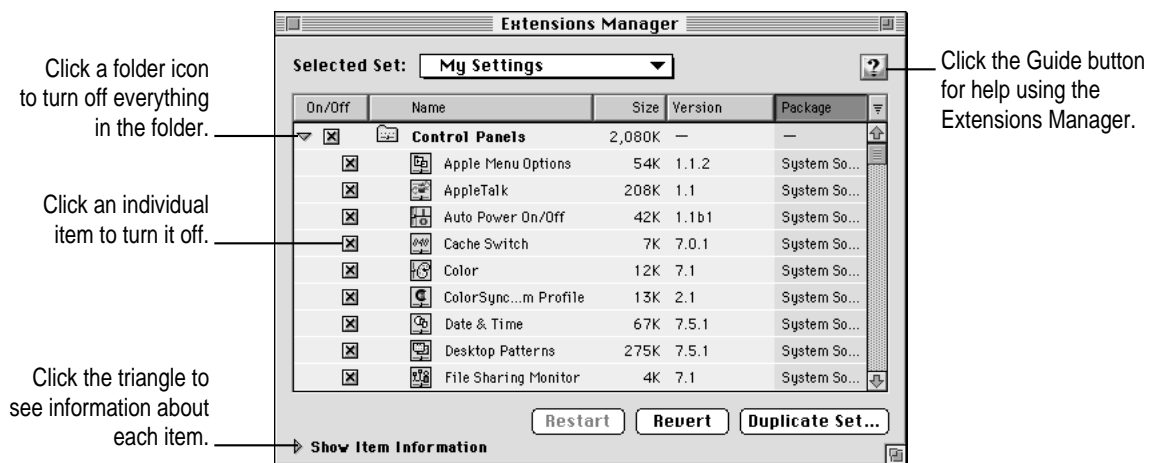
With Mac OS 7.6, you can customize the way your computer works, get easy access to application programs and control panels, and view a detailed profile of the hardware and software you're using.

### New version of the Extensions Manager

You can improve system performance by turning off parts of your system software you're not using. For example, if you're at home and not connected to a network, you can turn off networking-related software. More of your computer's memory is then free for other tasks.

This version of the Extensions Manager control panel makes it easier to turn extensions on and off.

- Detailed information is provided for each software component listed.
- Creating and editing your own sets of components is easier and more flexible.
- You can use the By Package command in the Views menu to group items used by specific components. For example, you can see which items are used by QuickDraw GX graphics software, and turn just those on or off.



For help using the Extensions Manager to choose which parts of system software you want to use, see Mac OS Guide, available in the Guide menu when the Finder is the active program. Or click the Guide button in the Extensions Manager itself.

## Apple System Profiler

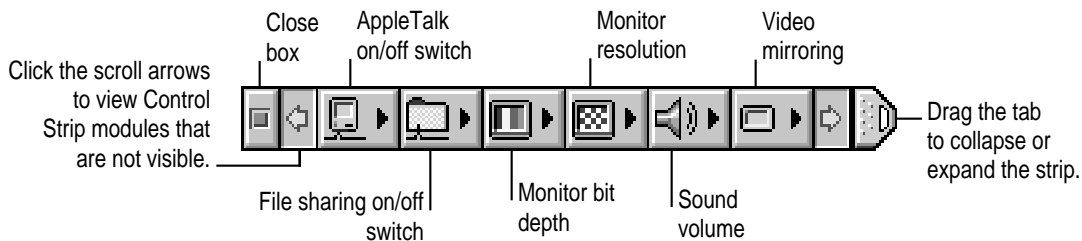
The Apple System Profiler application, available in the Apple () menu, provides detailed information about your current hardware and software configuration. This information can often help technicians isolate the cause of a problem you're experiencing. The Apple System Profiler is only available on computers with 68040 processors or PowerPC microprocessors.

The items displayed by the System Profiler are described in Balloon Help. If you aren't familiar with a particular item, open the Guide menu and choose Show Balloons. Then point to that item to see a description of it.

## Control Strip

If you have a portable computer, or a PowerPC computer that uses the PCI expansion bus, you'll notice the Control Strip at the lower-left corner of your screen after you install Mac OS 7.6. You can use the Control Strip to access common features quickly. (You can still use control panels to fine-tune your settings.) For example, you can use the Control Strip to turn off file sharing or increase the sound volume. You use the Control Strip control panel to show and hide the Control Strip.

The Control Strip may look slightly different depending on whether you have a portable or a desktop computer and on other options you may have.

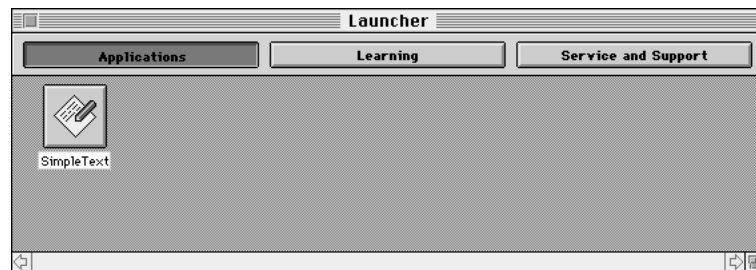


For help using the Control Strip, see Mac OS Guide, available in the Guide menu when the Finder is active.



## Easy customization of the Launcher

You use the Launcher to quickly find applications and documents, and then open them with a single click. Now you can add items to the Launcher simply by dragging them into it.



You can also change the size of the Launcher buttons. To do so, position the pointer over the Launcher window. Then hold down the ⌘ (Command) key while pressing the mouse button. Pick a size in the pop-up menu that appears, then release the button.

For help organizing the Launcher, see Mac OS Guide, available in the Guide menu when the Finder is active.

## Mobile computing software

Mac OS 7.6 includes several new features to help make mobile computing easier and more efficient.

### File synchronization

The File Assistant application program automatically synchronizes files between portable computers and other Mac OS–based computers. The File Assistant keeps any two files, folders, or disks synchronized—locally, over a network, or using a floppy disk.

For help using the File Assistant, choose File Assistant Guide from the Guide menu when the File Assistant is active.

## Other mobile computing features

Your computer has other features to make mobile computing with your portable computer easier and faster. You can

- Set documents to print automatically the next time you connect your portable computer to a printer.
- Send electronic mail automatically the next time you connect your portable computer to a network.
- Put your portable computer to sleep by holding down the Shift, ⌘ (Command), and 0 (zero) keys at the same time.
- Spin down the hard disk by holding down the Shift, Control, ⌘ (Command), and 0 (zero) keys at the same time.
- Automatically reconnect to hard disks and servers when your computer wakes from sleep.
- Save battery power by using the RAM disk instead of the hard disk. Files on the RAM disk are saved in the System Folder on the hard disk when you shut down your computer. The next time you start up, the files are automatically copied back to the RAM disk.

## Sound and monitors options

Depending on the type of computer you have, you either have two control panels, the Sound control panel and the Monitors control panel, or you have a combined Monitors & Sound control panel. You use these control panels to set how your monitor displays images and how your computer plays and accepts sound.



Sound

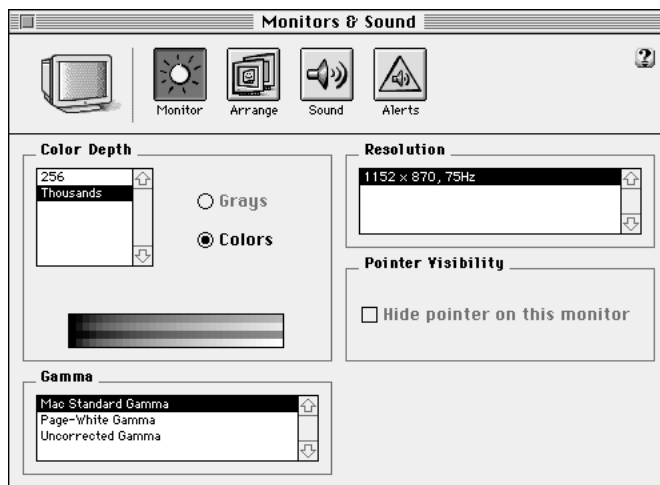


Monitors



## Monitors & Sound

The Monitors & Sound control panel, installed on PCI desktop computers with PowerPC microprocessors, is a combined control panel that replaces the separate Sound and Monitors control panels. (It also replaces the Sound & Displays control panel.) You can use this control panel to specify information about monitors attached to your computer (for example, monitor resolution, monitor bit depth, monitor arrangement, and so on). You can also use this control panel to specify information about other audiovisual equipment attached to your computer (for example, audio CD players, VCRs, video cameras, external speakers, and so on).



For information about using these control panels to set your sound and monitor settings, see the sound and monitor topics in Mac OS Guide, available in the Guide menu when the Finder is active.

## Better performance when using virtual memory

With virtual memory, you can use available hard disk space as if it were random-access memory (RAM). In Mac OS 7.6, virtual memory is significantly faster than in previous versions.

The new virtual memory improves on previous versions in the time it takes to

- open an application program that requires a significant amount of memory (RAM)
- switch between memory-intensive application programs
- switch between large documents within an application
- access SCSI devices

Mac OS 7.6 automatically turns on virtual memory when you install it.

# 3

## Troubleshooting



This chapter helps you solve some of the common problems you may encounter when upgrading to Mac OS 7.6.

### Problems during installation

This section helps you solve problems you may encounter while installing your software.

**You can't start up the computer using the *Mac OS 7.6* CD-ROM disc or the *Mac OS 7.6 Install Disk 1* floppy disk.**

*Cause:* Your computer located the system software on your hard disk before it located the system software on the CD or floppy disk.

*Solution:* With the CD or floppy disk inserted, open the Startup Disk control panel and click the CD or floppy disk icon. Then restart the computer.

If you do a normal installation, you'll need to reselect your hard disk as the startup disk after you install the software. Open the Startup Disk control panel again and click the icon for your hard disk. Then restart your computer.

If you do a clean installation, you don't need to reselect your hard disk as the startup disk.



**The Install Mac OS program cannot repair your hard disk.**

*Cause:* Install Mac OS is unable to repair your problem.

*Solution 1:* If you see a message that the disk can't be fixed because a file is open, quit all programs. If file sharing is on, turn it off. Then try installing again.

*Solution 2:* Use a third-party disk repair utility to see if it can repair the disk.

If you don't have a third-party utility, or if that utility can't repair the disk either, you may need to reinitialize the hard disk.

First, back up your hard disk because reinitializing erases everything on the disk. Then use either the Drive Setup or HD SC Setup utility program to reinitialize the disk.

You can find these utilities in the Utilities folder on the *Mac OS 7.6* CD-ROM disk, or on the *Disk Tools* floppy disks. To reinitialize your startup disk (the disk with system software on it) you need to start up the computer from a different disk. You can start up using the *Mac OS 7.6* CD-ROM disc or *Disk Tools* floppy disk. See "Start Up From the Mac OS 7.6 Disks" in Chapter 1 for instructions.

Computers with PowerPC microprocessors, and computers with 68030 and 68040 processors that have IDE hard disks, should use Drive Setup. Other computers should use HD SC Setup. If you try to open the wrong program, you'll see a message.

*Note for PowerBook 150 owners:* To reinitialize your computer's internal hard disk, you must use the Internal HD Formatter application that came with your computer. To reinitialize an external disk, use HD SC Setup.

After you've reinitialized the disk, use Drive Setup or HD SC Setup to update the disk driver. Then reinstall system software and your application programs.

For more information about reinitializing your hard disk, see the manual that came with your computer.

**The Update Driver button is not available in the Drive Setup utility.**

*Cause 1:* You don't have an Apple hard disk.

*Solution 1:* Drive Setup doesn't work with non-Apple disks. See the instructions that came with your computer or hard disk to check if the manufacturer includes a disk setup utility, or call the manufacturer and ask what disk utility to use. Use that utility to update the driver. To ensure a successful update, obtain the latest version of the utility.

*Cause 2:* You've previously updated your hard disk with a non-Apple disk utility.

*Solution 2:* Non-Apple disk utilities sometimes update disks with non-Apple drivers. You need to use the utility you used previously to update the driver again. To ensure a successful update, obtain the latest version of the utility.

*Cause 3:* Some IDE hard disks must be reinitialized before you can update the driver.

*Solution 3:* Back up all the files on the hard disk onto another disk and use Drive Setup to reinitialize the hard disk. For instructions on reinitializing the hard disk, see the manual that came with your computer.

**You click the Drive button in HD SC Setup, but nothing happens.**

*Cause 1:* You don't have an Apple hard disk.

*Solution 1:* HD SC Setup doesn't work with non-Apple disks. See the instructions that came with your computer or hard disk to check if the manufacturer includes a disk setup utility, or call the manufacturer and ask what disk utility to use. Use that utility to update the driver. To ensure a successful update, obtain the latest version of the utility.

*Cause 2:* You've previously updated your hard disk with a non-Apple disk utility.

*Solution 2:* Non-Apple disk utilities sometimes update disks with non-Apple drivers. You need to use the utility you used previously to update the driver again. To ensure a successful update, obtain the latest version of the utility.

**You see a message that there's not enough memory to use the Installer.**

*Cause:* You have too many applications open.

*Solution:* Quit all open application programs.

*Cause 2:* You have too many system extensions running.

*Solution 2:* If you have system software version 7.5 or later, open the Extensions Manager control panel and choose "System 7.x" from the Sets menu, then restart the computer. If you have an earlier version of system software, hold down the Shift key while you restart the computer. This turns off all system extensions.

*Cause 3:* Your disk cache or RAM Disk setting is set too high in the Memory control panel.

*Solution 3:* Open the Memory control panel, set your disk cache to the lowest possible setting, reduce or turn off your RAM disk, and turn on virtual memory. Then restart the computer.

**You see a message that your computer doesn't have enough memory to use the software.**

*Cause:* Your computer has less RAM than is required to use Mac OS 7.6.

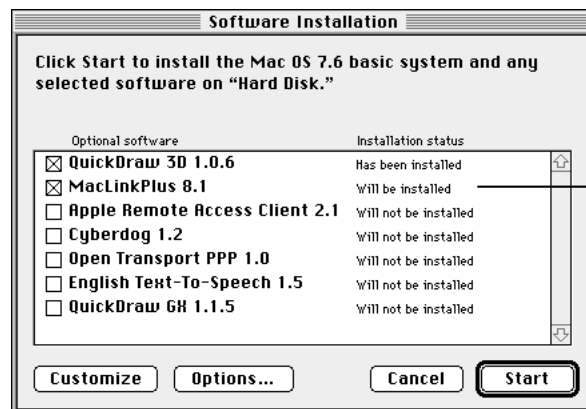
*Solution:* For memory guidelines, see "System Requirements" in Chapter 1. If necessary, contact your Apple-authorized reseller for information about how to purchase additional memory.

**You see a message that there's not enough disk space.**

*Cause:* Your computer's hard disk has less than the minimum amount of space required to install the software.

*Solution:* Make more space available on your hard disk by removing some files from the disk. Make backup copies of the files, if necessary. Then drag them to the Trash icon and choose Empty Trash from the Special menu. You don't need to quit the Install Mac OS program before you remove files from the disk.

When you see this message, some of the software you selected may have been successfully installed. The Install Software window in the Install Mac OS program indicates which software has already been installed.



Use this list to check what software was installed before the disk became full.



**You see a message that the System file cannot be modified.**

*Cause 1:* You have installed virus-protection software that guards against modification of the System file.

*Solution 1:* Start up your computer from the *Mac OS 7.6* CD-ROM disc or the *Install Mac OS 7.6 Disk 1* floppy disk, as described in “Start Up From the Mac OS 7.6 Disks” in Chapter 1.

*Solution 2:* Drag any virus-protection software out of the System Folder and restart your computer. You can put the virus-protection software back after installation.

*Cause 2:* Your System Folder may be protected. Or the System and Finder files may be locked.

*Solution 2:* To turn off System Folder protection, open the General Controls panel. Click to remove the X from the Protect System Folder box. To see if your System file or Finder file is locked, select the file’s icon. Then open the File menu and choose Get Info. To unlock the file, click the Locked checkbox to remove the X.

**You see a message that the installation was not successful.**

*Cause:* You may have an incompatible item in your System Folder.

*Solution 1:* Start up your computer using the *Mac OS 7.6* CD-ROM disc or the *Install Mac OS 7.6 Disk 1* disk. See “Start Up From the Mac OS 7.6 Disks” in Chapter 1.

*Solution 2:* If you have a non-Apple CD-ROM drive and can’t start up from the CD, try restarting your computer with only those extensions provided with your version of system software.

- If you are using System 7.5 or later, you can open the Extensions Manager control panel and choose “System 7.5.x” in the Sets pop-up menu. Then restart the computer.
- If you are using an earlier version of system software, drag any non-Apple extensions out of your Extensions folder in the System Folder, then restart the computer. (If you don’t know where a particular extension came from, select its icon. Then choose Get Info from the File menu. Apple extensions all have “© Apple Computer, Inc” in the Version section of the Get Info box.)

## Problems using Mac OS 7.6

This section helps with problems you may encounter using the computer after you have installed Mac OS 7.6.

### **You can't start up or restart the computer.**

*Problem:* When you turn on your computer, you see a “bomb” message.

*Cause 1:* You probably have an incompatible item in the System Folder.

*Solution 1:* Follow the instructions in “Testing for Compatibility,” later in this chapter.

*Cause 2:* Your system software may have been damaged.

*Solution 2:* Follow the instructions in “Performing a Clean Installation,” later in this chapter, to reinstall system software.

### **You often encounter problems that require you to restart the computer.**

*Cause:* You may have an incompatible item in the System Folder. It's also possible that an application program is incompatible with Mac OS 7.6.

*Solution:* Follow the instructions in “Testing for Compatibility,” later in this chapter.

For compatibility information on application programs, contact the program's manufacturer. You may have a version of the program that doesn't work with Mac OS 7.6.

### **None of your network devices appear in the Chooser.**

*Cause 1:* AppleTalk is not turned on.

*Solution 1:* Make sure AppleTalk is turned on in the AppleTalk control panel, as well as in the Chooser. If AppleTalk is turned on, make sure you have chosen the correct port in the “Connect via” pop-up menu in the AppleTalk control panel.

*Cause 2:* There is a conflict between your network number and another network number.

*Solution 2:* If your network number or node number has been set to “User Defined,” turn off the User Defined setting in the AppleTalk control panel. Then close and reopen the control panel.

For complete AppleTalk setup instructions, see Mac OS Guide, available in the Guide menu when the Finder is active.

**You can't connect to devices outside your local network.**

*Cause:* Your router address or subnet mask hasn't been entered correctly.

*Solution:* Make sure your router address and subnet mask are entered correctly in the TCP/IP control panel. Check with your network administrator or Internet service provider for the correct values to enter.

For complete TCP/IP setup instructions, see Mac OS Guide, available in the Guide menu when the Finder is active.

**You can connect to remote computers by IP address, but not by name.**

*Cause 1:* You haven't entered a name server address, or an unreliable name server is listed before a more reliable one.

*Solution 1:* Make sure you have entered at least one name server address in the TCP/IP control panel and that the address is correct. If you have entered more than one, make sure the most reliable ones are listed first.

*Cause 2:* The additional domain names entered in the TCP/IP control panel are invalid.

*Solution 2:* Make sure you have entered valid domain names in the Additional Search Domains box in the TCP/IP control panel. (The domain name area only appears when the control panel is in Advanced mode.)

*Cause 3:* The domain names entered for an implicit search are incorrect.

*Solution 3:* If you have entered starting and ending domain names for an implicit search, double-check the TCP/IP control panel to make sure they're correct. (The implicit search name area only appears when the control panel is in Advanced mode.)

For complete TCP/IP setup instructions, see Mac OS Guide, available in the Guide menu when the Finder is active. For help determining what values to enter, contact your network administrator or Internet service provider.

## Problems using QuickDraw GX

This section helps with problems you may encounter using the computer after you have installed QuickDraw GX.

### **Your non-Apple printer is no longer available in the Chooser.**

*Cause:* To print on a non-Apple printer with QuickDraw GX installed, you need a QuickDraw GX driver for that printer. QuickDraw GX installation provides drivers for Apple printers only.

*Solution 1:* If you are using a non-Apple PostScript printer, try using the Apple LaserWriter GX driver. To install the LaserWriter GX printer software, see the section “QuickDraw GX” in “Printing Software” in Chapter 2.

*Solution 2:* Contact the manufacturer of the printer to obtain a QuickDraw GX printer driver for your non-Apple printer.

*Solution 3:* You can temporarily turn off QuickDraw GX and print using your previous printer driver. To turn off QuickDraw GX, hold down the Space bar while you restart your computer. When the Extensions Manager opens, click the QuickDraw GX extension to remove the checkmark beside it. This prevents the QuickDraw GX software from loading. Close the Extensions Manager to resume startup. You should be able to print normally. You won't be able to use any QuickDraw GX features until you turn the extension back on again.

### **Your fax modem is no longer available in the Chooser.**

*Cause:* To use a fax modem, you need a QuickDraw GX driver for that fax modem.

*Solution 1:* If you have an Apple fax modem, contact Apple for a QuickDraw GX fax modem driver. If you have a non-Apple fax modem, contact the vendor to obtain a QuickDraw GX driver.

*Solution 2:* You can temporarily turn off QuickDraw GX and use your previous fax modem driver. To turn off QuickDraw GX, hold down the Space bar while you restart your computer. When the Extensions Manager opens, click the QuickDraw GX extension to remove the X beside it. This prevents the QuickDraw GX software from loading. Close the Extensions Manager to resume startup. Your fax modem should work normally. You won't be able to use any QuickDraw GX features until you turn the extension back on again.

**You have trouble printing in a particular application program.**

*Cause:* The program may be incompatible with the QuickDraw GX printer driver.

*Solution 1:* Install the QuickDraw GX utilities and use the QuickDraw GX Helper utility to turn off QuickDraw GX printing capabilities for the program. For instructions on how to install the QuickDraw GX utilities, see the section “QuickDraw GX” in “Printing Software” in Chapter 2. After you install, open the program, then open the Apple (🍏) menu. Choose “Turn desktop printing off.” The command changes to “Turn desktop printing on.” The program uses the non-GX printer driver until you choose the command again.

*Solution 2:* You can also turn QuickDraw GX off temporarily with the Extensions Manager. Hold down the Space bar while you restart your computer. When the Extensions Manager opens, click the QuickDraw GX extension to remove the X beside it. This prevents the QuickDraw GX software from loading. Close the Extensions Manager to resume startup. You should be able to print normally. You won’t be able to use any QuickDraw GX features until you turn the extension back on again.

## Testing for compatibility

If your computer does not start up properly or behaves erratically, you probably have an incompatible extension or control panel.

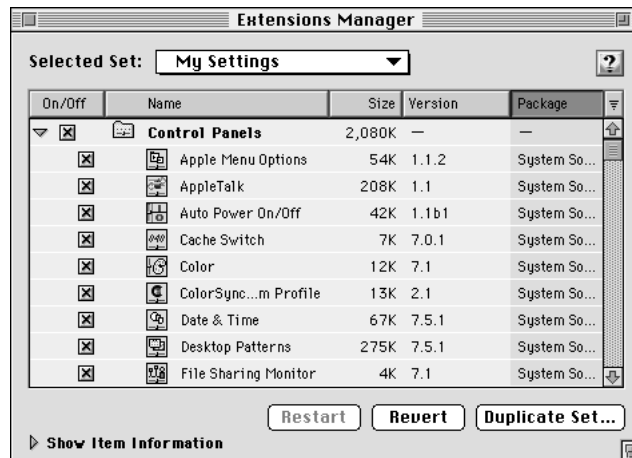
### Step 1: Verify the problem

To verify that you have a compatibility problem, follow the steps below.

- 1 Start up your computer while holding down the Space bar.

Holding down the Space bar opens the Extensions Manager control panel during startup.

- 2 Release the Space bar when the Extensions Manager control panel opens.



- 3 Open the Selected Set menu and choose Mac OS 7.6 Base System.

This turns off all extensions and control panels except those installed with Mac OS 7.6.

- 4 Close the Extensions Manager to continue startup.
- 5 When the computer is ready, try the same actions that caused the problem.

If the problem no longer occurs, you probably have an extension or control panel that doesn't work with Mac OS 7.6. Continue with the steps in the next section.

If the problem still occurs, try checking your hard disk for problems with the Disk First Aid utility. You can find Disk First Aid in the Utilities folder on the *Mac OS 7.6* CD or on the *Disk Tools* floppy disk. You should also check to make sure that your application programs are compatible with Mac OS 7.6. If the problem only occurs when using a certain program, that program is probably not compatible. Check with the program's manufacturer for information.

## Step 2: Test individual extensions and control panels

To test an individual extension or control panel for compatibility, follow the steps below.

- 1 **Start up your computer while holding down the Space bar.**

Holding down the Space bar opens the Extensions Manager control panel during startup.

- 2 **Release the Space bar when the Extensions Manager control panel opens.**

- 3 **Turn on the item you want to test by clicking its name to put an X beside it.**

- 4 **Close the Extensions Manager to continue startup.**

- 5 **Try the same actions that caused the problem.**

If the problem does not occur again, then the item is probably compatible with Mac OS 7.6.

If the problem occurs again, the item is probably incompatible. Open the Extensions Manager and click the item's name to remove the X.

- 6 **Repeat steps 1 through 5 for each item you want to test.**

## Performing a clean installation

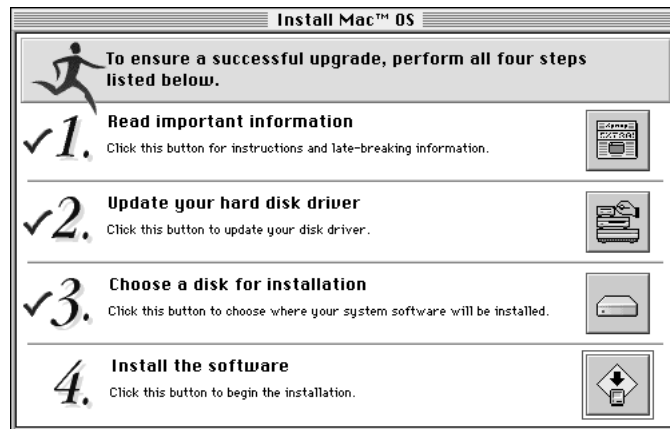
This section provides instructions for what is commonly called a “clean” installation of system software.

A normal system software installation replaces changed system files and adds new ones, but leaves other files alone. When you install system software using a “clean” installation, the Installer creates a new System Folder on your hard disk. The old System Folder is renamed Previous System Folder. Since your computer has a new System Folder, you must reinstall any third-party extensions and control panels after a clean installation. This can be a complicated procedure, but if you are experiencing problems or your computer seems slow, performing a clean installation may help.

Follow these steps to begin your clean installation.

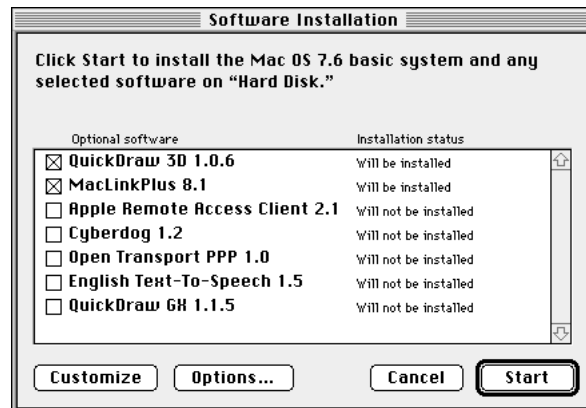
- 1 Start up your computer from the *Mac OS 7.6* CD-ROM disc or from the *Mac OS 7.6 Install Disk 1* disk, as described in “Start Up From the Mac OS 7.6 Disks” in Chapter 1.
- 2 Open the Install Mac OS application and follow the instructions in the first three sections of “Installing the Software” in Chapter 1.

You should have completed the first three steps indicated in the main Install Mac OS screen.



- 3 Click the fourth button on the main Install Mac OS screen.

The following screen appears.

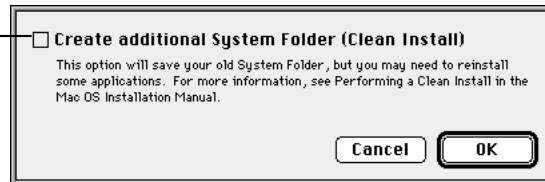




**4 Click Options.**

**5 In the screen that appears, click the checkbox next to “Create additional System Folder,” then click OK.**

Click to put an X in this box, then click OK.



**6 Click Start.**

A new System Folder is installed on your hard disk. (The old System Folder is renamed Previous System Folder.)

Reinstall extensions, control panels, and other startup items not installed with Mac OS 7.6 from their original disks, if possible. If you don't have the original disks, you can drag these items one at a time from the Previous System Folder to the new System Folder. Restart your computer after you reinstall each item, to make sure your software is compatible with Mac OS 7.6.

## Installing over PowerTalk

PowerTalk is not compatible with Mac OS 7.6. Once you install Mac OS 7.6, you will not be able to use PowerTalk services, including

- your PowerTalk keychain
- personal catalogs
- your PowerTalk mailbox
- the AppleMail application program
- digital signatures
- PowerShare server mail and services

After you install Mac OS 7.6, you no longer see your mailbox and keychain icons. You see your personal catalogs, but you won't be able to open them. Additionally, you can only access AppleMail messages that were saved as text files and moved out of your PowerTalk mailbox before you installed Mac OS 7.6.

To save your messages as text files, follow these steps:

- 1 Open a PowerTalk mail message.**
- 2 Open the File menu and choose Save As Text.**
- 3 In the dialog box that appears, choose a name for the message.**
- 4 Choose a location to store the text message.**

You can save the file in any folder on your hard disk.

Tools to help save and convert your PowerTalk information are available on the World Wide Web at the following address:

<http://devworld.apple.com/dev/powertalk/>

If you have Internet access, use these tools before you install Mac OS 7.6.



## Index

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### A, B

Acrobat Reader 25  
America Online 23  
Apple HD SC Setup. *See also* Drive Setup  
installing with 9  
troubleshooting installation problems with 39  
Apple Internet Connection Kit 21, 22  
Apple Remote Access (ARA) networking software 21  
Apple System Profiler 32  
At Ease software 2

### C

CD-ROM disc 3  
CD-ROM drives 3, 8  
clean installations 47–49  
client software 21  
ColorSync System Profile 28  
compatibility  
of extensions and control panels 45–47  
of PowerTalk 2

control panels  
reinstalling in System Folder 49  
testing compatibility of 47  
turning off 46  
Control Strip 32–33  
customizing installations 13–18  
Cyberdog 23

### D

desktop printing 26–27  
destination disks  
choosing 10  
problems repairing 37–38  
verifying 13, 16  
Disk First Aid utility 46  
disk–security software 2  
disk space  
requirements for installation 2, 10  
troubleshooting problems with 40  
drivers  
LaserWriter printer 27–28  
QuickDraw GX 44–45  
updating hard disk 6–9  
Drive Setup. *See also* Apple HD SC Setup  
installing with 8  
non-Apple hard disks and 38–39

## E

- easy installation process 16
- enabling Type 1 PostScript fonts 29–30
- extensions
  - reinstalling in System Folder 49
  - testing compatibility of 47
  - turning off 46
- Extensions Manager
  - enhancements to 31–32
  - starting the computer and 3, 4
  - turning off extensions and control panels with 46

## F, G

- file synchronization 33–34
- floppy disk installation 3–18
- fonts 29–30

## H

- hard disk drivers 6–9
- hard disks
  - choosing as destination disks 10
  - installing on non-Apple 6, 38–39
  - problems repairing 37–38
  - space required for installations 2, 10
  - troubleshooting disk space
    - problems 40
  - verifying destination disks 13, 16

## I, J, K

- installation 1–18
  - installing software 11–18
  - performing clean installations 47–49
  - preparing for 2
  - reading information 5
  - selecting destination disks 10
  - starting up from Mac OS 7.6 disks 3–4

- system requirements 1–2
- troubleshooting problems with 37–41
- updating hard disk drivers 6–9
- Install Mac OS program 4–18
- Internet software 22–23
  - America Online 23
  - Cyberdog 23
- IP addresses 43

## L

- LaserWriter printer drivers 27–28
- Launcher 33

## M

- Mac OS 7.6
  - new features in 19–36
  - problems using 42–43
  - upgrading to 4–18
- memory
  - troubleshooting problems with 39, 40
  - virtual 35–36
- microprocessor requirements 1
- mobile computing software 33–34
- Monitor control panel 34–35
- Monitors & Sound control panel 34–35
- multimedia software 23–25
  - Acrobat Reader 25
  - PlainTalk 25
  - QuickDraw 3D 24–25
  - QuickTime 24

## N

- networking software
  - Apple Remote Access 21
  - Open Transport 20
  - Open Transport PPP 20–21
    - troubleshooting problems with 42–43
- non-Apple CD-ROM drives 3
- non-Apple hard disks 6, 38–39

## O

- onscreen documents 5
- OpenDoc 19
- Open Transport networking software 20
- optional software 12–13

## P

- performance improvements 35–36
- performing clean installations 47–49
- PlainTalk 25
- portable computers. *See also* PowerBook computers
  - additional features for 34
  - file synchronization for 33–34
- PowerBook computers. *See also* portable computers, installing on 2
- updating hard disk drivers and 6
- PowerTalk
  - compatibility of 2
  - installing over 49–50
- PPP software 20–21
- preparing for installation 2
- printer drivers
  - LaserWriter 27–28
  - QuickDraw GX 44–45
- printing dialog box enhancements 27–28
- printing software
  - ColorSync System Profile and 28
  - enhancements to desktop printing 26–27
  - printing dialog box 27–28
  - QuickDraw GX and 28–30

## Q

- QuickDraw GX 28–30, 44–45
- QuickDraw 3D 24–25
- QuickTime 24

## R

- RAM requirements 1
- reading information 5
- repairing hard disks 37–38
- restarting the computer
  - after installation 18
  - problems 42

## S

- selecting destination disks 10
- software installation 4–18
  - of optional products 12–13
- Sound control panel 34–35
- starting the computer. *See also* restarting the computer
  - after installation 18
  - from Mac OS 7.6 disks 3–4
  - problems 37
- synchronizing files 33–34
- system alert messages 25
- System file 40–41
- System Folder
  - clean installations and 47
  - reinstalling extensions and control panels in 49
- system requirements 1–2

## T

- text-to-speech capability 25
- 3D capability 24–25
- troubleshooting 37–50
  - compatibility testing and 45–47
  - installing over PowerTalk 49–50
  - performing clean installations 47–49
  - problems during installation 37–41
  - problems using Mac OS 7.6 42–43
  - problems using QuickDraw GX 44–45
- turning off
  - extensions and control panels 46
  - virus-protection and disk-security software 2
- Type 1 PostScript fonts 29–30

## U

- updating hard disk drivers 6–9
- utility and desktop management software 31–33
  - Apple System Profiler 32
  - Control Strip 32–33
  - Extensions Manager 31–32
  - Launcher 33

## V, W, X, Y, Z

- virtual memory 35–36
- virus-protection software 2



# Mac OS 7.6



*Installation Manual*