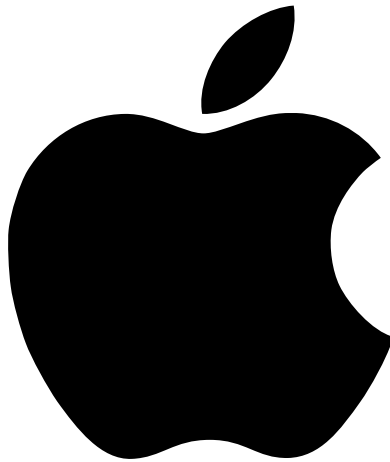




Emergency Handbook

Includes troubleshooting, hard disk repair,
and software installation information for your iMac

 Apple Computer, Inc.

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Problems Starting Up

Problems

Computer won't start up, restart, or shut down

Computer won't start up.

Try these solutions:

- Make sure your computer is getting power. (p. 13)
- Force your computer to restart. (p. 12)
- Increase the memory available for system software. (p. 15)
- Make sure memory is installed correctly. (p. 20)
- Replace the computer's backup battery. (p. 20)

Unusual sound occurs when you try to start up the computer.

Try these solutions:

- Make sure external devices are properly connected and turned on. (p. 14)
- Make sure memory is installed correctly. (p. 20)
- Test and repair the hard disk directory. (p. 21)

Computer won't restart.

Try these solutions:

- Make sure your computer is getting power. (p. 13)
- Quit open applications. (p. 13)
- Make sure you're using the correct disk as a startup disk. (p. 16)
- Resolve system extension conflicts. (p. 17)
- Force your computer to restart. (p. 12)
- Reset the PRAM. (p. 19)

Computer won't shut down.

Try this solution:

- Force your computer to shut down. (p. 13)

Single icon appears in middle of screen**Icon with blinking question mark appears.**

Try these solutions:

- Make sure external devices are properly connected and turned on. (p. 14)
- Re-bless the System Folder. (p. 16)
- Resolve system extension conflicts. (p. 17)
- Reset the PRAM. (p. 19)
- Test and repair the hard disk directory. (p. 21)
- Reinstall system software. (p. 21)

Icon with X appears.

Try this solution:

- Make sure you're using the correct disk as a startup disk. (p. 16)

Computer beeps

Try these solutions:

- *One or two beeps:* Make sure memory is installed correctly. (p. 20)
- *Three, four, or five beeps:* Contact an Apple-authorized service provider. See the service and support information that came with your computer.

Computer freezes**Computer freezes before "Welcome to Mac OS" appears.**

Note: Startup may take several minutes if you have more than 32 megabytes (MB) of RAM installed because of the time it takes to verify that the RAM is functioning properly.

Try these solutions:

- Take notes. (p. 11)
- Make sure external devices are properly connected and turned on. (p. 14)
- Force your computer to restart. (p. 12)
- Test and repair the hard disk directory. (p. 21)

- Reinstall system software. (p. 21)

Computer freezes during startup or while you're using your computer.

Try these solutions:

- Take notes. (p. 11)
- Make sure external devices are properly connected and turned on. (p. 14)
- Force your computer to restart. (p. 12)
- Resolve system extension conflicts. (p. 17)
- Test and repair the hard disk directory. (p. 21)
- Reinstall system software. (p. 21)

Keyboard or mouse doesn't work.

Try these solutions:

- Make sure external devices are properly connected and turned on. (p. 14)
- Resolve system extension conflicts. (p. 17)
- Test and repair the hard disk directory. (p. 21)
- Reinstall system software. (p. 21)

Message appears

Message about system software appears.

Try these solutions:

- Take notes. (p. 11)
- Make sure you're using the correct disk as a startup disk. (p. 16)
- Reinstall system software. (p. 21)

"Not enough memory" message appears.

Note: These solutions are for system software memory problems. For problems with application memory, see "Problems With Applications, Documents, and Memory" on page 23.

Try these solutions:

- Increase the memory available for system software. (p. 15)
- Check RAM disk settings in the Memory control panel. (p. 15)
- Resolve system extension conflicts. (p. 17)

Disk corruption message appears on startup.

Try these solutions:

- Take notes. (p. 11)
- Check RAM disk settings in the Memory control panel. (p. 15)

Normal desktop doesn't appear

Screen is dark.

Try these solutions:

- Wake up your computer. (p. 11)
- Make sure your computer is getting power. (p. 13)
- Reset the PRAM. (p. 19)

No icons appear in windows, and pointer alternates between an arrow and a wristwatch.

Try this solution:

- Reset the window display. (p. 16)

Empty flashing box appears.

Try these solutions:

- Re-bless the System Folder. (p. 16)
- Test and repair the hard disk directory. (p. 21)
- Reinstall system software. (p. 21)

Large folder-shaped areas containing pictorial buttons appear.

Try this solution:

- Make sure you're using the correct disk as a startup disk. (p. 16)

Hard disk icon doesn't appear on desktop



*This is what a typical
hard disk icon looks like.*

Try these solutions:

- Restart the computer. (p. 12)
- Make sure external devices are properly connected and turned on. (p. 14)
- Test and repair the hard disk directory. (p. 21)

Computer starts up from wrong disk

Try these solutions:

- Make sure external devices are properly connected and turned on. (p. 14)
- Make sure you're using the correct disk as a startup disk. (p. 16)
- Reset the PRAM. (p. 19)
- Test and repair the hard disk directory. (p. 21)

Solutions

Take notes.

If you see an error message or the screen freezes, you don't have to take action immediately. First, note the following information:

- the error message and numbers (if any)
- what you were doing when the problem occurred
- the programs you were using
- software you have installed recently (especially items that have been added to the System Folder)
- clues on the screen—is a menu selected? What programs and document icons are open?
- anything else that seems relevant

If you were typing text, write down any text still visible on the screen so that some of your work will be easy to replace.

If this doesn't solve your problem, return to "Problems" on page 7.

Wake up your computer.

If your screen is dark, a screen saver program may have darkened your screen, or the computer may have "gone to sleep" (to save energy) because it was inactive. If the power button on the front of your computer is amber, your computer is asleep. Turn off the screen saver or wake up your computer by pressing any key or moving the mouse.

You may want to adjust the settings in the Energy Saver control panel to determine when your screen and computer go to sleep. See the information about the Energy Saver control panel in Mac OS Help (choose Help from the Finder's Help menu).

If this doesn't solve your problem, return to "Problems" on page 7.

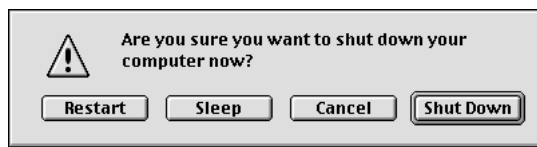
Restart the computer.

Often you can eliminate a problem simply by restarting your computer, which clears the computer's memory. Always try restarting the proper way:

- 1 If you can, save any open documents before restarting.
- 2 Open the Special menu and choose Restart.

Note: You can also press the power button (⏻) on your Apple USB keyboard or on the front of the computer.

A dialog box appears.



- 3 Click Restart.

If the computer freezes: Try quitting open applications. See “Quit open applications.” on page 13.

Force your computer to restart.

- If you are unable to restart your computer as described above, try pressing the Command (⌘) and Control keys simultaneously while also pressing the power button (⏻) on your Apple USB keyboard or on the front of the computer.
- Open the cover on the side of your computer and locate the Reset hole (it's the upper hole on the right side, between the Ethernet and modem ports). Carefully insert the end of a large straightened paper clip into the hole and push gently. Do not use excessive force. Your computer should restart.
- If neither of the above suggestions work, unplug your computer. Wait at least 30 seconds, then reconnect the power plug and turn your computer on by pressing the power button (⏻) on your Apple USB keyboard or on the front of the computer.

If this doesn't solve your problem, return to “Problems” on page 7.

Shut down the computer.

Always try shutting down your computer the proper way:

- 1 Open the Special menu and choose Shut Down, or press the power button (⏻) on your Apple USB keyboard or on the front of the computer.
- 2 In the dialog box that appears, click Shut Down.

If the computer freezes: Try quitting open applications. See the following section, “Quit Open Applications.”

Force your computer to shut down.

If you are unable to shut down your computer the normal way, unplug your computer. Wait at least 30 seconds before turning your computer back on again.

Quit open applications.

When you restart your computer, the computer tries to quit all open applications. Sometimes an application doesn't get the message to quit and you have to quit the application yourself.

Important Before quitting an application, make sure you save any open documents.

- You can quit almost any application by choosing Quit from the File menu or pressing Command (⌘)-Q.
- If this doesn't work, you can sometimes force a program to quit by simultaneously pressing the keys Command (⌘), Option, and Esc. Then click Force Quit in the dialog box that appears.

Note: Unsaved changes in your current documents will be lost.

Immediately save all open documents, quit all other open programs, and restart your computer.

If this doesn't solve your problem, return to “Problems” on page 7.

Make sure your computer is getting power.

- Check that the keyboard and mouse cables are properly connected. Unplug each cable, then reconnect them.
- Check that the power cord is plugged into a working outlet. If it's plugged into a power strip, make sure the power strip is turned on.

If this doesn't solve your problem, return to “Problems” on page 7.

Make sure the screen is properly adjusted.

- Check that the settings for brightness, contrast, and geometry are adjusted properly in the Monitors & Sound control panel.

If this doesn't solve your problem, return to “Problems” on page 7.

Make sure external devices are properly connected and turned on.

- Make sure connectors are plugged in all the way. Try unplugging connectors on all of the devices, then plugging them back in.
- If the device has a power cord, make sure the cord is plugged into a working electrical outlet.
- Make sure the device is turned on.
- If you are connected to an Ethernet network:
 - Check the settings in the AppleTalk control panel to make sure that Ethernet is selected.
 - Your computer may not start up because of heavy network traffic. Disconnect the Ethernet cable, then start up again. Reconnect the Ethernet cable after the computer starts up. (It's okay to connect and disconnect an Ethernet cable while your computer is on.)

For USB devices:

- Plug the device into another USB port on your computer or into the USB port on another device that is plugged into a power outlet (such as a self-powered hub).
- If the device is connected to a hub, try unplugging one or more devices from the hub.
- If the device is connected to a self-powered hub (a hub that has a power cord), make sure the cord is plugged into a working electrical outlet.
- Unplug all USB devices from your computer except the Apple USB keyboard and Apple USB mouse. Plug one device in at a time to determine which device is the problem, then refer to the documentation that came with the device. Also see the information on connecting equipment in the online documentation that came with your computer.
- If you suspect a mouse problem, clean your Apple USB mouse as described in the online documentation that came with your computer. Then, plug the mouse into an open USB port on your computer. If the mouse works, then you may have a problem with the keyboard. If the mouse doesn't work, borrow an Apple USB mouse from another computer and connect it to yours. If that solves the problem, you may need to repair your mouse. Consult an Apple-authorized service provider.
- If you suspect a keyboard problem, borrow an Apple USB keyboard from another computer and connect it to yours. If that solves the problem, you may need to repair your keyboard. Consult an Apple-authorized service provider.

For non-USB devices:

- Shut down your computer by pressing the power button (⏻) on your Apple USB keyboard or on the front of the computer. When a dialog box appears, click Shut Down. Make sure all external devices are properly connected, make sure connectors are plugged in all the way, and turn on the devices. Then restart your computer.

- If that doesn't solve your problem, shut down your computer again. Turn off and disconnect all external equipment, except your keyboard and mouse. Then restart the computer. To determine which piece of equipment may be causing the problem, reconnect one device, start up your computer, and make sure the device is operating correctly. Then shut down the computer. Continue reconnecting devices one at a time, starting up, verifying the devices work, and shutting down until you determine which device is causing the problem. Then refer to the documentation that came with that device, as well as the information on connecting equipment in the online documentation that came with your computer.

If this doesn't solve your problem, return to "Problems" on page 7.

Check RAM disk settings in the Memory control panel.

If you're using a RAM disk and you see a disk corruption message at startup, click Cancel to close the message. Check the RAM disk settings in the Memory control panel to make sure that you aren't trying to create a RAM disk larger than the amount of free space on your hard disk.

If this doesn't solve your problem, return to "Problems" on page 7.

Increase the memory available for system software.

If you're having trouble starting up your computer, there may not be enough memory to load all the system software extensions you've installed. Restart the computer, holding down the Shift key until you see the message "Extensions Disabled" in the "Welcome to Mac OS" box.

Then try the following:

- Turn on (or increase) virtual memory in the Memory control panel. Your computer will perform well with virtual memory set to no more than twice the amount of RAM in the computer; for best performance, limit virtual memory to 1.5 times the amount of RAM.
- Reduce the size of the disk cache in the Memory control panel.
- If you use a RAM disk, reduce its size or turn it off in the Memory control panel.
- Use the Extensions Manager control panel to turn off extensions you don't need. (You can use the Extensions Manager to create different sets of extensions for special situations.)

You need to restart the computer for these changes to take effect. See Mac OS Help (available in the Help menu) for more information about using virtual memory, a RAM disk, and the Extensions Manager.

If the problem persists, try performing a clean installation of system software. See Chapter 5, "Reinstalling Your Computer's Software."

If none of these suggestions work, install additional memory, or RAM, in your computer. See the online documentation that came with your computer for instructions on how to do this.

If this doesn't solve your problem, return to "Problems" on page 7.

Reset the window display.

There may be a problem with the display of the windows. Restart the computer and hold down the Option key until the desktop icons appear. When the desktop appears, all windows will be closed.

If this doesn't solve your problem, return to "Problems" on page 7.

Re-bless the System Folder.

If your computer is not recognizing the system software, the System Folder may need to be "re-blessed." This helps the computer recognize which System Folder to use.

- 1** Start up your computer from the software install CD.
See Chapter 3, "Starting Up From a CD."
- 2** Open the System Folder.
- 3** Double-click the System suitcase.
- 4** After the System suitcase opens, close the suitcase and System Folder windows and restart your computer.

If this doesn't work, then try the following:

- 1** Drag the System suitcase and Finder out of the System Folder.
- 2** Close the System Folder.
- 3** Put the System suitcase and Finder back into the System Folder.

If this doesn't solve your problem, return to "Problems" on page 7.

Make sure you're using the correct disk as a startup disk.

At least one disk drive must have system software on it from which the computer can start up. Most computers have an internal hard disk that is used as the startup disk. You can also use the software install CD to start up your computer.

- Make sure the correct disk is selected in the Startup Disk control panel.

- If your computer is trying to start up from a CD that is not a startup CD (it has no system software on it), press the Open button on your CD-ROM drive, carefully pull out the tray, and remove the disc. Gently push the tray in and restart your computer.

Note: If your computer started up from a CD, the disc will not be automatically ejected when you shut down. Restart the computer while pressing the Open button on the drive. The tray should open so you can remove the disc. If the tray won't open, see the next section, "CD disc is jammed.."

CD disc is jammed.

If a CD disc is jammed, shut down your computer. Locate the small hole near the disc drive's opening, and carefully insert the end of a large straightened paper clip. Push gently until the CD tray opens, then pull out the tray and remove the disc. Do not use excessive force.

If this doesn't solve your problem, return to "Problems" on page 7.

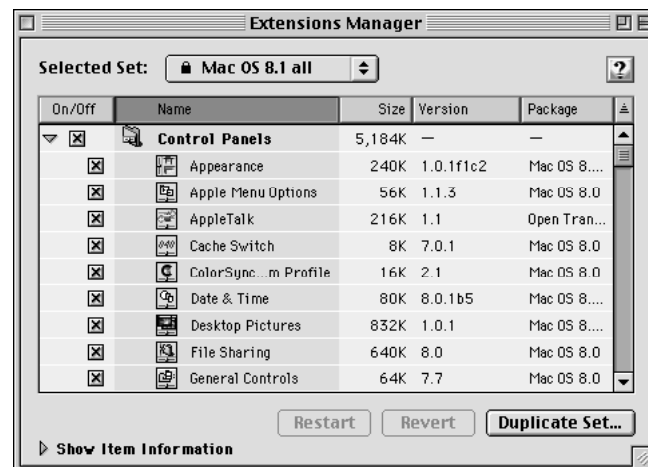
Resolve system extension conflicts.

If your computer does not start up properly or behaves erratically, you may have an extension or control panel that is not compatible with another extension or control panel, or with an application or system software.

Verify the problem

To verify that you have a compatibility problem:

- 1 Start up your computer while holding down the Space bar.
This opens the Extensions Manager control panel.
- 2 Release the Space bar when the Extensions Manager control panel opens.



- 3 Notice the name of the currently selected set of extensions in the Selected Set pop-up menu so that you can return to it later if you want.
- 4 Open the Selected Set pop-up menu and choose the “Mac OS 8.1 base” set.
This makes the computer start up using only the software installed at the factory.
- 5 Click the Continue button to continue startup.
- 6 When the computer is ready, try the same actions that caused the problem.
If the problem no longer occurs, you probably have one or more extensions or control panels that don’t work with Mac OS 8.1. Continue with the steps that follow in “Test Individual Extensions and Control Panels.”

Test individual extensions and control panels

- 1 Restart your computer while holding down the Space bar.
- 2 Release the Space bar when the Extensions Manager control panel opens.
- 3 Click the Duplicate Set button to create a new set. In the window that appears, type a name for the set (for example, “Test Set”) and click OK.
- 4 Turn off all the extensions in the new set by choosing All Off in the Edit menu.
- 5 Turn on the item you want to test by clicking its checkbox.
- 6 Click the Continue button to continue startup.
- 7 Try the same actions that caused the problem.

If the problem occurs again, the item is probably incompatible. Remove the item from the Extensions folder or turn the item off using the Extensions Manager.

- 8 Repeat steps 1 through 7 for each item you want to test.

If you find that a piece of software is incompatible, contact the manufacturer of the software to see if an updated version is available.

Tip: A recently installed extension or control panel might be the problem. If you have a lot of extensions and control panels, you may want to “work by halves.” Turn on half the extensions and control panels and test for the problem. If the problem disappears, repeat the process turning on half of the remaining items. If the problem persists, repeat the process turning off half of the items that are turned on. Continue to work by halves like this until you locate the conflicting extensions or control panels.

If this doesn’t solve your problem, return to “Problems” on page 7.

Reset the PRAM.

Your computer stores information in an area of memory called parameter RAM (PRAM). Resetting the PRAM replaces the information stored there with the default (original) settings.

Important Some system preferences are stored in PRAM. Third-party software programs may also store information in PRAM. When you reset the PRAM, some of these preferences are lost. Make sure you make a note of the settings before you reset PRAM.

Resetting PRAM may affect the settings in some of your control panels, including the following:

- Date & Time
- Memory (information lost includes RAM disk settings)
- Monitors & Sound
- Keyboard and Mouse (or Trackpad)
- AppleTalk (“Connect via” is set to the Ethernet port)
- Map

Note: You may also have to restore modem settings in any communications software programs you are using.

Follow these steps to reset the PRAM:

Important Make sure you are using an Apple USB keyboard. This procedure may not work with some USB keyboards from manufacturers other than Apple.

- 1** Make sure the Caps Lock key is not engaged.
- 2** Restart your computer and *immediately* press and hold the Command (⌘), Option, P, and R keys.
- 3** Hold the keys down until you hear the startup sound a second time, then release the keys.
- 4** If you had special settings in any control panels or applications, open those control panels or applications to restore the settings you want.
- 5** If you set preferences for a modem, open the communications software program you are using and restore any modem settings.

If this doesn't solve your problem, return to “Problems” on page 7.

Make sure memory is installed correctly.

If you hear one or more beeps, there may be a problem with the memory in your computer. If you recently installed RAM in your computer, check the installation instructions in the online documentation that came with your computer to make sure it is properly installed. Make sure you've used the proper type of RAM for your computer.

If this doesn't solve your problem, return to "Problems" on page 7.

Replace the computer's backup battery.

If you have intermittent problems starting up your computer and the date is reset, replace the battery. See the online documentation that came with your computer for instructions on how to do this.



Important Batteries contain chemicals, some of which may be harmful to the environment. Please dispose of used batteries according to your local environmental guidelines.

Replacing the battery may affect the settings in some of your control panels, including the following:

- Date & Time
- Memory (information lost includes RAM disk settings)
- Monitors & Sound
- Keyboard and Mouse (or Trackpad)
- AppleTalk ("Connect via" is set to the Ethernet port)
- Map

Make sure you make a note of the settings before you replace the battery.

Note: You may also have to restore modem settings in any communications software programs you are using.

If this doesn't solve your problem, return to "Problems" on page 7.

Test and repair the hard disk directory.

Follow the instructions in Chapter 4, “Testing and Repairing Your Hard Disk Directory.”

If this doesn't solve your problem, return to “Problems” on page 7.

Reinstall system software.

Follow the instructions in Chapter 5, “Reinstalling Your Computer's Software.”

If this doesn't solve your problem, return to “Problems” on page 7.

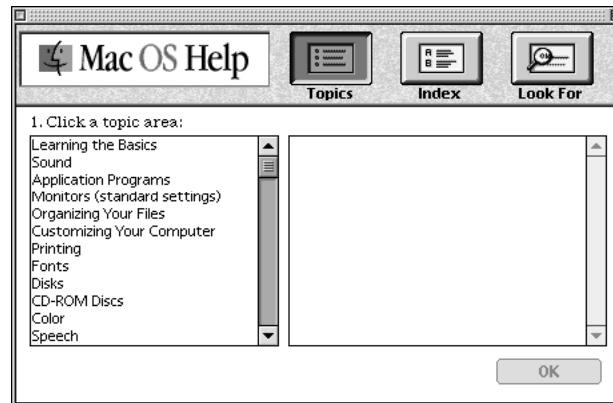
Where to Find Onscreen Help

Mac OS Help

Step-by-step instructions for using the Mac OS are available from Mac OS Help.



To open the help system, choose Help from the Finder's Help menu.



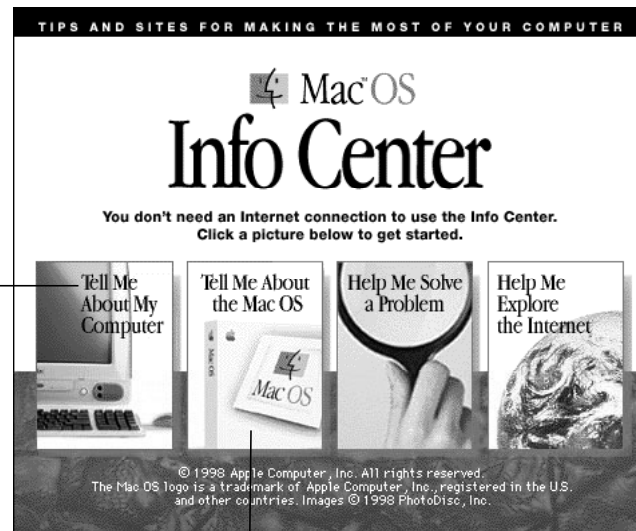
Mac OS Info Center

The Mac OS Info Center contains information about your computer and the Mac OS, including troubleshooting information.



Double-click the Mac OS Info Center icon on the desktop to open the Info Center.

Click this button to see the online user's manual.



Click this button to see troubleshooting information and information on Apple's online support Web sites.

Problems Using Your Computer

Problems With Applications, Documents, and Memory

Message appears saying there's not enough memory.



All the memory in your Macintosh is in use by other application programs, system software, and system resources.

- Quit other open programs to free memory, then open the program you want to use.
Note: Make sure you have quit other applications, not just closed their open documents. To quit an application, open the application menu at the far right of the menu bar and choose the application name to make the application active. Then open the File menu and choose Quit.
- Follow these steps to allocate more memory to the program:
 - 1 Choose About This Computer from the Apple () menu. Take note of the number in the Largest Unused Block section. This number tells you how much memory is available to open programs.
 - 2 Quit the program if it's open, select its icon, and choose Get Info from the File menu. Take note of the numbers in the Minimum Size and Preferred Size boxes.

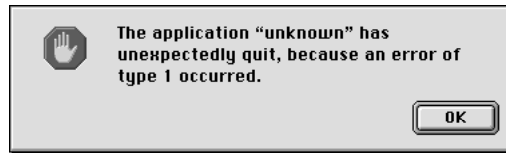
- 3 If the number in the Minimum Size box is larger than the largest unused block, not enough memory is available to use this program. To free memory, quit open programs or restart the computer. You can also type a smaller number in the Minimum Size box if you want to open the program using less memory. But some programs don't work well if you assign them less memory.
 - 4 If the number in the Preferred Size box is smaller than the largest unused block, you may need to assign more memory to the program. (A program may need more memory if you are working with complex documents.) Type a larger number in the Preferred Size box. (Try increasing the number in increments of 200.)
 - Use the Memory control panel to reduce the size of the disk cache, remove or reduce the size of your RAM disk, or turn on virtual memory. For more information, use Mac OS Help (choose Help from the Finder's Help menu).
- Note:** If you have both virtual memory and a RAM disk turned on in the Memory control panel, don't set both of them at or near their maximum values. Doing so can result in unpredictable or reduced performance by your computer. (A RAM disk uses random-access memory, or RAM, as if it were a hard disk.)
- Turn off system extensions that you don't need using the Extensions Manager control panel. See the information about the Extensions Manager control panel in Mac OS Help (choose Help from the Finder's Help menu).
 - If you have installed system software additions from the Apple Extras folder, you may want to remove them if you are not using them. (This software can decrease the amount of memory available for use by application programs.) To remove a system software addition, run the system software Installer. Follow the steps for a custom installation (one of the choices is to Add/Remove software). For more information, see Chapter 5, "Reinstalling Your Computer's Software," on page 53.
 - If you frequently want to open more programs than memory allows, you may want to install more random-access memory (RAM). See the online documentation that came with your computer.

Computer freezes.

- Your computer may be trying to complete a task, but it's taking so long that it seems that the screen has frozen. If you need to do something else instead, try simultaneously pressing the Command (⌘) key and the period key (.) to cancel the task the computer is working on.
- There may be a temporary software problem that can be fixed by restarting your computer. See "Restart the computer." on page 12.

If the problem recurs, it may involve one or more of your application programs. See the next entry for additional suggestions.

Software quits unexpectedly.



The application program needs more memory, or there is a software problem.

- Write down what you were doing when the message appeared, and write down the text of the message. This information may help a technical support representative diagnose your problem if you later need to contact Apple or the manufacturer of the application program.

About the codes in error messages: The number codes in error messages are used in software development. Sometimes they can help a technician narrow down the source of a problem.

- Restart your Macintosh. (See "Restart the computer." on page 12.) Most software problems are temporary, and restarting the computer usually corrects the problem.
- Check for multiple System Folders on your startup disk, using the Find File command. If you have more than one System Folder, throw away the current System Folder. The System Folder that your computer is using has the Mac OS icon on it, which distinguishes it from any other System Folder.



System Folder

Try re-blessing another System Folder so that your computer uses that one on startup (see "Re-bless the System Folder." on page 16). If that doesn't work, try reinstalling system software (see Chapter 5, "Reinstalling Your Computer's Software," on page 53.)

- Check for viruses on all your disks, using a virus-detection program. Eliminate any viruses the program finds.
- Use the program's Get Info window to give it more memory. (Select the program's icon and choose Get Info from the File menu.) See "Message appears saying there's not enough memory." on page 23.
- If the problem occurs when you are trying to print, there may not be enough memory for printing. Quit other open programs to free memory.
- If the problem only occurs in one application program, check for multiple copies of the program on your hard disk. Use the Get Info command to check the programs' version numbers. Keep one copy of the latest version and throw away all other copies.

Also, try reinstalling the program from the original disks. If reinstalling doesn't solve the problem, contact the manufacturer of the program to see if the program contains software errors or "bugs" and if it is compatible with the version of system software you're using.

- Sometimes incompatible system extensions or control panels can cause system software problems. Restart while holding down the Shift key; this temporarily turns off all system extensions.

If your computer works normally after you do this, use the Extensions Manager control panel (in the Control Panels folder in the Apple [🍏] menu) to turn on extensions and control panels one at a time. Restart after you turn on each extension or control panel. This procedure should identify incompatible extensions and control panels. (If you just added new software to your computer, its system extension is the most probable cause of the problem.) See "Resolve system extension conflicts." on page 17.

If your computer performs better when a particular extension or control panel is turned off, contact the software's manufacturer for information or an upgrade.

- Reduce the number of active fonts in your system by moving fonts from the Fonts folder to another folder [such as "Fonts (Disabled)"]. Then restart your computer.
- If the problem recurs, you may need to reinstall system software. See Chapter 5, "Reinstalling Your Computer's Software," on page 53.

Application won't open.

- The application program may already be open. Check the Application menu to see which programs are running.
- There may not be enough memory available to open the program. Quit any programs you're not using and try again. If that doesn't work, try restarting the computer.

You can also use virtual memory to make more memory available to your programs. You turn on virtual memory in the Memory control panel. See the information about the Memory control panel in Mac OS Help (choose Help from the Finder's Help menu).

- The program isn't requesting as much memory as it needs. Use the program's Get Info window to give it more memory. See "Message appears saying there's not enough memory." on page 23.
- The program may be damaged, or it may not be compatible with Power Macintosh technology. Check to make sure the software is PowerPC-compatible. (See the program's documentation, or contact the manufacturer or vendor.) Make sure you install the software from a known good source (such as the original program disks).
- Check that the program is compatible with the version of system software that you are using. (See the program's documentation, or contact the manufacturer or vendor.)
- You may need an updated version of the software. Contact the software manufacturer for more information.

Application won't open because a file can't be found.

Macintosh programs designed specifically for the PowerPC microprocessor (also called “native” applications) use special files called “shared libraries.” Any necessary shared libraries should be installed automatically when you install these special Macintosh programs.

Follow the directions that came with your program to reinstall it. If the shared library is still missing, contact the software program's manufacturer for assistance.

Document won't open, or application program can't be found.

The document may have been created with a program that is not on your hard disk, or with a different version of the program.

- Try starting a program that you think might be able to open the document. Then choose Open from the program's File menu to open the document. For more information, see the documentation that came with the program.
- Purchase and install the correct software to use the document, or find out if the creator of the document can convert it to a format that one of your programs can use.
- Rebuild your desktop. To rebuild the desktop, hold down the Command (⌘) and Option keys on the keyboard while you restart the computer. Hold down the keys until a dialog box appears asking if you want to rebuild the desktop. Click OK.
- Don't try to open the files in your System Folder. Most of the files in your System Folder are used by your computer for internal purposes and are not intended to be opened.
- If the document is from a DOS or Windows computer, see “DOS or Windows document won't open, or displays incorrectly.” on page 28.

Document can't be saved.

- A CD-ROM disc is a read-only medium. This means that information can be read (retrieved) from it, but not written (stored) on it. You can save the changed information on a hard disk.

“QuickDraw 3D could not be found” message appears.

- Make sure that the following files are in the Extensions folder, inside the System Folder:
 - QuickDraw 3D
 - QuickDraw 3D RAVE
 - QuickDraw 3D Viewer
 - QuickDraw 3D IR

If the files are there and you still get the message, it means that you don't have enough memory to run the application. You may be able to open the application if you try one or more of the following:

- Quit other open applications.
- Reduce the amount of memory allocated to the application:
 - 1 Select the application's icon in the Finder.
 - 2 Choose Get Info from the File menu.
 - 3 Type a lower number in the box for Preferred Size.
- Install more memory (RAM).

DOS or Windows document won't open, or displays incorrectly.

If you can't open a DOS or Windows document by double-clicking its icon, try one of the following:

- Open the document from within the program by choosing Open in the program's File menu.
- Use the PC Exchange control panel (in the Control Panels folder in the Apple [🍏] menu) to specify which Macintosh program will open the document.

If a DOS document is displayed incorrectly, or you see strange codes or characters in the document, try one of the following:

- Your application program may have special procedures for opening and saving documents with different file formats. See the information that came with your program, or call the program's publisher.
- Try opening the document in another program.

Note: Some characters that can be displayed on the Macintosh are not accurately displayed on DOS computers.

See information about working with DOS or Windows documents on your Macintosh in Mac OS Help (choose Help from the Finder's Help menu).

Can't throw away a file.

- The file may be locked. From the Finder, select the file's icon, choose Get Info from the File menu, and click the Locked checkbox to remove the X. You can delete locked files that are in the Trash by holding down the Option key while you choose Empty Trash from the Special menu.
- An application program may be using the file. Close the file or quit the program.
- The file may be in a shared folder that can't be changed. You can throw away the file by turning off file sharing temporarily (click Stop in the File Sharing control panel). Or you can select the shared folder, choose Sharing from the File menu, and uncheck the box labeled either "Can't be moved, renamed, or deleted" or "Same as enclosing folder."

Older Macintosh programs don't work properly.

- Some older Macintosh programs are not completely compatible with Macintosh computers that have the PowerPC microprocessor or Mac OS 8.1. Contact the program's publisher to see if an upgrade is available.

Window disappears.

- Another window may be covering the one you're looking for. Move, resize, close, or hide windows until you see the one you want.
- The program the window is associated with may be hidden. Choose Show All from the Application menu and then click the window you want, or choose the program from the Application menu.

Can't quit program opened from Launcher.

Some programs in the Learning section of the Launcher (when you press the Learning category button) are self-running demos. If you can't get out of one of the programs or demos, try the following:

- Look again to see if you can find a Quit button or other quitting option.
- Hold down the Command (⌘) key on your keyboard and, while holding it down, press the period (.) key.
- While holding down the Command (⌘) key on your keyboard, press the Q key.
- Press the power button (⏻) on your Apple USB keyboard or on the front of your computer, then press Return to shut down the computer.
- Restart your computer by holding down the Command (⌘) and Control keys while you press the power button (⏻) on your Apple USB keyboard or on the front of the computer.

Problems With Hard Disks, CDs, and Other Storage Media

Problems With Hard Disks

Only one document called "Where have all my files gone?" appears on the hard disk.

If no files appear on the hard disk except for a single document called "Where have all my files gone?", you started up your computer from a CD with system software earlier than Mac OS 8.1. To see the contents of your disk, you must start up your computer from a disk with Mac OS 8.1 (or later).

Can't mount Mac OS, DOS, or ProDOS partitions.

- Use PC Exchange to mount these partitions as individual volumes on the desktop. (PC Exchange is a control panel that is part of system software.)

Note: If the disk contains both Mac OS and DOS-format partitions, PC Exchange will recognize only the Mac OS partition.

Can't resize Mac OS, DOS, or ProDOS partitions.

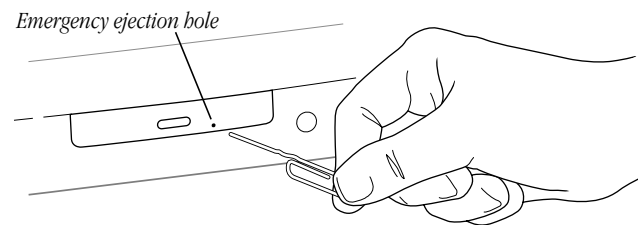
- To resize or reformat multiple Mac OS, DOS, or ProDOS partitions, you need to use third-party software designed for partitioning hard disks and removable media cartridges.

Problems With CD Drives and Discs**CD disc is jammed.**

The normal way to remove a CD disc from your computer is to drag the disc's icon on the desktop to the Trash. You can also select the disc's icon and choose Eject from the Special menu. Removable discs are usually ejected when you shut down your computer.

Warning Turn off your computer before you attempt to remove a jammed disc. If you don't, you may damage the CD-ROM drive.

If a disc is jammed, shut down your computer. Locate the small hole in the middle of the CD-ROM disc drive tray, and carefully insert the end of a large straightened paper clip. Push gently until the disc is ejected. Do not use excessive force.

**Icon doesn't appear on desktop.**

- Make sure that the disc label is facing up and the disc is centered in the tray.
- Make sure the tray is closed all the way.
- Try restarting your computer.
- Make sure that the Apple CD-ROM and Foreign File Access extensions are turned on in the Extensions Manager control panel. Then restart your computer.

- Try starting up your computer from the system software CD that came with your computer. Insert the CD and restart while holding down the C key. (See Chapter 3, “Starting Up From a CD,” on page 45.) If only the hard disk icon appears on the desktop, then there may be a hardware problem with your CD-ROM drive. If the CD-ROM disc icon appears above the hard disk icon, reinstall your CD-ROM software. The easiest way to do this is by reinstalling your system software. See Chapter 5, “Reinstalling Your Computer’s Software,” on page 53.
- The disc may use a format that the Macintosh cannot recognize. Ask the disc’s manufacturer for a disc that a Macintosh can recognize.

Disc is vibrating in the drive.

- Make sure the disc is centered in the tray.
- Some CD-ROM disc labels have artwork that is noticeably thicker on one side than the other and can cause the disc’s weight to be slightly off-center. This uneven distribution of weight coupled with the high rotation speed of your CD-ROM drive can cause some discs to wobble in the drive and make your computer vibrate. The vibration does not damage the CD-ROM disc or the computer and affects very few CD-ROM discs. If you can feel or hear that the CD-ROM disc is vibrating in the computer, you don’t need to do anything special; continue to use the CD-ROM disc as you normally would.

Note: If you use a CD-ROM disc with a removable (sticky) label, remove the label before inserting the disc.

Tray won’t open.

If a CD-ROM disc icon appears on your screen:

- Select the disc icon and choose Put Away from the File menu, or drag the icon to the Trash.

Note: You won’t lose information on the CD by dragging its icon to the Trash.

If the AppleCD Audio Player is active, choose Eject CD from the File menu or click the eject button in the AppleCD Audio Player controller.

If you see a message that a disc can’t be put away because it is being shared, turn file sharing off in the File Sharing control panel in the Control Panels folder, available in the Apple () menu.

If no CD-ROM disc icon appears on your screen:

- Restart your computer. Immediately after you hear the startup sound, press the Open button on your CD-ROM drive.
- The signal to open the tray may not be reaching the computer. Manually remove the disc, as described in the online documentation that came with your computer.

If neither of these suggestions works, your CD-ROM drive may be damaged. Contact an Apple-authorized service provider or Apple for further assistance.

Can't eject disc.

- If file sharing is on and you are having trouble ejecting a disc, turn file sharing off in the File Sharing control panel in the Control Panels folder, available in the Apple () menu.

"This is not a Macintosh disk: Do you want to initialize it?" message appears.

- Make sure that the Foreign File Access extension is installed and turned on. Use the Extensions Manager control panel in the Control Panels folder in the Apple () menu to turn it on, then restart your computer.
- Make sure the CD-ROM software is installed. (The CD-ROM software is already installed on Macintosh computers that come with CD-ROM drives.) The easiest way to install CD-ROM software is by reinstalling your system software. (See Chapter 5, "Reinstalling Your Computer's Software," on page 53.) Restart your computer after reinstalling system software.
- The disc may use a format that the Macintosh cannot recognize. Ask the disc's manufacturer for a disc that a Macintosh can recognize.

Computer ejects disc unexpectedly.

- Make sure the disc is lying flat in the tray and the disc label is facing up.

Important If you're using a small (8 cm) disc, make sure it's centered within the tray's inner ring and the computer is absolutely level. An improperly seated small disc in your computer may result in damage to the disc, the CD-ROM drive, or both.

- The disc may need to be cleaned. (See the online documentation that came with your computer.) If there are visible scratches on the shiny side of the disc, you may be able to remove them with a CD-ROM disc polishing kit (available from your audio CD dealer). If the scratches can't be removed, you need to replace the disc.
- The disc may be damaged. Try another disc in the drive, and try the original disc in another drive. If the original drive reads other discs or if the original disc also doesn't work in another drive, the disc is probably damaged. You need to replace it.

Problems Using ISO 9660 or High Sierra Discs**Files can't be opened.**

- Discs in the ISO 9660 and High Sierra disc formats have version numbers attached to file names. Some application programs need these version numbers in order to work with files. To make the version numbers available to programs on your computer, drag the CD-ROM disc icon to the Trash. When the tray opens, hold down the Option key and push the tray back in. Continue to hold down the Option key until the disc is mounted in the drive. The program you are using should now be able to locate file names on that CD-ROM disc.

- Make sure that the Foreign File Access, ISO 9660 File Access, and High Sierra File Access files are present in the Extensions folder in the System Folder on your hard disk. If these files are not present, reinstall your CD-ROM software. The easiest way to do this is by reinstalling your system software. See Chapter 5, “Reinstalling Your Computer’s Software,” on page 53.

Problems Using Photo CDs

Icon doesn’t appear on desktop.

- Reinstall the CD-ROM and QuickTime software. The easiest way to do this is by reinstalling your system software. See Chapter 5, “Reinstalling Your Computer’s Software,” on page 53.

Color icons for individual images don’t appear.

- Your computer may be low on memory. To view color icons, restart your computer and then reopen the Photos folder. See Mac OS Help (choose Help from the Finder’s Help menu).

Image is scrambled, colors are displayed incorrectly, or no image appears.

- The program you are using may not be designed to work with large (high-resolution) image files. You can open the image with another program or you can assign more memory to the program. See Mac OS Help (choose Help from the Finder’s Help menu).

System “freezes,” or “bomb” message appears.

- Restart your Macintosh. (If you need help restarting your computer, see Chapter 1, “Problems Starting Up.”) The program you are using may not be designed to work with large (high-resolution) image files. You can open the image with another program or you can assign more memory to the current program. See Mac OS Help (choose Help from the Finder’s Help menu).

Problems Playing Audio CDs

See “Problems With Sound and Video” on page 41.

Problems With USB Devices

Message appears saying the device can’t operate because it needs more power than is available.

- If the device has a power cord, make sure the cord is plugged into a working electrical outlet.
- Plug the USB cable from the USB device into a USB port on your computer or another USB device that is plugged into a power outlet.

- If the device is connected to a USB hub, do the following:
 - If the hub has a power cord, make sure the cord is plugged into a working electrical outlet.
 - Try unplugging one or more devices from the hub.

Message appears saying a device may not provide all of its functions because it requires more power.

- If the device has a power cord, make sure the cord is plugged into a working electrical outlet.
- Plug the USB cable from the USB device into a USB port on your computer or another USB device that is plugged into a power outlet.
- If the USB device is connected to a USB hub, try unplugging one or more devices from the hub.

Message appears saying a device plugged into another device needs more power than is available and all ports on the second device have been disabled.

- If the device has a power cord, make sure the cord is plugged into a working electrical outlet.
- Plug the USB cable from the USB device into another USB port on your computer or another USB device that supplies power (such as a hub).
- If the device is connected to a USB hub, try unplugging one or more devices from the hub.

The device isn't working, but no message appears.

- Make sure the USB connectors are plugged in properly.
- If the device has a power cord, make sure the cord is plugged into a working electrical outlet and the device is turned on.
- Some USB devices, such as printers, need to warm up for a few minutes after you turn them on. For more information, see the documentation that came with your device.
- Make sure you've installed the necessary software to use the device.

USB devices use software called “drivers” that allow your computer to check the device when it's connected to make sure it gets enough power and speed. Some software drivers are already available on your computer in the Mac OS. However, with some devices, you may need to install the software drivers. For more information, see the documentation that came with your USB device.

- If you suspect a mouse problem, clean your Apple USB mouse as described in the online documentation that came with your computer. Then, plug the mouse into an open USB port on your computer. If the mouse works, then you may have a problem with the keyboard. If the mouse doesn't work, borrow an Apple USB mouse from another computer and connect it to yours. If that solves the problem, you may need to repair your mouse. Consult an Apple-authorized service provider.

- If you suspect a keyboard problem, borrow an Apple USB keyboard from another computer and connect it to yours. If that solves the problem, you may need to repair your keyboard. Consult an Apple-authorized service provider.
- Make sure the cables on your device are not damaged or frayed. If so, contact the manufacturer of the device or see the documentation that came with the device.

For more information

- To find out more about USB and your computer, see the online documentation that came with your computer.
- To find out more about your USB device, see the documentation that came with the device.

Problems Printing

If you're using a USB printer, see also "Problems With USB Devices" on page 33.

Note: Also refer to the documentation that came with the printer.

- Check your printer settings in the Chooser (in the Apple [🍏] menu), making sure you have selected the correct printer.
- Turn off the computer and printer and check the printer cable connections.
- If none of these suggestions solves the problem, you may need to reinstall the printer software that came with your printer. Refer to the documentation that came with your printer.

Can't print, or error message appears.

- There may not be enough memory for printing. Try the following:
 - Try quitting other open applications.
 - Immediately after sending the Print command, quit the application you're printing from to free memory for printing.
 - Increase the amount of memory for the desktop printer icon; select it, choose Get Info from the File menu, and type a larger number in the Preferred Size box.
 - Reduce the amount of memory used by the application you're printing from.
 - If your document uses lots of fonts, choose Page Setup from the File menu. Make sure you have selected "Unlimited Downloadable Fonts" under PostScript™ Options. If that doesn't work, use fewer fonts in the document.
 - If the document contains complex graphics, remove some of the detail from the images.
 - Don't use background printing.
- Make sure the printer is turned on. Some printers need to warm up for a few minutes after you turn them on.

- The printer may be out of paper or may need attention. Check the printer status lights and any messages on your screen.
- Open the desktop printer icon and check for status messages.
- Print a detailed report. (In the Print dialog box, select “Print detailed report” under Error Handling.)
- Reinstall your printer software.
- Check the settings in the application’s Page Setup dialog box. If there is a setting for “printer type,” make sure it is set to the type of printer you are using.

Performance and Other Problems

Performance decreases.

- If you notice a decrease in your computer’s speed and general performance after you install a control panel or system extension, the software may not be compatible either with Macintosh computers built with the PowerPC microprocessor or with other system extensions. See “Resolve system extension conflicts,” on page 17. You may also need updated software. Contact the software manufacturer for more information.
- Use the Memory control panel to turn off virtual memory. See the information about memory in Mac OS Help (choose Help from the Finder’s Help menu).
Note: If you turn on both virtual memory and a RAM disk in the Memory control panel, don’t set both of them at or near their maximum values. Doing so can result in unpredictable or reduced performance by your computer. (A RAM disk uses random-access memory, or RAM, as if it were a hard disk.)
- If you still do not notice an improvement, you may want to reinstall system software on your startup hard disk. See Chapter 5, “Reinstalling Your Computer’s Software,” on page 53.
- If you typically use several application programs at the same time, your computer’s performance will increase if you install more random-access memory (RAM). See the online documentation that came with your computer.
- Remove unused fonts from the Fonts folder in the System Folder.
- Test and repair the hard disk. See Chapter 4, “Testing and Repairing Your Hard Disk Directory,” on page 47.

Computer isn’t performing well.

If, after trying the tips in the previous section, your computer still isn’t performing as fast as you’d like, try these suggestions. Each one will make only a small difference in your computer’s speed, but if you try them all, you’ll notice the improvement.

- Open the Memory control panel in the Control Panels folder in the Apple (🍏) menu; then make these changes:
 - In the Disk Cache section, increase the Cache Size slightly. (Because the amount of memory available for opening programs decreases as you increase the size of the cache, do not set the Cache Size too high.)
 - In the Virtual Memory section, click Off if you haven't already done so.
- Open the Keyboard control panel in the Control Panels folder; then make these changes:
 - Set the Key Repeat Rate to Fast.
 - Set the Delay Until Repeat to Short.
- If you don't need to see thousands or millions of colors on the screen, reduce the color depth. Open the Monitors & Sound control panel in the Control Panels folder; then select 256 in the Color Depth section.
- Increase the speed of mouse tracking. Open the Mouse control panel in the Control Panels folder; then set Mouse Tracking to Fast.
- Make sure your computer is not calculating folder sizes. Choose View Options in the View menu. Make sure the checkbox next to "Calculate folder sizes" is *not* selected.

Note: "Calculate folder sizes" is only available when "as List" is selected in the View menu.
- Test and repair the hard disk. See Chapter 4, "Testing and Repairing Your Hard Disk Directory," on page 47.

3D rendering doesn't seem to be accelerated.

The performance advantage of any 3D accelerator depends on the type of scene being rendered. Some applications may show the benefits of acceleration more than others.

Check the following items:

- Set your screen to a lower resolution (the lowest resolution is 640 x 480) and reduce the number of colors. The online documentation that came with your computer may provide additional information about the video modes (resolution and color depth) that support 3D acceleration.
- Make sure that your application uses QuickDraw 3D. Some older 3D applications don't use QuickDraw 3D for rendering, and cannot be accelerated.
- If the Control Strip is overlapping or touching the 3D window, hide the Control Strip or move the window.
- Some applications allow you to turn hardware acceleration on or off. Check your application's documentation to be sure that hardware acceleration is turned on.
- Check that the following files are in the Extensions folder, which is in the System Folder:
 - ATI 3D Accelerator
 - ATI Graphics Driver

- ATI Video Memory Manager

Note: If these files are missing, you need to reinstall system software in order to have them on your computer.

- Turn off virtual memory. (Apple recommends turning off virtual memory whenever you use 3D applications.) Open the Memory control panel, click the Off button in the Virtual Memory section of the control panel, and restart your computer.

Right-angle bracket prompt (>) appears.

Your computer has tried to launch a “debugging” application (perhaps you inadvertently pressed the Command (⌘) and Power keys at the same time), but could not find one on your hard disk. Debugging applications are programs that software developers use to locate and fix problems in computer code. If you do not have a debugging application installed, your screen displays a right-angle bracket prompt (>). To return to the desktop or your application, type G and then press Return.

Clock doesn’t keep time accurately.

If your clock begins to keep time inaccurately, replace the battery. See the online documentation that came with your computer for instructions on how to do this.



Important Batteries contain chemicals, some of which may be harmful to the environment. Please dispose of used batteries according to your local environmental guidelines.

Icons look strange.

- There may be a problem with the information that the computer uses to keep track of files. To fix this problem, rebuild the desktop. Hold down the Command (⌘) and Option keys on the keyboard while you restart the computer.
- You may be using a file-compression program to save space on your hard disk. Some compression programs change the appearance of icons.

Font file can’t be opened or moved.

- The font file may be damaged. Replace the font in the Fonts folder (inside the System Folder).

Blinking icon appears in menu bar.

- A program needs attention. Open the menu and choose the program whose icon is blinking (it may have a diamond by its name). Respond to any messages on the screen. If it’s not clear what you should do, consult the documentation that came with the program.
- Open the Easy Access control panel (if it is installed on your computer) and check whether any of its features are turned on.

Computer makes unusual sounds.

- Select a different alert sound in the Monitors & Sound control panel.

- If the sounds are regular or melodic, they may be caused by interference from electrical equipment. Move the computer farther away from any such equipment.
- If you hear one or more beeps, there may be a problem with the memory in your computer. If you recently installed RAM in your computer, check the installation instructions in the online documentation that came with your computer to make sure it is properly installed. Make sure you've used the proper type of RAM for your computer.

Problems With Networks and File Sharing

If you are having problems using the network or file sharing, try the following before attempting further solutions:

- Make sure the network is working by opening the Chooser and checking for the shared disks and printers you usually use. See if other computers on your network have access to network devices.
- Open the AppleTalk and TCP/IP control panels and make sure the settings are correct. See the topic on file sharing in Mac OS Help (choose Help from the Finder's Help menu).
- Make sure that all the network software is installed. The Network and AppleShare extensions should be in the Extensions folder. If you want to use file sharing, the File Sharing control panel should be in the Control Panels folder, and the File Sharing extension should be in the Extensions folder. If any of these items is missing, reinstall the system software. See Chapter 5, "Reinstalling Your Computer's Software," on page 53.
- There may be a physical problem with a cable, connector, hub, or wall jack. Make sure network cables are connected properly. Try substituting equipment that you know is reliable. (You can even try a different computer if one is available.)

Computer you want doesn't appear in the Chooser.

- Make sure the computer you're trying to connect to is turned on.
- Make sure file sharing is active on the computer you're trying to connect to. (That computer's File Sharing control panel should say that file sharing is on.)

Shared disk you want to use is not available.

- You may already be connected to the shared disk. Check for its icon on your desktop.
- You may not have the access privileges you need to use the shared disk. Ask the network administrator or the owner of the shared item to give you access. See the information on file sharing in Mac OS Help (choose Help from the Finder's Help menu).

Can't see any files on remote computer.

- Make sure that files are being shared on the other computer. The File Sharing Monitor control panel on that computer lists the items being shared.

- Make sure you have the access privileges you need to view the files. Ask the network administrator or the owner of the shared item to give you access. See the information on file sharing in Mac OS Help (choose Help from the Finder's Help menu).

File sharing can't be turned on.

- Make sure AppleTalk is turned on in the Chooser.
- Make sure you have at least 400K of space available on your hard disk.
- Some disk-formatting programs don't work with file sharing. If you use such a program, contact the manufacturer or vendor for compatibility information.
- There may be a problem with some of the information your computer uses to start up file sharing. Follow these steps in order until the problem is solved:
 - 1 Open the File Sharing control panel and enter new information in the Network Identity section. Then try again to turn on file sharing.
 - 2 Remove the File Sharing folder from the Preferences folder (inside the System Folder). Then restart the computer and try to turn on file sharing.
 - 3 Reset the PRAM. See "Reset the PRAM." on page 19.
 - 4 Remove the Users & Groups Data File from the Preferences folder (inside the System Folder). Restart the computer.
 - 5 Reinstall system software. See Chapter 5, "Reinstalling Your Computer's Software," on page 53.

Item can't be shared.

- Make sure you have at least 1 MB of space available on your hard disk.
- Some removable storage devices can't be shared. Check with the manufacturer or vendor of the device for more information.
- Some disk-formatting programs don't work with file sharing. If you use such a program, check with the program's manufacturer or vendor.

Can't open a shared disk or folder.

- You may not have the access privileges needed to use the disk or folder. Ask the network administrator or the owner of the shared item to give you access.
- Check with the owner of the item to make sure you are entering your name exactly as the owner specified (including spaces and capitalization) and try again.

You can't remember your Administration password.

- Erase your Administration password (along with all of your AppleTalk settings and configurations) by dragging the AppleTalk or TCP/IP Preferences file (inside the Preferences folder in your active System Folder) to the Trash. When you open the AppleTalk or TCP/IP control panel again, you must reenter all your settings.

Your computer can't connect to devices outside its local network.

- Check that your router address is correct in the TCP/IP control panel.

Your computer can connect to hosts by IP address, but not by name.

- Check the settings in the TCP/IP control panel:
 - Check that you have entered valid domain names in the Additional Search Domains box.
 - If you have entered your local and administrative domain names, double-check to make sure they're correct.
 - Check that the domain name server (DNS) you have selected is actually a DNS server and is operating properly.
- Check with your Internet service provider (ISP) or network administrator if you have questions about configuring the TCP/IP control panel.

Servers: Your computer does not respond to a "ping."

- Check that you have an application open on your computer that uses TCP/IP and can respond to a ping from another computer, and that the correct port is being pinged.
- Check that your TCP/IP configuration is correct.
- Check that the Use 802.3 checkbox isn't selected in the TCP/IP control panel.

Problems With Sound and Video

Can't hear any sound.

- If you have headphones connected to the computer, make sure they are firmly connected. Make sure the volume control on your headphones is not turned down too low.
- If you do not have headphones connected to the computer, make sure that nothing else is plugged into the computer's sound output port (🔊).
- If you are using a CD-ROM disc over a network, you won't be able to hear the audio portion.
- Make sure that the correct sound source is selected in the Monitors & Sound control panel or in the Sound Source module in the Control Strip.
- Make sure the volume is turned up in the Monitors & Sound control panel.
- Make sure the volume is turned up in the AppleCD Audio Player. With the program open, drag the volume control slider up, use the volume controls on your computer, or press the Up Arrow key on your keyboard.
- The CD may have been paused. Click the Play/Pause button in the AppleCD Audio Player.

Audio stops playing when you double-click a CD-ROM disc icon.

- You can't open data files on a CD-ROM disc and listen to audio tracks on it at the same time.

Audio CD begins playing automatically when inserted.

- Your computer is set to automatically begin playing audio CDs when they are inserted. To turn off this feature, use the QuickTime Settings control panel to change the automatic play setting.

Sound comes out of computer's speakers even though headphones are plugged in.

- Plug your headphones into one of the headphone jacks (🎧) on the front of the computer.

Sound in headphones is odd.

- Your computer has **SRS (●)** 3D Surround Sound, which doesn't work well through headphones. To turn it off, open the Monitors & Sound control panel and click the Sound icon. Click to remove the X from the Enabled checkbox.

Can't record from audio CD.

- Check your computer's sound input port to see if a microphone or other device is connected.
- You may need to reset the sound options in the Monitors & Sound control panel. See the information on sound in Mac OS Help (choose Help from the Finder's Help menu).

Can't record with microphone.

- If you're using your monitor's built-in microphone to record, use the Monitors & Sound control panel to mute the monitor's speakers. In the same control panel, make sure that the sound input is set to the monitor's built-in microphone.
- If you're using an external microphone plugged into your computer, make sure your sound input source is set to External Microphone. Open the Monitors & Sound control panel, click the Sound icon, and choose External Microphone from the Sound Input pop-up menu.

See the information about sound in Mac OS Help (choose Help from the Finder's Help menu).

"QuickDraw 3D could not be found" message appears.

- Make sure that the following files are in the Extensions folder (inside the System Folder):
 - QuickDraw 3D
 - QuickDraw 3D RAVE
 - QuickDraw 3D Viewer
 - QuickDraw 3D IR

If the files are there and you still get the message, it means that you don't have enough memory to run the application. You may be able to open the application if you try one or more of the following:

- Quit other open applications.
- Reduce the amount of memory allocated to the application. Follow these steps:
 - 1** Select the application's icon in the Finder.
 - 2** Choose Get Info from the File menu.
 - 3** Type a lower number in the box for Preferred Size.
- Install more memory (RAM). See the online documentation that came with your computer for instructions on how to do this.

Starting Up From a CD

To test, repair, or initialize a hard disk, or to install or remove system software on a hard disk, you need to start up your computer from another disk. You can start up your computer using the software install CD-ROM disc.

Starting Up From the Software Install CD

Follow these steps to start up from the software install CD.

- 1 Turn on your computer if it's not already running.
- 2 Press the Open button on your CD-ROM drive.
- 3 Carefully open the tray and place the software install CD in the tray with the disc label facing up.

Make sure the disc is lying flat in the tray.

- 4 Gently push the tray in.
- 5 Hold down the C key on your keyboard while you choose Restart from the Special menu and wait for the message "Welcome to Mac OS" to appear.

If this doesn't work, restart the computer, make sure the CD is inserted, and hold down the Command, Option, Shift, and Delete keys (to temporarily disable the hard disk). Hold the keys down until the message "Welcome to Mac OS" appears.

- 6 When you see the screen that says "Mac OS" and the phrase "Starting Up," release the C key.

In a few seconds the desktop appears. The CD's icon appears at the top-right corner of the desktop (above your hard disk icon), and the Apple (🍏) menu does not contain the usual items.

Note: The desktop pattern is different from the pattern you normally see, since your computer is now using the system software that's on the CD. Your regular desktop pattern will reappear when you start up from your normal startup disk.

When You're Done With the CD

When you start up your computer from a CD, the CD cannot be ejected in the usual way.

To restart your computer from the hard disk and eject the CD:

- 1** Choose Restart from the Special menu.
- 2** Immediately after hearing the startup sound, press the eject button on the front of the CD-ROM drive.

Note: You can also change the startup disk by opening the Startup Disk control panel and selecting the hard disk. Restart your computer. After startup, eject the CD by selecting its icon and choosing Put Away from the File menu (or by dragging its icon to the Trash).

Testing and Repairing Your Hard Disk Directory

If you see a message reporting that a disk is “damaged” or unreadable, the directory on your hard disk may have become corrupted. The directory can be corrupted

- any time the computer is not shut down properly, using the Shut Down command
- when your computer freezes or crashes

Repairing Corrupted Data on Your Disk

Most data corruption can be fixed easily by using Disk First Aid. Disk First Aid is an application on the software install CD that came with your computer.

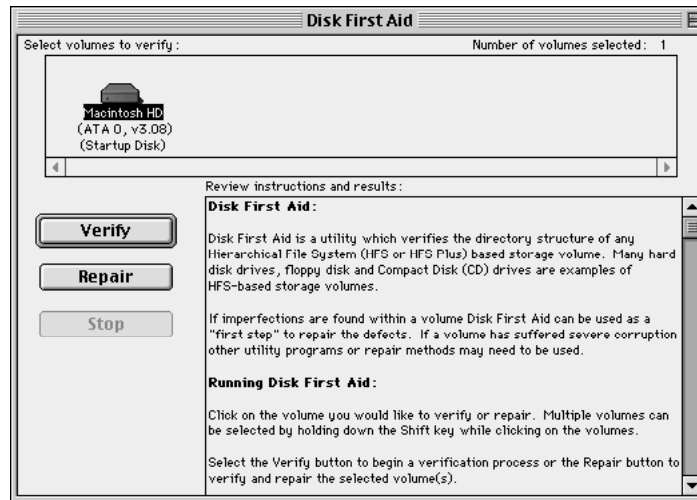
- 1 Start up your computer from the software install CD.
See Chapter 3, “Starting Up From a CD,” on page 45.
- 2 Locate the Disk First Aid icon and double-click it to open the Disk First Aid program.



Disk First Aid

- 3 Click the icon of the disk you want to test.

Disk icons appear in a box at the top of the Disk First Aid window.



- 4 Click Repair to begin testing and repairing the disk directory.

If Disk First Aid Cannot Correct the Problem

- Make sure you started up from the software install CD. See Chapter 3, “Starting Up From a CD,” on page 45.
- Try running Disk First Aid a second or third time. Sometimes repeating the process corrects the problem.
- Use the Drive Setup utility (typically located in the Utilities folder) to update the driver.
- Use another disk repair or recovery program. Sometimes another program will help you recover a corrupted disk.

Note: Before using software from a manufacturer other than Apple, see the documentation that came with the software or contact the software manufacturer to make sure the program is compatible with your computer and the version of Mac OS installed on your computer. Apple cannot guarantee the performance of software from manufacturers other than Apple.

- If you can't repair the disk directory, the System suitcase file or other resources may be damaged. Perform a clean installation of system software (see Chapter 5, “Reinstalling Your Computer's Software,” on page 53). If that doesn't work, reinitialize the hard disk (see “Initializing a Hard Disk” on page 49).

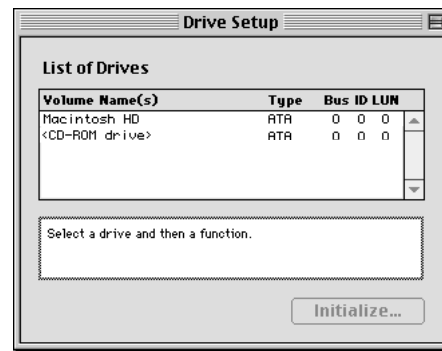
Updating the Hard Disk Drivers

- 1 Start up your computer from the software install CD. (See Chapter 3, “Starting Up From a CD,” on page 45.)
- 2 Locate the Drive Setup icon and double-click it to open the Drive Setup program.



Drive Setup

- 3 In the list of drives, click the disk you want to update.



- 4 From the Functions menu, choose Update Driver.
A message appears saying the new driver won't be available until you restart your computer.
- 5 Restart your computer. (See “Restart the computer.” on page 12.)

Initializing a Hard Disk

The hard disk inside your computer was initialized (formatted for use) at the factory, so you should need to initialize it only if your hard disk is damaged and can't be repaired with Disk First Aid (or another disk repair program).

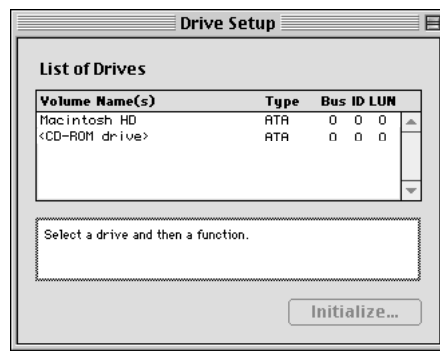
You can initialize your internal hard disk using a program called Drive Setup, which is on the software install CD that came with your computer.

Warning Initializing a disk erases all information on the disk. Before initializing your disk, recover all the information you can and copy it to another disk or a network file server.

- 1 Start up your computer from the software install CD. (See Chapter 3, “Starting Up From a CD,” on page 45.)
- 2 Locate the Drive Setup icon and double-click it to open the Drive Setup program.



- 3 In the list of drives, select the disk you want to initialize.



- 4 Click Initialize.

If initialization fails, choose Initialization Options from the Functions menu to select the “Low level format” and “Zero all data” options. Then try initializing the disk again.

If initialization fails a second time, test your hard disk for damage, as described in “Testing Your Hard Disk for Physical Damage” on page 50.

Mac OS Extended Format

Mac OS Extended format is a new method of formatting hard disks that allows for more efficient use of hard disk storage space. You can format your hard disk with Mac OS Extended format by performing a custom initialization of your hard disk. For instructions, see Drive Setup Help in the Help menu.

Testing Your Hard Disk for Physical Damage

Note: Testing the disk can take two hours or more, depending on the size of your disk.

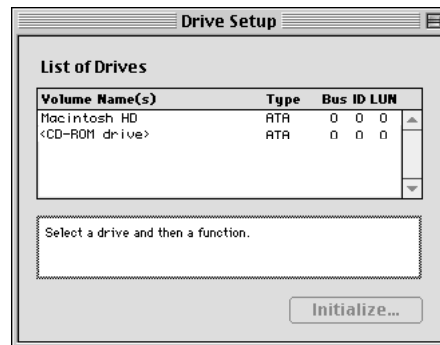
- 1 Start up your computer from the software install CD. (See Chapter 3, “Starting Up From a CD,” on page 45.)

- 2 Locate the Drive Setup icon and double-click it to open the Drive Setup program.



Drive Setup

- 3 In the list of drives, click the disk you want to test.



- 4 From the Functions menu, choose Test Disk.
 - 5 When a message tells you that the testing is complete, click Quit.
- If the test reveals a problem, the hard disk may be damaged. Consult an Apple-authorized service provider for assistance.

Reinstalling Your Computer's Software

If you are having problems with the system software or applications that came with your computer, you can replace software in the following ways:

- reinstall system software—if you encounter system software problems or you want to add or remove system software components
- reinstall individual applications—if you inadvertently erased an application on your hard disk, are having problems with an application, or an application is damaged
- restore your hard disk with its original contents—if you want your computer to have its original system software, factory settings, and applications that came with the computer

Reinstalling System Software

The Mac OS Install application, located on the software install CD, lets you reinstall the Mac OS (or specific components of the Mac OS) on your computer. This CD also includes a Read Me document that describes how to reinstall custom system software settings and application software that came with your computer.

Before Installing System Software

Before you begin the installation, do the following:

- *Customized preferences and settings:* If you have preferences or settings in control panels and individual applications, make a note of them so you can easily reset them if necessary, after you install system software.

Note: If you are having problems with your computer, you may not be able to open any files with preferences or customized settings.

- *Software that runs in the background:* If you are using software that runs in the background, such as virus protection software or access control software, you may need to turn it off before you reinstall system software. For instructions, see the documentation that came with the software.

Important It is highly recommended that you back up the data on your hard disk before installing system software.

Reinstalling Mac OS System Software

Note: If something goes wrong, see “Problems During Installation” on page 60.

- 1 Start up from the software install CD-ROM disc. (See Chapter 3, “Starting Up From a CD,” on page 45.)
- 2 Double-click the *Mac OS Install* icon.



A Welcome dialog box describes the steps in the installation process. To learn more about each step, click the Help button (?) in the upper-right corner of the window.



- 3 When you're ready to begin, click Continue.

The Select Destination dialog box appears.



If you want to perform a clean installation, skip to “Performing a Clean Installation” on page 58. Otherwise, continue with the following step.

Note: A clean installation gives you a fresh start with system software. It is sometimes the best way to solve a persistent problem.

- 4 Choose the destination disk from the pop-up menu and click Select.

The following dialog box appears.



- 5 Proceed to the next section, “Selecting Which Software to Install.”

Selecting Which Software to Install

After selecting a disk, you need to decide between a standard or a custom installation. The standard installation installs all the software you need for your model of computer and is the best choice to solve system software problems. A custom installation lets you add or remove specific system software components.

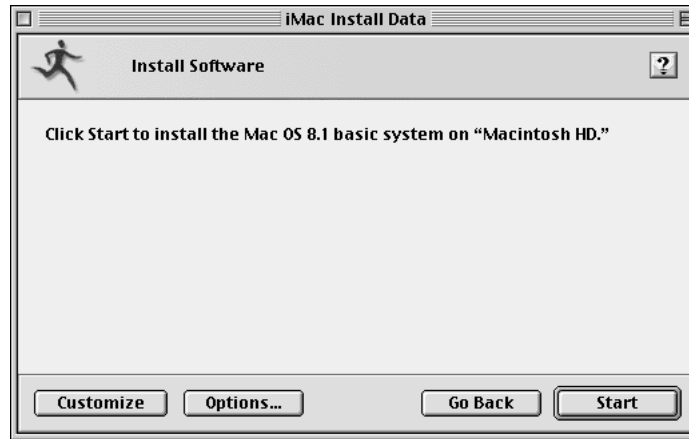
Note: Keep in mind that the more components you install, the more memory, or RAM, is used and the greater the potential for software conflicts. Install only the items you expect to use.

Standard installation: Click Reinstall. Proceed to “Standard Installation” on page 56.

Custom installation: Click Add/Remove. Proceed to “Custom Installation” on page 56.

Standard Installation

- 1 Follow the instructions on your screen until you see the Install Software window.



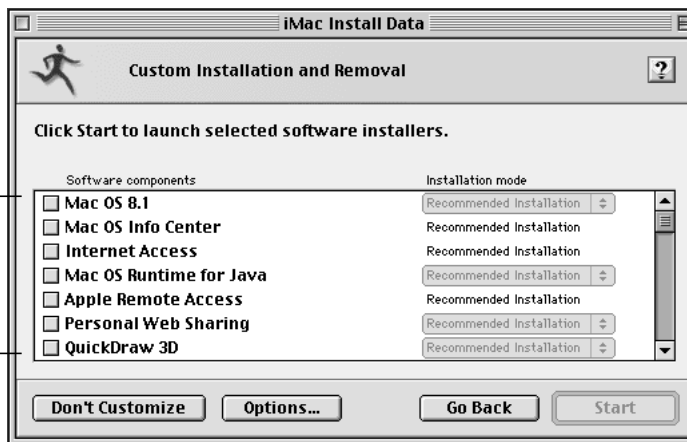
Note: Your screen may look slightly different from the one pictured here.

- 2 If you want to update the hard disk drivers and create an installation report, click Options. In the window that appears, click the appropriate checkboxes, then click OK.
- 3 Click Start.
- 4 When the installation has finished, restart your computer.

Custom Installation

- 1 In the window that appears, select the software to install, the software to remove, or both.

Select the software you want to add or remove.

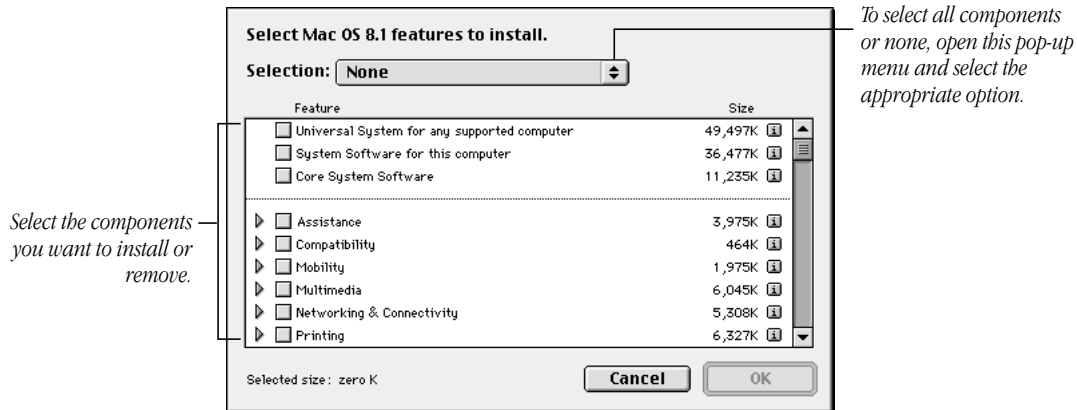


- 2 Open the pop-up menu next to each software product and choose an option.

- Customized Installation—lets you choose the components to install
- Customized Removal—lets you choose the components to remove

Note: Recommended Installation installs the standard components.

- 3 All available components for the software product appear in a window.



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

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. For more information about each component listed, click the box with the letter “i” in it to the right of the component.

- 5 When you’re finished choosing components, click OK.

- 6 Repeat steps 2–4 for all the software products you want to install or remove.

- 7 If you want to update the hard disk drivers and create an installation report, click Options. In the window that appears, click the appropriate checkboxes, then click OK.

- 8 Click Start.

A window appears, showing the status of the installation or removal process.

If you see messages about problems with your hard disk, see “Problems During Installation” on page 60.

- 9 When a message appears saying that the installation process finished, click Quit to leave the program or click Continue to install or remove other software.

Performing a Clean Installation

This section provides instructions for what is commonly called a “clean installation” of system software. Performing a clean installation is more complicated than a standard installation, but it is sometimes the best way to solve a persistent problem. A clean installation gives you a fresh start with system software.

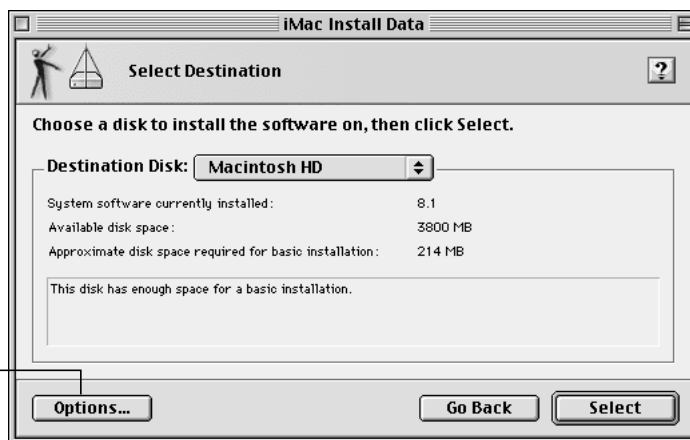
When you install system software using a clean installation, the Installer creates a new System Folder on your hard disk. The old System Folder is renamed Previous System Folder. Since your computer has a new System Folder, after a clean installation you must reinstall custom fonts, extensions, and control panels that you’ve added to your system or that came with utility or application programs. You will also need to reset modem settings in communications software programs you are using.

Note: Though application programs are not replaced or changed, some require system software components that are removed from the System Folder during a clean installation. You may need to reinstall these applications after you perform a clean installation.

- 1 Start up your computer from the software install CD-ROM disc. (See Chapter 3, “Starting Up From a CD,” on page 45.)
- 2 Open the Mac OS Install application.
- 3 In the Welcome box, click Continue.

The Select Destination dialog box appears.

To perform a clean installation, click Options.



- 4 Click Options.



- 5 Click the Perform Clean Installation checkbox so that it has a checkmark in it, then click OK.
- 6 Click Select and follow the instructions until you see the Install Software dialog box.
- 7 To install software other than the basic system, click Customize and follow the instructions in the section, “Custom Installation” on page 56.
- 8 Click Start to install the software.

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

- 9 Restart your computer from the hard disk.

If the problem is solved: See the following section that describes how to reinstall your custom extensions, fonts, and control panels.

If the problem is not solved: You can reinstall your custom extensions, fonts, and control panels; or you can restore the previous system. These options are described in the following sections.

Reinstalling Your Custom Extensions, Fonts, and Control Panels

After a clean installation, you need to reinstall any custom extensions, fonts, and control panels you were using. If you don't have the original installation discs, you can drag items one at a time from the Previous System Folder to the new System Folder. It's a good idea to restart your computer after you install each item, to see if that's the item causing the problem. After you're sure that you've copied all the items you want into the new System Folder, delete the Previous System Folder by dragging it to the Trash.

If the Clean Installation Didn't Solve the Problem

You may have a hardware problem. Consult an Apple-authorized service provider.

You may want to revert to the Previous System Folder so that you do not have to reinstall your custom extensions, fonts, control panels, and other items not installed with Mac OS 8.1. To use the previous system again, follow the steps in this section.

Warning Reverting to the previous System Folder may not work. If it doesn't, you'll have to perform a clean installation again.

- 1 Locate the currently active System Folder. It is distinguished by the Mac OS icon on it.
- 2 Open the System Folder and move the System suitcase into the Preferences folder. Close the System Folder.
- 3 Rename the System Folder "Clean System Folder."
- 4 Rename the Previous System Folder (the one you wish to use again) "System Folder."
- 5 Open the newly designated System Folder and double-click the System suitcase. Close the window that appears, then close the System Folder.

The Mac OS icon should appear on the new System Folder's icon. If it doesn't appear, repeat this step.

- 6 Restart your computer.
- 7 Drag the Clean System Folder to the Trash.

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 software install CD.

- Your computer may have located the system software on your hard disk before it located the system software on the CD.

With the CD inserted, open the Startup Disk control panel and click the CD icon. Then restart the computer.

Note: After you install the software, you'll need to reselect your hard disk as the startup disk. Open the Startup Disk control panel again and click the icon for your hard disk. Then restart your computer.

The files on your hard disk disappear when you start up from the CD.

- If no files appear on the hard disk except for a single document called “Where have all my files gone?”, you started up your computer from a CD with system software earlier than Mac OS 8.1. To see the contents of your disk, you must start up your computer from a disc with Mac OS 8.1 (or later).

You can't install or restore software.

- Make sure your computer started up from the software install CD. See Chapter 3, “Starting Up From a CD,” on page 45.

The Installer cannot repair your hard disk.

- 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.
- Use Disk First Aid or a third-party disk repair utility to see if it can repair the disk.

Note: Before using a disk utility from a manufacturer other than Apple, see the documentation that came with the software or contact the software manufacturer to make sure the program is compatible with your computer and the version of Mac OS installed on your computer. Apple cannot guarantee the performance of software from manufacturers other than Apple.

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. See “Initializing a Hard Disk” on page 49. After you've reinitialized the disk, try installing the system software again.

The Installer cannot update the hard disk driver.

- If you don't have an Apple-brand hard disk, or if you've updated your Apple hard disk with a non-Apple disk utility, use that disk utility or the one supplied by the disk's manufacturer to update the drivers on your system. Make sure to get the latest version of the utility.
- Some hard disks must be reinitialized before you can update the driver. See “Initializing a Hard Disk” on page 49.

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

- Make sure you are starting up the computer from the software install CD.

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

- You may have virus-protection software installed that guards against modification of the System file. Make sure you are starting up the computer from the software install CD. Drag any virus-protection software out of the System Folder and try installing again. You can put the virus-protection software back after installation.

- The System and Finder files may be locked. To see if your System file or Finder file is locked, open the System Folder and select the System or Finder icon. Open the File menu and choose Get Info. To unlock the file, click the Locked checkbox to remove the checkmark.
- Try performing a clean installation of system software. See “Performing a Clean Installation” on page 58.

You see a message that the installation was not successful.

- Make sure the software install CD is the startup disk, then try installing system software again. If the installation is still not successful, try performing a clean installation.
- Make sure the CD is clean. See the online documentation that came with your computer for information on cleaning CDs.

Responding to Messages About Your Hard Disk

The Mac OS 8.1 Installer checks the destination hard disk for errors before installing the software. Additionally, if your hard disk was formatted with an Apple disk utility program, the Installer updates the hard disk drivers with the latest version of the driver software. If your disk drives are formatted with a disk utility from another company, the drivers are not updated. You should use the third-party disk utility to update your hard disk before installing Mac OS 8.1.

Note: Before using a disk utility from a manufacturer other than Apple, see the documentation that came with the software or contact the software manufacturer to make sure the program is compatible with your computer and the version of Mac OS installed on your computer. Apple cannot guarantee the performance of software from manufacturers other than Apple.

Reinstalling Individual Applications

If you're having problems with an application or it was damaged or inadvertently erased, try reinstalling that application. If an application came with its own CD, see the software documentation or the Read Me document on that CD for instructions on how to reinstall that software. If not, see the Read Me document on the software install CD for instructions on how to reinstall that software.

Important If you have preferences or settings for individual applications, make a note of them so you can easily reset them if necessary, after you install system software. If you are having problems with your computer, you may not be able to open any files with preferences or customized settings.

Restoring All Original Software

The Apple Software Restore application, located on the software restore CD, restores all your original software, including original system software, factory settings, and applications that came with your computer. This application gives you the option of erasing your hard disk before restoring the original software, or just replacing the original software (“Restore In Place”).

Before Restoring Your Software

Before you begin the restore process, do the following:

- *Customized preferences and settings:* If you have preferences or settings in control panels and individual applications, make a note of them so you can easily reset them if necessary, after you install system software.
Note: If you are having problems with your computer, you may not be able to open any files with preferences or customized settings.
- *Software that runs in the background:* If you are using software that runs in the background, such as virus protection software or access control software, you may need to turn it off before you reinstall system software. For instructions, see the documentation that came with the software.

Important It is highly recommended that you back up the data on your hard disk on an external storage device or network file server before restoring your system.

Restoring In Place

This procedure replaces only your original software (original system software, factory settings, and applications that came with your computer) with new copies from the CD, leaving everything else on your disk untouched.

Important Your preferences may be reset to their original factory defaults, and if you’ve already registered software, this procedure may modify that data.

- 1 Start up your computer from the software restore CD and open the Apple Software Restore application.

For instructions, see Chapter 3, “Starting Up From a CD,” on page 45.

- 2 Click the OK button on the introductory screen.
- 3 If necessary, click Switch Disk to choose the disk on which you want to restore your software.
- 4 Click the checkbox next to “Restore In Place.”
- 5 Click Restore.
- 6 An onscreen message shows the status of the restore process.

- 7** Click Quit when the process is complete.

Erasing Your Hard Disk

This procedure completely erases the contents of your hard disk before restoring the original contents (original system software, factory settings, and applications that came with your computer).

- 1** Start up your computer from the software restore CD and open the Apple Software Restore application.

For instructions, see Chapter 3, “Starting Up From a CD,” on page 45.

- 2** Click the OK button on the introductory screen.
- 3** If necessary, click Switch Disk to choose the disk on which you want to restore your software.
- 4** Click the checkbox next to “Erase your hard disk before restoring.”
- 5** If necessary, change the disk format you want from the Volume Format pop-up menu.

The recommended option is “Same as selected configuration” because it restores your hard disk to the Mac OS Extended format. This format provides more efficient storage, especially on large disks.

- 6** Click Restore.
- 7** Click OK.
- 8** An onscreen message shows the status of the erase and restore process.
- 9** Click Quit when the process is complete.

Contacting Apple for Help

If this handbook has not helped you solve your computer's problem, try getting information from Apple's product support site on the World Wide Web. See the next section, "Obtaining Information via the World Wide Web."

If you can't find answers on the support Web site, or don't have access to the Web, contact Apple for assistance. For information on how to contact the Apple Assistance Center, see the service and support card that came with your computer. Before you contact Apple, see the section, "Have This Information Available Before Calling."

Obtaining Information via the World Wide Web

Apple provides substantial information online for its customers. If you have access to the World Wide Web (WWW), you may want to check the information in the support area before you call Apple. Support information can be found at the following Uniform Resource Locator (URL):

- www.apple.com/support

At Apple's support Web site, you'll find

- Apple software updates
- Tech Info Library—a searchable database of easy-to-read articles
- Tech Exchange—a resource for product-specific information and support, including a discussion forum and the latest news

Have This Information Available Before Calling

Have the following information and software available when calling the Apple Assistance Center:

- a description of the problem (for example, the computer freezes in only one application or at startup)
- what you have tried to do already
- the type of computer
- the serial number of your computer
- the version of system software, third-party software, external devices, and so on (especially if the problem involves something you have added to the computer)
- the software install CD

Be in front of the computer when you call so you can take steps the technician suggests.

Using the Apple System Profiler

If you are able to start up your computer, the Apple System Profiler provides information about your computer that will help you and the Apple Assistance Center troubleshoot your computer.

To open the Apple System Profiler:

- 1** Choose Apple System Profiler from the Apple () menu.
A System Overview window appears.
- 2** Use the commands in the Select menu to get more specific information about the hardware and software used by your computer, or to go back to the System Overview window.
 - To find out what the items in the Apple System Profiler window mean, choose Show Balloons from the Help menu. Then point to the item you want to know about.
 - The Create Report command in the File menu lets you create a customized report of system software information. You can print this report by choosing the Print command from the File menu.



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