



## System Clean Install

System 7.1, 7.5, 7.6





# System 7.1 Clean Install

## **Purpose of a Clean Install**

A normal installation of system software modifies and updates the existing System Folder, but does not remove or disable any incompatible components. A clean installation, on the other hand, disables the existing System Folder, leaving all files in place, and forces the Installer to create a new System Folder with standard system configuration.

Perform a clean installation when system software has been damaged or modified in a way that prevents a normal system installation. You may also use the clean install procedure to troubleshoot Macintosh computers that are hanging, crashing, or generally misbehaving.





**Note:** This document describes the preparation, installation, and post-installation steps for performing a clean install of System 7.1 software. For additional information on System 7.1, refer to the Read Me file, located inside the Apple Utilities folder on the System 7.1 Tidbits disk. For information on performing a System 7.5 clean installation, refer to the section of this chapter called “[System 7.5 Clean Install.](#)”

**Note:** Text that appears in blue and underlined indicates a link to related material. Click the text to view the information.





## System Requirements

System 7.1 software requires a Macintosh computer with at least 2 MB of RAM (4 MB strongly recommended), a hard drive with at least 5 MB of free space available, and a floppy drive or network access to the system software.

**Note:** If you don't have an Apple hard drive, or if you used third-party software to format your hard drive, verify that the formatting software is compatible with System 7.1. You may need to contact the third-party developer.





## **Preparing for a Clean Install**

### **Back Up the Hard Drive**

Back up your entire hard drive. If this isn't possible, at least save a backup copy of your System Folder to another hard drive or to floppy disks.

### **Check Hard Drive Space Available**

Installation of System 7.1 requires 5 MB of disk space. To determine how much space is available on the hard drive where you are installing the software, double-click the icon for that hard drive and choose "By Icon" from the View menu. The upper-right corner of the window displays the amount of available disk space. If there's less than 5 MB available, you'll need to delete some files. Copy files to





floppy disks if you need to, drag the hard drive copies to the Trash, and empty the Trash.

### **Disable Virus and Security Software**

To disable security software,

- 1 Select Control Panels from the Apple menu.
- 2 Double-click the security software icon.
- 3 Turn off the security software.
- 4 Close the security software window.





To disable SAM virus software,

- 1 Double-click the System Folder to open it.
- 2 Drag SAM Intercept and SAM Virus Definitions out of your System Folder.

### **Restart with Disk Tools**

To start up the computer using the Disk Tools disk,

- 1 Shut down the computer.
- 2 Insert Disk Tools into the floppy drive and turn on the computer. At the desktop, the Disk Tools floppy disk's icon should be in the upper-right corner of the screen with the hard drive's icon below it.





**Note:** If the computer ejects the disk, make sure you have an Apple SuperDrive that reads high-density disks and that you are using System 7.1 Disk Tools. If your system doesn't have a SuperDrive, you need a Disk Tools disk and System 7.1 on 800K floppy disks. To request these disks, call the Apple Assistance Center at 800-767-2775.





## Run Disk First Aid

Disk First Aid is a utility that verifies the directory structure of any storage volume based on the hierarchical file system (HFS). Many hard drives, floppy drives, and CD-ROM drives are HFS-based storage volumes.

If imperfections are found within a volume, you can use Disk First Aid as a first step to repair the defects. If a volume has several problems, you may need to use other utility programs or repair methods.

To run Disk First Aid,

- 1 Open the Disk Tools disk and double-click the Disk First Aid icon. When the window appears, verify that the main hard drive is selected. If it isn't, click the Drive button to select the drive.





- 2 Click Open once and Start once. Disk First Aid then checks your hard drive for potential problems. If the program finds any problems, let it repair them.
- 3 Repeat this procedure for each hard drive attached to the system.
- 4 When you're finished verifying the hard drives, choose Quit from the File menu to return to the desktop.

**Note:** If Disk First Aid can't repair your hard drive, make sure the drive is backed up and then reinitialize it using the appropriate formatting utility. For Apple drives, use Apple HD SC Setup.





## Run Apple HD SC Setup to Update Disk Drivers

Drivers are small bits of information that tell the hard drive how to interact with the computer. For System 7.1, update these drivers on Apple hard drives with the version of Apple HD SC Setup that is on the Disk Tools disk.

**Note:** If you do not have an Apple hard drive, or you used third-party software to format your hard drive, do not use Apple HD SC Setup to update the driver. Contact the third-party developer for driver information and to verify that the formatting is compatible with System 7.1.

To update the hard disk driver using Apple HD SC Setup,

- 1 Double-click the HD SC Setup icon on the Disk Tools disk.
- 2 Verify that the main drive is selected.





- 3 Click the Update button.
- 4 When the program is finished updating the driver, click Quit to return to the desktop.

**Note:** Sometimes HD SC Setup is unable to update the hard disk driver. (This situation is indicated by a dimmed Update button.) Here are some possible reasons and solutions:

- Reason: The same or a more recent version of Apple HD SC Setup already formatted the hard drive.  
Solution: Don't update the driver.
- Reason: A third-party utility formatted the hard drive.  
Solution: Obtain a System 7.1 compatible version of the utility to update the hard drive and driver.
- Reason: The computer has an internal IDE drive.  
Solution: Don't update the driver on the internal drive. However, if you have additional Apple SCSI hard drives attached to the computer, use Apple HD SC Setup to update their drivers.





- Reason: An earlier System 6 version of Apple HD SC Setup formatted the hard drive and didn't leave enough room for the updated driver.

Solution: It is not essential to update the driver, unless you intend to use file sharing or have a Macintosh that can use virtual memory. If you do want to update the driver, you may first have to reinitialize the drive with Apple HD SC Setup. (Make sure you have a backup of the drive before reinitializing.)

- Reason: The driver is corrupt and the computer doesn't recognize the drive (the drive doesn't show on the desktop).

Solution: You may have to reinitialize the drive with Apple HD SC Setup. (Make sure you have a backup of the drive before reinitializing.)





## Check Software Compatibility

If you're upgrading from an earlier version of System 7 to 7.1, check the Software Compatibility list or run Compatibility Checker 2.0. Identify items that may be incompatible with System 7.1, and place them in a folder labeled "May Not Work with System 7.1."

If you have the Tune-Up file in your system, delete it from the Extensions folder within the System Folder. System 7.1 provides enhanced Tune-Up capabilities.

If you have MODE 32 and MacTCP 1.1 installed, delete them from the Extensions folder. These files are not compatible with System 7.1.

**Note:** You can use the 32-bit system enabler with System 7.1 in place of MODE 32.





## Disable the System Folder

To disable the System Folder, remove the System and Finder files and rename the folder.

- 1 Double-click the hard drive's icon and locate the System Folder.
- 2 Double-click the System Folder and locate the System and Finder files.
- 3 Drag these files to the Trash, but do not empty the Trash until the clean installation is successful. (The files are harmless in the Trash and will act as a backup in case anything goes wrong during the clean install.)
- 4 Close the System Folder's window and rename the folder "Previous System Folder."
- 5 Close any open windows on the desktop.





## **Restart and Check for Additional System Folders**

When you choose Restart from the Special menu, the system automatically ejects the Disk Tools disk. After a few seconds, you should see a picture of a disk with a flashing question mark.

If instead your computer starts up from the hard drive, you have an extra System Folder on the drive. Delete or disable the folder and start up the computer again.

When you see the flashing question mark, you can continue.





## Install System 7.1

System 7.1 software is distributed on a set of nine 800K disks or a set of six 1.4 MB disks. You can easily obtain a copy of system 7.1 from the Apple Restoration CD for System Software. This valuable tool is a great way to quickly perform system software reinstalls. To order, see Programs/Ordering.

To install System 7.1 software, follow these steps:

- 1 If you're installing from 1.4 MB disks, start the computer with the Install or Install Me First disk. If you're installing from 800K disks, start the computer with the Disk Tools disk, then eject the Disk Tools and insert the Install disk. (Since the 800K Install disk doesn't contain a System file, you can't use it as a startup disk. You'll have to swap between the Disk Tools and





Install disks four to six times before the Installer begins.)

**Note:** If your computer requires a system enabler, you should use the Install Me First disk that came with the computer. The standard System 7.1 Install disk doesn't contain the enabler and won't start up a computer that requires one.

- 2 Once the Welcome message appears, click OK.
- 3 Choose either the Easy Install or Customize Install option and follow the prompts on the screen.





**Note:** When installing System 7.1 on the Quadra 700/900/950, Macintosh LC and LC II, and PowerBook 100/140/170 computers, use the Easy Install option or choose “System software for any Macintosh” in the Custom Install window. Don't use Custom Install for other software choices—the Monitor's control panel won't install properly if you do.

- 4 Click on Install.
- 5 Insert the other system disks as the Installer prompts you.

## **Verify that All Problems are Resolved**

After performing a clean installation, verify that you resolved the system problems before adding anything to the new System Folder.





## Transfer and Test Nonstandard Items

Transfer and test files in “May Not Work with System 7.1” folder.

When you checked the System 7.1 compatibility of software on your hard drive, you transferred potentially incompatible extensions or control panels into a folder called “May Not Work with System 7.1.” After installation, you may want to enable and test some of these extensions as follows:

- 1 Drag one file from the “May Not Work with System 7.1” folder to the appropriate folder inside the System Folder.
- 2 Restart your computer. If your computer starts up, continue with the next step. If the computer does not start up, the file is probably incompatible with System





- 7.1. Disable the file by deleting it or returning it to the "May Not Work with System 7.1" folder.
- 3 Repeat the preceding steps for each file in the "May Not Work with System 7.1" folder that you want to test.
- 4 Check the version numbers of any problem extensions for compatibility. Try reinstalling the extensions from original floppy disks, or contact the software vendor.





## Transfer Nonstandard Items

In addition to enabling files in the "May Not Work with System 7.1" folder, you can also reinstall items from the Previous System Folder. If possible, reinstall these items from their original disks.

If the original disks are not available, move the non-standard items from the Previous System Folder to the new System Folder. Be careful not to replace anything that is already in the new System Folder. Drag the files onto the System Folder icon and the system will automatically place the files into the correct folder within the System Folder.

To transfer the files,

- 1 Open each corresponding folder within the System Folder and the Previous System Folder and compare the contents.





- 
- 2 Transfer items not already in the new System Folder from the Previous System Folder.
- 3 Restart the computer.





## Troubleshoot Extension Conflicts

### Check for Extension Conflicts

If your computer fails to restart or behaves erratically after you have transferred nonstandard items to the new System Folder, you probably have an incompatible or conflicting system extension or control panel.

To verify this problem, follow these steps:

- 1 Restart the computer and after you see the picture of a smiling computer, hold down the Shift key.
- 2 Release the Shift key when the “Welcome to Macintosh, Extensions Off” message appears.
- 3 When the computer is ready, try to recreate the erratic behavior.





If the problem no longer occurs, you have a conflicting or corrupt extension or control panel. Continue with the next section.

### **Identify Incompatible Extensions**

Use the following steps to isolate and resolve problem extensions or control panels:

- 1 Create a new folder on the desktop and name it “Disabled Extensions.”
- 2 Open the System Folder, Extensions folder, and Control Panels folder, and choose “by Kind” from the View menu.
- 3 Transfer all items labeled “system extension” or “control panel” to the Disabled Extensions folder.
- 4 Close the System Folder, and restart the computer.





- 5 Attempt to recreate the problem. If you cannot, continue these steps to determine which of the nonstandard extensions is causing the problem.
- 6 Move one item from the Disabled Extensions folder onto the icon for the closed System Folder and restart the computer.
- 7 Attempt to recreate the original problem.
- 8 Repeat the previous two steps for each item in the Disabled Extensions folder until the problem recurs. The last item returned to the System Folder is probably the cause of the problem.





- 9 Check the problem extension's version number for compatibility. Try reinstalling the extension from original floppy disks, or contact the software vendor.

After all items are successfully transferred from the Disabled Extensions folder to the System Folder, delete the Disabled Extensions folder.





## **Verify that Applications Perform Normally**

If there are problems with an application, refer to the application's user manual or contact the application's developer.

## **Empty Trash**

When the computer behaves as expected and you're sure you've transferred all needed items from the Previous System Folder, drag the folder to the Trash and select Empty Trash from the Special menu.





# System 7.5 Clean Install

## **Purpose of a Clean Install**

A normal installation of system software modifies and updates the existing System Folder, but does not remove or disable any incompatible components. A clean installation, on the other hand, disables the existing System Folder, leaving all files in place, and forces the Installer to create a new System Folder with standard system configuration.

Perform a clean installation when system software has been damaged or modified in a way that prevents a normal system installation. You may also use the clean install procedure to troubleshoot Macintosh computers that are hanging, crashing, or generally misbehaving.





**Note:** This document describes the preparation, installation, and post-installation steps for performing a clean install of System 7.5 software. For information on performing a System 7.1 clean installation, refer to the section of this chapter called, “[System 7.1 Clean Install.](#)”

**Note:** Text that appears in blue and underlined indicates a link to related material. Click the text to view the information.

## System Requirements

System 7.5 software requires a Macintosh computer; a hard drive with as much as 21 MB of disk space available (for installation of the complete system); and a 1.4 MB floppy drive, CD-ROM drive, or network access to the system software.





**Note:** If you don't have an Apple hard drive, or if you used third-party software to format your hard drive, verify that the formatting software is compatible with System 7.5. You may need to contact the third-party developer.

For all computers except the Power Macintosh family, the basic installation of System 7.5 requires a minimum of 4 MB of RAM; the full installation, which includes PowerTalk and QuickDraw GX, requires a minimum of 8 MB of RAM and a 68020 processor. (You do not need PowerTalk and QuickDraw GX installed to run System 7.5.) On Power Macintosh computers, the basic installation requires a minimum of 8 MB of RAM; the full installation requires a minimum of 16 MB of RAM.





## **Preparing for a Clean Install**

### **Back Up the Hard Drive**

Back up your entire hard drive. If this isn't possible, at least save a backup copy of your System Folder to another hard drive or to floppy disks.

### **Check Hard Drive Space**

Check that sufficient hard drive space is available. Installation of System 7.5 requires up to 21 MB of disk space to install the complete system, including PowerTalk and QuickDraw GX. To determine how much space is available on the hard drive where you are installing the software, double-click the icon for that hard drive and choose “By Icon” from the View menu. The upper-right corner of the window displays the amount of available disk space.





If there's less than 21 MB available, you may need to delete some files. Copy files to floppy disks if you need to, drag the hard drive copies to the Trash, and empty the Trash.

### **Disable Virus and Security Software**

To disable security software:

- 1 Select Control Panel from the Apple menu.
- 2 Double-click the security software icon.
- 3 Turn off the security software.
- 4 Close the security software window.





To disable SAM virus software:

- 1 Double-click the System Folder to open it.
- 2 Drag SAM Intercept and SAM Virus Definitions out of your System Folder.





## Restart with Disk Tools

To start up the computer using the Disk Tools disk,

- 1 Shut down the computer.
- 2 Insert Disk Tools into the floppy drive and turn on the computer.
- 3 At the desktop, the Disk Tools floppy disk's icon should be in the upper-right corner of the screen with the hard drive's icon below it.

**Note:** If the computer ejects the disk, make sure you have an Apple SuperDrive that reads high-density disks and that you are using System 7.5 Disk Tools.





To start up the computer using the Apple Macintosh CD that came with your computer,

- 1 Shut down the computer.
- 2 Insert the CD into the CD-ROM drive.
- 3 If you have a Power Macintosh or a Macintosh 630 series computer, hold down the letter C on the keyboard and turn on the computer.

If you have a Macintosh 570 series computer, turn on the computer and immediately hold down the Command-Option-Shift-Delete keys. Keep these keys down until you see the Welcome to Macintosh message.





- 4 At the desktop, the CD's icon should be in the upper-right corner of the screen with the hard drive's icon below it.

**Note:** If any other hard drives appear above the CD's icon, shut down the computer and all attached devices, remove the large SCSI cable from the rear of the computer, and try again. If the internal hard drive still appears above the CD, go to the Control Panels under the Apple menu, open the Startup Disk item, select the CD, close all open windows, and restart. The CD should now appear above the hard drive.





## Run Disk First Aid

Disk First Aid is a utility that verifies the directory structure of any storage volume based on the hierarchical file system (HFS). Many hard drives, floppy drives, and CD-ROM drives are HFS-based storage volumes.

If imperfections are found within a volume, you can use Disk First Aid as a first step to repair the defects. If a volume has several problems, you may need to use other utility programs or repair methods.

To run Disk First Aid:

- 1 Open the Disk Tools disk or the Disk Tools folder on the CD and double-click the Disk First Aid icon.
- 2 Select the main hard drive's icon at the top of the window.





- 3 Click Repair. Disk First Aid then checks your hard drive for potential problems and attempts to fix them if necessary.
- 4 Repeat the above procedure for each hard drive attached to the system.
- 5 When you're finished verifying the hard drives, choose Quit from the File menu to return to the desktop.

**Note:** If Disk First Aid can't repair your hard drive, make sure the drive is backed up and then reinitialize it using the appropriate formatting utility. For Apple drives, use Apple HD SC Setup.





## Run Apple HD SC Setup to Update Disk Drivers

Drivers are small bits of information that tell the hard drive how to interact with the computer. For System 7.5, update these drivers on Apple hard drives with the version of Apple HD SC Setup that is on the Disk Tools disk or within the Disk Tools folder on the CD.

**Note:** If you do not have an Apple hard drive, or you used third-party software to format your hard drive, do not use Apple HD SC Setup to update the driver. Contact the third-party developer for driver information and to verify that the formatting is compatible with System 7.5.

To update the hard disk driver using Apple HD SC Setup,

- 1 Double-click the HD SC Setup icon.
- 2 Verify that the main drive is selected.





- 3 Click the Update button.
- 4 When the program is finished updating the driver, click Quit to return to the desktop.

**Note:** Sometimes HD SC Setup is unable to update the hard disk driver. (This situation is indicated by a dimmed Update button.) Here are some possible reasons and solutions:

Reason: The same or a more recent version of Apple HD SC Setup already formatted the hard drive.

Solution: Don't update the driver.

Reason: A third-party utility formatted the hard drive.

Solution: Obtain a System 7.5 compatible version of the utility to update the hard drive and driver.

Reason: The computer has an internal IDE drive.

Solution: Don't update the driver on the internal drive. However, if you have additional Apple SCSI hard drives





attached to the computer, use Apple HD SC Setup to update their drivers.

Reason: An earlier System 6 version of Apple HD SC Setup formatted the hard drive and didn't leave enough room for the updated driver.

Solution: It is not essential to update the driver, unless you intend to use file sharing or have a Macintosh that can use virtual memory. If you do want to update the driver, you may first have to reinitialize the drive with Apple HD SC Setup. (Make sure you have a backup of the drive before reinitializing.)

Reason: The driver is corrupt and the computer doesn't recognize the drive (the drive doesn't show on the desktop).

Solution: You may have to reinitialize the drive with Apple HD SC Setup. (Make sure you have a backup of the drive before reinitializing.)





## Check Software Compatibility with Safe Install Utility

To insure a smooth upgrade to System 7.5 software, and to test the compatibility of your applications and files, you should run the Safe Install Utility on the System 7.5 installation disk labeled Before You Install.

This utility scans the System Folder on your computer's hard drive and identifies items that might be incompatible with System 7.5. Safe Install checks extensions and control panels for compatibility. It does not check the compatibility of your application programs.

**Important:** If At Ease software is installed on your computer, you must turn it off before you use Safe Install.





To run Safe Install, restart the computer and follow these steps:

- 1 Insert the disk labeled Before You Install into a floppy drive. Then double-click the disk's icon to open it.

**Note:** If installing from a CD, open the Before You Install folder (inside the Installation folder) on the CD. If installing over a network, find the Safe Install Utility on your file server.

- 2 Open the Safe Install Utility by double-clicking its icon.
- 3 Click Quick or Detailed to continue.

If you click Quick, the program scans your System Folder for incompatible extensions.

If you click Detailed and you have more than one hard drive connected to your computer, a dialog box appears





in which you can select the drives you want the Safe Install Utility to scan. (An X appears next to the selected drives.) Make sure your startup drive is selected and click OK. The Safe Install Utility then begins to scan your system. Messages report the progress of the scan.

If the Safe Install Utility finds incompatible or unknown items in the System Folder of your startup disk, a message box appears asking you if you want to move the incompatible or unknown items from the System Folder into another folder called "May Not Work with System 7.5."

- 4 Click Move to transfer potentially incompatible items out of the System Folder and into the "May Not Work with System 7.5" folder.

After installation, you may want to reactivate individual items in the "May Not Work with System 7.5" folder and





test them for compatibility.

When the Safe Install Utility has finished examining your system, you will see a report on your screen. If you chose the Detailed option, the report includes vendor information about your application programs.

- 5 To print the report, click Print.
- 6 When you're finished using the Safe Install Utility, click Quit.





## Installing System 7.5

System 7.5 software is available on a set of 1.4 MB disks or on CD. The software may also be downloaded through a net install over specified networks. You can easily obtain a copy of system 7.5 from the Apple Restoration CD for System Software. This valuable tool is a great way to quickly perform system software reinstalls. To order, see Programs/Ordering.

Installation of System 7.5 includes a significant change from installation of earlier system software. With previous versions, you could drag control panels and extensions separately into the System Folder. However, because System 7.5 installation files are compressed and must be expanded by the Installer program, you cannot drag these files to your system.





**Note:** If you are installing from a CD onto a computer with a non-Apple CD-ROM drive, make a backup of the System 7.5 software before you begin the installation. If you encounter problems during installation, you can install System 7.5 from the backup disks. This procedure is necessary because you won't be able to use your CD-ROM drive again until the System 7.5 software is installed on your computer. (The startup that comes with your CD recognizes only Apple CD-ROM drives.)

To install System 7.5 software, follow these steps:

- 1 Shut down the computer.
- 2 Locate the Installer:
  - If you are installing from floppy disks, insert the Install Disk 1 disk into your floppy drive and turn on the computer. Double-click the disk icon to open it.





- If you are installing from a CD, start up the computer and insert the CD. Open the CD icon, and find the Installer in the System Install folder (inside the Installation folder).
  - If you are installing over a network, start up your computer and find the Installer on your file server.
- 3 Open the Installer by double-clicking its icon.
  - 4 When you see the Installer's welcome screen, click Continue. The Easy Install dialog box then appears.
  - 5 Make sure the destination disk indicated on the screen is the one on which you want to install the software. If the wrong disk name appears, click the Switch Disk button until the correct disk appears.





- 6 Hold down Shift-Command-K to start the clean installation. (This shortcut installs a new system folder and automatically renames your former system folder “Previous System Folder.”)
- 7 When a dialog box appears, click Install New and OK. The dialog box then closes and in the Easy Install dialog box, the Install button changes to Clean Install.
- 8 Follow the on-screen instructions.

**Note:** If you encounter problems while installing the software, refer to Hardware-Software Procedures/Software Troubleshooting/System 7.5 Installation Problems. When you see a message reporting that the installation was successful, restart the computer.





**Note:** MacTCP, CloseView, and Easy Access are not part of the Easy Install process under System 7.5. You must perform a Custom Install to include these features. To install MacTCP, click Custom Install, expand the view for Networking Software, and click MacTCP. To install CloseView and Easy Access, click Custom Install, expand the view for Control Panels, and click CloseView and Easy Access.

- 9 Verify that all problems are resolved. After performing a clean installation, verify that you resolved the system problems before adding anything to the new System Folder.





## Transfer Potentially Incompatible Items

Transfer and test files in “May Not Work with System 7.5” folder. When you used the Safe Install Utility, you transferred potentially incompatible extensions or control panels into a folder called “May Not Work with System 7.5.” After installation, you may want to enable and test some of these extensions as follows:

- 1 Drag one file from the “May Not Work with System 7.5” folder to the System Folder icon. (When you drag a file to the System Folder icon, rather than into the open System Folder, the system automatically puts the file where it belongs. For example, system extensions automatically go into the Extensions folder.)
- 2 At the dialog box that asks if it's OK to put the file where it belongs, click OK.





- 3 Restart your computer. If your computer starts up, continue with the next step. If the computer does not start up, the file is probably incompatible with System 7.5. To disable the file, hold down the Space bar while you restart your computer. When the Extensions Manager opens, find the file and click its name to disable it. Close the Extensions Manager to resume startup.
- 4 Go back to the first step to enable and test another extension.
- 5 Use the computer for a while and see if any problems occur.
- 6 Repeat the preceding steps for each file in the "May Not Work with System 7.5" folder that you want to test.
- 7 Check any problem extensions' version numbers for compatibility. Try reinstalling the extensions from original floppy disks, or contact the software vendor.





## Transfer Nonstandard Items

In addition to enabling files in the "May Not Work with System 7.5" folder, you can also reinstall items from the Previous System Folder. If possible, reinstall these items from their original disks.

If the original disks are not available, move the nonstandard items from the Previous System Folder to the new System Folder. Be careful not to replace anything that is already in the new System Folder. Drag the files onto the System Folder icon and the system will automatically place the files into the correct folder within the System Folder.

To transfer the files:

- 1 Open each corresponding folder within the System Folder and the Previous System Folder and compare the contents.





- 2 Transfer items not already in the new System Folder from the Previous System Folder.
- 3 Restart the computer.





## Troubleshoot Incompatible Extensions

### Check for Extension Conflicts

If your computer fails to restart or behaves erratically after you have transferred nonstandard items to the new System Folder, you probably have an incompatible or conflicting system extension or control panel.

To verify this problem, follow these steps:

- 1 Restart the computer and after you see the picture of a smiling computer, hold down the Shift key.
- 2 Release the Shift key when the “Welcome to Macintosh, Extensions Off” message appears.
- 3 When the computer is ready, try to recreate the erratic behavior.





If the problem no longer occurs, you have a conflicting or corrupt extension or control panel. Continue with the next section, “Troubleshoot Incompatible Extensions.”

### **Identify Incompatible Extensions**

If you are experiencing extension conflict problems, use the following steps to troubleshoot the extensions:

- 1 Open the Control Panels from the Apple Menu. Double-click the Extensions Manager control panel.
- 2 Go to the Sets menu and select System 7.5 Only. (This procedure deselects all nonstandard extensions and control panels, such as virus protection, screen savers, compression utilities, etc.)
- 3 Go to the Special menu and choose Restart.
- 4 Attempt to recreate the original problem. If you cannot,





continue these steps to determine which of the nonstandard extensions is causing the problem.

- 5 Open the Extensions Manager control panel, turn on one of the disabled extensions by clicking its name, and restart the computer.
- 6 Attempt to recreate the original problem.
- 7 Repeat the previous two steps for each disabled extension until the problem recurs. The last item enabled is probably the cause of the problem.
- 8 Check the problem extension's version number for compatibility. Try reinstalling the extension from original floppy disks, or contact the software vendor.





## **Verify that Applications Perform Normally**

If there are problems with an application, refer to the application's user manual or contact the application's developer.

## **Empty Trash**

When the computer behaves as expected and you're sure you've transferred all needed items from the Previous System Folder, drag the folder to the Trash and choose Empty Trash from the Special menu.





# Mac OS 7.6: Clean Install Instructions

## **Purpose of a Clean Installation**

A normal system software installation modifies and updates the existing System Folder. A clean installation disables the existing System Folder, leaving all files in place, and forcing the Installer to create a new System Folder.

A clean system installation brings the system software back to the standard configuration. This is necessary when system software has been damaged or modified, preventing a normal installation. It is also useful in troubleshooting.





## Clean Install Instructions

Follow these instructions in the order presented.

### **If you have a Disk Tools Disk:**

- 1 Shut down your Macintosh computer.
- 2 Insert Disk Tools in the floppy drive, and turn on the computer. At the desktop, the Disk Tools floppy disk's icon should be in the upper-right corner of your screen with your hard drive's icon below it.
- 3 If the computer ejects the Disk Tools disk, make sure you have an Apple SuperDrive (formerly FDHD) that will read high-density disks and that you are using the appropriate Disk Tools that came with System 7.6.
- 4 Disk Tools Disk 1 is designed for use with all non-PowerPC machines except those with IDE drives.





- 5 Disk Tools Disk 2 is designed for use with all machines with IDE drives (LC 630, PowerBook 190, LC 580, Performa 640, etc.), and all PowerPC computers.

**If you have an MacOS 7.6 CD:**

- 1 Insert the Apple Macintosh CD in the CD-ROM drive.
- 2 Restart your Macintosh.
- 3 Hold down the letter 'C' on the keyboard and turn the computer on. Hold down the key until you see the "Welcome to Macintosh" message.
- 4 If the computer does not start from the CD, shut down the computer, turn on the computer and immediately hold down the Command-Option-Shift and the large Delete key simultaneously. Hold down these keys until you see the "Welcome to Macintosh" message.
- 5 At the desktop, the Apple Macintosh CD's icon should be





in the upper-right corner of your screen with your hard drive's icon below it. If any other hard drive appear above the Apple Macintosh CD, go to the Control Panels under the Apple Menu, open the Startup Disk item, select the Apple Macintosh CD, close all open windows and restart. The Apple Macintosh CD should then appear above the hard drive.

### **Run Disk First Aid**

- 1 Disk First Aid can detect and repair problems with a hard disk.
- 2 Open the Disk Tools disk or the Apple Macintosh CD. Apple Macintosh CD users should open the Utilities or Disk Tools Folder.
- 3 Double-click on the Disk First Aid icon. Select the main hard drive's icon at the top of the Disk First Aid window.





- 4 Click on Verify. Disk First Aid will check your hard disk for any potential problems. If it finds a problem, click Repair. It will attempt to fix the problem.
- 5 Repeat this procedure for each hard disk attached to the system.
- 6 When you are finished verifying the hard disks, choose Quit from the File menu to return to the desktop.

If Disk First Aid cannot repair a hard disk, you should back up the hard disk and reinitialize it using the appropriate formatting utility for that drive. For Apple drives, use Apple HD SC Setup or Drive Setup.

## **Install System 7.6 From Floppy Disk**

This assumes you have started the computer using the Disk Tools diskette.





- 1 You have finished using the Disk Tools disk so, choose Shutdown from the Special menu. The Disk Tools will automatically eject.
- 2 Insert the "Install Disk 1" disk into the Macintosh and turn the computer on. The computer will start up using the system file on the Install disk.
- 3 The "MacOS 7.6" welcome screen will come up.
- 4 Follow Step 1 in the MacOS installer by reading the ReadMe file. Click on the document icon, read the file if you have not already, then quit SimpleText and return to the Installer.
- 5 Follow Step 2 in the MacOS installer by updating the hard disk driver. Click on the button with 3 stacked drives. This launches Drive Setup or HDSC Setup, depending on which computer you are using. Select your hard drive, then click on the Update Driver button. You





will be prompted to quit the application and return to the Installer. (See note)

- 6 Follow Step 3 in the MacOS installer by choosing the drive you are installing onto. Click on the drive button. This will prompt you to choose a drive to install onto. Select the appropriate hard drive that has enough room, then click OK.
- 7 To install the software, click on the Installer button in Step 4 of the MacOS installer.
- 8 When the installer window appears, first select the features of 7.6 you wish to install. For further information about these features, refer back to the ReadMe file. Then click on the Options button. Select the box next to "Create New System Folder (Clean Installation)" and then click "OK." This will install a new system folder and rename you current folder "Previous System Folder."





9 Insert the other disks when instructed by the Installer.

**Note:** You cannot update the driver if you are using a non-Apple drive, or if you have used a third-party utility to reformat your drive.

## **Install System 7.6 From Mac OS 7.6 CD-ROM**

This assumes you have started the computer using the Mac OS 7.6 CD-ROM.

- 1 Open the Mac OS 7.6 CD icon.
- 2 Double-click the "Install Mac OS" icon.
- 3 The "Mac OS 7.6" welcome screen will come up.
- 4 Follow Step 1 in the installer by reading the ReadMe file. Click the document icon, read the file, then quit SimpleText and return to the Installer.





- 5 Follow Step 2 in the installer by updating the hard disk driver. Click on the button with 3 stacked drives. This launches Drive Setup or HDSC Setup, depending on which computer you are using. Select your hard drive, then click on the Update Driver button. You will be prompted to quit the application and return to the Installer. (See note)
- 6 Follow Step 3 in the installer by choosing the drive you are installing onto. Click on the drive button. This will prompt you to choose a drive to install onto. Select the appropriate hard drive that has enough room, then hit OK.
- 7 To install the software, click on the Installer button in Step 4 of the installer.
- 8 When the installer window appears, first select the features of Mac OS 7.6 you wish to install. For further information about these features, refer back to the





ReadMe file. Then click on the Options button. Select the box next to "Create New System Folder (Clean Installation)" and then click "OK." This will install a new system folder and rename you current folder "Previous System Folder."

**Note:** You cannot update the driver if you are using a non-Apple drive, or if you have used a third-party utility to reformat your drive.

When you are finished with the installation, restart the computer. If you started from the diskette, it will be ejected, however if you started from the CD-ROM you will need to eject the Mac OS 7.6 CD.

After performing a Mac OS 7.6 Clean Install and restarting the computer, "About This Computer" under the Apple Menu will no longer display the specific Macintosh name. Instead, it will display only "Macintosh", "Macintosh Powerbook",





or "Power Macintosh" depending on the type of computer it is running on.

## **Troubleshooting**

These steps assume you are using the Clean Install of system software for troubleshooting purposes.

### **Verify Problem Resolution**

After performing a clean installation, verify that you resolved the problem before adding anything to the new System Folder.

Adding items to the System Folder before resolving your problem defeats the purpose of performing a clean installation.





## Install Non-Standard Items

You can now reinstall the nonstandard items from the old System Folder (now named "Previous System Folder") such as fonts, screen savers and device drivers. If possible, you should reinstall these items from their original disks.

If the original disks are not available, you may move the nonstandard items from the Previous System Folder to the new System Folder. Be careful not to replace anything that is already in the new System Folder. Only move items that are not already in the new System Folder.

- 1 Open each corresponding folder within the System Folder and the Previous System Folder and then compare the contents.
- 2 Move up to 5 items that are not already in the new System Folder and its sub folders from the Previous System Folder and its sub folders.





- 3 Restart your Macintosh
- 4 Verify that the Macintosh is still starting up properly and that basic functions are working properly.
- 5 Repeat Steps 1-4 until all non-standard items have been moved from the Previous System Folder to the new System Folder.

### **Final Steps**

Verify your applications are performing normally. If not, refer to the application manual or contact the vendor.

When the Macintosh behaves as expected and you are sure that all needed items from the Previous System Folder are transferred or reinstalled, move the Previous System Folder to the Trash, and choose Empty Trash from the Special menu.





## Mac OS 7.6.1 System Update

If you have the Mac OS 7.6.1 Software update now would be an excellent time to complete the update.

The Mac OS 7.6.1 System Update is available through online services (America OnLine and Compuserve), Apple's Web site (<http://www.info.apple.com>) in the Software Updates section, and through the Apple Order Center. Updates are usually free-of-charge, but there can be a shipping/handling fee and you will still be charged by your online service for the time to download the Update.

More specific information about how to find the update on these services is available in Fax document #20729. If you do not have access to any online services, please call 1-800-SOS-APPL for more information.

This article is one of many available through the Apple Fax





center. For a complete list of available fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature). The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

