



Mac OS 8.1 Update

What's New, Installation, and Known Problems





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What's New in Mac OS 8.1 Update

Mac OS Extended Format

Mac OS 8.1 now supports a new volume format called Mac OS Extended format. The hard disk format supported by Mac OS version 8.0 and earlier is Mac OS Standard format. Mac OS Extended format optimizes the storage capacity of large hard disks by decreasing the minimum size of a single file. As an example, on a 4 GB hard drive a file containing only 4K of information requires 64K of space in Mac OS Standard format, whereas with the Mac OS Extended format, it will require the actual 4K on the 4 GB hard disk.

Existing hard disks formatted with Mac OS Standard format will continue to function and be supported by Mac OS 8.1. To determine whether a disk was initialized with Mac OS





Standard format or Mac OS Extended format, select the disk, and choose "Get Info" from the File menu.

If you want to use Mac OS Extended format on one or more of your hard disks, please refer to "[About Mac OS 8.1 Extended Format](#)" later in this document. For additional help in creating and using a Mac OS Extended format volume as a start up volume, please go to: <<http://www.apple.com/support>>.

Universal Disk Format 1.0 (UDF)

UDF is a new industry standard file format. The version of UDF in Mac OS 8.1 supports UDF formatted CD ROM discs and UDF formatted DVD ROM discs. In order to use a UDF formatted DVD ROM disc, your computer must have a DVD ROM drive and the appropriate driver. UDF requires a 2x or faster CD ROM or DVD ROM drive.





LaserWriter 8.5.1

LaserWriter 8.5.1 adds support for IP printing, Custom Page Size, PostScript 3 printers, Acrobat PDF files in the Save As File option. It also improves support for ColorSync and adds support for Desktop Printer Utility.

PC Exchange 2.2

PC Exchange supports VFAT and FAT32 volume formats as used by Windows 95. Support for Long File Names (LFN), DOS (FAT) file system and FAT32 support for 4 GB Volumes has also been added. PC Exchange now has better support for removable media, such as Jaz, Zip, and PMO.

Problems with Pinnacle Magnetic Optical DOS formatted drives, Maxtor SCSI hard drives, PC formatted Quantum 160MB hard drives and SCSI DOS drives greater than 1 GB





have been addressed. Plus:

PC Exchange will now mount drives over 1 GB.

Get Info now shows the correct number of items on a DOS disk.

PC Exchange now works with shared folders.

Open Transport 1.3

Open Transport 1.3 provides improved performance and single-link multihoming support. Complete details are provided in OT 1.3 information.

Finder

Now has improved performance when copying to and from shared volumes.





Sound

Previously, audio management was determined by your computer, now your applications control audio input and output setups. There is a new control strip module which allows easier user selection of sound input source.

Mute selection in the Monitors & Sound control panel retains its settings with volume changes.

Mac OS 8.1 CD Additions

Location Manager 2.0.1

Now works on all Mac OS computers.





QuickDraw 3D 1.5.3

Fixed incompatibilities with some high-end 3D rendering applications.

Mac OS Runtime for Java 2.0

This is Apple's implementation of Sun's JDK 1.1.3 specification. More information provided in the Mac OS Runtime for Java 2.0 documentation.

Internet Explorer

Microsoft Internet Explorer is now the default Browser for clean install or new computers. Internet Explorer uses Apple's MRJ as its Java engine.

If you use Internet Setup Assistant to register with an ISP, the Netscape Navigator Browser will be used.





Find File

Find File has been added to the Apple Menu when the Mac OS 8.1 CD is used to startup your computer so that you can find a file easily. The copy feature of the Find File (or dragging a file from the Items Found window) does not work because the startup volume is locked. If you need to copy a file that you found, open its enclosing folder by double-clicking on it in the lower part of the Items Found window.





Known Issues with Mac OS 8.1

Installation

When doing a custom install from the Mac OS 8.0 CD or Mac OS 8.1 CD, if a component is selected which is newer in Mac OS 8.1, a dialog will be presented which states that a newer version already exists. This will give you the option of selecting the older or newer version. Select the newer version because the older version may not be compatible with Mac OS 8.1.

Important: When using the Mac OS 8.1 CD, the installer first runs the Mac OS 8 installation and then automatically runs the Mac OS 8.1 Update, LaserWriter 8.5.1, and Open Transport installations. This occurs when you are doing either an Easy Install, a Custom Install, or Custom Remove.





Acrobat 3.0

Because of installation order requirements, please refer to the About Adobe Software document.

Netscape Navigator 4.04

If you do not already have an ISP (Internet Service Provider) and plan on using the Internet Setup Assistant to obtain one, register for one before upgrading to Netscape Navigator 4.04 which has been provided on the Mac OS 8.1 CD in addition to Netscape Navigator 3.01. Existing accounts will work without any problems, but you may not be able to create any new ISP accounts once you have upgraded to Netscape Navigator 4.04.





Display Name Change

AppleVision 750 and 850 displays were recently renamed ColorSync Displays. Mac OS 8.1 delivers a new Monitors & Sound Control panel which will identify these monitors as ColorSync Displays. You can continue to use the AppleVision 750 or 850 ColorSync profiles as they are identical to the renamed versions.

DVD disc will not mount after bootable CD

If you have a DVD ROM drive connected to your computer and start up the computer with a bootable CD ROM disc in the drive, but not as the boot volume, you may not be able to use DVD discs until you remove the CD ROM disc and restart the computer. To use the DVD ROM drive make sure you do not have a bootable CD ROM disc in the drive when starting the computer unless you are booting from it. After starting the





computer, you may then use both CD ROM and DVD discs.

Password Security and booting from Mac OS Extended

When using a Mac OS Extended formatted drive as your start up disk, the Password Security control panel will not function properly. Do not use the Password Security control panel if you plan to password protect and then start up from a Mac OS Extended formatted volume.

Do not try to reformat a disk drive which currently is password protected.

LocalTalk PCI

Mac OS 8.1 installs a new extension on some models called





LocalTalkPCI which is a PowerPC version of the LocalTalk driver. This new driver provides improved performance when using LocalTalk. However, this improved performance can cause some LocalTalk printers to be invisible when using the Chooser to select a printer. If you encounter this problem use the Extensions Manager to disable LocalTalkPCI and the printer will become visible and selectable.

Sound

The following items do not effect Macintosh 68K and Power Macintosh 6100/7100/8100 series computers, nor Mac OS compatibles based upon the Power Macintosh 6100/7100/8100 series.

- With Mac OS 8.1, the Sound control panel found in the Apple Extras folder can no longer be used to set the sound input source. Use the Monitors & Sound control panel or a new control strip module to change the input





source.

- Changing the volume in the Sound control strip module will not unmute the computer. If you have selected the mute check box in the Monitors & Sound control panel, you must use Monitors & Sound to unmute the computer.
- When using the PC Compatibility software with a DOS compatible system, you may need to manually select the sound input source after inserting an audio CD. The PC Compatibility software plays sounds through the CD input source, so you must select CD input in the Monitors & Sound control panel or the SoundSource control strip module to hear sounds from the PC Card.
- When using Apple Speech Recognition version 1.4.1 software on some computers, an error will be reported that your microphone is not standard or is not connected. This error is reported when turning on the Speakable Items feature. To avoid the error, select "none" as the sound monitor source before turning on





this feature, then change the monitor source to "Microphone". This error may be ignored, and the Speech Recognition software can be used normally. This will occur on PCI-based computers and some PowerPC-based PowerBook computers.

Printing

- Use QuickDraw GX 1.1.6 or later with Mac OS 8.1.
- Desktop Printer Utility
- Desktop printers created with the Desktop Printer Utility will not appear configured in the Chooser, but the printer will still operate normally.

To create a printer in a different AppleTalk zone, do not use the Desktop Printer Utility found in the Apple Extras folder. Use the Chooser from the Apple Menu to create the printer.





Apple Language Kits and Mac OS 8

Apple's language kits require an updater for full functionality with this version of the Mac OS. The Language Kit Updater for Mac OS 8 can be downloaded from the software updates area of Apple's Web site, America Online, and other sites where Apple software updates are available.

After an Apple language kit is installed on a Mac OS 8.1 system you must also install the Language Kit Updater for Mac OS 8. Following that, you must open the Language Kit Additions folder within the Extensions folder and remove all LaserWriter and PrintLib files which have a version earlier than 8.5. Not removing these files can cause the application to unexpectedly quit when you attempt to print.

Apple does not recommend installing system software by making a copy of an existing system folder because important files used when starting up may not be found and





the system software will have to be reinstalled.

Mac OS Extended and Language Kits

The Disk Tools PPC that is supplied with Mac OS 8.1 is intended for use with the primary script and English. If you are using a Language Kit (secondary script) you must use the Mac OS 8.1 CD. If you use a Disk Tools PPC floppy which you have created to startup the computer, file and volume names that were created with the secondary script will appear scrambled or missing. If you attempt to change any of them, the files may become lost.





Miscellaneous

G3 PowerBooks and PowerBook 3400

AppleTalk zones are unavailable when booting from the Mac OS 8.1 CD on G3 PowerBooks and PowerBook 3400.

ARA 3.0

If you are going to install ARA 3.0, do not select the Apple Remote Access optional install when installing Mac OS 8.1. Do not install ARA 2.1 over 3.0.

When using ARA 3.0 do not use Internet Dialer as the connection application, instead use the Remote Access to connect.





Video Cards

While starting up on some computers, the screen may flash, go black and reappear. This is normal and occurs when a ROM video driver is replaced by a newer driver in the system folder. It occurs with some Apple and third party video cards.

Apple Video Player MPEG movies

If Apple Video Player cannot find an MPEG movie due to the movie's title, use MoviePlayer's import command.

Apple Video Player

There is a problem recording video in Apple Video Player when the 'no compression' option is selected and Virtual Memory is turned off. When you stop recording, the computer may appear to hang for two to four minutes and the





following error message "An error occurred while trying to record" appears and you will not be able to save the recording. To avoid this problem turn Virtual Memory on or select a different compression option.

Compatibility Issues with Third Parties

Mac OS 8.1 and Mac OS Extended format issues

There are several types of programs that may be incompatible with Mac OS 8.1 and the new Extended format:

- Utilities that check the integrity of a disk volume
- Programs that provide password security for volumes
- Audio and video programs that write data directly to the volume.

Please contact the vendor of the program for revised versions.





Norton Utilities

Norton Utilities 3.5.3 is compatible with Mac OS Standard volumes, but Mac OS Extended volumes are treated as remote volumes and cannot be accessed.

If you are using the Norton Utilities for Macintosh 3.5.1 or earlier, do not run the following Norton Utilities on a Mac OS Extended volume: Disk Doctor, Speed Disk, Wipe Info, FileSaver, UnErase, Volume Recover, and Disk Editor. Later versions of the Norton Utilities for Macintosh will support the Mac OS Extended format and will be available on the Symantec web site: <www.symantec.com>.

Conflict Catcher

Conflict Catcher is not compatible with the Mac OS 8.1. Casady and Greene has requested Apple disable the program due to the severity of this incompatibility. If the files are





found, an error message will indicate the Conflict Catcher extension is located in the Mac OS Extension folder and must be disabled before installing Mac OS 8.1. Please contact Casady and Greene for version 4.1 which is compatible with Mac OS 8.1 by calling (408)484-9228 or visiting their Web site at <www.casadyg.com>.

PGPdisk 1.0

Functions correctly on Mac OS 8.1 provided the PGPdisk volume file is located on a Mac OS Standard volume. If it is located on a Mac OS Extended volume, you will get an error after the passphrase is entered for that volume, and it will not appear on the desktop. All data remains intact. To access the volume, you need to either obtain PGPdisk 1.0.1 or move the volume file to a Mac OS Extended volume. Contact PGP at <<http://www.pgp.com>> for information regarding updates.





PC Cards

Because of changes in Mac OS 8.1 some third-party PC Card drives will no longer function. Some updated drivers have been provided in the CD Extras folder. Please contact the PC Card vendor for other drivers as needed.

Quarterdeck Mail (also known as Microsoft Mail for Networks)

Client applications, versions 4.1 and earlier, are not compatible with Mac OS 8.1. For information on upgrading to version 4.2, please contact StarNine/Quarterdeck at info@starnine.com or www.starnine.com.

AdobePS 8.5.1

If your printer comes with the AdobePS 8.5.1 installer and you wish to continue using other LaserWriter printers





follow the steps outlined here.

Before installing AdobePS 8.5.1, find and move the PrintingLib extension from the Extensions folder to your desktop. Install AdobePS 8.5.1. Drag the PrintingLib extension from your desktop back into the Extensions folder. A dialog will warn you that a file with that name already exists: click OK to replace it with the one from your desktop. The version of PrintingLib that is available with Mac OS 8.1 includes all of the functionality of AdobePS 8.5.1.

If you have already installed AdobePS 8.5.1, find and move the PrintingLib extension to the Trash. Then install Mac OS 8.1.

Mac OS 8.0 Issues not fixed with Mac OS 8.1

- PowerBook 1400 computers and Apple Video Player.





There is no support in Apple Video Player for the PowerBook 1400 series computer. Open the MoviePlayer application found in Apple Extras folder to view MPEG files using QuickTime MPEG software.

- PowerBook 190, 190c, and 5300c computers. On PowerBook 190, 190c or 5300c computers the display may appear blank when you first restart after installing Mac OS 8, or after resetting PRAM. This is because the power manager is being updated on the PowerBook. Restarting the PowerBook one more time will result in a normal screen. To shut down the PowerBook safely, press the Power button one time (which brings up the shutdown dialog box) then press the Return key.
- MBDF virus and Mac OS 8. If you notice that the menubar becomes white and disables the menubar clock, your computer may be infected with the MBDF virus. With previous versions of the Mac OS, you may not have noticed that your computer was infected with this virus.





Use a virus detection application to identify and remove MBDF and other viruses from your computer.

Note: Please refer to the Mac OS 8 Read Me for other known issues.

Mac OS 8.1 TIL Articles

Mac OS 8.1: FM Radio Error After Installation (22141)

I just installed the Mac OS 8.1 update. When I try to open the Apple FM Radio application, I keep getting the message "The FM Radio Component in the Extensions folder is not the correct version." What could be causing this message?

Mac OS 8.1: Where Have All My Files Gone? (24319)

If you have used Mac OS 8.1 to format your hard drive as





a Mac OS Extended Format (HFS+) volume, a single text file containing the following information is the only file that will appear on your hard drive.

Mac OS 8.1: Aliases Cannot Find Originals (30350)

I updated my System Folder from Mac OS 8.0 to 8.1, backed up my entire hard drive, reformatted it as Mac OS Extended format, and restored all my files from backup. Now, none of my existing aliases work, and any new aliases I create cannot find the originals either. What's wrong?

Mac OS 8.1: Using non-Apple CD-ROM Drives(30346)

Power Computing customers and Mac OS-Compatible computer customers may need to create special Disk Tool disks for using with Mac OS 8.1. This process will be the same as previously with Mac OS 8.0.





Mac OS 8.1: Certain Mac OS 8.1 Extensions Appear Corrupted or Damaged (22142)

Mac OS 8.1 installs various system extension files which may appear corrupt or damaged when inspected by certain third-party utility software.





How to Install Mac OS 8.1

This section describes how to install Mac OS 8.1. It includes compatibility information, instructions for installing Mac OS 8.1, and basic installation troubleshooting.

Updating your system using the downloaded Mac OS 8.1 Update image requires that you already have Mac OS 8.0 installed. If you are using the Mac OS 8.1 Reference CD, you may install onto Mac OS system versions 7.5 through 8.1.

For more information, see the Mac OS 8 installation manual.

WARNING: PowerTalk is not compatible with Mac OS 8.1. After you install any version of Mac OS 8, you will not be able to access your PowerTalk mail or catalogs, nor will you be able to use your keychain or other PowerTalk services. See the Mac OS 8 installation manual for more information.





WARNING: Application programs that use QuickDraw GX may not be able to print due to changes in the version of QuickDraw GX included with Mac OS 8. See the file About QuickDraw GX for more information.

Before You Install

Important: In order to install Mac OS 8.1 on PowerPC machines with less than 16 MB of RAM, it will be necessary to reboot with extensions off (by holding the shift key until you see the Welcome to Mac OS message).

Important: If Apple Remote Access 3.0 (ARA 3.0) Personal Server is installed, make sure answering is off before upgrading to System 8.1. To ensure answering is off in ARA 3.0, make sure the answering option is unchecked in the ARA Answering dialog. To get to the dialog, open the Remote Access control panel and select Answering... from the Remote





Access menu. After the 8.1 update installation has successfully completed, turn answering back on from the same dialog.

Note: If you want to create and use a Mac OS Extended format volume, make sure that you read the file “About Mac OS Extended format.”

Before You Install Steps

- 1 Turn off any security software that you may have installed on your computer.
- 2 Turn off any virus-protection software that you may have installed on your computer.
- 3 If you have a PowerBook, make sure that it is plugged into AC power and set not to go to sleep.
- 4 If you have AppleShare software earlier than version





3.6.4, you should upgrade to version 3.6.4 before installing Mac OS 8 over a network. See the document in the AppleShare folder in the Utilities folder for instructions.

- 5 When doing a clean install, write down your current Internet settings, such as the IP address, subnet mask, name server, and so on. After installation, the Internet Setup Assistant will ask you to enter this information.

Important: Apple recommends that you make a Disk Tools floppy disk; if you have downloaded the Mac OS 8.1 Update from the Apple Internet website, make sure that you also download the Disk Tools for PPC disk image. For all Mac OS compatible computers with a 68040 processor, except the PowerBook 190, use the "Disk Tools 1" disk. If you have a Mac OS 8.1 CD-ROM disc, you will find this disk image in the Disk Tools Images folder.





To make a Disk Tools floppy disk :

- Run the Disk Copy program
- From the "Utilities" menu select "Make a Floppy ..."
- Find the disk image "Disk Tools for PPC" and select it
- Press the Open button
- When requested insert a 1.4 MB high density floppy disk
- When asked if you are sure that you want to erase the floppy, press the "Yes" button
- After the floppy disk is finished copying, remove it from the drive
- Select "Quit" from the "File" menu

Disk Space Requirements

The amount of disk space required to do a full install of Mac OS 8.1 will vary greatly dependent on several factors as outlined below.





- The First is the size of the hard disk volume being used.

For Mac OS Standard format volumes, the larger the volume the more space that will be required. This is because the minimum file size supported on a Mac OS Standard format volume increases as the size of the volume increases.

For Mac OS Extended format volumes, the amount of space needed is the same regardless of volume size because the minimum file size is a constant.
- The Second size factor is the number of optional software packages that you choose to install. Apple has preselected some optional software packages, but you have the option of selecting others or deselecting the preselected packages.
- The Third size factor depends on what method was used to start the computer. If the computer was started up from the volume that is being updated or from the Mac OS 8.1





CD, Disk Tools Floppy or another volume, such as an external Hard Disk more space will be required. When the computer is started up from the volume that is being updated, the installer must create temporary files that are used until the computer is restarted.

- The Fourth size factor is the type of computer that you have. Each model has a slightly different set of Mac OS system components required to be installed to function correctly.
- The Final size factor depends on the volume onto which you are performing the install: whether or not the volume already has Mac OS system files and if the "clean install" option was selected.

Below are tables which suggest requirements for easier installation, as well as space used after installation process is complete.





Table 1—An Install of just the base Mac OS system software with all of the optional items deselected:

Volume Size	Format Install	Needed for Restart	Used After
2 GB	Standard	135 MB	68 MB
1 GB	Standard	120 MB	58 MB
500 MB	Standard	115 MB	50 MB
Any size	Extended	118 MB	56 MB





Table 2—An Install of the base Mac OS system software and the Apple preselected optional software using the Mac OS 8.1 CD to start up the computer:

Volume Size	Format Install	Needed for Restart	Used After
2 GB	Standard	152 MB	140 MB
1 GB	Standard	139 MB	129 MB
500 MB	Standard	127 MB	117 MB
Any size	Extended	132 MB	122 MB





Table 3—An Install of the base Mac OS system software and the Apple preselected optional software onto the volume that was used to start up the computer: (**Note:** This is not a recommended method.)

Volume Size	Format Install	Needed for Restart	Used After
2 GB	Standard	190 MB	140 MB
1 GB	Standard	176 MB	129 MB
500 MB	Standard	162 MB	117 MB
Any size	Extended	172 MB	122 MB

When doing a "clean install" the space required is in addition to the amount used by the current System folder.





Installation Procedure

- 1 Start up your computer using the Mac OS CD-ROM disc or an appropriate Disk Tools floppy disk. See your installation manual for instructions.
- 2 If you can't start up with the Mac OS 8.1 CD or Disk Tools floppy disk, be sure to do the following additional step: Disable all non-Apple extensions and control panels. If you have System 7.5 or later, use the Extensions Manager control panel to select the System 7.x or Mac OS 8 base set of extensions and control panels. See the installation manual for more details.
- 3 Restart your computer before installing Mac OS 8.1.
- 4 Although compatibility problems are not expected, you can ensure a smooth upgrade by checking with the manufacturers of any non-Apple software you use to make sure it is compatible with Mac OS 8.1. If you do





experience a problem, see the troubleshooting chapter in your installation manual for more information on isolating compatibility problems.

- 5 When reinstalling Mac OS 8.1 onto a volume which already contains a Mac OS 8.1 system file, after selecting the volume a dialog will appear asking if you want to reinstall or if you want to perform a custom install/remove. If you select the reinstall option, the Mac OS 8.0 installation program will display a series of dialogs stating that newer versions of some components are already present. In order to perform a reinstall, you must press continue for each of these dialogs. After the Mac OS 8.1 installation program finishes, the Mac OS 8.1 updater will reinstall the previously mentioned components.





Compatibility Information

Computers With 68040 Processor Upgrade Cards

Computers upgraded to 68040 with a processor upgrade card are not supported by Mac OS 8.

Performa or Power Macintosh 5000 and 6000 Series Computers

Performa or Power Macintosh 5000 and 6000 series computers Some Performa or Power Macintosh 5200 series, 5300 series, 6200 series, and 6300 series models cannot use Mac OS 8.1 until a hardware problem is fixed. The repairs are covered under the Apple repair extension program. To see if your computer has this hardware problem, use the 5xxx/6xxx Tester utility in the Utilities folder on the CD before installing Mac OS 8.1.





Important: The Power Macintosh or Performa 6320, 6360, and 5260 do not have this hardware problem. If you have a Power Macintosh or Performa 6320, 6360, or 5260, you do not need to use the tester program.

Installing Mac OS 8.1 on Accelerated NuBus PowerPC Computers

If you have a Power Macintosh 6100, 7100, 8100, or 9150 with a third-party accelerator that increases the clock speed of your computer, the Installer might refuse to install Mac OS 8.1 because it doesn't recognize your system. You may need to remove the third-party accelerator before installing Mac OS 8.1.

MacODBC and Mac OS 8.1

If you use MacODBC, you should either install it before





installing Mac OS 8.1, or perform a custom install of MacODBC and make sure the ASLM extensions are not selected. The MacODBC installer installs older versions of ASLM extensions that are incompatible with Mac OS 8.

Third-Party Finder and Utility Software

Some third-party programs that extend or add features to Mac OS may be incompatible. Examples include programs that change the way menus work, change how files are stored, or alter the way you work with files in the Finder. Contact the software's manufacturer for information about using such programs with Mac OS 8.1. This is especially important if you're using a program that automatically alters the way files are stored (such as compressing them) because you might not be able to access those files until you obtain updated software for use with Mac OS 8.1.





400K Diskettes and Mac OS 8

The 400K MFS diskette format is not supported by Mac OS 8.1. If you have information or programs on obsolete 400K diskettes that you want to access, copy the files to your hard disk, an 800K diskette, or a 1.44 MB diskette before installing Mac OS 8.1.

Using the Install Mac OS 8.1 Program

To ensure a successful upgrade, use the Install Mac OS 8.1 or the Update to Mac OS 8.1 program to install the software. This program performs all the tasks recommended for a successful installation and simplifies the installation process. Refer to the Mac OS 8 installation manual and the onscreen help in the program for more information.

If you select the information button for a component in the





installer, while doing a custom install, the installer may report an earlier version number than the component that is actually installed. For example, the information button for Apple Video Player will report the version to be installed as 1.6.2. This is incorrect. Version 1.7.1 of Apple Video Player will actually be installed.

Troubleshooting Suggestions

Some Apple-branded disks manufactured by third parties, including the Apple 365 MB external hard disk, are not supported by the Apple disk utilities. If your disk cannot be updated with the Apple utilities, you will need to use a third-party disk utility to update the driver.

If you see a message that your disk has problems and cannot be repaired, turn off file sharing if it is on, then try installing again. If that does not work, try using another





disk-repair utility. If you do not have another utility, or if that utility also does not work, you may need to reinitialize the disk. Copy all your files to another disk first, as reinitializing erases the disk. For more information about reinitializing, see the manual that came with your computer.

If you experience problems during installation, be sure to start up with the Mac OS 8.1 CD-ROM disc or the Mac OS 8.1 Disk Tools floppy disk. See your installation manual for instructions.

If you are installing over a network, or if you have a non-Apple CD-ROM drive and can not start up with the CD or disk, turn off all extensions that were not provided with your system software. Then restart the computer.

See the troubleshooting chapter in your installation manual for additional suggestions.





Late Breaking Tips

Password Security

Mac OS 8.1 will not install the new Password Security control panel on a PowerBook 2400 or 3400 unless it already exists in the Control Panels folder. To get a working version of the Password Security control panel, you can custom install it from the Mac OS 7.6.1 CD and then install Mac OS 8.1. Alternatively, the new control panel (version 1.0.6) is available at Apple Software Updates in the PowerBook section.

Note: Mac OS 8.1 installs version 1.0.6 of the Password Security control panel and this version is required to work correctly with Mac OS 8.0 or Mac OS 8.1.





If You Need To Make AppleTalk Inactive

The default networking option for the Macintosh is to use the printer port for AppleTalk. In order to use the printer port for a serial device it is necessary to stop using the printer port for AppleTalk. There are two ways to accomplish this.

The first is to move AppleTalk to another port such as Ethernet (if you are connected to an Ethernet network). The second method is to make AppleTalk inactive.

During the migration from Classic Networking to Open Transport, older components of the networking software have not been upgraded to fully support Open Transport. Two such components are the Chooser and the AppleTalk Switch Control Strip Module. If AppleTalk is made inactive using either the Chooser or the Control Strip then only Classic AppleTalk components are made inactive. Open Transport AppleTalk components are still active. When you attempt to





use the printer port for a serial device the following error messages (or similar messages) may result.

- "Printer port is in use by another application"
- "Cannot find printer"
- ".[XXX printer driver] requires that AppleTalk is inactive. Please make AppleTalk inactive."

The recommended method of making AppleTalk inactive under Open Transport is to:

- 1 Open the AppleTalk control panel.
- 2 Select User Mode under the Edit menu (or Command-U).
- 3 Select Advanced user mode and click OK.
- 4 Click on the Options button.
- 5 Select Inactive and click OK.
- 6 Close the AppleTalk control panel.





7 Save the changes.

Location Manager 2.0.1 offers a convenient way to turn AppleTalk on and off. For more information, please see the Read Me included with Location Manager 2.0.1.

PlainTalk Text To Speech Info

PlainTalk Text To Speech, when used with a GeoPort, may cause a crash when used with Mac OS 8.1. Apple is aware of this problem and expects to have a solution with the next Mac OS release.

Creating a Mac OS Extended volume for use as a startup volume

For steps on how to do this, please consult the Tech Info





Library article: Mac OS 8.1: [Creating a Mac OS Extended Startup Volume](#) - /techinfo.nsf/artnum/n30339. The text of this TIL article is included in this document.

Note: Apple recommends that you do not use a Mac OS Extended formatted volume as your startup disk unless you have the Mac OS 8.1 CD.





About Mac OS 8.1 Extended Format

This section discusses the new volume format called the Mac OS Extended format.

Important: Apple recommends that you do not use a Mac OS Extended formatted volume as your startup disk unless you have the Mac OS 8.1 CD.

Mac OS 8.1 Volume Formats

Mac OS 8.1 now supports a new volume format called the Mac OS Extended format. The hard disk format supported by Mac OS 8.0 and earlier is now referred to as the Mac OS Standard format. Mac OS Extended format optimizes the storage capacity of large hard disks by decreasing the minimum size of a single file. As an example, on a 4 GB hard drive a file containing only 4K of information requires 64K





of space in Mac OS Standard format, whereas with the Mac OS Extended format, it will require the actual 4K on the 4 GB hard disk.

Always Backup Your Hard Disk Before Initializing

Whenever you initialize your hard disk, you must first back up your files. Initializing will erase all the data on the hard disk.

Mac OS Extended format is Supported by Mac OS 8.1 and Later

All computers must have Mac OS 8.1 or later installed to access the files on a Mac OS Extended format volume that is directly connected to the computer. If a Mac OS Extended format volume is connected to a computer running Mac OS 8 or earlier, you will not see any of the files on the hard disk.





You will see a document explaining that your files are still on the hard disk, but inaccessible. You will be able to access those files once you connect that hard disk to a computer running Mac OS 8.1 or later. However, Mac OS Extended formatted volumes shared on a network by a computer running Mac OS 8.1 or later can be seen by a computer running Mac OS 8 or earlier.

When to Choose Mac OS Standard instead of Mac OS Extended format

Volumes smaller than 32 MB can not be initialized as Mac OS Extended format; if you attempt this using the Drive Setup application it will state the "Initialization Failed." Floppy disks can not be initialized with Mac OS Extended format.

The storage efficiency of Mac OS Extended format typically applies to 1 GB or larger volumes.





How to Initialize with Mac OS Extended format

After backing up your data, you must initialize your hard disk to change the format from Mac OS Standard format to Mac OS Extended format. Always backup your hard disk before initializing. Initializing erases all the data on the hard disk. Once you have backed up your data, you can choose to use either of the following options to initialize the hard disk:

Option 1: In the Finder, select the hard disk you wish to initialize. Choose Erase Disk... from the Special menu. A dialog will be displayed which contains a pop-up menu where you can select Mac OS Extended format.

Option 2: Open the Drive Setup application, version 1.4 or later. Choose Initialize. A dialog will be displayed where you can specify Mac OS Extended format, as well as other initialization options.





Note: You must select the number of volumes in the Partitioning Scheme pop-up menu before selecting a volume format. Drive Setup can partition a disk into multiple volumes and each may have a different format.

After initializing, you may restore the data from your backup. After restoring, double-clicking on some aliases may result in the error "the original item could not be found". Locate the original file, and recreate the alias.

680x0 Specific Issues

680x0 processor computers can not use a hard disk initialized with Mac OS Extended format as the start up disk, but the Mac OS Extended format can be used on additional disks connected to a 680x0 computer running Mac OS 8.1 or later. In addition, you can not select a hard disk initialized with Mac OS Extended format in the Virtual Memory section





of the Memory control panel.

Text Encoding Converter Extension and Text Encoding Folder

Warning: Proper installation of Mac OS 8.1 will automatically place the Text Encoding Converter extension and the Text Encoding folder in the System Folder. In order for Mac OS Extended format to function properly, you must not move or delete these files.

Frequently Asked Questions about the Mac OS Extended format

What is Mac OS Extended format?

Mac OS Extended format is a new hard disk format that increases the number of allocation blocks on the disk. This





new format also allows more than 65,000 files on the hard disk. Mac OS Extended format optimizes the storage capacity of large hard disks by decreasing the minimum size of a single file.

What are the differences between Mac OS Extended format and Mac OS Standard format?

The most visible difference between Mac OS Extended format and Mac OS Standard format, other than the minimum file size, is the maximum number of files.

How do I know a hard disk is Mac OS Extended format?

Select the hard disk in the Finder and choose the Get Info command in the File menu. The format information will specify either Mac OS Standard or Mac OS Extended.





Should I reformat my hard disk to be Mac OS Extended format?

Mac OS Extended format is most useful for hard drives that are 1 GB or larger. Do not reformat a hard disk with Mac OS Extended format if it is intended to be used as the startup disk for a computer with a 680x0 processor.

Can I use my third party disk utilities with a Mac OS Extended format hard disk?

Some third party utilities may not be compatible with hard disk initialized with Mac OS Extended format. Consult the utility's documentation, or contact the vendor for compatibility information.

Can I Format my Server's Hard Disk as Mac OS Extended format if my Client Machines Have an Earlier





Version of Mac OS?

Yes. The server may use Mac OS 8.1 and Clients may have earlier versions of Mac OS. The clients will still be able to access all files on the server's Mac OS Extended formatted hard disks.

Where can I get more information on Mac OS Extended format?

Both Apple Guide and Mac OS Info Center have information on the new hard disk format. Choose the Help menu or double-click on the Mac OS Info Center icon on the desktop to access Mac OS Extended information.





Creating a Mac OS Extended Startup Volume

Apple recommends that you do not use a Mac OS Extended formatted volume as your startup disk unless you have the Mac OS 8.1 CD.

Important: In order to use a hard drive as a Mac OS Extended formatted drive, the drive must be erased. In addition, if you wish to boot from a drive formatted as Mac OS Extended, you will need a PowerPC-based Mac OS computer. You can use a Mac OS Extended formatted drive with a non-PowerPC-base Mac OS computer, but you will not be able to use it as a startup disk or use it as a hard disk for virtual memory.

Below are the steps required to use an Mac OS Extended volume as your startup volume on Power PC Mac OS compatible computers. There are two ways to get Mac OS 8.1





onto a Mac OS Extended Hard Drive.

Method 1

Updating Mac OS 8.0 to Mac OS 8.1 and installing it onto a Mac OS Extended volume

- 1 Update to Mac OS 8.1 or Install Mac OS 8.1. Follow the instructions under "[How to Install Mac OS 8.1](#)" or refer to the Installing Mac OS 8.1 Read Me.
- 2 Startup from the Mac OS 8.1 Reference CD.
 - Place the Mac OS 8.1 Reference CD in the CD drive
 - Select "Restart" from the "Special" menu
 - Hold the "C" key down on the keyboard until you see the "Mac OS" screen
 - Verify that you have started up from the CD by looking at the desktop. If the pattern looks similar to the image





ofnCDs, you are booted from the CD.

- 3 Make a backup all of the files on your startup disk
 - Copy your files to another hard disk
 - Copy them to a server on the network
 - If you want to use some other method to backup you hard drive please referred to the section below entitled "Other backup methods"

- 4 Reformat your volume to be Mac OS Extended. If you want to change the partitions on a hard drive refer to the Drive Setup Read Me. Otherwise, select "Erase Disk" in the Finder to create an Mac OS Extended volume.
 - In the Finder, select the volume you want to reformat by clicking on it once so that it is highlighted.
 - From the "Special" Menu select "Erase Disk..."
 - Type in the name you want the reformatted volume to be called
 - Using the Pop-up menu below the file name, select "Mac





OS Extended xxx". The xxx will be the size of the formatted volume.

- Click the Erase Button.

Warning: All of the data on the volume will be lost. You will not get a warning telling you that you are about to lose all of the data on the volume. Make sure that you have the right volume selected. If you erase the wrong volume there is no way to recover your data.

- 5 Restore the files that you backed up in step two.
- 6 Select "Restart" from the "Special" menu

Method 2

Installing Mac OS 8.1 on an empty drive

Follow these steps only if you have the bootable Mac OS 8.1





CD. Otherwise, follow the instructions in "Updating Mac OS 8.0 to Mac OS 8.1 and installing it onto an Mac OS Extended volume.

- 1 Start up from the Mac OS 8.1 Reference CD
 - Place the Mac OS 8.1 Reference CD in the CD drive
 - Select "Restart" from the "Special" menu
 - Hold the "C" key down on the keyboard until you see the "Mac OS" screen
 - Verify that you have started up from the CD by looking at the desktop. If the pattern looks similar to the image of CDs, you are booted from the CD.
- 2 Reformat your volume to be Mac OS Extended If you want to change the partitions on a hard drive refer to the Drive Setup Read Me, other wise you can use the Finder's Erase Disk function to create an Mac OS Extended volume
 - In the Finder, select the volume you want to reformat by clicking on it once so that it is highlighted.





- From the "Special" Menu select "Erase Disk..."
- Type in the name you want the reformatted volume to be called
- Using the Pop-up menu below the file name, select "Mac OS Extended xxx". The xxx will be the size of the formatted volume.
- Click the Erase Button.

Warning: You will not get a warning telling you that you are about to lose all of the data on the volume. All of the data on the volume will be lost. Make sure that you have the right volume selected. If you erase the wrong volume there is no way to recover your data.

- 3 Install Mac OS 8.1. Follow the instructions in the "Installing Mac OS 8.1" Read Me.
- 4 Restart your computer. Select "Restart" from the "Special" menu.





Other Backup Methods

It is possible to perform other types of backups. However you may have to perform extra steps.

Using removable hard drives

In step 2 above, when you start up your computer, the removable drive must be inserted in the drive.

Using a recordable CD.

Add the driver for your CD ROM drive to the Disk Tool PPC floppy disk as described in "Creating a custom startup Floppy" and use the floppy disk to start up your computer.

Using a tape drive

Add the driver for your tape drive to the Disk Tool PPC





floppy disk as described in "Creating a custom startup Floppy" and use the floppy disk to start up your computer.

Using a backup program to backup the files

Put the backup program on a floppy.

Creating a custom startup Floppy

If you have some special hardware that you need to use during the install process you may need to create a custom startup floppy. This special hardware could include a non-Apple CD-ROM Drive, Zip Drive, Jaz Drive, Bernoulli removable drive, SyQuest removable drive, tape drive, DAT drive, or CD discs other than the Mac OS system discs.

- 1 Create a startup floppy as described above
- 2 Remove the programs Drive Setup and Disk First Aid





- Select each file and drag them to the trash
- From the "Special" menu select "Empty Trash"
- 3 Copy the driver for your hardware from the system folder on your hard drive to the system folder on the floppy. The drivers are located in the "Extensions" folder in the "System Folder". If you are going to be using CD-ROMs other than the Mac OS CD-ROM, you will need to copy the "Apple CD-ROM" file to the System Folder on the floppy.
- 4 Make sure the custom floppy works
 - From the "Special" menu select "Restart"
 - Put the custom floppy in the floppy drive
 - After the system has finished starting up, verify that your special hardware functions.

Notes:

- The "Mac OS" screen is in black and white
- If you have two special pieces of hardware (like a





non-Apple CD ROM drive and a DAT drive) you may have to create two custom startup floppy because of the limited space on the floppy, one with each of the drivers.

