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System 7.1: Clean Installation from 1.44MB Disks (5/96)

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TOPIC -----

This article presents the steps necessary to perform a clean installation of system software version 7.1. Follow these instructions in the order presented.

DISCUSSION -----

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 most 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.

Follow these instructions in the order presented.

Restart with Disk Tools

Shut down your Macintosh computer, insert the Disk Tools diskette 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 disk's icon below it.

If the computer ejects the Disk Tools disk, make sure you have an Apple SuperDrive (formerly FDHD) that will read high-density disks. If your computer does not have a SuperDrive, you need system software version 7.1 on 800K disks. To get them, call the Apple Order Center.

The Tech Info Library article titled "Locating Vendor Information" can help you

search for the Apple Order Center's phone number.

Run Disk First Aid

Disk First Aid can detect and repair problems with a hard disk.

Step 1

Open the Disk Tools disk, and double-click on the Disk First Aid icon. In the window that appears, be sure the main hard drive is selected. If it is not, click the Drive button to select the main hard drive.

Step 2

Click once on Open and then once on Start. Disk First Aid will check your hard disk for any potential problems. If it finds problems, you should let the software repair them.

Step 3

Repeat this procedure for each hard disk attached to the system.

Step 4

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.

Update Hard Disk Drivers

If you do not have an Apple hard drive, or you use third-party software to format your hard disk, do not use the Apple HD SC Setup utility. However, you should contact your hard drive vendor to verify that your formatting software is compatible with system software version 7.1.

If you have an Apple hard drive, you should update the drivers with the version of Apple HD SC Setup that is on the Disk Tools disk, following these steps:

Step 1

Double-click the HD SC Setup icon on the Disk Tools disk to open it.

Step 2

Click on the Update button.

Step 3

When you are finished, click Quit to return to the desktop.

Sometimes HD SC Setup cannot update the hard disk driver (indicated by a "dimmed" Update button). Here are some possible causes and solutions:

- If a third-party utility formatted your hard disk, you should obtain the latest version of the utility to update your hard drive.
- If a version of Apple HD SC Setup more recent than the version on the Disk

Tools disk formatted your hard drive, do not update the hard disk drivers.

- If an earlier System 6 version of Apple HD SC Setup formatted the drive, it may not have left enough room for the updated driver. You do not have to update the hard disk drivers. However, if you intend to use file sharing or have a Macintosh that can use virtual memory, then you need to back up the disk and reinitialize it with HD SC Setup. This erases the disk, so be certain you back up the hard disk first.

- If the driver is corrupt, the Macintosh does not recognize the drive (that is, the drive does not show on the desktop when you start from a floppy disk). You may wish to reinitialize it with HD SC Setup. This erases the disk, so be certain you back up the hard disk first.

- If the driver has been modified with compression or security software you will not be able to update the driver. Contact the vendor for additional help.

Check Available Hard Disk Space

Be sure you have at least 5 MB available on the hard disk where you plan to install the system software. Open the hard disk's window. Open the Views control panel and select "Show disk info in header." The amount of available disk space appears in the upper-right corner of any open window.

If there is less than 5 MB available, you will need to delete some unnecessary files by moving them to the Trash. Choose Empty Trash from the Special menu, and you will have more disk space available. Or you can copy files onto floppy disks or other media before moving them to the Trash.

Disable the System Folder

You disable the System Folder by moving the System and renaming the System Folder.

Step 1

Open your hard disk's icon and locate the System Folder.

Step 2

Open the System Folder and locate the System file.

Step 3

Move the System file into the Preferences folder.

Step 4

Close the System Folder's window and rename the System Folder
"Storage."

Step 5

Close all windows that are open on your desktop.

Restart Your Computer

Choose Restart from the Special menu. The system automatically ejects the Disk

Tools disk, and after a few seconds you should see a picture of a disk with a flashing question mark.

If your Macintosh starts up from the hard drive, you have an extra System Folder on the hard disk. You need to delete it or disable it as described in the previous section, then restart.

When you get the disk with the flashing question mark on your screen, you can continue. If you still do not see this on your screen, and you are installing the system software on the internal hard disk, turn off your Macintosh and all attached peripherals. Then disconnect the SCSI cable from the back of the Macintosh. Start your Macintosh again.

Install System 7.1

Install system software version 7.1 following these steps:

Step 1

When you see the disk with a flashing question mark, insert the Install 1 or Install Me First disk into the Macintosh. The computer will start up with the system files on the Install disk.

If you have a Macintosh computer that requires a System Enabler, you should use the Install Me First disk that came with your computer. The standard 7.1 Install disk does not contain the Enabler, and will not start up a Macintosh that requires one.

Step 2

Once the "Welcome to the Apple Installer" message appears, click on OK.

Step 3

Click on Install.

Step 4

Insert the other disks when the Installer asks you to.

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 this procedure.

Install Non-Standard Items

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

If the original disks are not available, you may move the non-standard items from the Storage 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.

Step 1

Open each corresponding folder within the System Folder and the Storage folder and then compare the contents.

Step 2

Move anything that is not already in the new System Folder and its subfolders from the Storage folder and its subfolders.

Step 3

Restart your Macintosh.

Troubleshooting Extension Conflicts

If you have installed any system extensions or control panels, you will probably see their icons line up across the bottom of the screen when you restart. They load into memory at startup time and modify the standard behavior of the operating system.

Verify INIT Conflict

If the Macintosh fails to restart or behaves erratically, you probably have an incompatible or conflicting INIT (also known as a system extension or control panel). To verify this problem, follow these steps:

Step 1

Be sure the Caps Lock key is off.

Step 2

Restart, and after you see the picture of a computer with a smile, hold down the Shift key.

Step 3

Release the Shift key when the "Welcome to Macintosh, Extensions Off" message appears.

Step 4

When the Macintosh is ready, try to recreate the erratic behavior.

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

Remove and Replace INITs in System Folder

Step 1

Create a new folder on the desktop.

Step 2

Open the System Folder, Extensions folder, and Control Panels folder, and choose by Kind from the View menu. Move all items of Kind "system extension" or "control panel" to this new folder.

Step 3

Close the System Folder, and restart the Macintosh.

Step 4

Attempt to recreate the problem.

Step 5

Move one item from the new folder on the desktop to the closed System Folder and restart the Macintosh.

Step 6

Attempt to recreate the original problem.

Repeat steps 5 and 6 for each item in the new folder on the desktop until the problem recurs. The last item returned to the System Folder is probably the cause of the problem.

Final Steps

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

When the Macintosh behaves as expected, move the Storage folder to the Trash, and choose Empty Trash from the Special menu.

System Update

After performing a clean installation of System 7.1, you may want to consider installing System Update 3.0 to ensure that you have the most current version of the system software.

System Update 3.0 is available from the Apple Software Updates area of many online services. More specific information about how to find the updates 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.

Article Change History:

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19 May 1995 - Corrected step numbering format.

17 May 1995 - Added information about installing System Update 3.0.

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