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System 7.1 Clean Installation from 800K Disks (5/95)

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TOPIC -----

This article presents the steps necessary to perform a clean installation of system software version 7.1 using 800K installation disks. 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's also useful in troubleshooting.

Restart with Disk Tools

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

NOTE: If you have a Macintosh that requires System 7 (for example, PowerBook or Quadra), you can't start up from the 7.1 Disk Tools 800K disk. Because of the limited disk space, this disk contains system software version 6.0.7. Use the system software version 7.0.1 Disk Tools disk that came with your Macintosh instead.

Run Disk First Aid

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

- 1) Double-click on Disk First Aid, and make sure the startup drive is selected. If it isn't, click the Drive button to select the main hard drive.

- 2) Click on Open and then on Start. Disk First Aid will check your hard drive for any potential problems. If it finds problems, you should 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.

If Disk First Aid can't repair a hard disk, you should back up the hard disk and re-initialize it using the appropriate formatting utility for that drive. For Apple drives, use Apple HD SC Setup.

Update Hard Disk Drivers

If you don't have an Apple hard disk or use third-party software to format your disk, don't use the Apple HD SC Setup Utility. However, you should contact your hard disk 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's on the Disk Tools disk, following these steps:

- 1) Double-click the HD SC Setup icon to launch it.
- 2) Click on the Update button.
- 3) When you're finished, click Quit to return to the desktop.

Sometimes HD SC Setup can't 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 disk.
- If a version of Apple HD SC Setup more recent than the version on the Disk Tools disk formatted your hard disk, don't 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 don't have to update 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 re-initialize 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 doesn't recognize the drive (that is, the disk doesn't show on the desktop when you start from a floppy disk). You may wish to re-initialize 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 5,120K (5MB) available on the disk where you plan to install the system software. To check hard disk space, follow these steps:

- 1) Choose Control Panels from the Apple menu.
- 2) Double-click the Views control panel to open it.
- 3) In the Views control panel, check "Show disk info in header."
- 4) Open your hard disk's window.

The amount of available disk space appears in the upper-right corner of any open window.

If there's less than 5,120K (5MB) available, you'll need to delete some unnecessary files by dragging them to the Trash. Choose Empty Trash from the Special menu and you'll have more disk space available.

Disable the System Folder

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

- 1) Open your hard disk's icon and locate the System Folder.
- 2) Open the System Folder and locate the System.
- 3) Move the System into the Preferences folder.
- 4) Close the System Folder's window and rename the System Folder "Storage."
- 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 don't see this on your screen, turn off your Macintosh and all attached peripherals and 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:

- 1) When you see the disk with a flashing question mark, insert Disk Tools into the floppy drive.
- 2) When the desktop appears, choose Eject Disk from the File menu.
- 3) Remove Disk Tools, and insert the Install 1 disk.
- 4) Double-click the Installer on the Install 1 disk. Disk swapping (6 or 7 times usually; more if using the System 7.0.1 Disk Tools disk) between Install 1 and Disk Tools is normal.
- 5) When the "Welcome to the Apple Installer" message appears, click OK and then click Install.
- 6) 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 aren't available, you may move the non-standard items from the Storage folder to the new System Folder. Be careful not to replace anything that's already in the new System Folder. Only move items that aren't already in the new System Folder.

- 1) Open each corresponding folder within the System Folder and the Storage folder and then compare the contents.
- 2) Move anything that isn't already in the new System Folder and its subfolders from the Storage folder and its subfolders.
- 3) Restart your Macintosh.

Troubleshooting Extension Conflicts

If you've installed any system extensions or control panels, you'll 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:

- 1) Be sure the Caps Lock key is off.
- 2) Restart, and after you see the picture of a smiling computer hold down the Shift key.
- 3) Release the Shift key when the "Welcome to Macintosh, Extensions Off" message appears.
- 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 next section.

Remove and Replace INITs in System Folder

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- 1) Create a new folder on the desktop.
 - 2) Open the System Folder, Extensions folder, and Control Panels folder. Choose by Kind from the View menu. Find all items of Kind "system extension" or "control panel" and move them to this new folder.
 - 3) Close the System Folder, and restart the Macintosh.
 - 4) Attempt to recreate the problem.
 - 5) Move one item from the new folder on the desktop to the closed System Folder and restart the Macintosh.
 - 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, drag 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.

Article Change History:

- 08 Feb 1995 - Added compressed driver information.
- 27 Oct 1994 - Review for consistency and update format.
- 28 Jan 1994 - Added more information to the HD SC Setup section.

Support Information Services

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