




General Troubleshooting Guide for Macintosh Hardware and Software

If you experience problems with your computer, follow this guide. It begins with non-invasive steps that don't affect your data and progresses to more invasive steps. The invasive steps, indicated by , may involve restoring custom settings, reinstalling applications, backing up data, and erasing the hard drive.

While performing the steps, make note of the steps attempted and their results. If at any time you do not feel comfortable continuing to troubleshoot, skip to the last step, "Gathering Information and Getting Assistance."

1

Make Sure Your Computer is Getting Power

If the computer won't turn on, unplug the power, keyboard, and mouse cables and plug them back in. If your computer and monitor are separate, make sure the external cables are properly connected.

Can you turn the computer on now?

Yes. **Solved!**

No.>

2

Reproduce the Issue

If your computer exhibits unexpected behavior, repeat the steps you took prior to experiencing the behavior. For example, if opening an application results in an error message, open the application again.

Does the behavior remain?

No. Probably solved, but if it recurs, resume troubleshooting.

Yes.>

3

Isolate the Issue

If your computer consistently exhibits a particular problem, try to narrow it down. For example, if an application is causing the problem, try a different application. If you can't print properly, try printing to a different printer.

Does the behavior remain?

No. Skip to "Reinstall Application or Device Driver."

Yes.>

4

Restart the Computer

If the unexpected behavior continues, restart the computer by choosing **Restart** from the **Special** menu. If that doesn't work, press the computer's reset button.

Does the behavior remain?

No. **Solved!**

Yes.>

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Rebuild the Desktop

This step is useful when icons don't appear as expected, or files don't seem to be where they should be, or accessing files seems unusually slow.

To rebuild the desktop, turn on the computer while holding down the Apple Command and Option keys. Hold both keys until a message asks whether you want to rebuild the desktop file. Click OK and release the keys.

Does the behavior remain?

No. **Solved!**

Yes.>

6

Disconnect Non-Apple Devices

Shut down the computer and disconnect any non-Apple devices that are not needed for the computer to operate. Make sure the keyboard, mouse, and monitor remain connected to the computer. If you are troubleshooting a problem with an external device, such as a printer, leave that device connected, but disconnect all others. Turn on the computer.

Does the behavior remain?

No. To isolate the conflict, reconnect devices one by one, restarting the computer each time.

Yes.>

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Reset the PRAM

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

To reset the PRAM, turn on the computer and immediately hold down the Apple Command, Option, P, and R keys. Hold all four keys until you hear the startup chime twice, then release the keys. If you had special settings in any control panels, open those control panels and check to see if you need to restore the settings.

Does the behavior remain?

No. **Solved!**

Yes.>

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Start Up From a CD

This step helps determine whether the problem is related to software or hardware.

With the computer turned on, insert the Install CD. Hold down the C key while choosing **Restart** from the **Special** Menu. When the Mac OS screen appears, release the C key. If possible, determine whether the behavior remains. (Not everything can be tested after starting up from a CD.)

Does the behavior remain?

Yes. There may be a hardware problem. Skip to "Gathering Information and Getting Assistance."

No.>>>

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Test and Repair the Hard Disk

Having started the computer from the Install CD, open the Utilities folder on the CD. Double-click the Disk First Aid icon to open it. Select the hard disk and then click Repair. When done, quit Disk First Aid and open Drive Setup. Select the hard disk. Take care not to click the Initialize button, as that will erase the hard disk. Open the Functions menu and choose Update Driver. Restart the computer.

Does the behavior remain?

No. **Solved!**

Yes>

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Troubleshoot Non-Apple Extensions, Control Panels

Restart the computer while holding down the Space bar. When the Extensions Manager appears, release the Space bar and open the "Selected Set" menu. Choose "Mac OS [version number] All," then click Continue. The computer will start up using only Apple software, temporarily disabling any non-Apple software.

Does the behavior remain?

No. To isolate the conflict, use Extensions Manager to turn on non-Apple extensions one by one, restarting the computer each time.

Yes>

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Disable All Extensions

Restart the computer while holding the shift key. When the computer is finished starting up, release the shift key.

Does the behavior remain?

No. Skip to "Reinstall the System Software."

Yes>

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⚠ Troubleshoot the System Preferences

Sometimes corrupt preferences cause problems. Locate the Preferences folder inside the hard disk's System Folder. Remove any preferences that might be associated with the issue your computer is experiencing. For example, if the computer doesn't print properly, move the printing preference file out of the folder and attempt to print again.

Does the behavior remain?

No. **Solved!**
You may need to customize certain settings again.

Yes>

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Reinstall Application or Device Driver

If an application or device is not working properly, reinstall the application or the drivers for the device.

Does the behavior remain?

No. **Solved!**

Yes>

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⚠ Reinstall the System Software

Start up from the Install CD and double-click the Mac OS Install icon. When a Welcome Screen appears, click Continue. Choose the hard disk from the pop-up menu, then click Select. If you want to replace all of the system software, click Reinstall. If you want to replace only a certain component, click Add/Remove and follow the steps for a Custom Installation.

Does the behavior remain?

No. **Solved!**
You may need to customize certain settings again.

Yes>

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⚠ Perform a Clean Installation of System Software

A clean installation places a new System Folder on your hard disk and renames your existing System Folder.

Write down your Internet settings (from the Modem, TCP/IP, and Remote Access control panels). Then start the computer from the Install CD and double-click the Mac OS Install icon. When a Welcome Screen appears, click Continue. Click the Options button, click to select Perform Clean Installation, then click OK. Select the hard disk, click Select, and then click Start.

Does the behavior remain?

No. **Solved!**
You will need to restore your Internet settings and reinstall your applications.

Yes>

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⚠ Reformat the Hard Disk and Install the System Software

Reformatting erases the data from the hard disk, so back up any important files first.

Start the computer from the software restore CD and open the Apple Software Restore application. Click the OK button on the introductory screen. Click the checkbox next to "Erase your hard disk before restoring." Click Restore, then click OK. Click Quit when the process is complete. You will need to restore your Internet settings, reinstall your applications, and restore the files you backed up.

Does the behavior remain?

No. **Solved!**

Yes>

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⚠ Perform a Low Level Format

Performing a low level format goes deeper than just erasing all data from the hard disk. Back up any important files first.

Start up the computer from the software install CD. Open the Utilities folder on the CD and double-click the Drive Setup icon. Select the hard disk from the list of drives. Choose Initialization Options from the Functions menu. Click to place a checkmark in the box next to "Low level format." Click Initialize. Then restore your Internet settings, reinstall your applications, and restore the files you backed up.

Does the behavior remain?

No. **Solved!**

Yes>

Gathering Information and Calling for Assistance

If you have done as many steps as you can and the issue remains unresolved, make sure you've documented those steps and their results, and then jot down answers to these questions:

- What model is the computer (iMac, G3 All-In-One, PowerBook G3 Series, and so on)?
- What is the serial number?
- What version of the Mac OS is the computer using?

You have three options:

- 1) Call Apple technical support at 1-800-800-2775 and choose option 3. Be sure to record the phone agent's name.
- 2) If your computer currently has access to the Web, you might find answers to your questions at <http://kbase.info.apple.com>.
- 3) Contact Tech Support for assistance.