

## Basic Macintosh Troubleshooting

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If your Mac is slow, is stuck at 50% charge on the battery, won't let you connect to a wireless network, or is generally acting weird, there are some troubleshooting steps you can try to resolve the problems.

1. **Permissions Repair**
2. **Zap the PRAM/NVRAM**
3. **Safe Boot**
4. **Single User Mode**
5. **Reset the SMC**


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### Repair Disk Permissions

1. Launch disk Utility, located at /Applications/Utilities/
2. Select the 'First Aid' tab
3. In the left-hand pane, select a volume you wish to run Repair Permissions on  
(Remember, the volume must contain a bootable copy of OS X)
4. Click the 'Repair Disk Permissions' button

### Resetting the PRAM/NVRAM

1. Shut down the computer.
2. Locate the following four keys on the keyboard: Command (⌘), Option, P, and R. You will need to hold these keys down simultaneously in Step 4
3. Turn on the computer
4. Press and hold the Command-Option-P-R keys. You must press this key combination before the gray screen appears
5. Hold the keys down until the computer restarts and you hear the startup sound for the second time
6. Release the keys

If you choose to reset your PRAM, you may need to set your display, time zone, startup volume, and other affected settings using System Preferences (accessible under the  menu). Some firmware updates may reset your PRAM as part of their installation process, which will mean you will have to reset the affected settings after the installation.

## Starting up in Safe Mode

To start up into Safe Mode (to Safe Boot), follow these steps.

1. Be sure your Mac is shut down.
2. Press the power button.
3. Immediately after you hear the startup tone, hold the Shift key.  
The Shift key should be held as soon as possible after the startup tone, but not before the tone.
4. Release the Shift key when you see the gray Apple logo and the progress indicator (looks like a spinning gear).

After the logo appears, you should see a progress bar during startup. This indicates that your computer is performing a directory check as part of Safe Mode.

To leave Safe Mode, restart your computer without holding any keys during startup.

## Starting up in Single-User Mode

1. Shut down your Mac if it is on.
2. Press the power button to start the computer.
3. Immediately press and hold the Command key and "s" key for single-user mode.  
(Command-S) - Release keys after text appears on screen
4. When you have a prompt, type `/sbin/fsck -fy`
5. Run the `/sbin/fsck -fy` command again until it does not report \*\*\*\*\* FILE SYSTEM WAS MODIFIED \*\*\*\*\*
6. Type `reboot` and press enter

## Resetting the System Management Controller (SMC)

How you reset the SMC depends on what kind of Intel Mac you have. The three categories are detailed below.

### 1) Resetting the SMC on Mac portables with a battery you can remove

1. Shut down the computer
2. Disconnect the MagSafe power adapter from the computer, if it's connected
3. Remove the battery
4. Press and hold the power button for 5 seconds
5. Release the power button
6. Reconnect the battery and MagSafe power adapter
7. Press the power button to turn on the computer

### 2) Resetting the SMC on portables with a battery you should not remove on your own

**Note:** Portable computers that have a battery you should not remove on your own include MacBook Pro (Early 2009) and later, all models of MacBook Air, and MacBook (Late 2009).

1. Shut down the computer
  2. Plug in the MagSafe power adapter to a power source, connecting it to the Mac if its not already connected
  3. On the built-in keyboard, press the (left side) Shift-Control-Option keys and the power button at the same time
  4. Release all the keys and the power button at the same time
  5. Press the power button to turn on the computer
- Note:** The LED on the MagSafe power adapter may change states or temporarily turn off when you reset the SMC

### 3) Resetting the SMC for Mac Pro, Intel-based iMac, Intel-based Mac mini, or Intel-based Xserve

1. Shut down the computer
2. Unplug the computer's power cord
3. Wait fifteen seconds
4. Attach the computer's power cord
5. Wait five seconds, then press the power button to turn on the computer

For additional start-up options you can visit the [Apple Support Page](#)