OS 9 Trouble Shooting

A: Non-Boot or failure during boot-up

Note: This document makes reference to the “Command” and “Option” keys.

This is the “Command” key: ![Command Key] This is the “Option” key

Step 1: **Reset Parameter RAM.**

1. Power machine down completely.
2. Power the machine on and quickly hold down the following keys:
   \[ \text{Command} + \text{Option} + \text{P} + \text{R} \]
3. Keep the buttons held down until you hear the Mac sound it’s startup chime 3 times.
4. Release all 3 buttons and see if this Mac will boot.

Note: This is procedure is similar to resetting a PC’s bios. As with a bios reset, the time, network and display settings may have to be reset to match their previous values. When working on a beige-colored Mac, this will disrupt the Appletalk network connection. To re-establish, go to the Apple Menu -> Control Panels -> AppleTalk, and select Ethernet from the pull-down menu. Close the window and choose Save when prompted.

Step 2: **Disabling Extensions** (*Macintosh Safe Mode*)

In MacOS 6->9.2.1, *Extensions* are used for everything from device drivers to networking to interface enhancement. These files are loaded at boot-time and “extend” the capabilities of the system. Unfortunately, as with Windows device drivers, these *Extensions* can sometimes conflict. Following these directions essentially boots up into the Mac equivalent of Windows’ “Safe Mode”

1. Power machine down completely.
2. Power the machine on and quickly hold down the following keys:
   \[ \text{Shift} \]
3. Keep the buttons held down until you see “Welcome to Macintosh. Extensions Disabled”
4. If you can boot into the machine, you now need to track down what *Extension* is causing the problem. If you can’t boot the machine, make sure you’ve properly run step 1, and move on to step 3.
5. Select the Apple Menu -&gt; Control Panels. Because the extensions are disabled, you won’t have a drop-down menu. Select Control Panels and release the mouse. This will bring up a Finder window with all of the Control Panels.
6. From within this window, select Extensions Manager and open it.
7. Page down in the display box until you see the headline Extensions. The far-right column contains information on what software installed the Extension listed. Most of the Apple-Produces packages (Listed as Mac OS X.X or Quicktime, Appletalk, those sorts of things) are pretty safe, so concentrate on extensions installed by 3rd party products. Also, ask the user if there was anything they installed recently that may have caused the problem, then look for extensions associated with that program.

8. To disable an extension, de-check the box on the left in the On/Off column. Once you have disabled all of the Extensions you want to, click Restart.

9. If the machine comes up when you restart, have the user attempt to run all of their basic programs, (especially any whose extension you just removed) to make sure everything else is running properly. If the machine doesn’t boot, go back to step 1, and repeat the process removing any other Extensions you can find that might be causing a problem. This can be a tedious process, but eventually you will find the offending extension.

**Note:** You are not “deleting” Extensions in this process. All you are doing is moving them to the Extensions Disabled folder in the System Folder. The Extensions Manager allows you to enable/disable them without losing any information.

Step 3: **Remove all external devices**

1. Power down machine completely
2. Unplug any USB or firewire devices attached to the system (Except obviously keyboard)
3. Try booting the machine. If it fails, remove everything except keyboard, mouse, and video. Try to boot again.
4. Repeat step one with all peripherals removed.

If the machine boots successfully, re-add the peripherals one by one until you find what’s causing the trouble.