OS X 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:  
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:  
   *Command + Option + ‘P’ + ‘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 the Mac will boot.

Note: This is procedure is similar to resetting a PC’s bios. As with a bios reset, the time and display settings will have to be reset to match their previous values.

Step 2: **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.
5. If the machine boots successfully, re-add the peripherals one by one until you find what’s causing the trouble.

Note: Steps 3 and 4 can be very helpful if you have some UNIX knowledge. If you are not very familiar with UNIX, consider skipping to step 4.

Step 3: **Verbose mode screen logging**  (Some UNIX knowledge required)

1. Power machine down completely.
2. Power the machine on and quickly hold down the following keys:  
   *Command + ‘V’*
3. When it boots, the typical Mac startup screen will be replaced by a long string of UNIX loading messages. Those familiar with UNIX may be able to track down the error, or at least locate the service where the Mac is stopping or crashing.
   Keep in mind that there will be a lot of output that may look like an error, but is simply part of the normal boot cycle. If you’re not familiar with UNIX, just try to figure out what it’s trying to load when it stops.
4. Use this information to consider your next choice.

Note: Booting in verbose mode will take longer than a normal boot. It will also run more system upkeep tools when you boot and may allow an otherwise non-booting system to come up.
Step 4: **Single User Login Mode** (Significant UNIX knowledge required)

1. Power down machine completely
2. Power machine on and quickly hold down the following keys: *Command + ‘S’*
3. This will start you on a screen similar to Verbose mode. The UNIX messages will go by until you get to a command prompt. From here you may run the usual UNIX diagnostics such as *fsck* and any others you are familiar with to attempt to troubleshoot the problem. As with any *NIX distribution, there will be some small differences in the tools available, but most of the basics are there.

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Step 4: **Restore System**

If you cannot get the machine to boot up at all, you will need to restore from a CD.

1. Obtain a MacOS 10 install disk or one of CIS’s desktop install CD’s.
2. If you use the MacOS 10 install CD, you have the option of restoring the system without affecting the user’s data. This is not a complete restore, but it can replace corrupt system files and potentially solve the problem.
3. If you are using CIS’s restore CD, you will need to backup the user’s data first. A backup procedure is currently being developed but has not yet been implemented.
4. To boot from either CD, put the CD in the tray and reboot the machine while holding down the ‘C’ key.