

Power Management Unit Operations and Maintenance

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The Power Management Unit (PMU in PowerPC Macs) or System Management Controller (SMC found in Intel Macs) basically manages low-level power management tasks required by the computer's various hardware additions such as fans, heat sensors, monitors on laptops and startup. For the purposes of SeaSonde operation the startup function of the PMU/SMC is of most importance.

Startup failure usually is characterized by an inability to start up the computer manually or the computer failing to restart upon loss of power.

Other situations that may require the PMU/SMU reset could be:

Fans begin to run erratically or on full throttle regardless of temperature.

Battery on laptops fails to charge when it should.

The LED on the power cable connector on laptops stops working normally.

The Ambient Light Sensor (ALS) starts working erratically. This is characterized by the screen brightness changing randomly regardless of the ambient light conditions.

The brightness control fails to work.

The Status Light Indicator (SIL) LED stops working properly. The SIL is the status light that normally turns on when you power up a Mac. Note newer Macs no longer carry these LEDs.

The laptop fails to come back online when opened if closed powered.

For MacBooks 13 inch and MacBook Pros 15 inch and 17 inch (early 2008)

- If the computer is on turn it off.
- Disconnect the AC power and take out the battery.
- Press and hold the power button for 5 seconds, release it after this time.
- Reconnect the battery and AC.
- Restart the computer by pressing the power button.

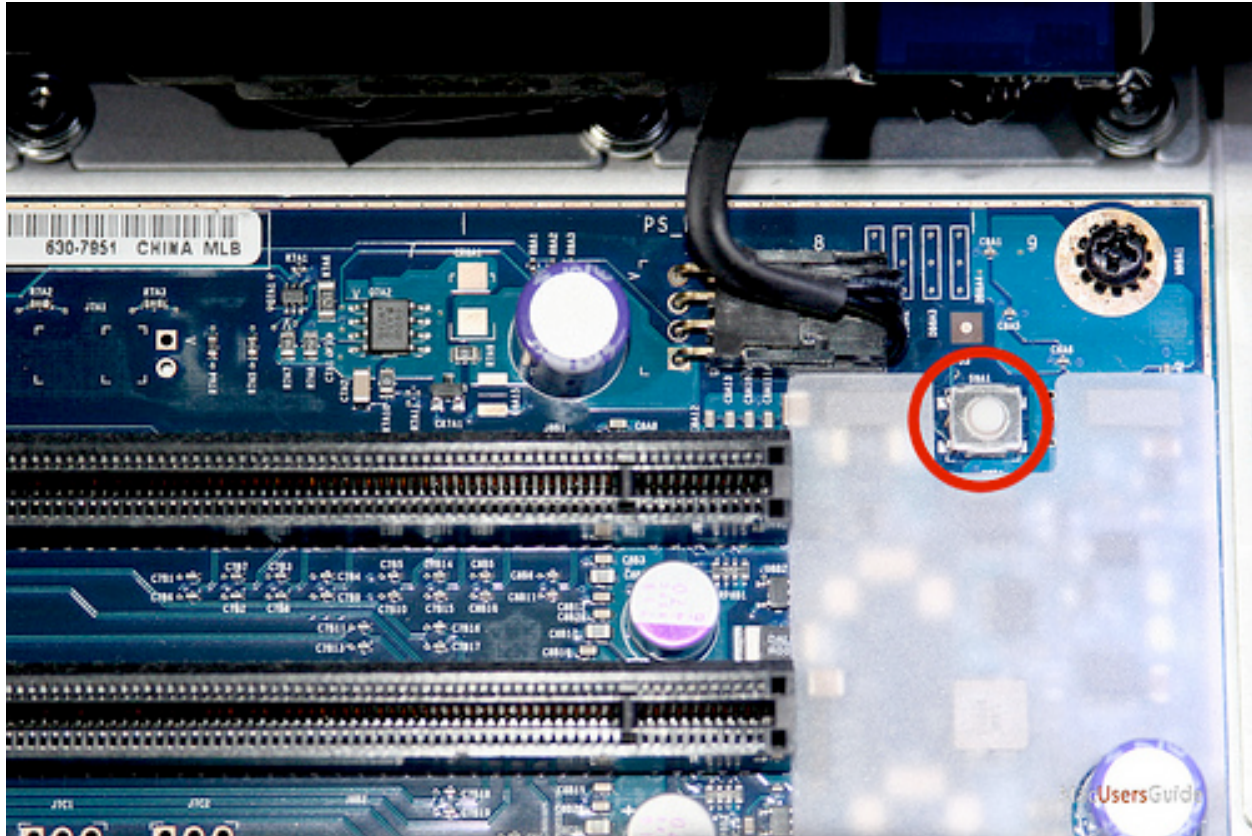
For MacBook Pros (Late 2008 and later)

- If the laptop is on do a graceful shutdown by turning off the computer using the apple menu options.
- If not connected, connect up the AC power to the laptop.
- On the laptop keyboard, press the key combo shift-control-option and the power button at the same time. NOTE: You MUST use the keys on the left side of the keyboard.

For Mac Pro towers

- Shut down the computer gracefully using the apple menu. If the computer is not responsive, press the power button until the computer shuts down.
- Unplug all cables from the tower, including the power cables.
- Wait for 15 seconds.
- Plug the power cord back in. DO NOT TOUCH THE POWER BUTTON. Next, reconnect the keyboard and mouse.
- Press the power button and start your computer back up.
- Connect up the display cables.

Alternately you can press the SMC reset switch located on the motherboard of the Mac Pro next to the row of diagnostic LEDs near the PCI slots.



Mac Mini Intel based

- Perform a graceful shutdown by using the apple menu options. If unresponsive force the shutdown by pressing the power button and holding it until the power goes down.
- Unplug all the cables to the Mac Mini.
- Wait 15 seconds.
- Plug the power cord back in. DO NOT PRESS THE POWER BUTTON. Next reconnect the keyboard and mouse.
- Press the power button.
- After the machine powers plug back in the display.

Alternatively the SMC_RST reset button may have to be press on the logic board.



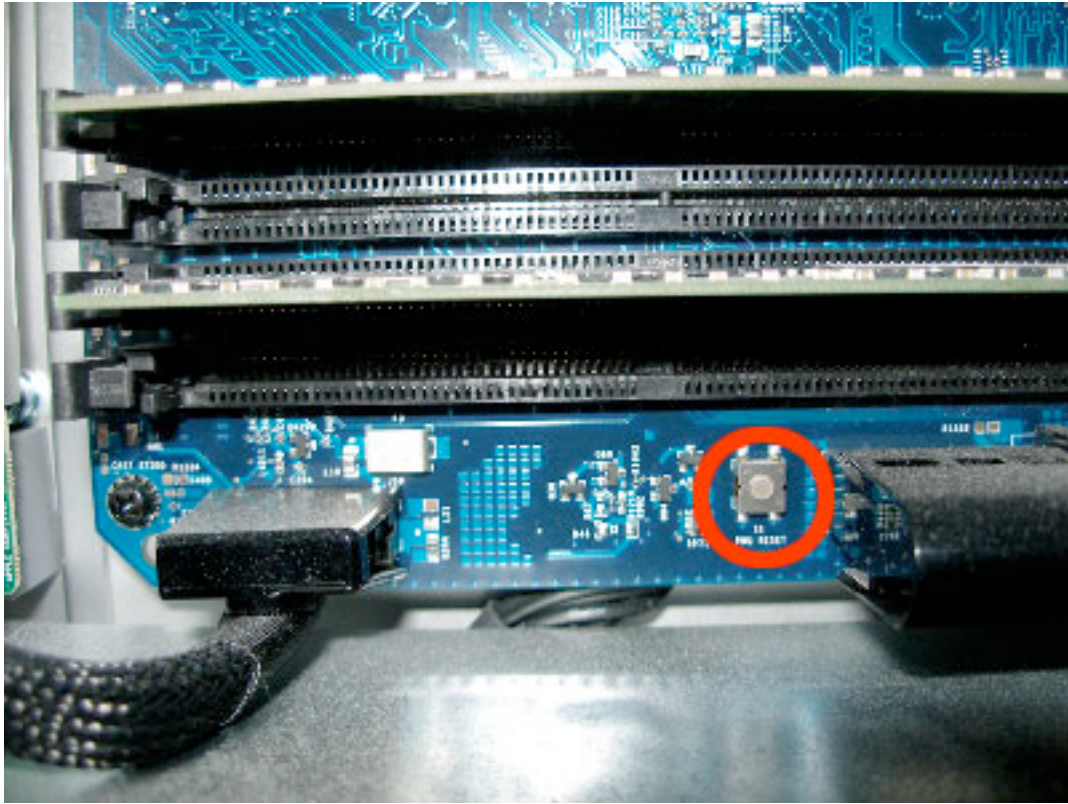
For Mac Mini (PowerPC based)

- Unplug all the cables from the computer.
- Wait 10 seconds
- Plug in the power cord AND press the power button at the same time.
- Let go of the power button.
- Press the power button once more to start the Mac Mini back up.

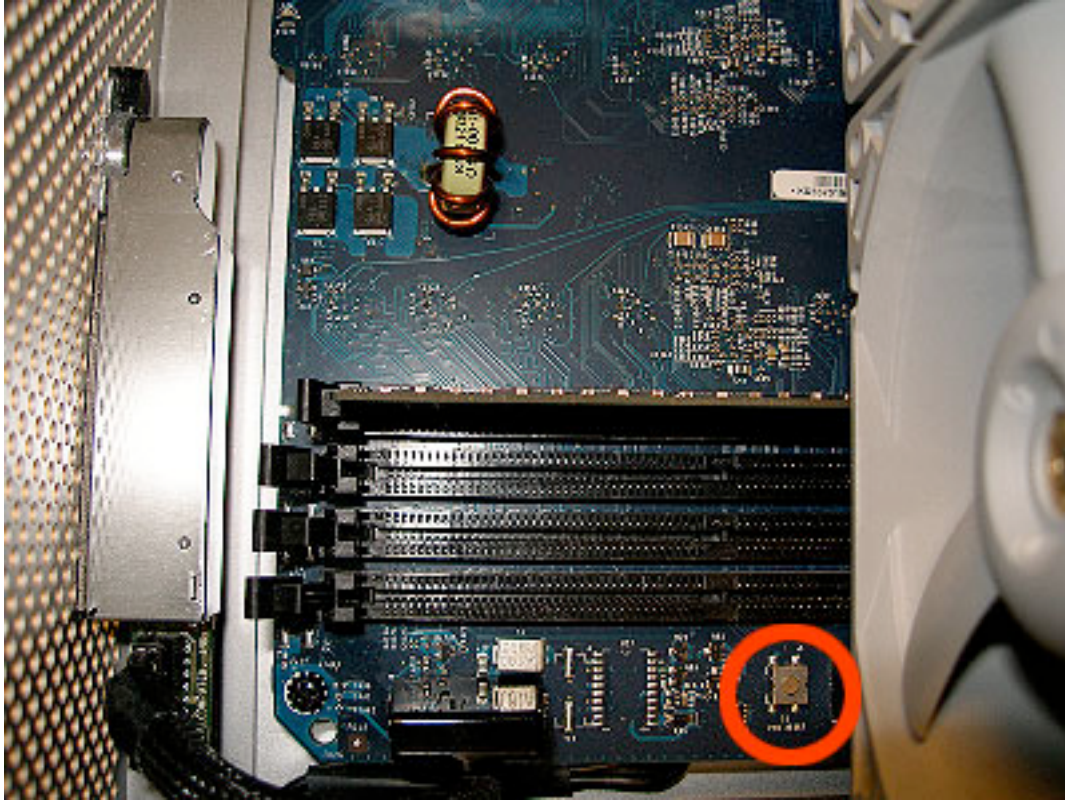
For the Power Mac G5.

- Shutdown the computer gracefully if possible.
- Disconnect all the cables from the computer.
- Open the case of the computer and make sure to ground yourself at all time to avoid static discharge and damage.

- Locate the PMU button.



Early 2005 Power Mac G5



Later Power Mac G5

- Press the PMU button ONCE. DO NOT press the power button more than once before starting the computer again.
- Wait 10 seconds then reconnect the cables you removed.
- Start up the computer.