



Galaxy II Mainboard Rebooting and Lockup Issues

If the Galaxy II locks up, reboots, or has intermittent coin up problems, it may be due to resistance caused by dirty headers at J1, J16 and J3 on the mainboard or bad crimps on the main wire harness.

First check the 5 Volts on the mainboard. To do this, take a multimeter and touch the ground lead to the ground test point right below J3 on the mainboard. Place the positive lead to the 5 Volt test point right under J16 (Figure 1). The measurement should be between 4.95 and 5.1 (usually about 4.99) Volts. If the measurement is below 4.95 Volts there is a problem either with oxidation of the J1 header or a bad connection in the wire harness.

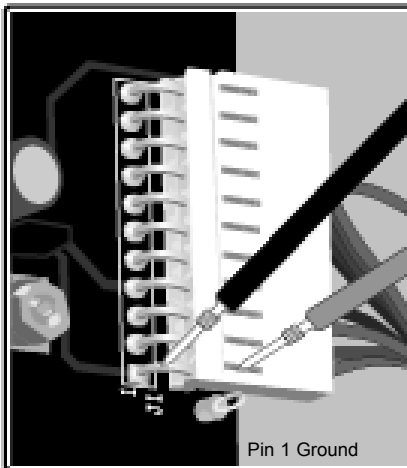


Figure 2

If the voltage is low, find out if the problem is with the headers by taking a voltage measurement across J1 pin 1 (ground) as shown in Figure 2. Also, measure across J1 pin 4 (+5V) as shown in figure 3. Ideally this should be 0 volts. The resistance of the metal to metal connection is too high when it reads .03 Volts or more.

Clean the header pins with 91% or higher isopropyl alcohol or a switch cleaner that does not leave a residue. This is best done with the mainboard removed from the machine. Use a small brush, such as a nylon toothbrush, to scrub the top and bottom of the J1, J16, and J3 headers with the isopropyl alcohol. Once cleaned thoroughly, it is recommended that a substance, such as NYOGEL 760G (Kit # 42179), be applied to the header pins. These substances will reduce wear, retard oxidation and protect against the harsh environmental conditions of a bar (i.e., smoke, kitchen grease, and vibration). Once finished, reassemble the mainboard and test the 5 Volts, as directed above, and the resistance using the steps mentioned below.

Warning: Do not clean contacts with a metal brush or file.

To test the resistance on the main wire harness, follow the instructions below:

1. Unplug the Galaxy II dartboard. There can be no power running through the wire harness when testing for resistance.
2. Set the multimeter to the Ohms scale.
3. Touch the ground lead from the multimeter to one of the ground test points on the mainboard (Figure 4).
4. Touch the positive lead to one of the ground connectors on the coin switch (Figure 4). Ground is the black wire with red stripe. The wire harness will measure about 0.2 Ohms or less on a new harness. Problems are caused if the wire harness measures 0.5 Ohms or above. If the resistance is more than 0.5 Ohms, checks can be made between the ground connector and the following points to find a possible bad connection.
 - ♦ Coin Mech and Dollar Bill Acceptor
 - ♦ Coin Door Wire Harness Plug
 - ♦ HotButton Reader

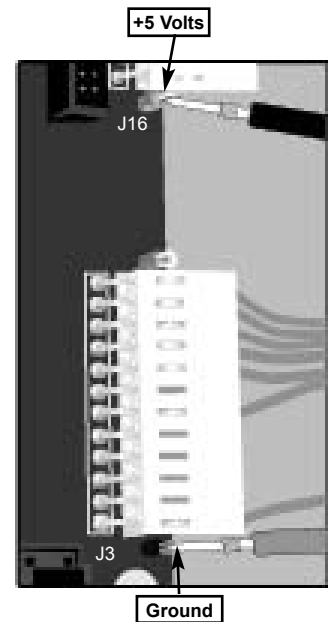


Figure 1

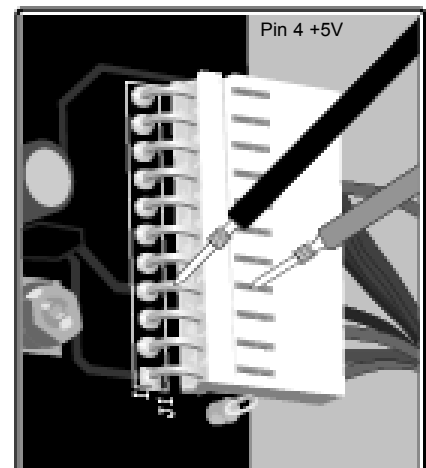


Figure 3

- ♦ Each Push Button - Enter, Up Arrow, Down Arrow
- ♦ The Speaker
- ♦ Power Supply

Keep the ground connection on the mainboard and move the positive lead from connection to connection until it reads good. At that point you have found the wire connection to fix.

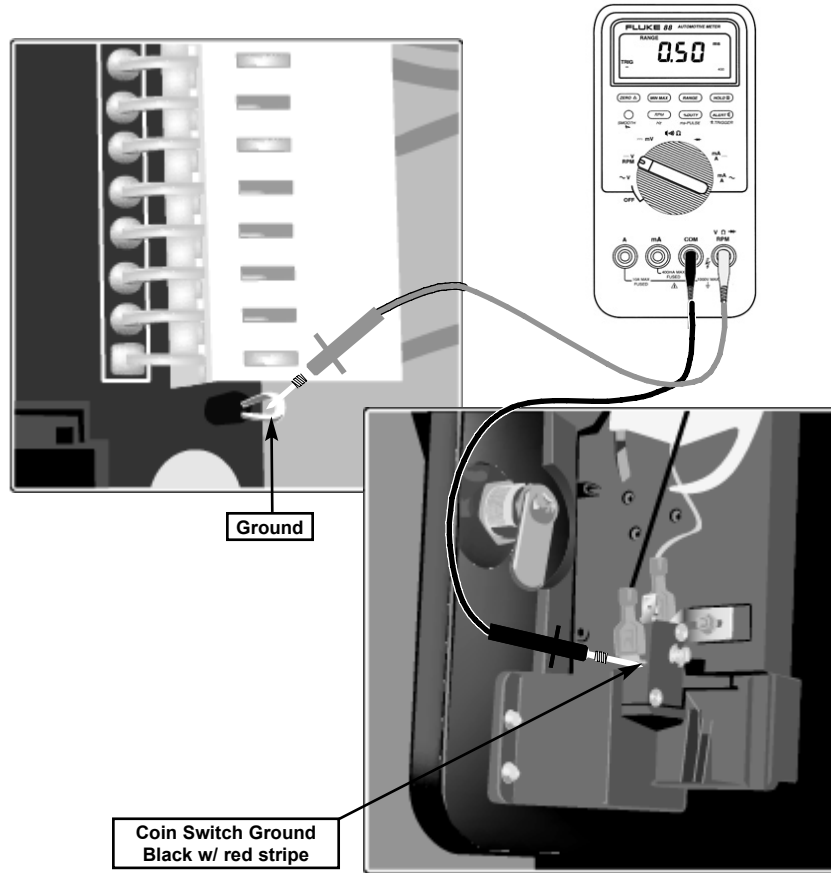


Figure 4