

Technical Service Bulletin

Bulletin SC575 - 002

Subject: Logic PCB Capacitor Replacement
Product Line: Studio Color (M & S versions only)
Date: May 31, 2000

Warning: Disconnect power before servicing.

Cautions: 1) This fixture must be serviced by a qualified technician. The information listed in this bulletin is intended to assist qualified personnel only.
2) Equipment surfaces may reach 250 C (482 F). Allow the fixture to cool before handling.

Logic PCB Capacitor Replacement

Overview:

In some high ambient temperature/ long duty cycle operating environments the 470uf/ 50 Volt electrolytic capacitors that filter the motor/logic voltage may fail and damage the PCB. It is recommended that these capacitors be removed and that replacements rated for operation at 125 degrees C be installed. It is necessary to install only six (6) replacement capacitors as this amount provides adequate filtering. If you have any questions concerning this procedure contact the High End Systems Service Department.

You will need:

- * 5/32" hex key
- * 30 Watt or lower soldering iron
- * desoldering tool
- * Diagonal cutter
- * Flux core solder suitable for electronic work
- * 6- 470uf 50V 125°C electrolytic capacitors

To replace the capacitors:

1. Electrically isolate the fixture. If the fixture has been operating allow it to cool before handling.
2. Place the fixture on a firm, stable surface at a height that allows you to comfortably work on it.
3. Lay the fixture on its side so that the cover of the electronics box is accessible.
4. Using the 5/32 hex key remove the six button head screws securing the cover and remove the cover.
5. Unplug all of the wires that are connected to the logic circuit board (the board containing the display and buttons).
6. Slide the circuit board out of the fixture.
7. Locate the eleven (11) 470uF 50V capacitors in positions C66, C71, C76, C81, C89, C14, C26, C31, C36, C41, and C11. These are the brown cylinders that are 3/4" tall and 3/8" in diameter. Also locate the 1000uF 35V capacitor in position C6. This is the black cylinder that is 7/8" tall and 1/2" in diameter.

8. Carefully remove the eleven capacitors specified in step 7 from the board by pressing on the side of each one until the leads break or pull out from the body of the capacitor.
9. Clip off any capacitor leads left sticking out of the circuit board.
10. Clear the thru-holes of solder and capacitor leads at locations C14, C89, and C26 near the Pan and Tilt drivers, and at C11 and C6 near the power input connector. Clear the holes of solder at location BP1 (just to the right of HD1) which has no installed component.
11. Install and solder new capacitors in the six (6) locations specified in step 10, paying careful attention to the polarity markings on the capacitors and the circuit board (the negative lead of the capacitor is marked and the positive terminal is marked on each circuit board location).
12. Reconnect all wires to the circuit board. Refer to the labels on the wires and the circuit board for placement.
13. Slide the circuit board back into the fixture and replace the cover and securely tighten the six (6) cover screws.