

Film-Tech

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Dolby Laboratories Inc

Field Bulletin 194

Potential Power Supply Connector Failure In Cat. No. 700 Digital Film Soundhead

- | |
|---|
| <input type="checkbox"/> Modification Urgent |
| <input type="checkbox"/> Modification Recommended |
| <input type="checkbox"/> Modification Required on Early Units |
| <input checked="" type="checkbox"/> Modification Required if Symptom is Present |

Some Cat. No 700 Digital Soundheads have experienced problems with poor electrical contact at the connectors carrying DC power from the power supply to the lamp. Later production used a different type of female power connector designed to avoid this problem. Soundheads carrying serial numbers 503599 and above have the improved connector installed.

Symptoms

- Low lamp brightness compared to other Cat. No. 700 lamps in your cinema
- Intermittent lamp output
- Replacement of lamp does not increase output

Recommended Repair

The connector must be removed from the DC output power cable, and each cable wire must be soldered to the male connector pins on the power supply. See the figures located at the end of this bulletin for reference.

1. Unplug the AC mains power cable. Allow the lamp to cool if necessary.
2. Remove the power supply assembly from the Cat. No. 700 by removing the six screws securing rear cover to the soundhead and gently separating the assembly from the soundhead.
3. Unplug the socket from the lamp.
4. Remove the power supply housing from the rear panel by removing the four screws securing it to the panel. **NOTE: Hazardous voltages are exposed on the power supply circuit board even with the power removed. Wait a minimum of 10 minutes after mains power is removed to allow time for the capacitors to discharge.**



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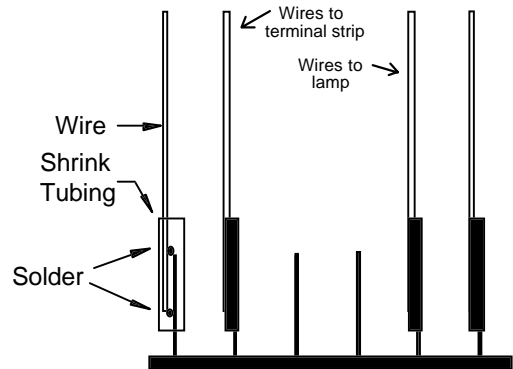
5. Unplug the DC lamp power connector from the power supply circuit board and cut each wire close to the connector body. **Take careful note of the connection position for each wire.**

6. Strip each wire and slide insulation tubing (ideally heat-shrink) over each wire.

7. Clean the male connector pins carefully with a gentle abrasive

8. Solder each wire to its respective power supply connector pin. Be very sure that no wire or stray strand of wire can short to an adjacent pin.

9. Slide each shrink tube over the pin and apply heat.



Note:

*You may check the power supply DC output at this time, and trim the voltage to be exactly 9.90V. See the attached figure for adjustment pot location. A thermistor in series with the lamp produces a range of 9.0 to 9.4 volts at the lamp socket. **Hazardous voltages are exposed on the power supply circuit board with mains power applied. Only attempt this adjustment if you are an experienced technician.***

10. Re-attach the power supply housing to the rear cover. Make sure no cables are trapped and pinched as you do this.

11. Re-attach the lamp power connector to the base of the lamp.


12. Re-assemble the rear cover to the reader. This completes the repair.

How To Verify a Connector Failure Problem

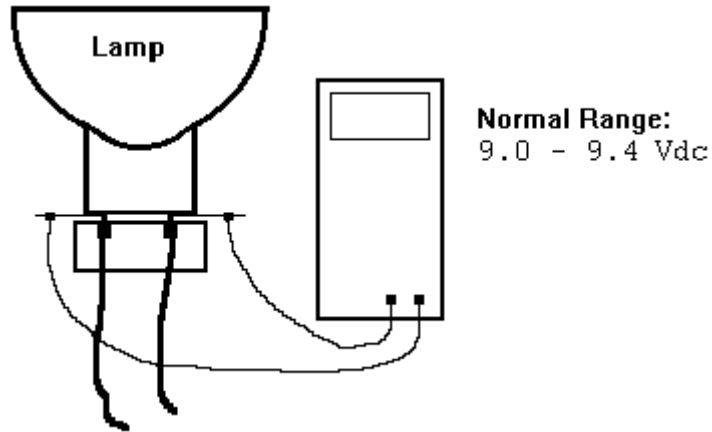
While not recommended, you may wish to verify that your DC output connector needs to be removed before proceeding with the procedure described above.

1. Remove the power supply assembly from the soundhead as described in steps 1 through 3 above.

2. Prepare a means to measure the power supply DC output voltage at the lamp base. The voltage must be measured with power applied to the lamp.

- a. Make two test wires with a loop on one end of each. 
- b. Wrap a wire on each lamp pin, then plug the lamp power connector back on to the lamp. Be certain that the wires are not shorting the lamp power pins.
- c. Connect a voltmeter to the two test wires.

3. Apply mains power to the power supply assembly and wait 4 minutes to allow the thermistor to stabilize, then measure the lamp voltage.



Measuring Lamp voltage

4. If the lamp voltage is **below 8.8 Vdc** then the DC power supply output connector resistance is very likely to be high and the above soldering procedure must be performed.

Power Supply DC Output Voltage Adjust

