

### **TR-7800 Intermittent display fix**

The particular TR-7800 that I have has suffered with intermittent display failures for some years. I seem\* to have finally traced the fault back to the construction of the display board, and in particular the vias connecting the pins on the two display readouts.

The problem appears to be due to the vias on the board where an edge of a via and the associated pad from a connecting track is inaccessible for soldering; e.g., underneath the edge of the displays or header connectors. As a result, many of these vias appear to suffer from intermittent contacts between the via and the track, causing either whole numerals, or rows of segments to fail (On one or both displays simultaneously).

The solution\* to the problem is to remove the main frequency readout and LEDs, remove the spacer board, clean the tops of all the pads, replace the frequency readout and LEDs (Without the spacer board), and solder both sides of all the contacts on the readout and LEDs, bridging out any shorter lengths of track on the board where possible with solder to increase reliability.

Note that the rectangular indicator LEDs have a tendency to disintegrate upon desoldering - Make sure you have some spare LEDs (3mm standard LEDs will do) to hand before any work is attempted.

For the channel indicator, any tracks that run on the component side of the board should be linked out using wires attached to the pins on the display, as soldering to the top side of the vias of this display is impossible due to the lack of clearance. Tracks running on the underside of the board shouldn't\* suffer from this problem.

Resoldering all the other contacts on both sides of the board is also recommended, as well as pushing small pieces of wire through the centre of vias that haven't got component legs through them (Note: two vias in particular are located at the very edges of the S-meter display).

Please note that pins 8 and 9 of the channel indicator appear to be transposed in the schematic diagram.

One failure that occurred after reassembly of my rig was the via connection between the end of R15 and pin "KM" on a board header (Which supplies the indicator LEDs for the memory select switch), thus requiring an additional wire bridge to restore the connection.

Please email me at [rich1richard2304antispam@aol.com](mailto:rich1richard2304antispam@aol.com) for additional information (Remove the "antispam" from the address).

For updates, photos, and additional information please visit <http://www.booni.info/TR7800displayfix/>

\* = Due to the nature of intermittent contacts it is impossible to tell when a problem has actually been repaired. So far, the display seems to be working without failure.

*73's M0ZMM.  
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