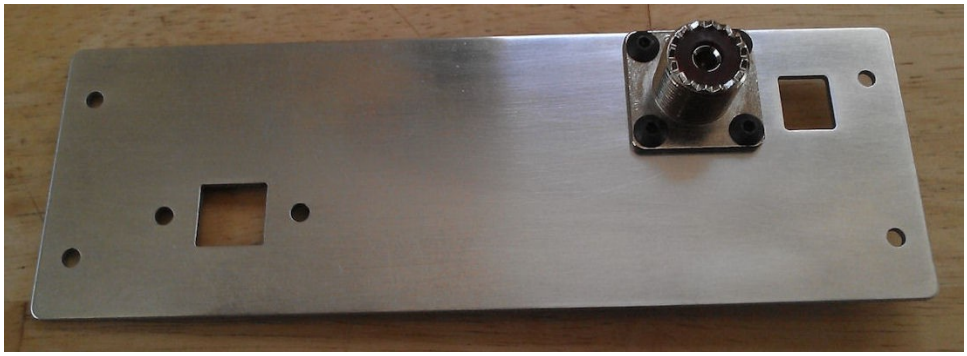
TT1245 SO-239 Antenna Connector Option Kit Installation

This kit replaces the RCA jack used by Ten-Tec on the main radio board with a panel mounted SO-239[1] RF connector. The kit has two main benefits:

- The SO-239 is a more common RF connector used on amateur radio equipment, and allows a convenient direct attachment for 50 ohm coax cables.
- The SO-239 connector is mounted to the rear aluminum panel. Mechanical stress by antenna cable flexing is transferred to the radio's case, and not to the weak solder point of the RCA connector on the main radio circuit board. This kit can prevent or repair board damage.

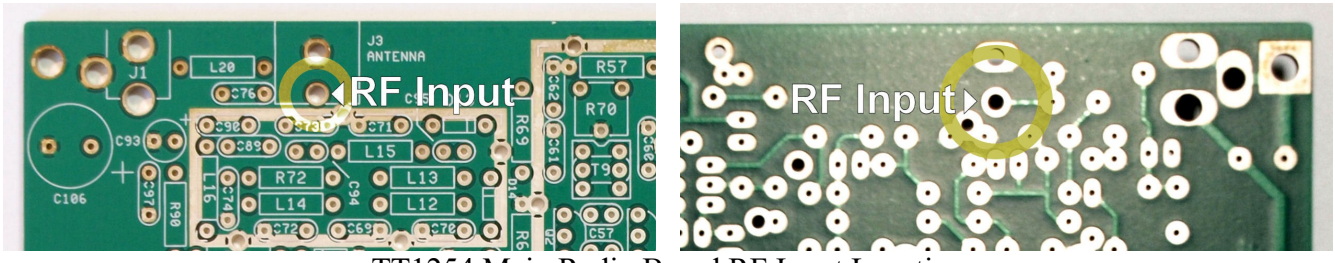


New Rear Panel with SO-239 Connector

Disassemble Instructions

J3 is the marked location on the main radio circuit board for the RF input antenna connector. If your radio has not been assembled do not solder in the RCA connector as directed by Ten-Tec's assembly instructions. If the radio is already assembled you will need to desolder the RCA connector. This is done using a soldering iron and either a desoldering tool (solder sucker), or solder wick. Just enough heat must be used to remove the solder without overheating and damaging the circuit board. Remove the original rear aluminum panel to have clear access to the solder connections.

There are two pins used on the RCA connector. The RF input is the more inside hole, as shown below.

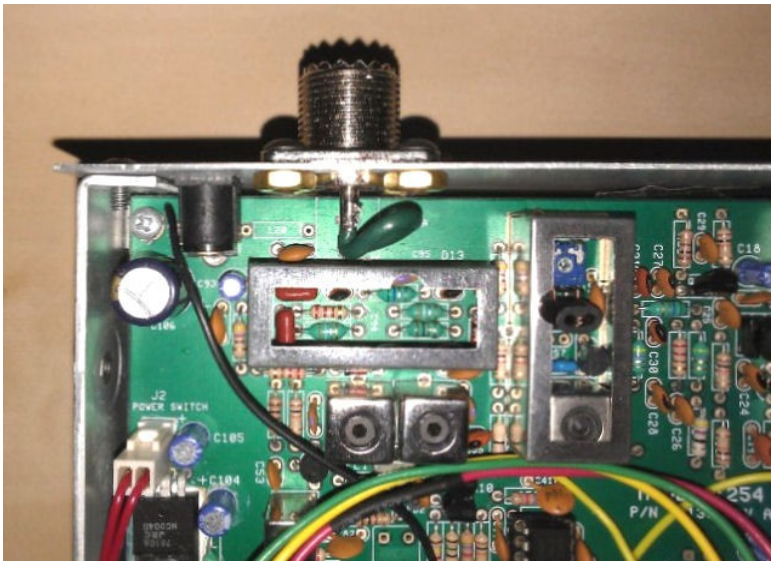


TT1254 Main Radio Board RF Input Location
Top and Bottom Board Views

1 A N type connector such as Digikey ARF1160-ND can be used in place of the provided SO-239 if desired.

Assembly Instructions

- If required then take the microUSB to USB type B extension cable provided with the TT1254 LCD Display kit, and screw it into place on the new aluminum panel supplied in this option kit. The arch part in the USB type B connector should be pointing upward when attached.
- Cut a short length, roughly up to 1½ inches or 4 cm, from the green wire provided in the kit.
- Strip the ends of the wire off exposing roughly about ¼ inch or 5 mm of bare wire, then twist each end so the wire strands are tight.
- “Tin” each exposed end of the wire by heating it with an iron then flowing a small of amount of thin solder onto the wire.
- Insert one end of the prepared wire into the center pin of the SO-239 connector and solder it in place. Bring the rear panel close to position on the radio's case.
- Insert the other end of the green wire into the RF input, top side of the pad, on the main radio board. The green wire was cut to be just long enough to allow soldering access to the main circuit board with the rear panel pulled back. From the bottom side of the main circuit board solder the wire in place.
- Position the panel and using its four screws mount it to the radio case. Move the green wire so it is not resting directly against any metal part.



This completes the installation.