

Rock-Topper — Low Profile

Assembly Instruction Supplement

These instructions provide information to modify the assembly of the TX-Topper PCB and band modules. The end results is installation in a matching CR-425 Rockmite][]-size enclosure.

Topper Mods

Build the Topper as described in the Topper Assembly Manual except as follows:

Modify the assembly of the TX-Topper PCB, Specifically R3, C4 and Q1.

- Using the same pads for each part

Form the leads of Q1 as shown in Figure 2.

- At the point in the assembly procedure for installing Q1, insert the leads such that the ends of the leads extend approximately 1/16 from the bottom of the board see Figure 3. Solder in place.



Figure 2

Attach R3 and C4 on the bottom of the PCB as shown in figure 1.



Figure 1

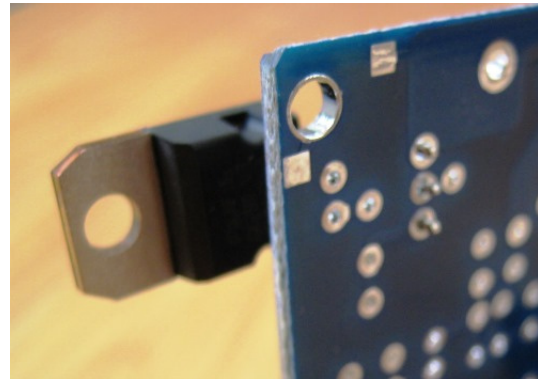


Figure 3

Power Wiring

Pre-wire the back panel power connections and front panel LED. See Figures 4, 5 and 6.

Attach 3ea MeSquares to the locations shown in the pictures below. One beside the power switch on the back panel and two on the front panel. Use super glue to attach them. Put a tiny drop on the clean surface then place the MeSquare over the drop of glue. Position the LED pads with a small space between the edges of the pads and the hole edges.

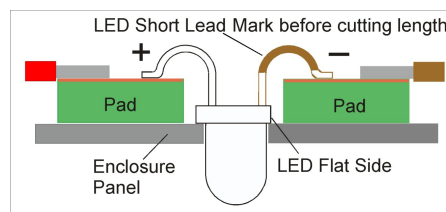


Figure 4

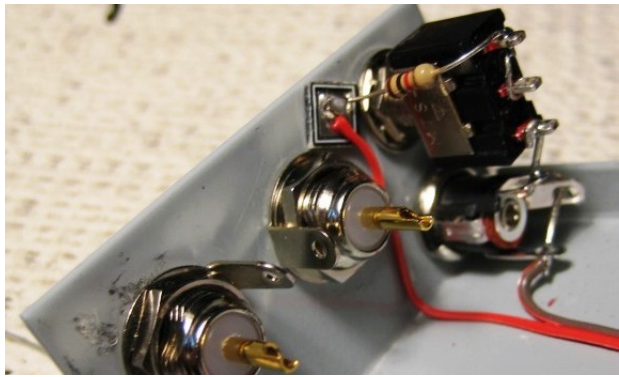


Figure 5

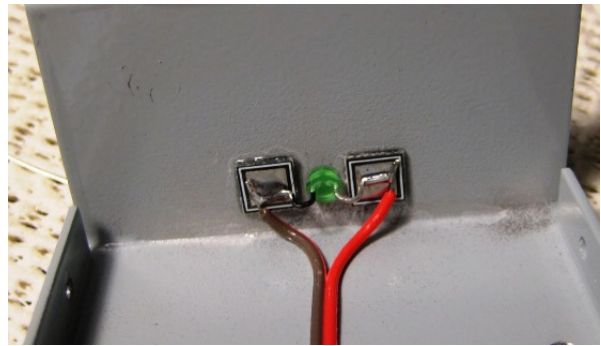


Figure 6

Use an abundance of caution when wiring the supply voltage circuits. A mistake will likely produce a catastrophic failure!

Attach interconnection wires to the Topper PCB



Figure 7

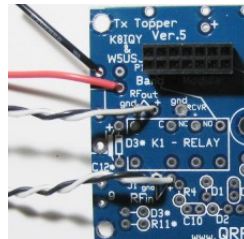


Figure 8

Assemble PCB to enclosure bottom

- Insert 4, 4-40 x 1/2 inch screws in bottom holes and hold in place
- Lay the assembly on a flat surface, screw heads down.
- Place 4, 1/4 in standoffs over screws
- Position PCB on the screws
- Affix 4, 4-40 nuts on the screws

Affix 4 feet on the bottom at the corners adjacent to the curved edges.

Connect power wiring to the back panel from the Topper PCB

- Twisted pair from RFin to J1 – 2-1/4 inches
Note polarity
- Twisted pair from RFout to J2 – 2-1/4 inches
Note polarity
- Short blk 20 AWG ground wire to J3 ground tabs – 1 inch
- Short Red 20 AWG to SW-1 Common terminal – 2 inches

Assemble LoPro Band module

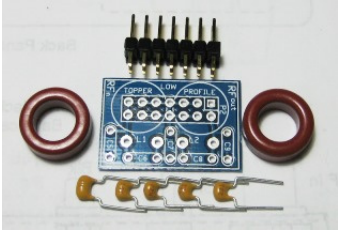


Figure 9

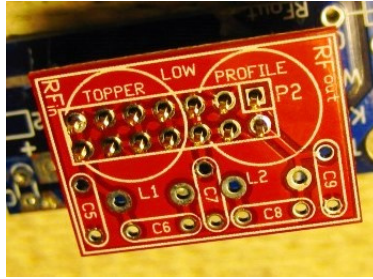


Figure 10

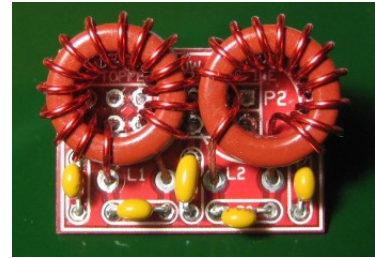


Figure 11

Use the band module connector on the Topper PCB as a holding fixture

- Insert the 16-pin header into the Topper connector
- Position the band module PCB over the header as shown. Tack solder two corner pins
- Ensure that the bottom of the module PCB is positioned tight against the top of the header
- Solder the remaining pins
- Shear off the tops of the soldered pins as close as possible to the PCB. Clean off any sharp or jagged ends.

Refer to the Topper manual, band module section, for inductor winding and capacitor values.

- Using 22 AWG magnet wire wind toroids with the number of turns needed for the band of choice
- Install capacitors C5 through C9 as needed for the band of choice
- Install the inductors in L1 and L2 noting that they have different values as indicated in the Topper manual

Final Installation and Testing

Refer to the Topper manual