

## TUNA TIN 2 40<sup>th</sup> Anniversary Buildathon Building Notes

The Tuna Tin 2 transmitter design has been around since 1976. I designed the 40A version especially for Buildathons and club builds. It is a fairly simple design with a minimal parts count so it can be built in a reasonable amount of time... Indeed, the Session 2 video is a complete build plus a lot of talking and it is short of 2 hours total time. When I designed the 40A layout, I laid out the board parts and traces AND the schematic so that they can be easily compared to each other. Another feature of my Buildathon kits is that the actual component values are used on the silk screen so that builders don't have to keep referring to the schematic to figure what parts to put where. It is quite possible to build the TT2 40A kit without referring to ANY paper documents as long as you pay attention to the details printed on the silk screen.

For the TT2 40A kit in particular:

There are only 4 components that one can solder onto the board in the proper place but incorrectly....due to polarity of the parts.

**Transistors** need to be inserted so that the flat side of the transistor aligns with the flat indication on the silk screen.

**1N5818 diodes** have a polarity stripe on the + end of the body and that needs to align with the bar indication inside the diode silk screen marking.

**Electrolytic capacitors** have a + and - polarity which requires the stripe on the capacitor to be oriented on the non-positive indicated pad. The TT2 board also has a dual footprint layout on the silk screen. Use the 2 outer pads for axial capacitors or the middle and lower pad marked + for radial capacitors.

**RCA connectors** need to be oriented so that the cable insertion side hangs out over the pcb. RED RCA used for power and WHITE RCAs for the antenna and receiver jacks. You will need to take a little off either side of the +lead so that it will fit into the pad hole easily. Just a tad off and use your second string flush cutters for that cutting.

When you build the 40A, start with the components closest to the board: resistors, inductors and diodes. You need to cut the SIP socket into 2 pieces and use one 3 pin section as a crystal socket. You will be wanting to change crystals easily so a socket is desirable. The other 3 pins can be cut into singles and soldered into the Q2 final transistor pads so you can easily change the final transistor when the smoke comes out or for experimentation purposes. Insert the pins onto the component leads in order to use the component as a handle when soldering. Use 2 cut component leads to make the tip & ring jumpers. Now move on to the higher components such as all the capacitors. After that, jacks & connectors and switch can be installed. You should now be out of components to solder..... The Session 2 video on the website is the entire TT2 40A build should be helpful in reinforcing all these notes.

