ADX-MINI Tuner Build Manual

for tuner board version 1.2

January 23, 2025

Intro

This tuner was inspired by this YouTube video:
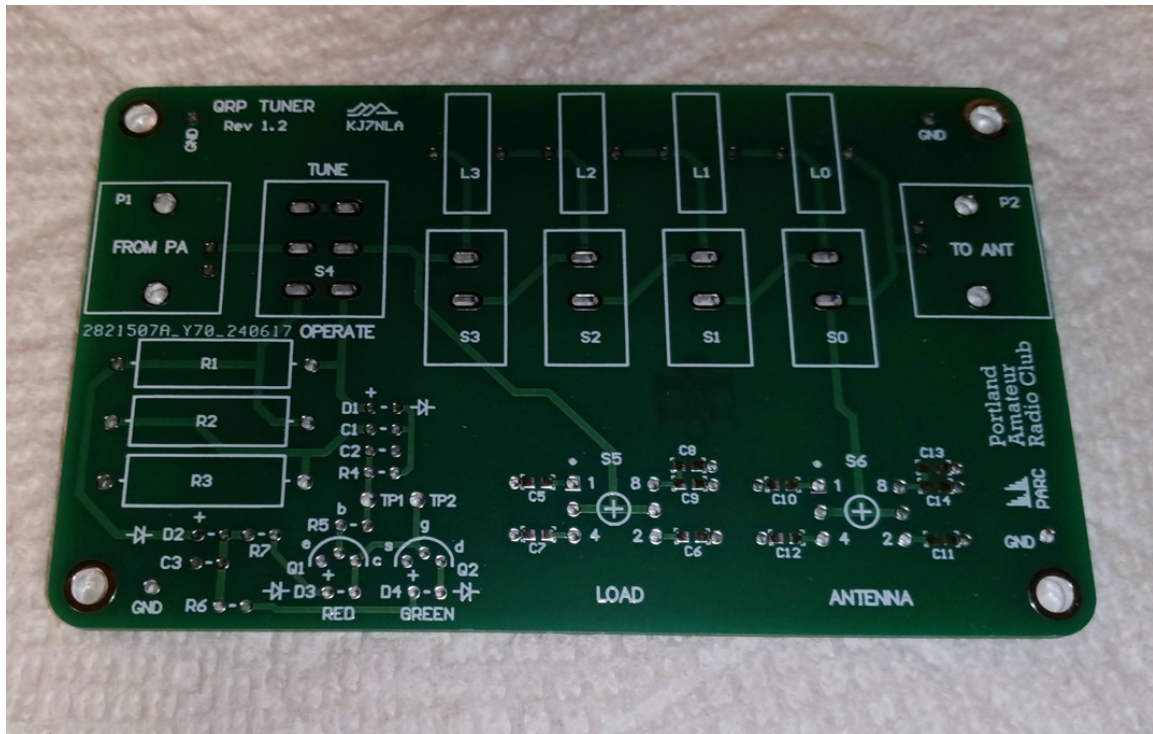https://www.youtube.com/watch?v=JwVuvu-C30c

I modified the design by adding a second variable cap to make a Pi-network rather than the simpler L-network.

The difference between this version and the previous version (1.1) is the replacement of the polyvaricon tuning caps with SMT tuning caps selected by a rotary hex switch.
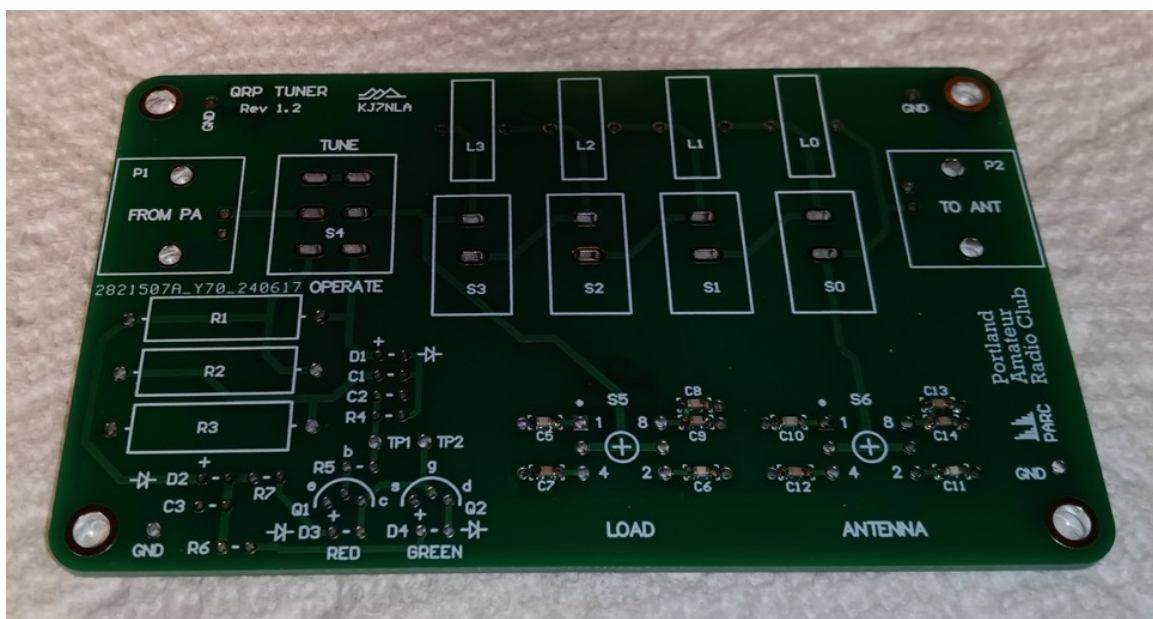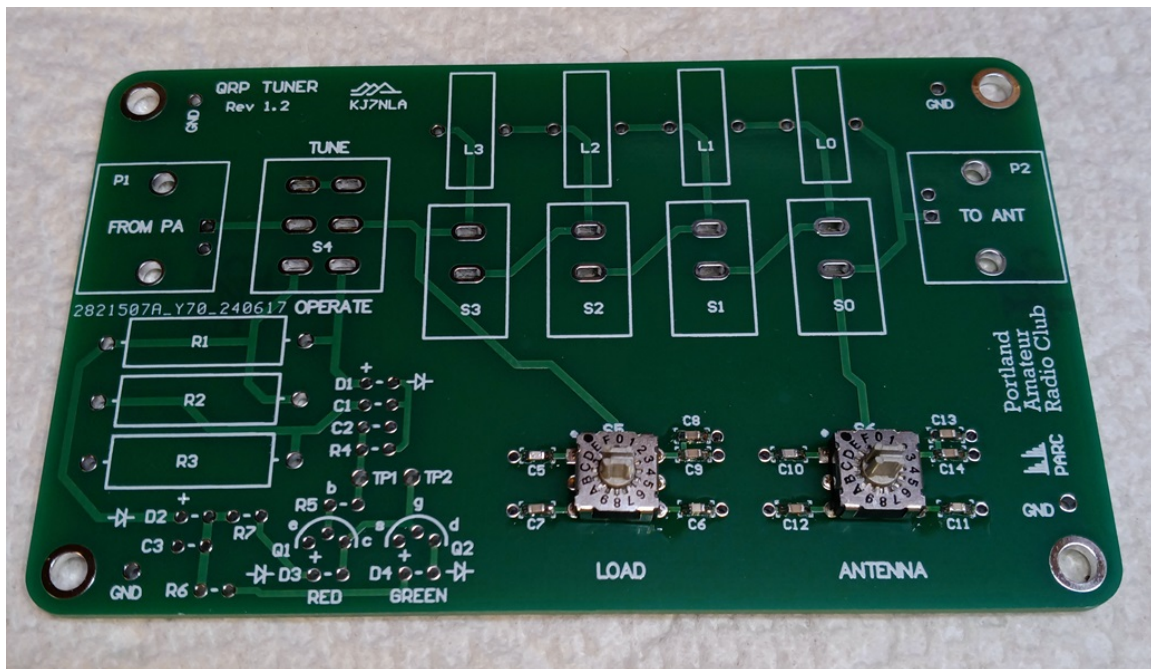
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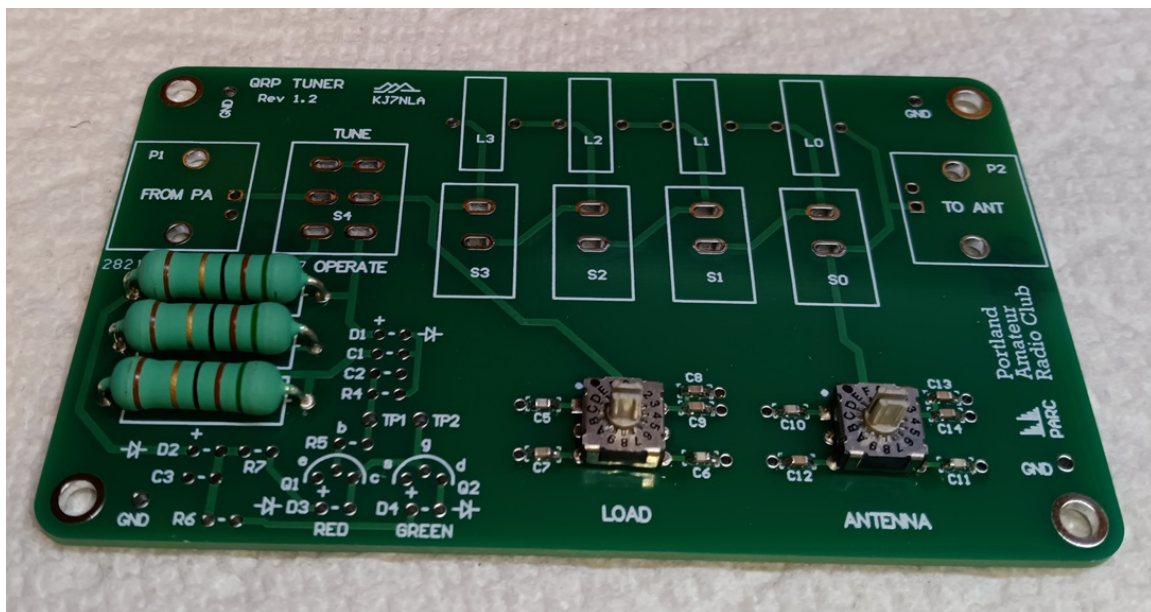
Step 0: Start with the bare board

Step 1: Add the SMT tuning caps These are 0603 packages. The method I use for installing these is to tin one pad, place the part and solder the one side, then solder the other side.
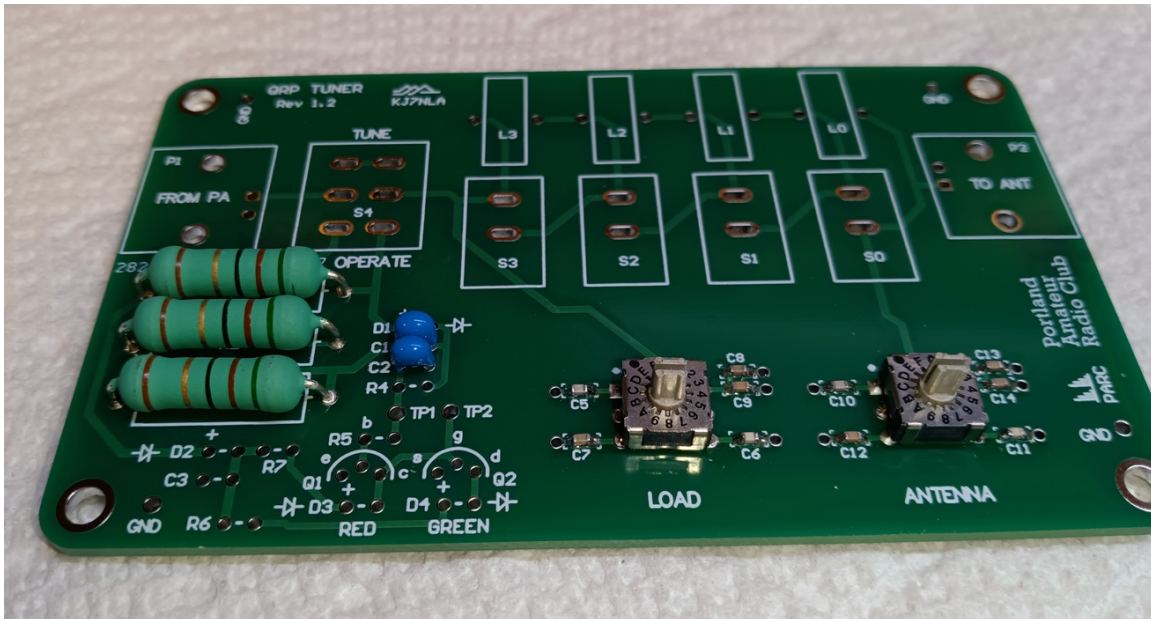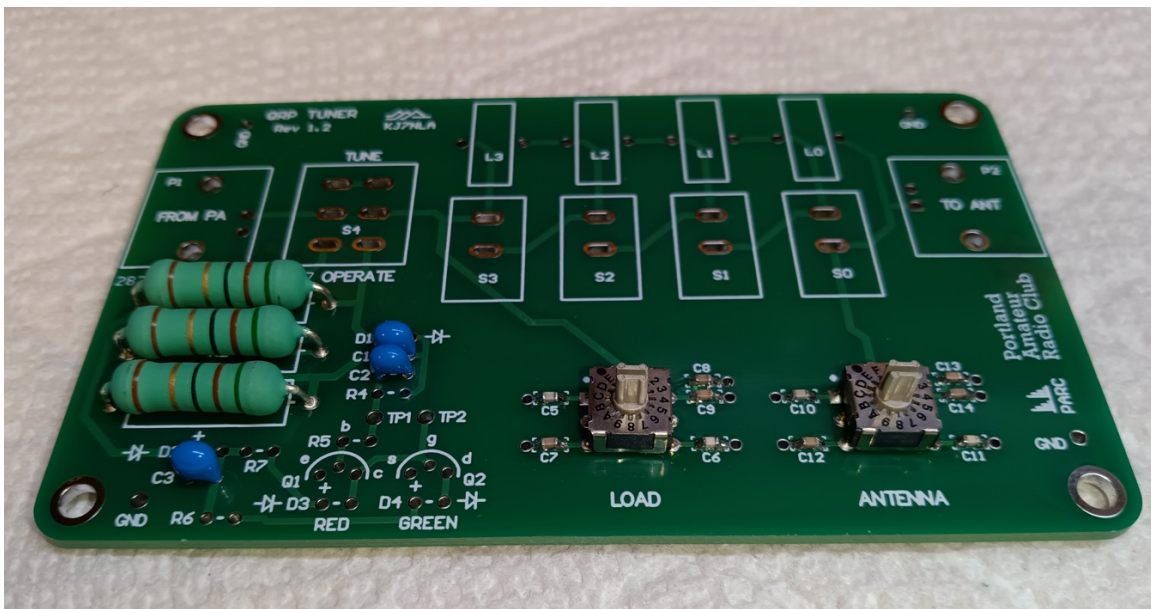
Step 2: Add the rotary switches S5 and S6

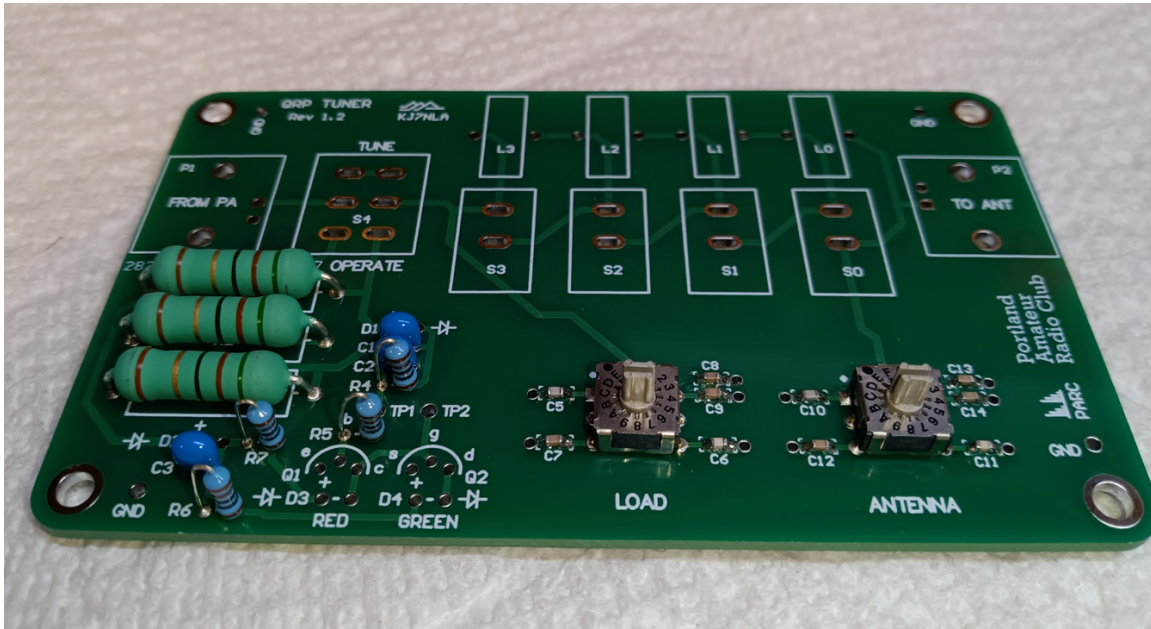## Step 3: Add 50-ohm resistors R1, R2, and R3

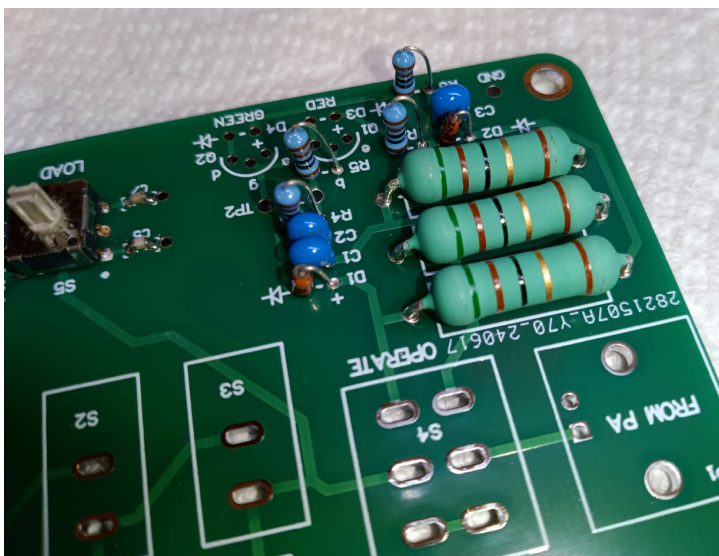## Step 4: Add .01 uF caps C1 and C2
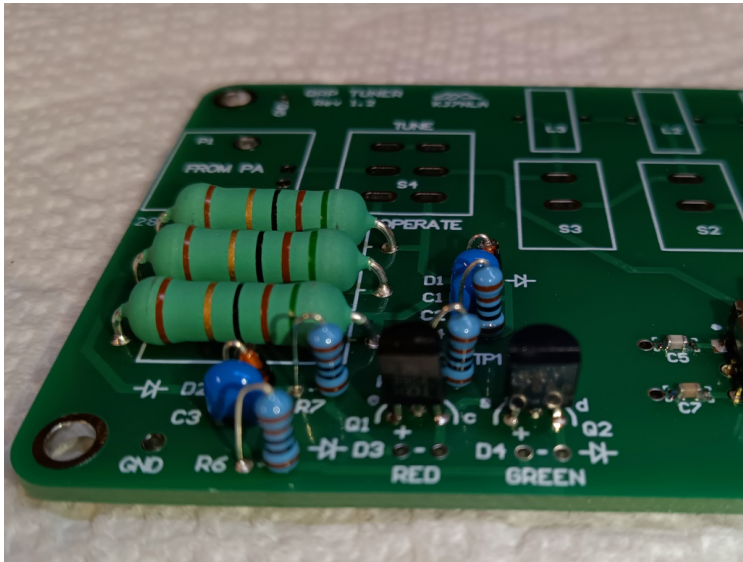

Step 5: Add .1 uF cap C3

Step 6: Add 1k resistors R4, R5, R6 and R7

Step 7: Add 1N4148 diodes D1 and D2

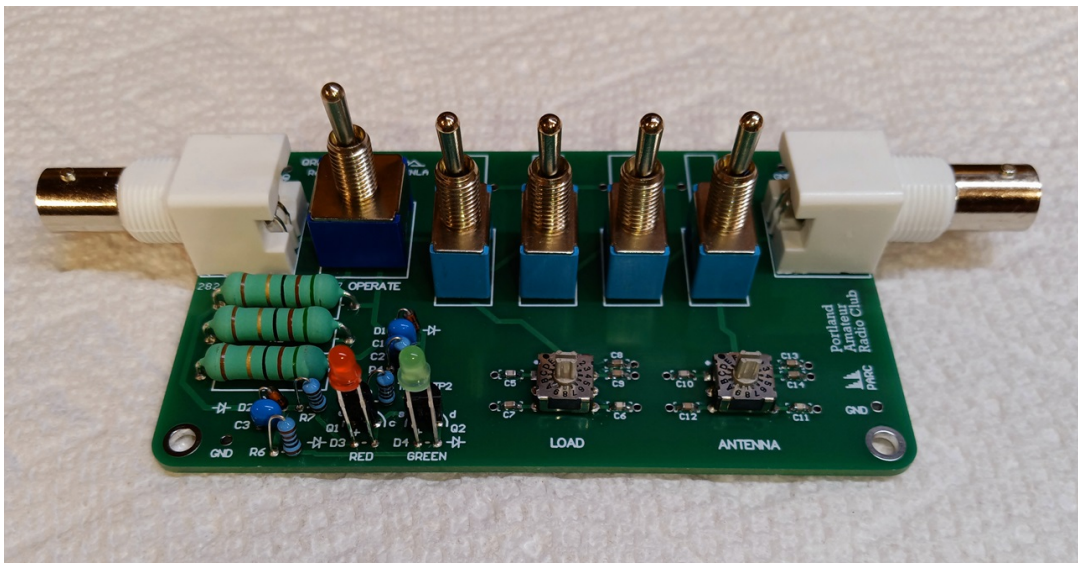## Step 8: Add Q1 (2N3904) and Q2 (2N7000)

Step 9: Add D3 (red) and D4 (green) Fit with top board installed for correct alignment.

Step 10: Add switches S0, S1, S2, S3, and S6 Fit with top board installed for correct alignment.
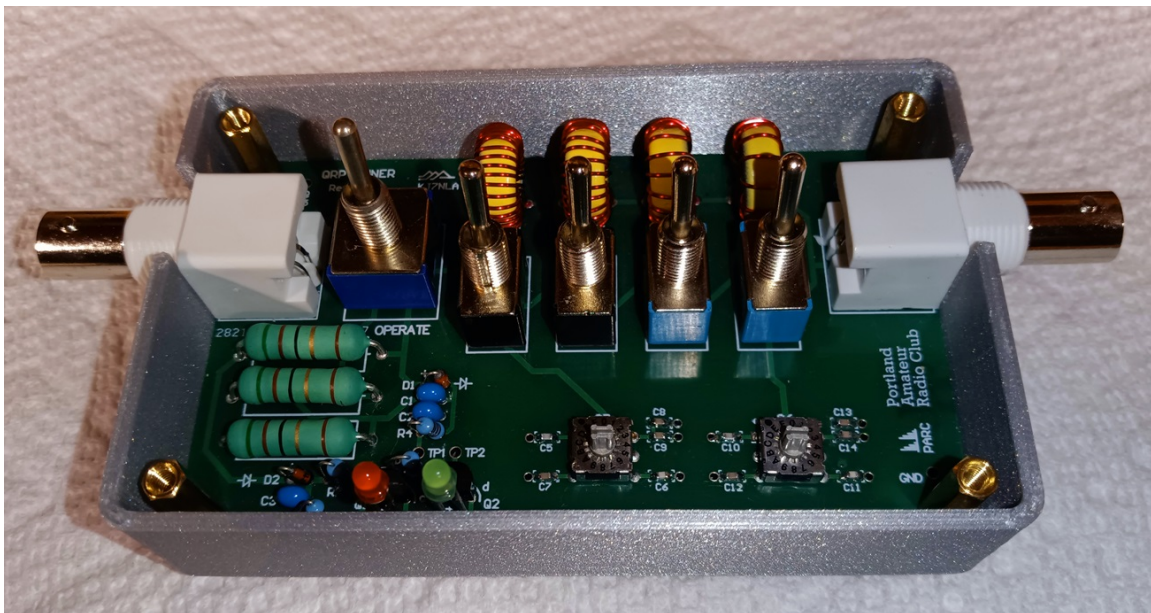

Step 11: Add the BNC connectors P1 and P2

Step 12: Wind the toroids.

Step 13: Install the toroids

Step 14: TEST

Step 15: Install the top cover