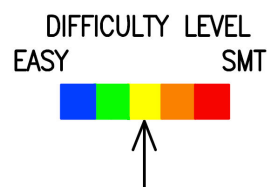
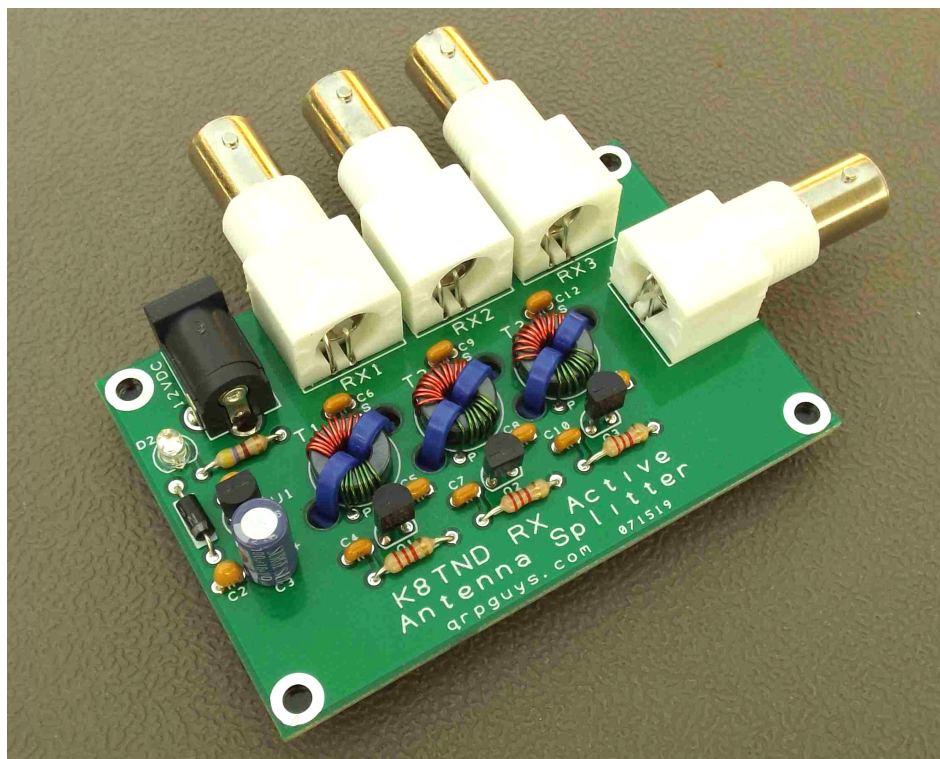


K8TND Active RX Antenna Splitter

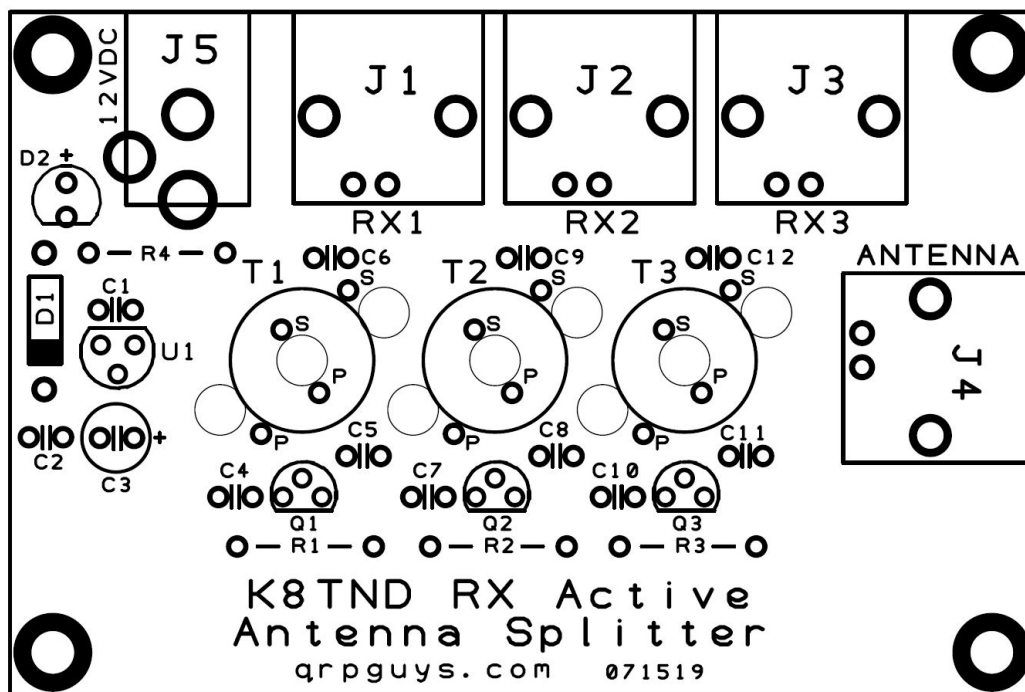


First, familiarize yourself with the parts and check for all the components. If a part is missing, please contact us and we will send one. You must use qrpguys.parts@gmail.com to request a part.

Parts List

- 1 – K8TND Active Antenna Splitter pcb
- 1 – U1, 78L09 voltage regulator
- 3 – Q1,2,3, 2N3904 transistor
- 1 – D1, 1N5817 diode, black with silver band
- 1 – D2, red LED
- 3 – R1,2,3, 2.2K resistor, (red-red-red-gold)
- 1 – R4, 470 ohm resistor, (yellow-violet-brown-gold)
- 2 – C1,2, 100nF (.1uF), monolithic capacitor, marked 104
- 1 – C3, 100uF electrolytic capacitor
- 3 – C4,7,10, 1nF (.001uF) monolithic capacitor, marked 102
- 6 – C5,6,8,9,11,12, 10nF (.01uF) monolithic capacitor, marked 103
- 4 – J1,2,3,4, female BNC pcb connector
- 1 – J5, 2.1mm DC power jack
- 3 – FT37-43 toroid
- 3' - #26 AWG red magnet wire
- 3' - #26 AWG green magnet wire
- 4 – self adhesive rubber foot
- 6 - 3/32 x 4" plastic tie

Start with main board and the smallest components first, using the figure below as a guide. All the components mount on this side shown.



We make every attempt to get .100" spaced capacitors, but sometimes we can only get .200" spacing. You may need to bend the leads to fit.

- [] Install C1,2, 100nF (.1uF), monolithic capacitor, marked 104
- [] Install C4,7,10, 1nF (.001uF) monolithic capacitor, marked 102
- [] Install C5,6,8,9,11,12, 10nF (.01uF) monolithic capacitor, marked 103
- [] Install D1, 1N5817 diode, black with silver band, *observe the silkscreen outline.*
- [] Install R1,2,3, 2.2K resistor, (red-red-red-gold)
- [] Install R4, 470 ohm resistor, (yellow-violet-brown-gold)
- [] Install D2, red LED, *observe polarity. The long lead is positive.*
- [] Install Q1,2,3, 2N3904 transistor. *Observe the silkscreened outline*
- [] Install U1, 78L09 voltage regulator. *Observe the silkscreened outline*
- [] Install C3, 100uF electrolytic capacitor, *observe polarity. The long lead is positive.*
- [] Install J5, 2.1mm DC power jack

Winding and installing T1,2,3 7:12 turn transformers

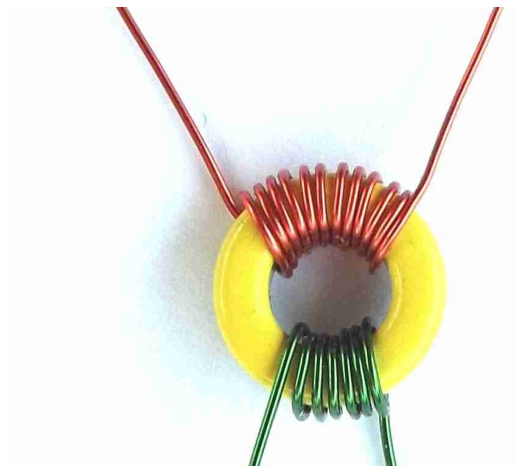
All three transformers are wound the same.

- [] Using an FT37-43 toroid (black) toroid, wind the primary of T1,2,3 using 10" of the green supplied magnet wire for a total of 7 turns. Wind It In the direction shown in the graphic below, closely spaced.



Yellow core shown for clarity

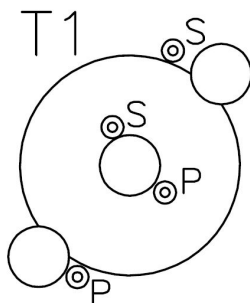
- [] Next wind the secondary 180° from the primary of T1,2,3 using 10" of the red supplied magnet wire for a total of 12 turns. Wind it In the direction shown in the graphic below, closely spaced.



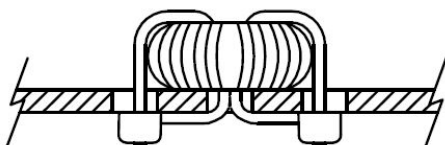
Yellow core shown for clarity

- [] We supply Thermaleze® wire so it is easy to tin without scraping. Separate the individual wires and tin them. Bend the wires down and check the continuity between red and red wire and separate continuity between green and green wire.

- [] Mount each transformer toroid assembly flush with the top surface of the pcb, with the *7 turn primary wires into the holes marked "P"*, and the *12 turn secondary into the holes marked "S"* as shown and solder.



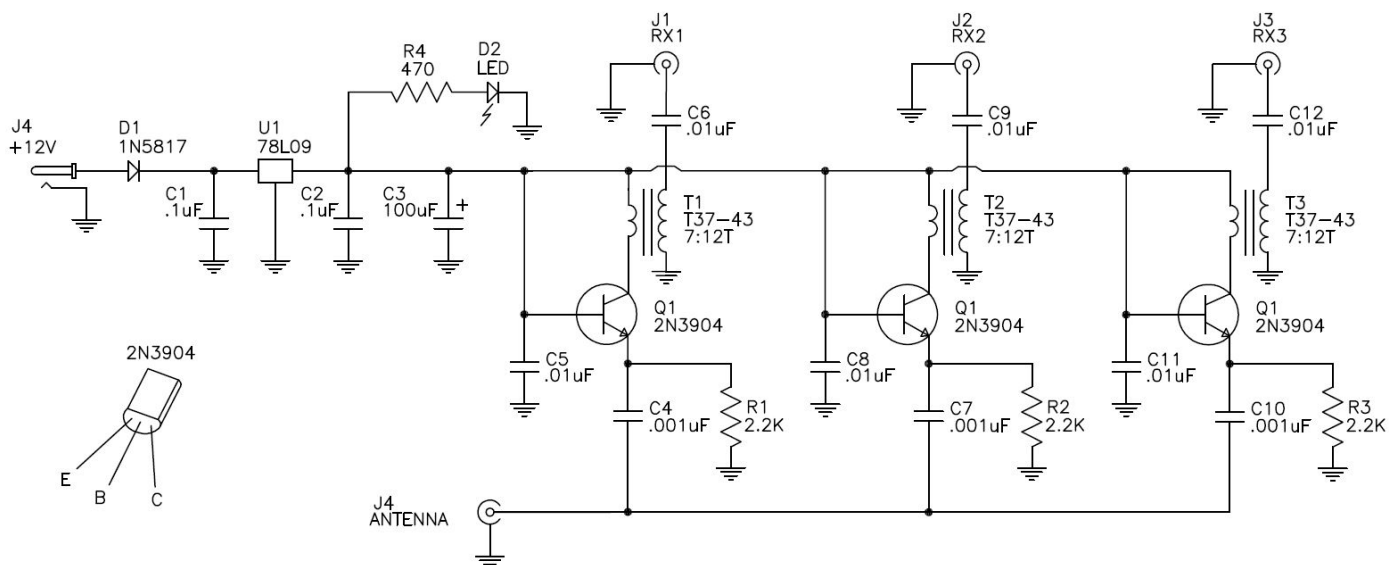
- [] Secure the toroids to the pcb using two of the supplied plastic zip ties, as shown below.



- [] Install J1,2,3,4, female BNC pcb connector
- [] Install the four self-adhesive feet on the backside of the board.

This completes the assembly

Schematic



Notes:
