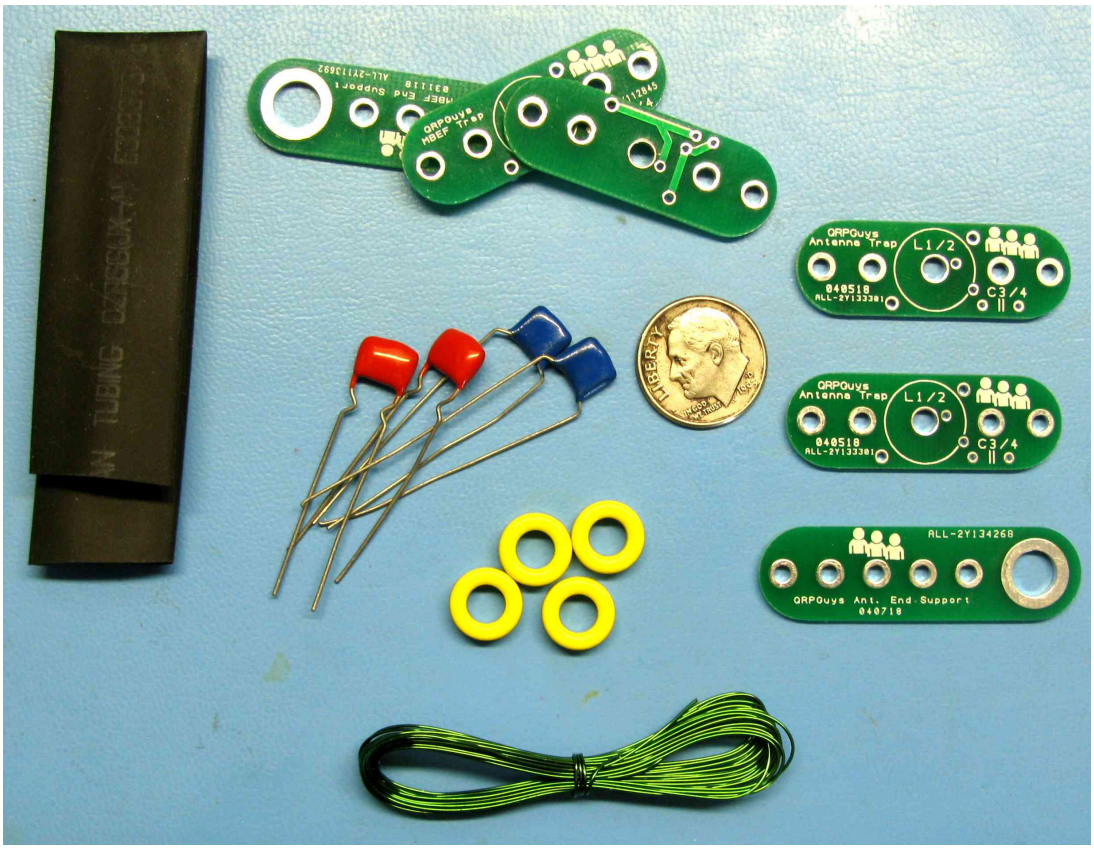
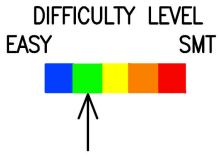
QRPGuys Wire Antenna Trap Guide





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. To request a part use the **SUPPORT** button on any page and submit a ticket.

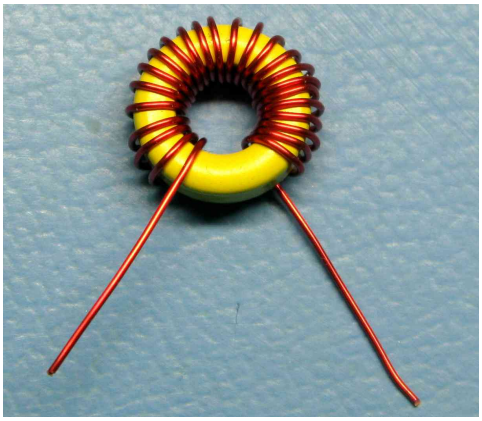
Parts List

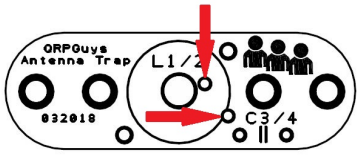
4 – Wire antenna trap pcb
2 – End support pcb
4 – T37-6 toroid core (yellow)
2 – 68pF 500V capacitors
2 – 150pF 500V capacitors
1 – 8’ of 26AWG magnet wire
1 – Ø1/2” x 8” heat shrink tubing

Trap assembly

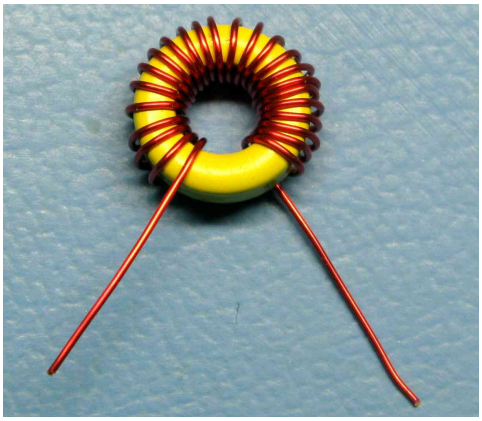
For illustration, the values shown below are the values we use on our 40-30-20m end fed antenna. Whatever values you end up with in your experimentation, use the assembly techniques detailed below.

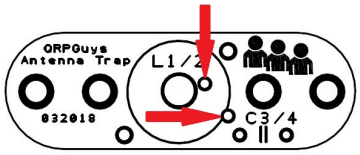
For a 20m trap use a T37-6 (yellow) core wound with 25 turns for “L” as shown below, with C, 68pF capacitor. Wind it like the graphic, tin the leads and when bent down the leads will align with the pcb. The trap should be resonant just below the 20m band. You can compress or spread the windings on the toroid for an ideal resonance. Theoretical inductance is 1.9uH for 14.000MHz.



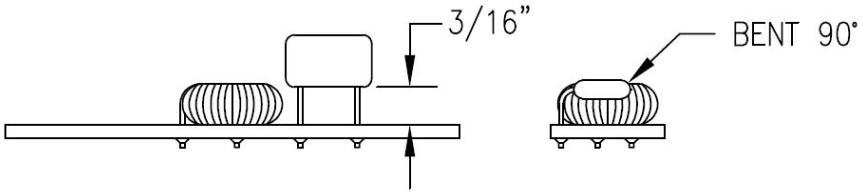


For a 30m trap use a T37-6 (yellow) core wound with 24 turns for “L” as shown below, with C, 150pF capacitor. Wind it like the graphic, tin the leads and when bent down the leads will align with the pcb. The trap should be resonant just below the 30m band. You can compress or spread the windings on the toroid for an ideal resonance. Theoretical inductance is 1.70uH for 10.000MHz.

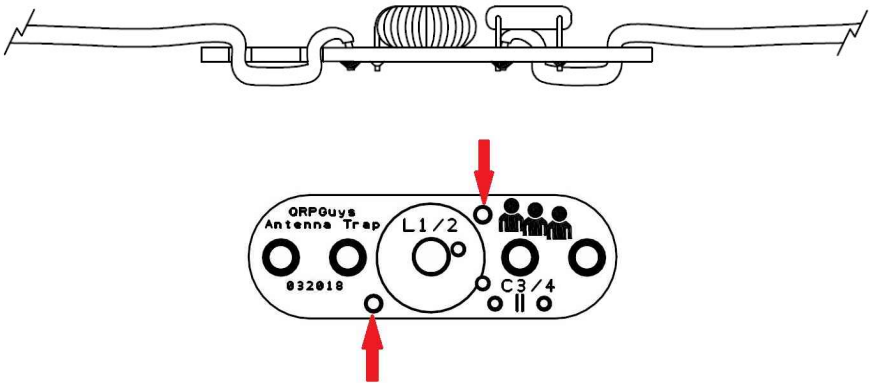




Install the toroid centered on the silkscreen, flush with the pcb, and appropriate capacitor 3/16” off the surface of the board. Bend them 90º towards the center of the board so the shrink wrap tubing will fit over the trap



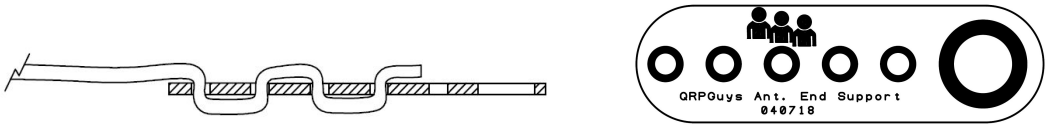
Before you use the heat shrink tubing to protect the trap, it is necessary to install the lengths of wire through the strain relief holes and solder where indicated below.



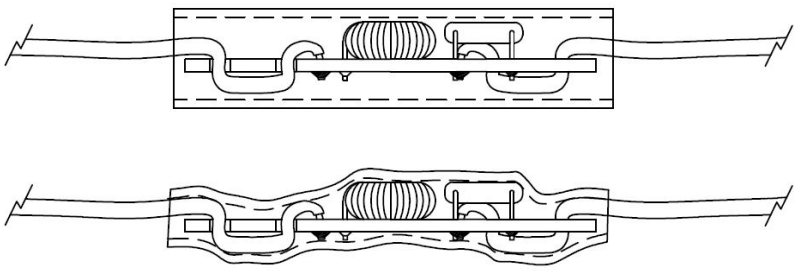
The user supplies the wire for the elements. We recommend stranded #22-24 AWG.

It is best to test the lengths and traps so if adjustments are necessary you don't have to cut off the tubing. *Be careful not to damage the traps during this process.* When multiple traps are used on a wire antennas they can interact with one another so be prepared to do some tweaking and adjustments to achieve optimum results.

Route and terminate the end wire as shown below with the supplied End Support.



When you are satisfied with the performance, cut a 1.75" long piece of the Ø1/2" heat shrink tubing, remove the End Support, slide the heat shrink onto the end of the wire, center it on the trap, and shrink it to the assembly, as shown below. It will not be waterproof, but it is designed to protect the trap from mechanical damage in the field. Replace the end support.



Use all the normal cautions throwing wires up in the air near power lines.

There are many sources on the internet for design help. A simple one can be found here:

http://www.deephaven.co.uk/lc.html

We use Diz's site to calculate the turn count for our toroids:

http://www.kitsandparts.com/toroids.php

FREQUENCY	C – pF	L –uH

Notes: