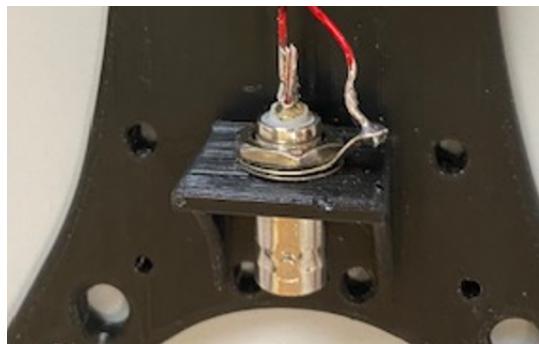


## CaHRTenna Mercury Linked Dipole Instructions

The jury is out on whether the Mercury is easier than the Apollo. We recommend you build that one first and then tell us which one you think is harder. We tried to make the toe-roid easier to wind but make the wire elements harder. First up - get that wire off that beautiful frame. Sit the frame proudly on your mantle until it's needed. Its ok to move your wedding picture, favorite kid's grad photo... maybe even the family dog – for now.

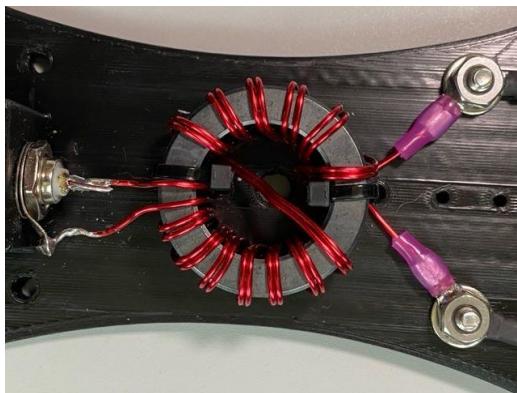
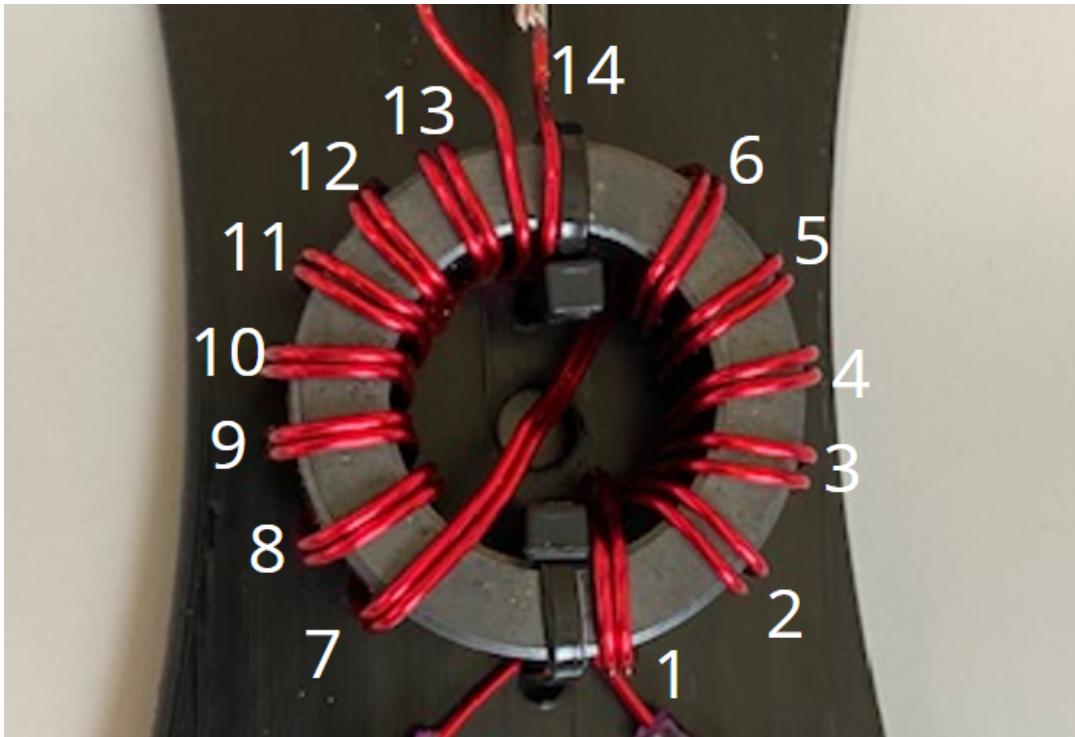
To prove how easy it is to install the toe-roid, we're going to declare the BNC to be the hardest part of this kit and jam it out first. Make sure the cup on the center connector is up - this will make it easier to solder.



The kit has 2 sets of magnet wire, straighten both out and lay them side by side. Put a 90 degree bend about 2.5 -3" from the end of each length of wire.

Feed the other end through the toe-roid. Feed the wires through 14 times with a cross on the 7th turn. Take your time here – keep your wires neat.





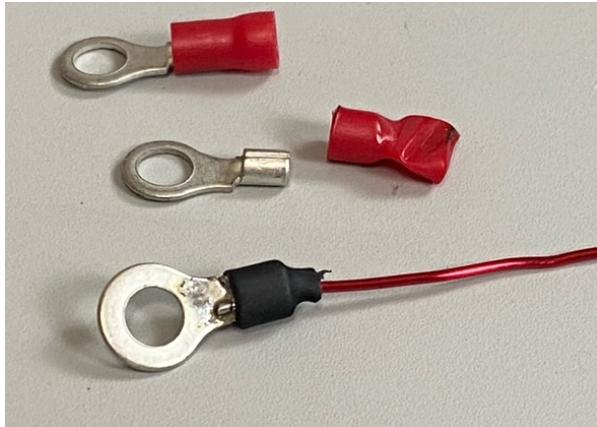
After winding the toe-roid, zip tie it down to the winder and measure the wires for length to the holes and BNC connector. Cut off any excess length.

Remove the enamel from all 4 ends. You can use 80-100 grit sandpaper or scrape with a razor blade, whatever works for you, fam. This step is important, it's how the solder sticks. Solder one wire to the



center of the BNC and the other to your ground lug.

Find the skinny pieces of heat shrink. Cut the wider diameter segment into 4 13/16" pieces (4 equal pieces) for the ring terminals, cut the rest into 3/8" sections for the links.



Remove the ugly red insulators from the ring terminals - use a little heat and burn them outta there! Slide the 13/16" heat shrinks over the free ends of the enamel wire. Crimp and solder the ring terminals on your bare enamel wires and snug up that heat shrink.

Take your screws and screw them all the way into the frame in the locations shown - you're screwing into plastic here, so be gentle. Install your newly fresh ring terminals, washers, and nuts on the winder as shown. Don't tighten the nuts down at all just yet.



Let's get cutting! If you have a tuner and cut the wires exactly as shown, you'll have zero problems with the 10,20,40m bands - even your radio's built-in 3:1 tuner!

Band	Quantity	Length
10m	2	8'3"
20m	2	8'6"
40m	2	16'4"

This antenna was cut at 23' to install with a 10m fiberglass extendable mast. Popular 10m masts come from DX Commander, Packtenna and SOTABeams. All of these masts are wimpy at the top, so we put this antenna at the 23' point of the mast.

We've sent along 7 S-Biners. The 3 orange S-Biners are your mounting insulators and the 4 black units are your band separates like this:



Let's get the 10m legs mounted to the frame! Start by weaving plenty of wire through the end of the frame for strain relief. Next slide on some heat shrink, crimp and solder the ring terminals. The wire should thread down from the top of the end hole in the winder and up through the small hole near the screw. When you're finished, pull out your slack.

Fold over 6" of wire and tie it to the **Black S-Biner** (*Yes, its orange in the picture. I blame Ape.*) This will give you a little extra wire for your first tuning. – We've supplied an extra 7' of antenna wire, so you've got plenty to fiddle with. – If you're going to use extra wire, put it after the knot and S-Biner.

For now don't add the banana clips, just twist the wires together to add that section for tuning.

Dress your knots. You're going to be sharing pictures and videos after all.

Be sure to check out our channels for videos on how to tune an antenna.



After you have tuned and trimmed your antenna, it's time to add the banana connectors. Slip on a 3/8" piece of the heat shrink first. No crimping here, just solder 'em home.

Take the supplied paracord, tie it through two of the unused holes opposite the BNC end of the winder and attach the last S-biner for attaching to your mast.

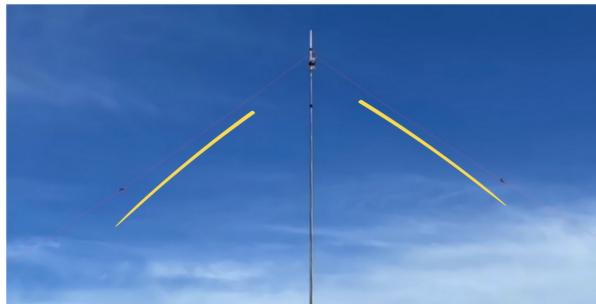


Cut 2 pieces of cordage (not included in the kit) about 12-15' long to guy out the legs of the antenna. Make sure to set the antenna up the same way each time to help ensure your SWR will be as close to the same as when you originally tuned it. The end of the 40m legs should be about 6' off the ground.

We've designed this antenna to be installed as an "Inverted-Vee". Take a look at the pictures below. The antenna wire is a little hard to see, but you can just make it out. By adding extra cordage to the ends of the antenna, you can widen the Vee out beyond 90° for optimal radiation.

Getting the mast guyed is an exercise for the builder's imagination. You can use a Chuck Stake, a tripod, cut an old cutting board up and use tent stakes and paracord. You got this!

You want the V to be greater than 90°



You don't want the V to be less than 90°



Using the 12-15' of cordage, hold down the ends of the wire with your favorite ground stakes. Chuck's Favorite guy stakes:



TO's Favorite Guy steaks:

