

# THE KK5ID 6 METER ROTATABLE DELTA LOOP PROJECT

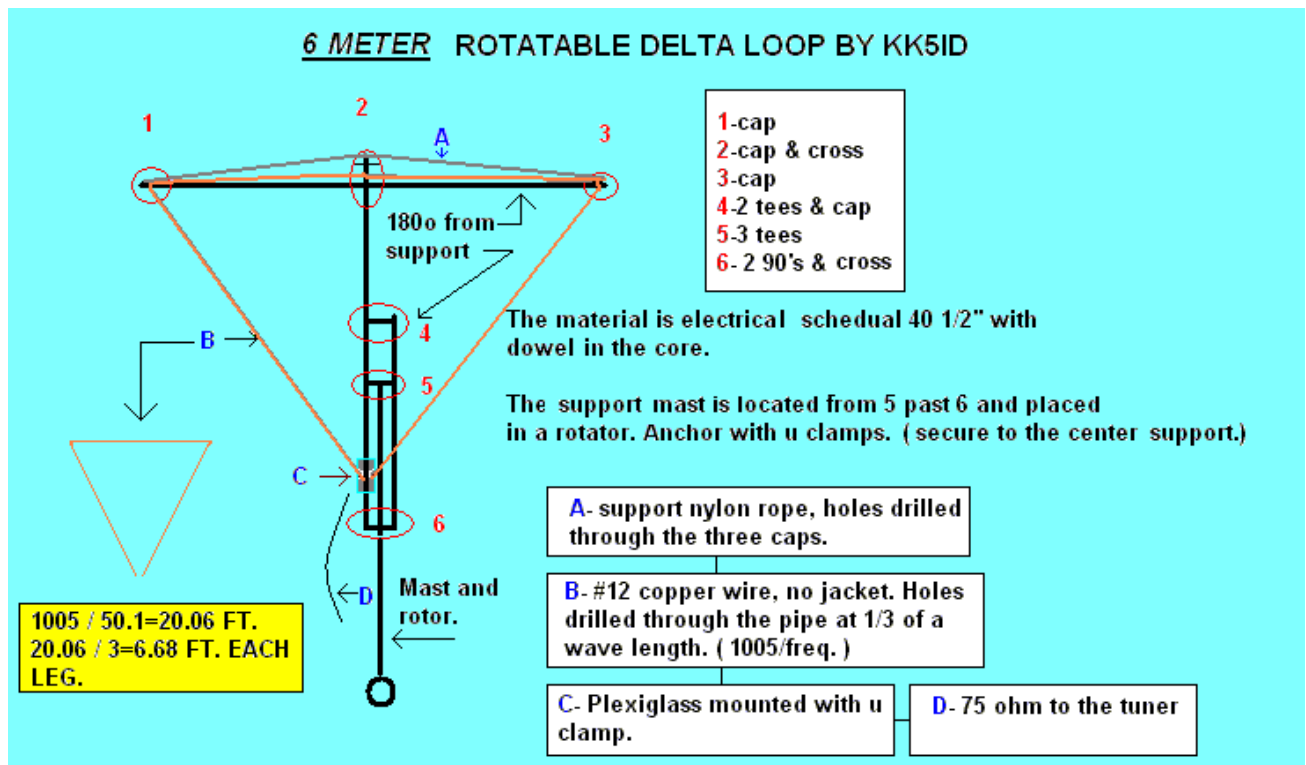
With Optional Umbrella base!

The 6 Meter Band may be dead at times, but help bring it to life with Larry's rotatable loop project.

Simple, easy to build and won't break the bank.

Straight from Gun Barrel City, Texas, (Home of Hamuniverse.com), where antennas are "Smokin'" over Cedar Creek Lake in East Texas.

Get out your weapons, load up this "Six" shooter and fire a couple of rounds at 6 meter fun with this antenna project!



## Construction Details

Note that no lengths or detailed construction info is given for the supporting mast due to the many variables involved with each builder's experience. Use your own best method to support the antenna on the rotor.

The Delta Loop is bi-directional, with usable lobes off the ends and has been one of my favorite [antennas](#). I have found that it will perform quite well in a fixed position. The 6 meter loop is small enough to erect a form around it and I have done this with 1/2" electrical pvc schedule 40 [pipe](#) with dowel inserted inside for extra strength. The caps and tees were put on without glue at first to get the size and shape I wanted and then it was dismantled one section at a time and glued with pvc glue. After it was put together, I inserted one self tapping screw at each connection to make sure that it was solid. The design of the support came from a sleepless night vision.

Is it funny looking? Sorta! Can it be improved on? Yes. Does it work? You bet!

The antenna works best if the "crust" "A" side in the drawing above of the "pie slice shape" is up and the support accomplishes this. You are now able to put it in a rotor and rotate for bi-directional transmissions.

### **Impress Your Neighbors**

The electrical characteristics of the Delta Loop can be found in any antenna book so I won't dwell on that aspect. The formula for the wire is 1005 divided by frequency. Or 20' 5/8" at 50.1. over all length. **Editors note:** If you want to make the Delta Loop free standing a sturdy [umbrella base](#) would make a good base for the antenna on the ground. Just check out the link above and adjust the support pipe as needed to fit the base. Now you have a 6 meter rotatable loop sitting on the ground that can be turned!

The legs then will be 6' 8 3/16". I used 75 ohm coax, (rg11), because of the close match to the 90 to 100 ohm feed point. 50 ohm line can be used which will have an SWR of 1.8 to 2.0 to 1 at the transmitter. The easiest way to match is with a tuner, however a matching transformer of 75 ohm cut at a quarter wave length times the velocity factor (.66) can be used to lower the SWR when using 50 ohm. To me it is a lot to do about nothing.....cut the wire, attach the coax, connect to a tuner and get after it. I painted my support black but you could paint yours red white and blue. This would surely impress your neighbors. Mine is only up above the roof line, maybe 30 feet or so and has shown good results in working Es. Tropo should be a piece of cake and as far as F2, time will tell. I use a 20 meter multi-band Delta for 40 and up and it works as good as my tri-bander in the direction of the wire and I also am able to do quite well off the sides of the wire especially Es at HF frequencies.

### **THE ANTENNA THEORY!**

My theory is cut the wire to spec, hang it up, hook it to a tuner and get after it. The thing works great! 25 or 30 bucks (2004 prices!) and you are in business! Good grief, did I get off on a tangent? Don't print this the way I presented it. Some electrical genius will punch my lights out and another DX HOG will swear that I am full of Texas tumbleweed, tall fish tales and bull \_\_\_\_\_. Oh well, you know what I mean. Fact is that 6 meters doesn't need 20 horizontal elements at 200 feet to be able to work Es from Texas to Florida!.....Good luck and good DX..... [KK5ID](#)

[LARRY](#)