

Subject: Delta Loops

From: G8MNY@GB7CIP.#32.GBR.EU

To : TECH@WW

How to make a Delta Loop

I guess we would like to be able to use a full sized Quad Beam but space & the neighbours (as well as Local Authorities) don't always like us to!

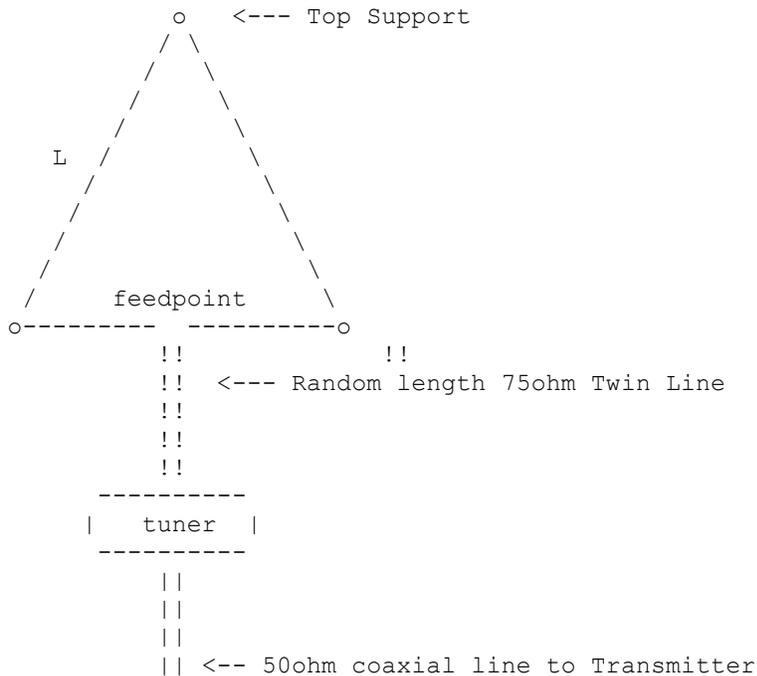
The next best alternative is to make and erect a Delta Loop. I have worked much exotic DX using the version shown in my bottom drawing. Such an aerial can be put together quickly and cheaply using spare wire you may have lying around. (What do you mean you haven't got any spare wire lying around!!!)

The wire forms a CONTINUOUS loop starting from one side of the feedpoint and running around to the other side of the feedpoint. The 'o' shown at each corner is an egg shape glass insulator but any insulator will do. I've even used old cotton reel spools!

Although for optimum results, a delta loop should be fed with 75ohm twin feeder going to a tuner and then 50 ohm coax to the TX/RX I have had excellent results just using 50 ohm coax from my transceiver to the feedpoint but with a 4:1 Balun at the feedpoint.

GO ON, make one and give it a try. You will probably be pleasantly surprised!!!  
Mel G4WYW

Here is how to make a DELTA LOOP

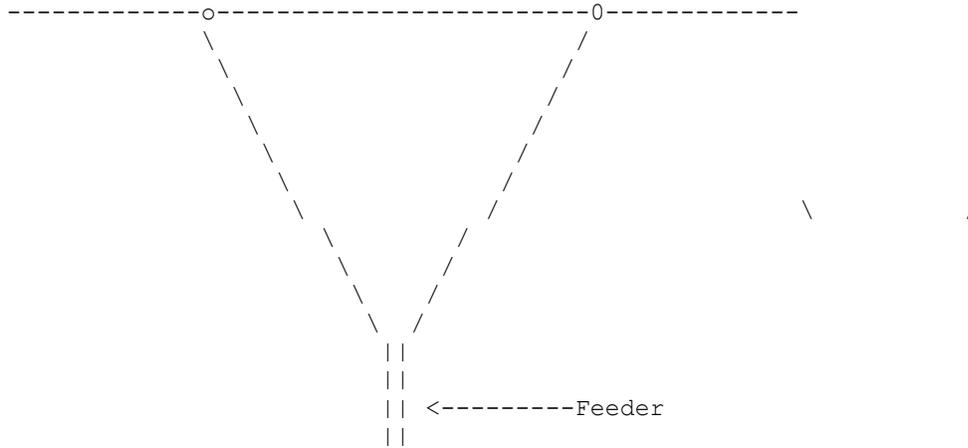


'L' = Length of ONE side  
L = 334 divided by 'f' (frequency in MHz) in feet.

Polarisation is horizontal ie; it 'catches' & radiates into & out of the enclosed space of the loop like a table tennis bat hits a ball!

Power gain of a Delta Loop is about 1.4 db over a Dipole.

The Delta Loop can also be fed from a corner with a flat side being supported as the top, ie;



73 - Mel, G4WYW @ GB7SOU.#48.GBR.EU

Title : Delta loop - slight mod.  
From: G0TEZ@GB7HVU.#16.GBR.EU

I just thought I'd mention a slight variation on the delta loop described by Mel, G4WYW, whose excellent drawing I have left in. Please forgive me, Mel.

I fitted mine in a loft which was only 5' high. It would wave on 11m. I fed it at one end with 50OHM co-ax. It was supported by 3 large elastic bands, the type used to peg tents down.

I found that stations that had previously been S3 were 9+ but, they still only got me at S3 so I put a reflector 1/10th wavelength inside the loop. As it was on the floor of a loft, I could make it free standing from Baco Foil (aluminium turkey foil) with 3 supports.

They then received me at 9+. When you're limited to 12W PEP you have to use tricks like that, Hi!

I know we have a lot more power available on AR but the reflector is well worth trying .

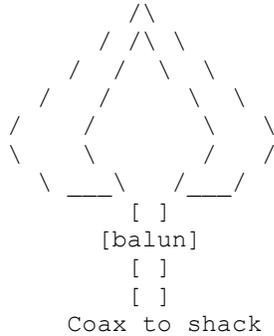
All the best. Ian.

p.s. I used the formula  $\text{Lambda} = c/f - 5\%$  to get the length.

p.p.s. It was a full wave on 11 metres.

Title : Re: Wire Antenna's and loops  
 From: G0IFI@GB7YEO.GB7FCR.#16.GBR.EU

Like Mel, G4WYW, I've had a lot of success with delta loops. The height above ground isn't as much of consideration as you might imagine. You can also make a multiband "nest" of loops, fed with coax and a 4-1 balun. I had one such arrangement some years ago.



If the outer loop is cut for 40m, it should also be resonant on 15m. I once had a nest of 3 loops like this, more or less diamond shape, one for 40, one for 20, and one for 10m, top end hung from a tree, sides pulled out by guy ropes. This made it easy to rotate. It worked great, I was able to work most of what I heard easily, with encouraging signal reports. One great advantage with a loop antenna is the QRN reduction, in fact when I first tried a loop antenna on 10m I thought there was something wrong because of the lack of background noise, until I tuned across a whopping signal from the USA.

There's a bit of cut and try with a nest of loops, as the resonant lengths of each loop are affected by the adjacent ones, but it's well worth the small effort.

Go on, go loopy.  
 Perry G0IFI @ GB7YEO

Why Don't U send an interesting bul?

73 de John G8MNY @ GB7CIP  
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